CITY OF FORT LAUDERDALE

NOVEMBER 2025

FORT LAUDERDALE URBAN FORESTRY MASTER PLAN

We Are Green | We Are FTL

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

From its specimen live oaks and mahoganies to its iconic mangroves, trees are a beloved cornerstone of Fort Lauderdale's unique urban environment. To paraphrase one City staff member, trees are the centerpiece of the dining room that is our City. Trees are an anchor to the character of its neighborhoods, and many of its oldest trees, such as the Bicentennial Liberty Live Oak or Rain Tree, serve as beacons of its storied history.

Trees are the centerpiece of the dining room that is our City.

Tree canopy is the mass of leaves, branches, and stem(s) that form a layer above the ground in the mid to upper portion of a tree or group of trees. When one stands under this layer, the benefits of having tree canopy, such as cooling shade and fresh air, are evident. When viewed from above, the extent of the canopy (i.e. canopy coverage) can be observed and measured. Mature trees comprise large portions of a forest's canopy and are the ones that bestow most of the forest's benefits to nearby inhabitants and visitors. When mature trees die in natural forests, there are younger trees patiently waiting their turn to grow into the newly formed spaces and mature. In urban settings, where new young saplings are discouraged through mowing, weeding, soil compaction and paving, forest rejuvenation primarily occurs when trees are intentionally planted and maintained. Unlike in the natural forest, urban forest tree replacement requires manually digging through compacted soils, purchasing, transporting and installing nursery-grown trees, and staking, watering and maintaining until the tree establishes itself or withers and dies due to challenging urban conditions. It is famously said that the best time to plant a tree is 20 years ago, the second-best time to plant a tree is now.

Because urban forests are so important to the health and comfort of the community, and because forest rejuvenation doesn't happen naturally, having a plan to plant replacement trees and to increase canopy is crucial. Those who remove trees in Fort Lauderdale are generally required by ordinance to mitigate for lost canopy, but not every tree that dies within the City is replaced (naturally or otherwise). Urban trees are community assets; critical infrastructure that improve air quality, moderate temperatures, reduce energy costs, enhance positive physical and mental health outcomes, protect water quality, absorb greenhouse gases, reinforce riverbanks and coastlines, and raise property values and retail sales. These services provide

the City value; Fort Lauderdale's canopy delivered $3.3 million in benefits to the community in 2024 alone[1]. When large swaths of canopy disappear in a short period of time to make way for development and infrastructure, those benefits can be quickly lost because replacement trees may not fill in the gaps for decades.

The City has spent approximately $1.33 million per year on core urban forestry practices of tree planting and establishment, tree maintenance, tree removal, and management since 2015[2], which falls near the average urban forestry budgets for cities of similar size per data from 2014[3]. Since there is no specific line item in the City's budget for urban forestry, the City's entire urban forest maintenance, management, operations, and regulations is embedded within the overall budgets of its internal stakeholders – 10 disparate teams and divisions across the City, including the Sustainability and Special Projects Division, where the dedicated Urban Forestry program is managed.

In 2024, the City's canopy was estimated to cover 26.6% of its geography[1]. As noted above, the canopy delivered $3.3 million in annual benefits, including the removal of 43,717 tons of air pollutants and the avoidance of 87.2 million gallons of stormwater runoff. Trees save the City money but also improve the quality of life for the community. Being a "City of Neighborhoods," most of the urban forest grows in residential areas. Although canopy cover at the neighborhood level ranges from as high as 55% to as low as 11.5%, each neighborhood has different histories, land uses, and canopy goals that shape its urban canopies today. By striving to accomplish greater tree equity in neighborhoods with low tree canopy, the City can fortify its urban tree canopy while ensuring that the immense benefits the urban forest is already delivering are enjoyed by everyone in Fort Lauderdale in personal and socially significant ways.

Nearly 800 City residents responded to the Urban Forestry Master Plan's (UFMP) public survey that asked what people valued most about their urban forest and what they wanted to see in the City's future urban forest. Respondents overwhelmingly expressed serious concern about the removal of large trees for development that were not adequately replaced. Similarly, 96% of responses strongly indicated that trees improve the quality of people's lives and 89% said that they wanted to see more trees in their neighborhoods. Comments indicated that trees make commuting, recreating, and working more enjoyable. Many said that the presence of large shade trees was central to their sense of place in the City.

These sentiments were mirrored in five public meetings held to introduce and present the concept of the UFMP to the public and to field public comments from attendees. A common theme in the public meetings was a desire to reduce or eliminate impacts to mature urban trees from development and for more trees to be planted across the City, with a greater focus on planting native species and planting in more equitable ways. Additionally, a shared sense of enthusiasm for planting trees in a variety of places was expressed in all meetings and in survey responses.

GOAL

The City of Fort Lauderdale aims to increase tree canopy cover to 33% by 2040.

Despite the environmental, economic, and social value of its urban forest, impacts from severe weather, sea level rise, emerging pests and diseases, and Fort Lauderdale's recent surge in urban development have led to a stagnation of the City's percent tree canopy, which has hovered around 25-26% since 2017 and is currently at 26.6% (**Figures 1.1, 1.2**). In response, the City's leaders adopted increased protections for mature trees in 2024 and resolved to implement a UFMP for the express purpose of achieving 33% tree canopy cover by 2040, which will require growing approximately 2.1 square miles of tree canopy in Fort Lauderdale's 5.6 square miles of available planting area to meet that goal.

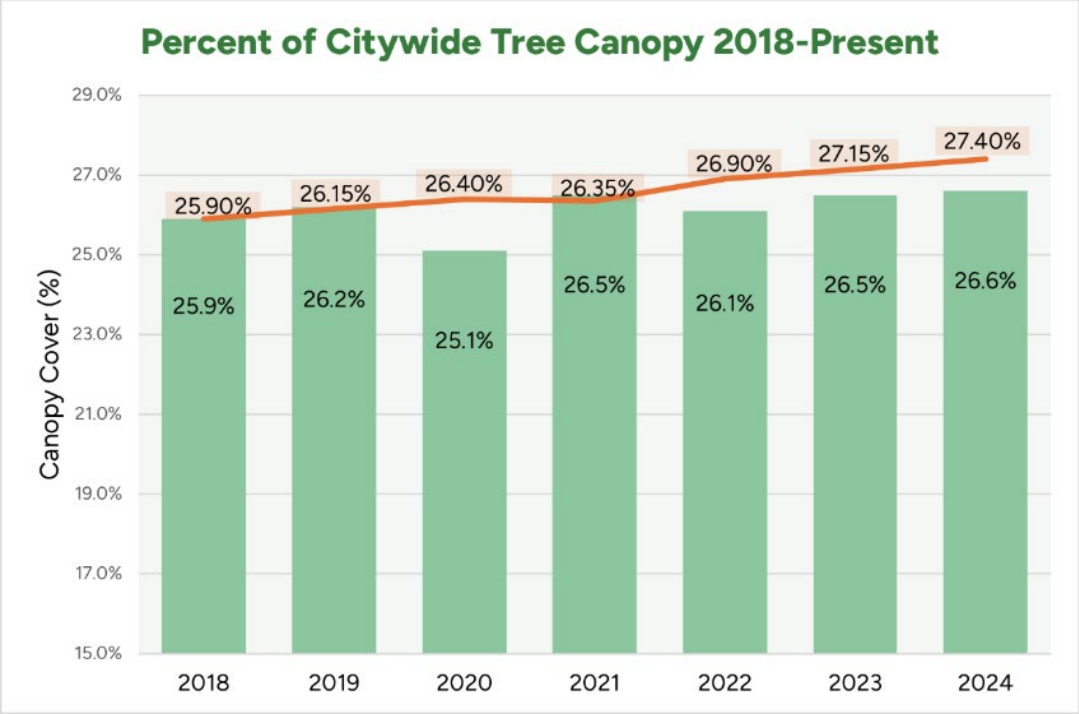

Figure ES.1: Average Citywide tree canopy from 2018-2024 according to i-Tree Canopy Analyses. The bars show the results from the canopy analyses, and the line graph shows the canopy goals for each year.

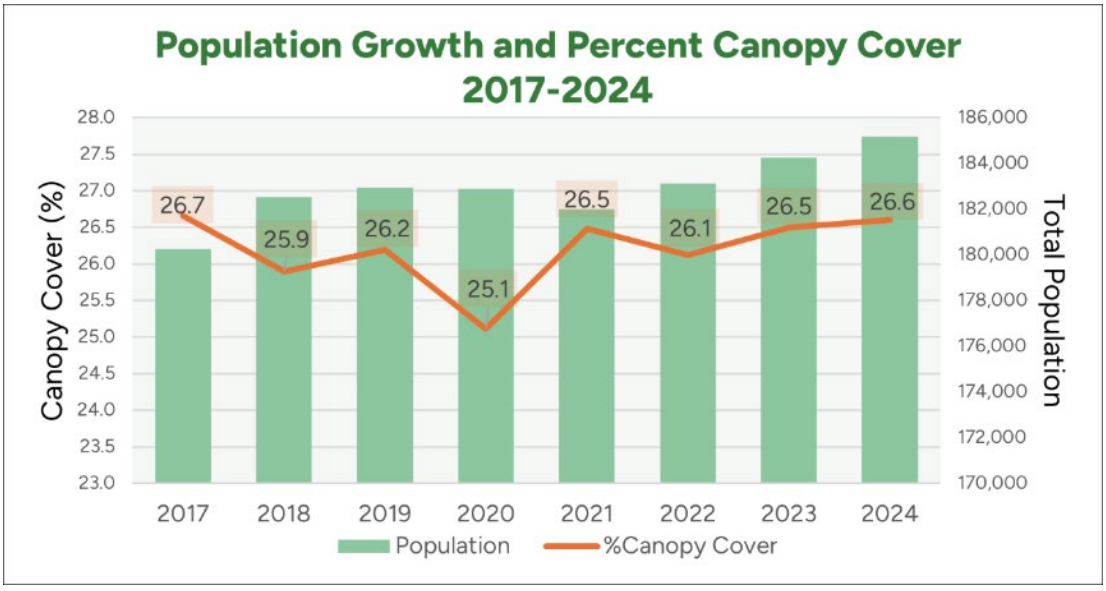

Figure ES.2: Percent canopy cover and population growth in Fort Lauderdale from 2017-2024.

In addition to supporting achievement of the 33% goal, the UFMP outlines the current state of the City's urban forest, how its stakeholders play a role in managing it, what the community's attitudes and experiences related to trees are, and how it can orient its practices and relationships to reflect the values of the community and reach its goals. The UFMP proposes 62 recommendations across 14 different areas of urban forest maintenance, management, regulation, enhancement, and funding that will advance Fort Lauderdale's current program into a paragon of resilient, innovative, equitable, and data-driven urban forestry (**Appendix I**).

The 14 recommendation action areas include:

- Action Area 1: Tree preservation measures
- Action Area 2: Permit fees and penalties
- Action Area 3: Replacement standards
- Action Area 4: Tree preservation incentives for developers
- Action Area 5: Homeowner assistance
- Action Area 6: Staffing
- Action Area 7: Invasive species, tree pests, and diseases
- Action Area 8: Tree planting
- Action Area 9: Mangroves
- Action Area 10: City design practices
- Action Area 11: Centralized tree databases
- Action Area 12: Community engagement
- Action Area 13: Interagency engagement
- Action Area 14: Revised tree palette

The changes recommended by the UFMP will not happen overnight. Timelines for implementation, associated milestones, and estimated costs for each recommendation are laid out. However, the guarantee for a future urban forest hinges on investments made today. A goal as ambitious as 33% canopy by 2040 calls for equally ambitious actions to be taken now. Potential hurdles to success include the significant investment of resources required to realize the necessary planting goals, the City's limited ability to incentivize and monitor tree planting on private property, fulfilling the new responsibilities associated with the UFMP within City government, and the uncertain outcomes of community outreach and planting programs.

It is estimated that 160,000 – 276,000 trees may need to be planted between now and 2040 to realize this goal, with minimal loss of existing canopy. The investment to realize all the goals of the UFMP may range between $27.6 million and $103.4 million by 2040. Developers and homeowners will need to overwhelmingly buy into the City's desire to minimize tree removals and plant more trees across the City. The City will need to expand the role of existing employee positions and create new ones, adopt new Codes, enforce and expand regulations, generate plans, and conduct public outreach. The City will need to ensure that the community outreach it conducts is effective, widespread, relevant, and set up for long-term success.

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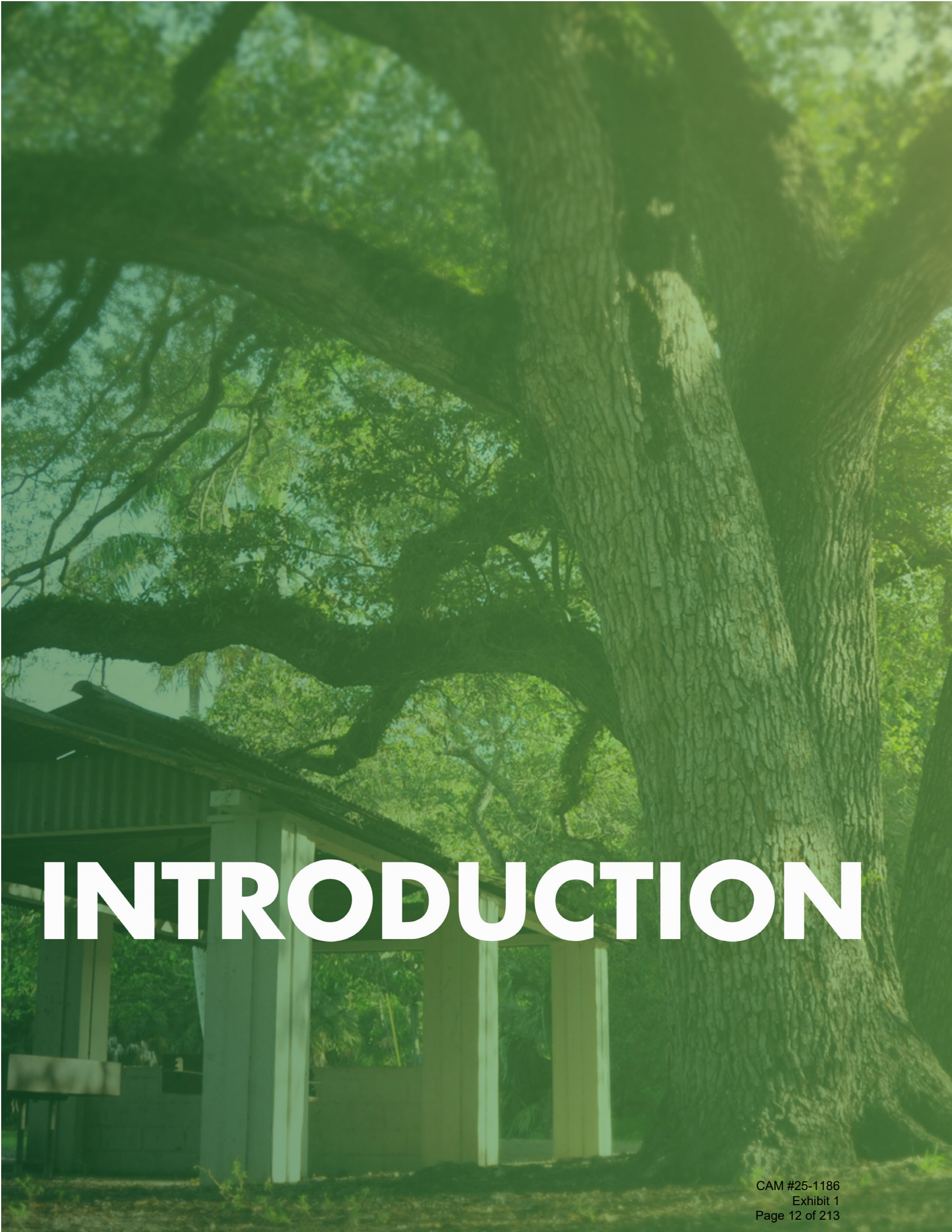
Every plan has challenges, some anticipated and others that emerge along the way. Similarly, the definition of success may evolve as actions are implemented and outcomes take shape. The only way to discover if the goals and aspirations of this UFMP are possible is to put them into practice. Adopting this Plan and working toward its goals will strengthen Fort Lauderdale's urban tree canopy, enhance the quality of life for residents, and create lasting benefits for the future generations of people and trees who will grow roots in this City.



INTRODUCTION

INTRODUCTION

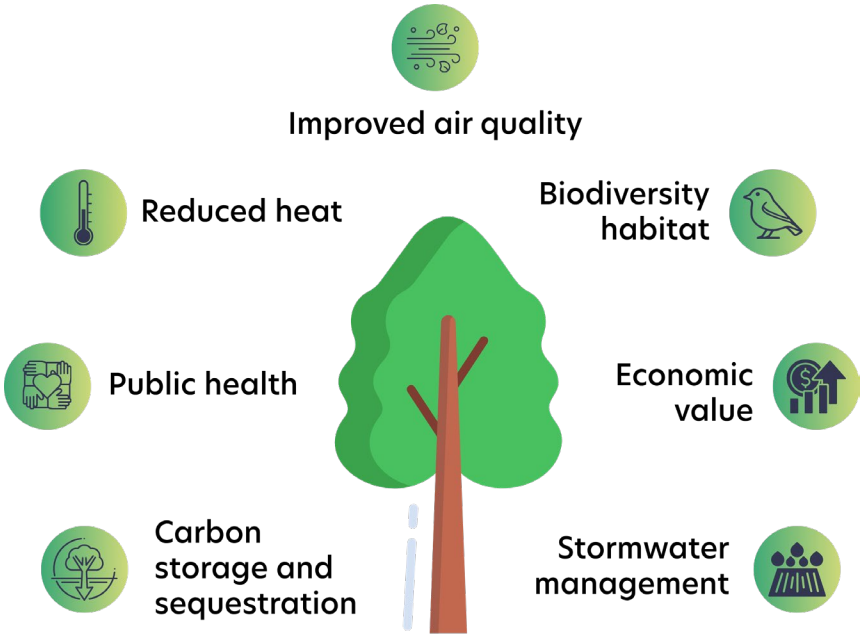
WHY TREES? BENEFITS OF THE URBAN FOREST

Urban trees are a vital part of city life that deliver environmental, economic, and social benefits to people, businesses, and infrastructure. Trees are fundamental elements to the green infrastructure in our built environment. Trees incorporate natural resources and principles to manage water, improve air quality, reduce heat, enhance biodiversity, and support community well-being.

Urban tree canopy cover refers to the layer of leaves, branches, and stems of trees that cover the ground when viewed from above.

Like other electric and water utilities, tree canopy cover delivers essential services to communities but, unlike many utilities, they do not require an account or subscription. By simply living, working, or recreating in the vicinity of trees, one can experience their ecological, social, and economic benefits, such as:

- Reduced heat: Trees reduce the urban heat island effect by providing shade and lowering surface and air temperatures.
- Improved air quality: Leaves filter pollutants such as ozone, nitrogen dioxide, and particulate matter.
- Stormwater management: Tree canopies intercept rainfall, slow runoff, stabilize soils, and reduce pressure on stormwater systems.
- Carbon storage and sequestration: Trees absorb and store CO_2 and other greenhouse gases, mitigating the root causes of climate change.
- Biodiversity habitat: Urban forests provide food and shelter for birds, butterflies, and other desirable wildlife.
- Public health: Access to green spaces and tree-lined streets is linked to lower stress, improved mental health, reduced respiratory illnesses, and quicker recoveries following medical procedures.
- Economic value: Neighborhoods with more tree canopy correlate with higher property values and attract businesses and residents. The above-listed benefits have defined values which can amount to hundreds of thousands of dollars, as do individual trees themselves.



Increasing canopy coverage enhances climate resilience, public health, and equity:

- Climate adaptation: Robust tree canopies improve resilience to extreme heat waves, heavy rainfall events, and moderately high winds. Flood- and salt-tolerant trees, such as bald cypresses and mangroves, respectively, can help stabilize soils in flood-prone areas, reduce wave intensity, and help redirect excess water away from infrastructure.
- Environmental services: Poor health and infrastructural inequities have been linked to the historically reduced canopy cover in disadvantaged neighborhoods. Expanding canopy in these areas can address these disparities.
- Sustainability goals: Increasing canopy helps cities meet climate action targets and sustainability commitments.
- Long-term resilience: Planting and maintaining trees now ensures canopy cover for future generations, as urban trees take years to mature.

URBAN FOREST AS GREEN INFRASTRUCTURE

Green infrastructure refers to natural and semi-natural systems that provide ecological benefits. Trees are a cornerstone of green infrastructure because they:

- Naturally perform or enhance some services that utilities provide, such as stormwater retention, temperature regulation, and air filtration.
- Reduce reliance on "gray infrastructure" (pipes, concrete, storm drains) by naturally managing water and cooling cities.
- Integrate with other green infrastructure elements (green roofs, bioswales, wetlands) to form a holistic urban ecosystem.
- Provide multi-benefit returns: one tree simultaneously contributes to climate, water, air, biodiversity, and social goals, which all have distinct economic values and deliver returns on investment.

SUPPORTING THE URBAN FOREST THROUGH POLICY

Public policy is essential to ensure trees are valued, preserved, and expanded in cities. Fort Lauderdale's approaches to protecting, regulating, and expanding its urban trees include:

- Tree preservation ordinances: Unified Land Development Regulations (ULDR) and City Ordinances that regulate removal, pruning, and protection of mature or heritage trees and require minimum planting of young trees during new development.
- Canopy cover goals: Cities adopt measurable canopy targets. Fort Lauderdale's current canopy cover goal is 33% canopy by 2040. This policy and other tree preservation policies are outlined in the City's Comprehensive Plan – Advance Fort Lauderdale (**Table 2.3**, pg.26).
- Urban forest management plans: Long-term strategies that integrate canopy goals into climate, health, and land-use planning and outline milestones for the actions which will achieve these goals.
- Incentives and grants: Incentives attempt to dissuade developers and property owners from removing desirable trees that they would otherwise not want to retain. Grants provide financial resources and technical assistance for private landowners, nonprofits, communities, and city departments to plant and maintain trees. As part of the UFMP, Fort Lauderdale is exploring how it can support developers and property owners in contributing to the health and stability of the urban forest canopy.
- Funding: Cities must adequately fund all relevant urban forestry internal stakeholders to maximize their performance in maintaining, managing, and enhancing tree canopy. Many operations are considered essential, whereas others may experience annual fluctuations in funding.

- Equity-based tree programs: Policies and partnerships that prioritize tree planting, preservation, and technical assistance to residents in underserved, low-canopy, and/or heat-vulnerable neighborhoods. As part of the UFMP, Fort Lauderdale is undertaking a tree planting campaign that will collaborate with communities across the City to enhance urban forest equity.
- Maintenance and risk management standards: Policies that describe and regulate acceptable approaches to pruning, disease control, and tree replacement to keep the canopy healthy and safe.

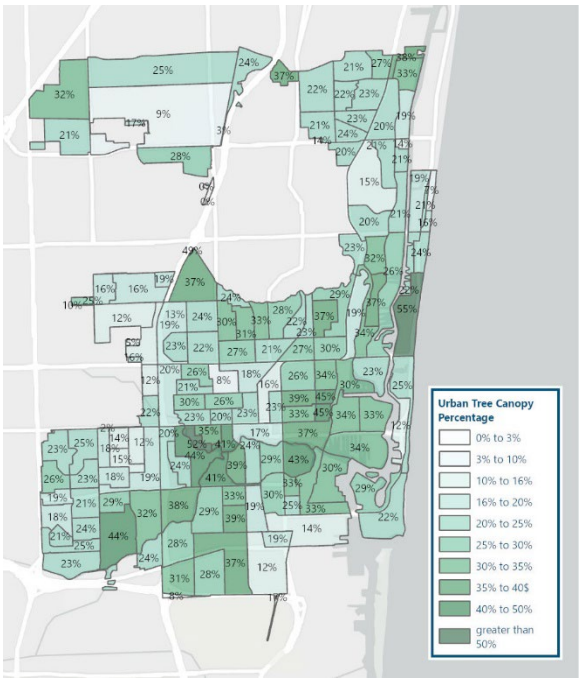


Figure 1.1: Fort Lauderdale has an average Citywide canopy cover of 26.6% as of 2024

CLICK TO VIEW THE FULL-PAGE MAP

PURPOSE OF THE UFMP: A ROAD MAP TO 33% TREE CANOPY

Fort Lauderdale currently has an urban tree canopy covering 26.6% of the City (**Figure ES.1, 1.1**). However, the urban forest faces growing challenges due to climate change, storms, pests, and development pressure. Recognizing the increasing importance of trees for mitigating urban heat, improving air quality, and sequestering carbon, the City has set a goal to increase canopy coverage to 33% by 2040 (**Figure 1.2**).

The 33% canopy goal was first put forth in the Advance Fort Lauderdale 2040 Comprehensive Plan, which was adopted by the City Commission in 2020. Expanding and enhancing urban tree canopy is a common goal for cities seeking to improve quality of life for their residents. Proximity and exposure to urban tree canopy coincides with a myriad of positive effects for urban areas, including improving mental and physical health outcomes, elevated retail sales, reduced energy consumption and stormwater runoff, cooler ambient temperatures during summer months, lower incidents of vehicular

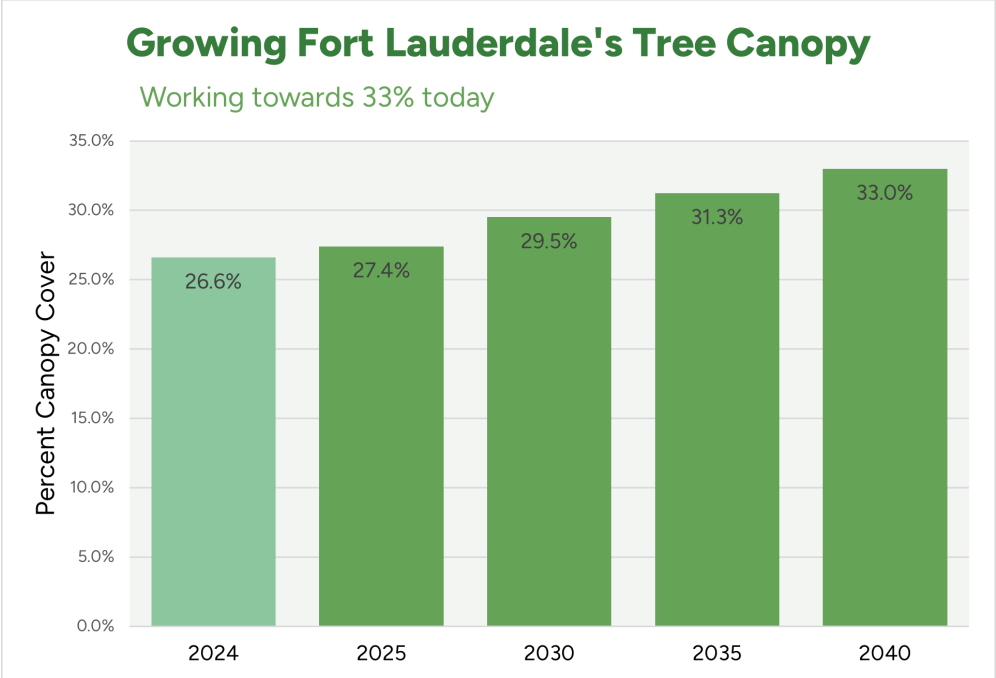


Figure 1.2: The purpose of the Urban Forestry Master Plan is to map the road to Fort Lauderdale's goal of increasing its Citywide tree canopy cover from its current 26.6% to 33% by 2040.

accidents, and lower rates of violent and petty crime. Maintaining healthy trees and planting new ones also represents a significant investment in the fabric of a neighborhood and can be easily woven into other efforts to improve access to resources, facilities, and infrastructure. They therefore act not just as a utility but also as a facilitator for community members' sense of place.

While the City has prioritized this goal in many other guiding documents, overall canopy coverage has remained essentially flat since 2017. This is due to several factors, including the removal of mature canopy trees for development, damage from severe weather, and impacts of pests and disease.

To map the road to 33% canopy by 2040, the City partnered with Resource Environmental Solutions (RES) ("the consultant"), a local consulting firm specializing in urban forest management and policy, to create an Urban Forestry Master Plan (UFMP). The UFMP assesses the current state of the urban forest, outlines clear goals and priorities, and provides a sustainable, strategic, and equitable framework for tree management in public and private spaces. This UFMP incorporates public input, coordination with City staff, and the latest science to craft incentives to preserve the City's existing canopy and identify the most feasible ways to plant and maintain more trees to grow the future canopy of Fort Lauderdale.

The UFMP is intended to be used as a road map for the City, community organizations, businesses, non-profits, and neighbors to make contributions towards achieving 33% canopy by 2040. It aligns with existing City Master Plans and reflects the expectations that the public has of its urban forest. The recommendations listed in the UFMP are actions that the City should take to reach its canopy goal.

Neither City staff nor community members alone will be able to achieve this lofty goal. It will require participation and cooperation across neighborhoods, social groups, community organizations, business owners, developers, and local governments. However, Fort Lauderdale's reputation as a City of Neighborhoods underpins the remarkable ability for its neighbors to band together to maintain the spirit and character that distinguishes it.

FORT LAUDERDALE'S URBAN FOREST TODAY

FORT LAUDERDALE'S URBAN FOREST TODAY

NATURAL RESOURCE ASSESSMENT

HISTORY OF THE URBAN FOREST

For millennia, the lower New River was part of what is now known as the Glades cultural area, and by the mid-1500s, when Spanish explorers first established missions there, it was Tequesta territory. At this time, the landscape was shaped by small elevation and salinity changes brought about by the changing tides of the Atlantic Ocean and sediment deposits of the New River. Coastal strand and dunes ecosystems just inland of the beach included sea grape, coco-plum, Spanish bayonet, railroad vine, and saw palmetto. Swamps of red and white mangrove and buttonwoods would have grown up around tidal edges and Intracoastal area. Further inland, slightly higher "islands" of dry ground were covered by tropical hardwood hammocks composed of gumbo-limbo, black ironwood, inkwood, satinleaf, pigeon plum, and live oak. Pine flatwoods and scrub of South Florida slash pine would have grown in areas maintained by natural and prescribed fires. Closer to the Everglades, a vast sawgrass marsh with tree islands of bald cypress, red maple, and dahoon holly would have covered the landscape. The land would have looked much like this into the 18th and 19th centuries, when the Seminole were driven deeper into the Florida peninsula during the Seminole Wars at the onset of the New River Settlement period.

At this time, pioneer homesteaders cleared upland forests and drained mangrove swamps to develop roads, homesites, trading posts, boatbuilding facilities and other infrastructure. Native pines, oaks, mahogany and cabbage palms were harvested and used for timber. Major drainage projects in the early 1900s opened land for agriculture and development.

During the 1920s, the population of Fort Lauderdale grew as it was promoted to northerners as a tropical paradise. Streets were planted with tropical and iconic royal and coconut palms and live oaks to attract potential real estate buyers. The population grew and development resulted in additional clearing.

Over the next few decades, invasive trees such as Australian pine, Brazilian pepper and melaleuca were introduced to provide shade, windbreaks, drainage, and aesthetic variation. These species remain problematic invasive species to this day, and non-natives like Australian pine performed notoriously poorly in hurricanes.

In 1971, the City's Urban Forester, William Theobald, conducted the first Citywide canopy analysis by randomly imposing a dot matrix over aerial photography, a method similar to the way the City currently conducts canopy analyses with the i-Tree® Canopy tool. Canopy was analyzed at the Census Tract-level, with only one Tract having greater than 20% canopy cover (**Figure 2.1**). The 1971 analysis estimated tree canopy at 5.13% (822 acres) of the City. At that time, much of the urban tree canopy surveyed by the City was composed of Jamaican Tall coconut palms (*Cocos nucifera* 'Jamaican Tall'). The lowest canopy coverage was found in Census Tract 410, located in the neighborhoods of Golden Heights/Dillard Park (0.9% canopy cover) and Census Tract 428, located in the Melrose Manors neighborhood (0.8% canopy cover).A 1973 canopy analysis indicated that percent canopy cover had dropped to 4.9% (786 acres), likely due to impacts of Lethal Yellowing (*Candidatus Phytoplasma palmae*) on the Jamaican Tall coconut palms. Regardless, the analysis' accompanying report suggested that a 40% canopy cover goal was "a reasonable goal to establish for the City of Fort Lauderdale".

Despite the impacts of Lethal Yellowing, a 1981 canopy analysis showed that percent canopy had increased to 15.3% (2,445 acres) Citywide. **Figure 2.2** from the 1983 Tree Canopy Analysis shows the changes from 1971 to 1981 in all Census Tracts surveyed. This Analysis stated that "40% canopy could possibly be achieved before 1991."

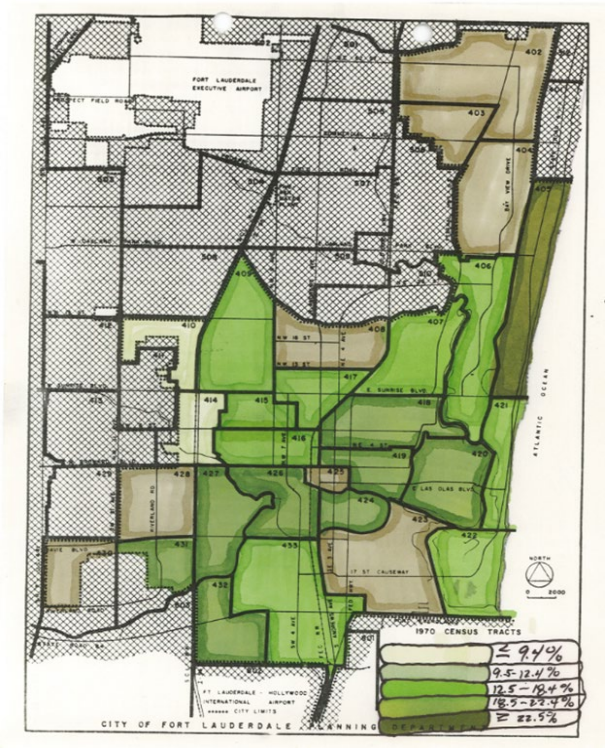


Figure 2.1: Results of Fort Lauderdale's 1971 tree canopy analysis.

DATA SHEET

TABLE 1

Census Tract (CT)	Land Area (Acres)	TCA 71 (Acres canopy)	TCA 81 (Acres canopy)	TCA 71 (Canopy %)	TCA 81 (Canopy %)
402	1141.71	39.80	128.80	3.49	11.28
403	435.12	8.71	46.86	2.00	10.77
404	866.86	25.65	108.18	2.96	12.48
405	650.27	121.87	167.21	18.74	25.71
406	878.19	36.15	123.82	4.12	14.10
407	712.02	25.21	93.77	3.54	13.17
408	621.09	25.04	73.23	4.03	11.79
409	885.92	75.75	141.92	8.55	16.02
410	345.18	3.12	29.9	0.90	8.66
411	12.05	0.30	1.45	2.49	5.70
414	358.58	24.69	28.01	6.89	7.81
415	279.70	12.83	35.18	4.59	12.61
416	435.70	33.64	56.64	7.72	13.03
417	419.69	19.85	65.47	4.73	15.60
418	677.21	34.85	129.72	5.15	19.16
419	371.66	32.01	80.73	8.61	21.72
420	446.73	17.31	87.63	3.87	19.62
421	317.75	17.94	49.22	5.65	15.49
422	421.01	24.06	68.08	5.71	16.17
423	896.96	32.62	102.12	3.64	11.39
424	261.04	25.70	49.68	9.85	19.03
425	107.39	3.57	11.14	3.32	10.37
426	542.07	54.97	117.99	10.14	21.77
427	606.55	27.06	130.41	4.46	21.50
428	675.86	5.25	66.24	0.78	9.80
430	410.73	11.30	39.33	2.75	9.58
431	338.90	17.21	62.97	5.08	18.53
432	590.39	27.88	126.04	4.72	21.35
433	1324.30	37.53	223.10	2.83	16.85
TOTAL	16,030.63	821.87	2,444.66	5.13	15.25

Average size census tract (in acres) = 552.78
Average canopy in average size census tract TCA 71 (in acres) = 28.34
or 5.13%
Average canopy in average size census tract TCA 81 (in acres) = 84.30
or 15.25%

Figure 2.2: Data table from the 1983 Tree Canopy Analysis showing changes in canopy at the Census Tract-level from 1971 to 1981.

However, this trend did not continue, and a 40% canopy cover was not achieved. The 1987 Tree Canopy Analysis revealed that the City's overall average canopy stood at 17.7% (3,354 acres).

In 1996, the City conducted a limited Urban Inventory Report which inventoried 14,302 trees, 66% were live oak, cabbage palm, or black olive. Most trees in the inventory were in good or fair condition (96%), and 74% were 10 inches diameter at breast height (DBH) or less, indicating that most of the urban forest in the area of interest were approaching maturity at that time. The report recommended that the City undertake an automated inventory of all its trees, calling such action "vital" to managing its urban forest into the future.

A 1996 Tree Canopy Analysis noted that since the 1971 Analysis, several Census Tracts with low canopy percentages had been added to the City, including the Executive Airport (6.23%), FiveAsh Water Treatment Plant (4.32%), Sunset Memorial Cemetery (4.42%), and a one-acre grocery store and parking lot at Turner's Corner (0.00%). The Analysis also pointed out other Census Tracts had low canopy covers and should be prioritized in the City's reforestation efforts, including areas of Lauderdale Isles, Flagler Village, Downtown, and South Middle River neighborhood. As of 2022, the overall canopy cover for these areas exceeds 20% (**Table A.1,** Appendix A), indicating significant increases in canopy at the neighborhood-level over the course of 35 years.

The 1996 Analysis called the City's 300% increase in canopy cover since 1971 "very commendable," citing the City's tree preservation policies, Adopt-A-Tree program, and Homeowners' Association plantings as having contributed to their success. The Analysis projected that the goal of 40% canopy cover could be met by 2010 if the City continued on the trajectory that it was on at that time. As with the 1981 Analysis, this projection proved to be overly confident.

BRANCH OUT

» Appendix H: 2010 Fort Lauderdale Canopy Assessment

A 2010 canopy analysis conducted with data from Broward County indicated that the City's average tree canopy cover stood at 20.4%, an increase of less than 3% since 1987 (**Appendix H**). Although this analysis did not provide data at the Census Tract-level, and therefore may not be directly comparable to the City's Tree Canopy Analyses, it nonetheless provided canopy data for the priority areas identified in these analyses. Golden Heights' canopy cover stood at 11.76%, and Dillard Park's was 13.78%. Flager Village's canopy was 13.96%, Downtown's was 20.21%, Lauderdale Isles' was 28.27%, and South Middle River's was 24.25%.

By 2013, the City began conducting canopy analyses using the USDA Forest Service's free i-Tree Canopy software. While these analyses did not provide neighborhood-level data, they used an imposition of a random dot-matrix over aerial photography, essentially the same methodology that the City had been using since 1971, to extrapolate an average Citywide canopy cover percentage. The average Citywide canopy cover in 2013 was 19.6%.

The City continued on an upward trajectory of adding canopy cover until 2016, where it peaked at 27.4%. By 2018, the City's adjusted canopy cover had declined slightly to 25.9%. From 2018 to the present day, the City's canopy has ebbed and flowed insignificantly from year to year, never surpassing 26.6% (2024) (**Figure 1.2**). The total value of the benefits for 2024 calculated by the i-Tree Canopy software totaled over $3.3 million. These benefits include air pollutants removed (**Figure 2.3**), stormwater intercepted (**Figure 2.4**), and carbon sequestered (**Figure 2.5**). While carbon storage is not considered an annual value, as it measures the total carbon a tree or forest stores over its lifetime, the estimated value of carbon stored in Fort Lauderdale's urban forest stood at nearly $32.8 million as of 2024 (**Figure 2.5**).

Tree Benefit Estimates: Air Pollution (English units)

Abbr.	Description	Amount (T)	±SE	Value (USD)	±SE
CO	Carbon Monoxide removed annually	7.15	±0.23	$2,787	±90
NO2	Nitrogen Dioxide removed annually	13.79	±0.45	$2,234	±73
O3	Ozone removed annually	136.31	±4.43	$202,769	±6,583
SO2	Sulfur Dioxide removed annually	1.27	±0.04	$309	±10
PM2.5	Particulate Matter less than 2.5 microns removed annually	5.63	±0.18	$277,747	±9,017
PM10*	Particulate Matter greater than 2.5 microns and less than 10 microns removed annually	22.59	±0.73	$56,705	±1,841
Total		**186.73**	**±6.06**	**$542,550**	**±17,614**

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Air Pollution Estimates are based on these values in T/mi²/yr @ $/T/yr and rounded: CO: 0.817 @ $389.82 | NO2: 1.575 @ $162.01 | - O3: 15.572 @ $1,487.60 | SO2: 0.145 @ $243.41 | - PM2.5: 0.643 @ $49,364.33 | - PM10*: 2.581 @ $2,510.32 (English units: T = tons (2,000 pounds), mi² = square miles)

Figure 2.3: This table from the City's 2024 i-Tree Canopy analysis shows the value and quantities of air pollutants removed by Fort Lauderdale's urban forest in 2024.

Tree Benefit Estimates: Hydrological (English units)

Abbr.	Description	Amount (T)	±SE	Value (USD)	±SE
AVRO	Avoided Runoff	87.20	±2.83	$779,261	±25,299
E	Evaporation	609.31	±19.78	N/A	N/A
I	Interception	609.31	±19.78	N/A	N/A
T	Transpiration	1,983.46	±64.39	N/A	N/A
PE	Potential Evaporation	4,500.19	±146.10	N/A	N/A
PET	Potential Evapotranspiration	3,589.64	±116.54	N/A	N/A

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Hydrological Estimates are based on these values in Mgal/mi²/yr @ $/Mgal/yr and rounded: AVRO 9.962 @ $8,936.00 | E 69.607 @ N/A | I 69.607 @ N/A | T 226.590 @ N/A | PE 514.100 @ N/A | PET 410.079 @ N/A (English units: Mgal = millions of gallons, mi² = square miles)

Figure 2.4: This table from the City's 2024 i-Tree Canopy analysis shows the value and quantity of hydrological benefits of Fort Lauderdale's urban forest in 2024.

Tree Benefit Estimates (English units)

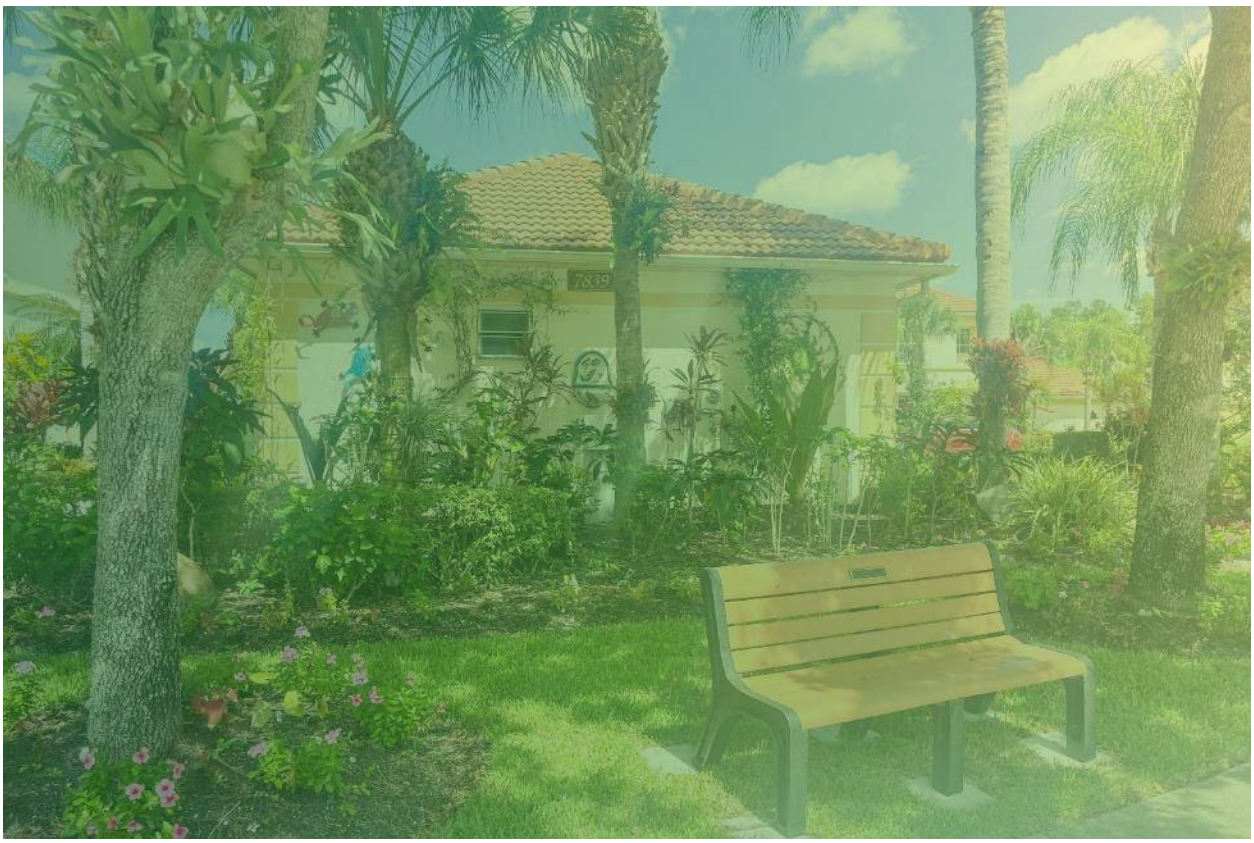
Description	Carbon (kT)	±SE	CO_2 Equivalent (kT)	±SE	Value (USD)	±SE
Sequestered annually in trees	11.87	±0.39	43.53	±1.41	$2,024,570	±$65,727
Stored in trees (Note: this benefit is not an annual rate)	192.05	±6.23	704.19	±22.86	$32,754,595	±$1,063,371

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified plot points. Amount sequestered is based on 1.356 kT of Carbon, or 4.972 kT CO_2, per mi²/yr and rounded. Amount stored is based on 21.940 kT of Carbon, or 80.446 kT CO_2, per mi² and rounded. Value (USD) is based on $170,550.73/kT of Carbon or $46,513.84/kT of CO_2 and rounded. (English units: kT = kilotons (1,000 tons), mi² = square miles)

Figure 2.5: This table from the City's 2024 i-Tree Canopy analysis shows the value and quantity of carbon sequestered by Fort Lauderdale's urban forest in 2024 and the value and quantity of carbon stored by Fort Lauderdale's urban forest as of 2024.

SPECIES DIVERSITY OF THE URBAN FOREST

Species diversity is widely regarded as a cornerstone of sustainable urban forest management. In the 20th century, US cities have seen and continue to see widespread devastation of urban forests that lacked species diversity. In the 1930's, one out of every four trees from Maine to Georgia was an American chestnut *(Castanea dentata*), until they were virtually wiped out by the chestnut blight fungus (*Cryphonectria parasitica*). The American elm *(Ulmus americana)* was once a paragon of urban trees, making up a large portion of urban tree canopy in most northeastern and midwestern cities, until the onset of Dutch elm disease (*Ophiostoma ulmi*), which killed off an estimated 75% of American elms. Ironically, the American elms were rapidly replaced in many cities by ash trees (*Fraxinus* sp.), which, in turn, have been reduced to a fraction of their former population due to the ongoing proliferation of the emerald ash borer beetle (*Agrilus planipennis*).



South Florida's urban forests are also no stranger to the detriment of tree pests and disease. The impacts of Lethal Yellowing were partly responsible for Fort Lauderdale's first attempts to inventory and manage its

urban forest on a City-wide scale and to begin planting a wider variety of resilient shade trees. Today, many Florida municipalities are grappling with impacts from Lethal Bronzing, a similar disease to Lethal Yellowing that affects many of Florida's native palms, as well as Citrus Greening, a disease which has decimated vast amounts of different varieties of Florida's signature tree commodity.

Species diversity is not a new concept to Fort Lauderdale's urban forest management. The 1996 Urban Inventory Report stated, "Planting a variety of species prevents monoculture. This reduces the spread of insects and disease."

It is therefore imperative that, as the City strives to reach 33% canopy cover by 2040, it not commit the folly of so many other US cities by planting a monoculture of fast-growing canopy trees. In doing so, the possibility looms that decades of growth, labor, and benefits could be wiped out in a matter of months.

OTHER NATURAL RESOURCES

Data of Fort Lauderdale's soils, hydrology, pests, urban heat islands, and sea level rise were analyzed. **Table 2.1** describes these assessments and their impact on the urban forest.

Table 2.1: **Natural Resource Assessment**

Natural Resource Assessment	Description	Impact on Urban Forest
Soils	The most common soil in Fort Lauderdale is Urban land (4,013.2 acres). Other prominent soils are either poorly-drained, deep sands with a high groundwater table or well-drained fine sands with a low groundwater table.	Soil characteristics, such as drainage and porosity, affect what kinds of trees will thrive. As a primarily Urban land environment, tree species adapted to urban conditions are most likely to succeed.
Hydrology	Major bodies of water in Fort Lauderdale include the New River (North and South Fork), the Florida Intracoastal Waterway, and the Atlantic Ocean. Fort Lauderdale is situated upon the Biscayne Aquifer. Saltwater intrusion has also been identified as a threat to the Biscayne Aquifer, which can be mitigated by restoring coastlines and stream banks. Average annual precipitation is 54 inches, which must be managed with stormwater infrastructure such as retention and detention ponds, underground piping, pumps, and canals.	Strategic planting of salt and flood-tolerant trees may enhance low impact design and other kinds of green stormwater management systems, as trees can transpire large amounts of water over time, and their root systems can direct infiltration while stabilizing soils.
Pests	Three species of termites threaten the City's urban forest and wood-based infrastructure. Relevant staff have been directed to raise awareness in communities particularly at-risk of infestation and establish a termite inspection program for City trees. Lethal Bronzing threatens many of the City's native and non-native palms. Species that are susceptible should be monitored for	Termites will likely be an impediment to any progress made towards 33% canopy cover. The City will need to expand efforts to combat the threat that termites pose to trees in order to preserve and expand its urban tree canopy cover. Lethal Bronzing and Citrus greening may impact the City's canopy goals through mortality on affected species. The City

Natural Resource Assessment	Description	Impact on Urban Forest
Pest (*continued*)	signs of infection. Palms' tissue can be tested to confirm whether they are infected. Citrus greening affects many varieties of Citrus trees that neighbors grow in their yards. People who are concerned about this disease's impact on their Citrus trees should be directed to the proper agency for further information and analysis.	should continue to work with Broward County Extension and other relevant agencies to assist residents with concerns about their palms and Citrus.
Urban heat island	Average temperatures in Fort Lauderdale have risen 4.5 degrees Fahrenheit since 1895. By 2050, forecasters expect that there will be 184 days of extreme heat, when temperatures exceed 90 degrees Fahrenheit. Areas with cooler average temperatures have more natural landscaping and tree cover, while densely developed areas have higher temperatures due to the propensity of buildings and hardscape to absorb and radiate heat energy.	Trees and vegetation can lower the land surface temperature and air temperature through increased shading and evapotranspiration. As temperatures rise, establishment periods for newly planted trees will increase, requiring more maintenance for trees to successfully establish. Trees may face heat stress even after they are established, and proximity to hardscapes may exacerbate this stress.
Sea level rise	Sea level is predicted to rise 10-17 inches above current average levels by 2040 and 21-40 inches by 2070, resulting in salt water flooding in many Fort Lauderdale neighborhoods. In recent years, some areas in the City can experience tidal flooding over 90 days per year.	Even temporary saltwater inundation can injure or kill young and mature trees, as well as create hostile soil conditions in which many trees will not grow. Planting species with high salt and flood tolerance should be conducted in areas that are likely to be impacted by increases in coastal flooding as well as in green infrastructure designed to redirect, absorb, or otherwise mitigate stormwater. As an extra protection measure, trees which the City plants in these areas today have to be planted in elevated beds so that their roots are not exposed to rising salty groundwater table or impacted by tidal nuisance floodings as sea level rises.

MANGROVES

As the "Venice of America," Fort Lauderdale is shaped by its fresh, brackish, and saltwater environments. Planting and preserving mangrove trees is therefore a primary focus of this City's UFMP.

There are three species of mangroves in South Florida: Black mangroves (*Avicennia germinans*), red mangroves (*Rhizophora mangle*), and white mangroves (*Laguncularia racemosa*). Buttonwoods (*Conocarpus erectus*) typically are found growing next to mangroves and thrive in similar habitats, and as such are considered a kind of "honorary" mangrove species. Mangroves are a keystone species, meaning that they directly or indirectly impact all or most species of plants and animals with which they share an ecosystem. This disproportionately large influence of one or a few species means that by managing them, ecosystem managers therefore enhance the habitat for several other species.

Mangroves grow in areas with brackish or salt water, where salt and freshwater mix together, creating unique habitats that can have outsized influence on coastal and inland flooding. Mangroves remove pollutants and heavy metals from water and intercept sediment and perform erosion control. This reduces water treatment costs for communities and improves water clarity, which is good for fish, shellfish, and other aquatic species.

Mangroves reduce wind and wave attenuation during severe weather such as tropical storms and hurricanes, which can save shoreline and inland communities millions in damages from storm surges and flooding.

Mangroves sequester and store greenhouse gases up to 10 times more efficiently than rainforest systems, improving the quality of the air we breathe and reducing the root causes of climate change at greater rates and with less energetic input.

However, these benefits have been significantly curtailed as mangroves and mangrove habitats have declined over the last century due to impacts from coastal development and changes to hydrology that sometimes happen miles inland. Mangroves are increasingly found inland, taking over pond apple (*Annona glabra*) habitats, as salt water intrusion from sea level rise makes coastal waterways more brackish.

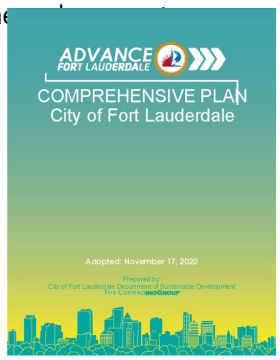
As these impacts have intensified in many areas of Florida, so has the frequency of large, intense storms which make landfall in Florida communities. While planting mangroves alone will not eliminate or redirect these storms or their causes, they are a useful but limited tool that can be utilized to assist with resilience to storm surges, flooding, and sea level rise.

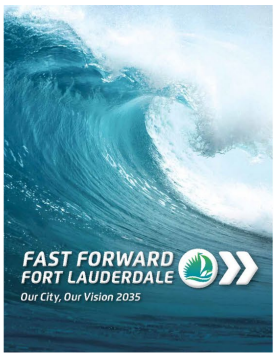
Mangroves also provide recreational opportunities for ecotourism not found in other places in Florida, in addition to their positive impacts on fisheries. By contributing to enhanced mangrove habitats along the City's coastlines and waterways, the City could play a strong role in cultivating its ecotourism economy.

In relation to the urban forest canopy specifically, approximately 9.6% of Fort Lauderdale is water. Only certain species of trees will grow adjacent to waterbodies, especially when water levels fluctuate dramatically during precipitation events. All three mangroves and buttonwood are uniquely fit to grow in areas with brackish water. Although pruning and maintaining mangroves is highly regulated, planting them in appropriate areas can unlock opportunities for the City to expand its urban tree canopy that many other places do not have.

REVIEW OF CITY PLANS, ORDINANCES, AND OTHER RELEVANT DOCUMENTS

The consultant reviewed 45 City of Fort Lauderdale planning documents, surveys, studies, and Advisory Board communications for relevance towards the goals of the UFMP and found shared goals





FORT LAUDERDALE'S TREE PRESERVATION ORDINANCE

The City's recently adopted revisions to Section 47-21.15 of the Unified Land Development Code (ULDR) outline stricter requirements for landscape planning for new development, incentives which may increase the rate of preservation of mature trees on single family residential lots, a higher replacement value of trees to be removed, and greater protection for mature trees in construction zones. Future revisions will address significant urban forestry questions such as how to reduce tree removals in developments and how many new trees should be planted. Effective tree ordinance clauses are a crucial component to preserving tree canopy.

Table 2.2 discusses topics that were evaluated in a review of the City's Code of Ordinances:

Table 2.2: **Ordinance Review**

Topic	Description
Requirements for preserving existing canopy	A permit must be approved for the removal of any trees which are three inches DBH on any site which is being developed or is to be redeveloped. Tree removal permits can be denied by the City for large mature trees which can be protected through reasonable modifications to development plans.
Tree protection standards for development sites and City projects	Protective barricades must be erected around a tree's critical root zone or at the drip line before and during construction activities. Underground utilities adjacent to trees must be routed around trees or installed in a tunnel under the tree via a power-driven auger. Masonry walls and fences must end where large roots begin or bridge those roots.
Replacement mitigation requirements, reforestation standards, and procedures for private and public development projects	Minimum landscaping requirements must be met in new developments. If trees are removed, any remaining replacement value not met by minimum landscaping must be paid through planting an equivalent number of replacement trees or with a payment to the City's Tree Canopy Trust Fund. If a tree is relocated, it must be guaranteed by the owner for one year.
Permitting tree planting projects within the public right-of-way	Landscape installation permits, which include tree planting in City rights-of-way, require that the applicant provide a landscape plan drawn to scale that is prepared by a Registered Landscape Architect. Exceptions to this requirement are provided to homeowners who wish to plant trees in the swales adjacent to their homes.
Protection of Specimen and Historic Trees	Specimen trees can be mitigated by cash payment equal to the equivalent value of the tree to the Tree Canopy Trust Fund. Removal or relocation of City Commission Protected Trees without approval through a resolution from the Commission is considered unlawful.
Ownership and responsibility for tree care within the public right-of-way	Most expenses related to planting or removing trees along streets must be paid by the adjacent property owner. The owner is also responsible for the maintenance and protection of landscaping. The Parks and Recreation Department is responsible for low pruning of trees in medians, for all maintenance of trees in City Parks, and for emergency response to tree failures which occur within public rights-of-way. The Department's tree maintenance contractor is responsible for all other care for trees in medians.

Topic	Description
Fines, penalties and corrective actions for illegal tree removal, tree abuse and tree preservation code violations	For the first offense of non-permitted tree removal committed within a 12-month period, the violator is subject to a penalty of $1,000 per tree plus a payment for the equivalent value of the tree or palm to be made to the tree canopy trust fund. For the second offense within a 12-month period, an additional penalty of $2,000 per tree plus a monetary payment for twice the equivalent value of the tree or palm to be made to the Tree Canopy Trust Fund. The owner of a parcel of land where tree abuse has occurred may be required to remove the abused tree and replant replacement trees or be required to make a payment to the Tree Canopy Trust Fund. On parcels zoned as single family residential, if a specimen tree for which preservation credits were issued is damaged or destroyed by other than Force Majeure, it must be replaced by trees whose equivalent value equals that of the specimen tree.
Incentives for preservation and retention of trees on development sites, and privately owned properties throughout the city.	To provide incentives for tree preservation on single family residential development sites and private property throughout the City, developers who retain specimen trees may receive credits towards tree planting requirements in the City's landscaping code. The Board of Adjustment may grant variances on setback requirements to preserve existing trees.

CONNECTING CITY PLANS, PROGRAMS, AND DOCUMENTS TO UFMP

Table 2.3 lists primary City Plans, programs, and documents from the last 15 years whose goals and purposes directly impact or overlap with those of the UFMP.

Table 2.3: **Goals of City Plans, Programs, and Documents Relevant to Urban Forestry**

Name of Document	Goals and Relevance to Urban Forestry
Advance 2040 Comprehensive Plan	Introduces 33% canopy goal by 2040 Preserve and enhance the natural environment and beauty of the city, improve infrastructure, and promote better quality of life by creating a safe, healthy, and sustainable landscape. Review funding opportunities to prepare an Urban Forestry Management Plan Expand tree canopy citywide to help reduce the heat island effect. Encourage and require the planting of native and other drought-tolerant vegetation known to sequester carbon and reduce heat island impacts Preserve healthy large canopy trees in park projects Protect existing beach vegetation and encourage landscaping with native, salt tolerant trees
Fast Forward 2035 Vision Plan	Include landscape buffers and shade to make Fort Lauderdale streets safer and more walkable for pedestrians and cyclists

Name of Document	Goals and Relevance to Urban Forestry
Fast Forward 2035 Vision Plan (*continued*)	Respondents to the Neighborhood Survey consider tree canopy to be an integral component to walkability and pedestrian friendly streets
Press Play 2029 Strategic Plan	The percentage of Citywide tree canopy coverage on public and private property is a key performance metric of the Plan's sustainability and resiliency goals
Watershed Asset Management Plan	Watersheds in Districts with relatively low tree canopy indicate a need for strategic tree planting
Stormwater Master Plan/Fortify Lauderdale	Six out of nine Phase I neighborhoods vulnerable to flooding have canopy cover that is below the City's average. Phase I and II neighborhoods are particularly vulnerable to flooding, and future stormwater improvements may impact trees without proper planning.
Design & Construction Manual	Current tree palette includes species, their approximate size at maturity, and appropriate planting sites for them Guidance for street tree planting, including plant spacing and planting space sizes. Recommendations for designs and placement of low impact stormwater systems, some of which include trees.
Connecting the Blocks	Include street trees as an integral component of Complete Streets to provide shade for all modes of transportation, promote traffic calming, and increase overall walkability of streets
Neighborhood Mobility Master Plans	All Neighborhood Mobility Master Plans recognize the importance of street trees and propose using City or other funds to enhance tree canopy by planting new trees
Complete Streets Manual	Use street trees to cool ambient temperatures, reduce traffic speeds, buffer pedestrians, mitigate stormwater, and enhance environmental and aesthetic quality of streets
Net Zero Plan	Implement tree planting and preservation initiatives from the UFMP that will advance the Comprehensive Plan goal of 33% tree canopy coverage by 2040 Advocate for increased percentage of greenspace in new urban developments Ensure trees and landscaping are designed for rainwater retention and include drought-resistant and low-water-needs vegetation. Use i-Tree database analyses to ensure that carbon sequestration benefits are reflected in City's Greenhouse Gas Emissions Reports.
Heat Watch Report – Fort Lauderdale, FL	City has evaluated distribution of urban heat island impacts across the City. This data will inform future actions to address the urban heat island effects on the City, including urban forest management. All areas with the highest heat index values, except Fort Lauderdale Executive Airport, did not have any of the highest or lowest Tree Equity Scores or canopy cover, and therefore local heat levels in these areas could be related to something unaffected by or unrelated to trees
Southeast Florida Climate Change Compact – Regional Climate Action Plan 3.0*	Protect tree canopy and urban green spaces Increase the use of urban tree canopy in addition to other green infrastructure within the urban environment to reduce extreme heat and provide shade Local governments are to engage local communities to plant the right tree in the right place and to ensure that new tree plantings are successful

* Plan not produced by the City of Fort Lauderdale

CURRENT URBAN FOREST MANAGEMENT

The City's urban forest is managed by several distinct divisions and departments, referred to as internal stakeholders. All these internal stakeholders shape the publicly owned and managed portion of Fort Lauderdale's urban forest, but the benefits of these trees pervade across property lines and neighborhoods. While there is a designated City Urban Forester, there is limited central coordination between internal stakeholders, both in terms of how the City manages its own trees and how trees are managed to provide benefits to the community.

The Urban Forester, under the Sustainability and Special Projects Division of the Department of Parks and Recreation, leads and implements urban forestry strategic planning programs; consults internally on tree maintenance and planting; provides technical expertise on urban forestry related issues; supports Code enforcement, plan review, ordinance development, and other planning related to trees; maintains records; prepares and presents arborist reports; performs tree assessments on some job sites; assists Code Compliance officers with concerns and complaints related to trees and recommends appropriate corrective measures; and acts as staff advisor at City Commission meetings, advisory board meetings, and other citizen review boards.

Members of the Sustainability and Special Projects Division act as liaisons to the Sustainability Advisory Board, which advises the City Commission on environmental sustainability which can include urban forestry topics.

Other internal stakeholders in the City's urban forest include other staff within the Department of Parks and Recreation, Landscaping Division, Stormwater Operations team, Zoning Division, Development Services Engineering team, Stormwater Engineering team, Community Enhancement and Compliance Division, Urban Design and Planning Division, Transportation and Mobility Department, Information and Technology Services Department, Neighbor Support office, and support staff who manage the SeeClickFix and Accela online portals. **Table 3.1** in the Stakeholder Visions and Goals section describes the duties of these stakeholders as they relate to the City's urban forest planning, management, and operations.

CANOPY DISTRIBUTION BY NEIGHBORHOOD

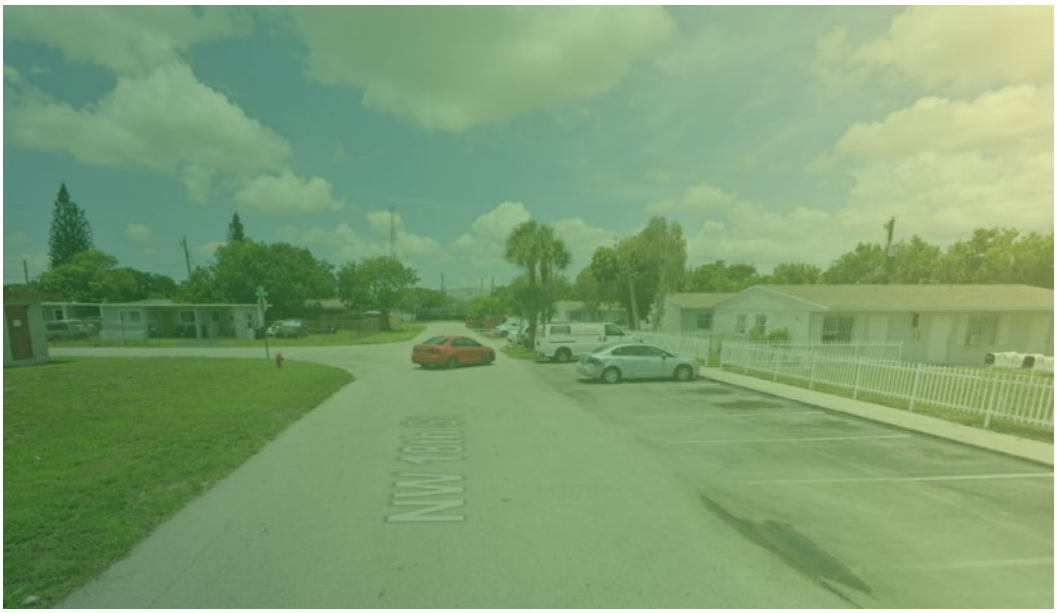
The most recent publicly available canopy data from the Florida Forest Service canopy tool (2022) features canopy cover data at the Census Block Group (CBG) level. Some CBGs span the boundary between neighborhoods, while some neighborhoods contain multiple CBGs. Canopy cover percentages for all neighborhoods are featured in **Table A.1** in **Appendix A**. The sections below feature highlights from this dataset.

BRANCH OUT

» Appendix A: Tables, Table A.1 Canopy Cover for All Neighborhoods

TEN NEIGHBORHOODS WITH THE LOWEST CANOPY COVER

The neighborhoods that have the ten lowest canopy cover percentages are given in **Table 2.4** along with the Commission District in which they are located. Each has a canopy cover lower than that of their respective Districts.



People who live in areas with low tree canopy cover do not experience the same degree or impact of tree-related benefits as people who live in high-canopy areas. Low-canopy areas are distinctly more vulnerable to environmental impacts such as stormwater runoff, urban heat islands, and impacts from severe weather, as well as socioeconomic impacts such as higher energy bills from lack of shade provided by tree canopy, complex stormwater management requirements, and correlation with lower property values.

In accordance with the City's stated goal of achieving 33% canopy cover to facilitate healthy and resilient neighborhoods, areas with low tree canopy cover should be prioritized not just for tree planting but also for efforts to preserve whatever existing canopy is currently there.

Table 2.4: **10 Neighborhoods with the Lowest Canopy Cover**

Neighborhood	District	Canopy Cover (%)
Dillard Park Homeowners Association	3	11.50
Lake Aire Palm View Homeowners Association	3	12.00
Golden Heights Neighborhood Association	3	12.00
Galt Mile Community Association	1	15.75
Riverland Civic Association	3	16.50
Melrose Manors Homeowners' Association	3	16.80
Rock Island Community Development, Inc.	3	17.00
Home Beautiful Park Civic Association	3	18.33
Coral Ridge Country Club Estates	1	18.67
Progresso Village Civic Association	2	18.75

TEN NEIGHBORHOODS WITH THE HIGHEST CANOPY

People who live in high-canopy neighborhoods likely experience high degrees of tree-related benefits. The neighborhoods themselves are more resilient to environmental impacts. The neighborhoods listed in **Table 2.5** have the 10 highest canopy averages of any neighborhood in Fort Lauderdale. They all exceed their respective District-wide canopy averages.

Their high canopy percentages should not be interpreted to mean that these areas do not require any investment in urban forest management. In fact, their high canopy coverages likely indicate a need for routine maintenance and risk assessment as well as prioritization of tree preservation. Furthermore, the canopy success of these neighborhoods should be used to model final outcomes for tree planting and preservation projects in neighborhoods with lower canopy percentages.

Table 2.5: **10 Neighborhoods with the Highest Canopy Cover**

Neighborhood	District	Canopy Cover (%)
Birch Park Finger Streets Association	2	55.00
Riverland Manors Homeowners' Association	4	44.00
Riverland Woods Homeowners' Association	4	44.00
Riverlandings Homeowners' Association	4	44.00
Dolphin Isles Homeowners' Association	2	38.50
Montego Bay Townhouse HOA, Inc.	1	38.00
Port Royale Master Association	1	38.00
Shady Banks Civic Association	4	38.00
Beverly Heights Association Inc.	4	37.00
Colee Hammock Homeowners' Association	4	37.00

CANOPY DISTRIBUTION WITHIN EACH DISTRICT

DISTRICT 1

Canopy cover for District 1 is 21.7% (**Figure 2.6**). District 1's canopy cover is below the Citywide average. The Fort Lauderdale Executive Airport and Fiveash Water Treatment Plant, two areas that past City canopy analyses noted have extremely low canopy cover, are in District 1. District-wide canopy average may therefore be depressed, despite some residential neighborhoods having average or high tree canopy cover.

BRANCH OUT

» Appendix G: View Canopy Cover Maps in Full

Galt Mile Community Association has the lowest canopy cover of any neighborhood in District 1 at 15.75%. Conversely, Port Royale Master Association and Montego Bay Homeowners' Association have the highest canopy cover of any neighborhood in District 1 at 38.0% (**Figure 2.7**).

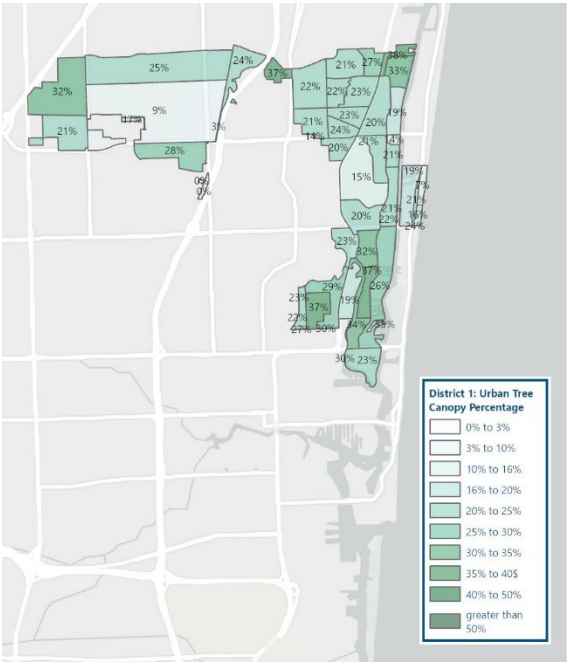


Figure 2.6: District 1's canopy cover is 21.7%.

CLICK TO VIEW THE FULL-PAGE MAP

Figure 2.7: Galt Mile Community Association has the lowest canopy cover in District 1; Port Royale Master Association and Montego Bay Homeowners' Association have the highest.

CLICK TO VIEW THE FULL-PAGE MAP

DISTRICT 2

District 2's canopy cover is 28.7% (**Figure 2.8**).

Progresso Village Civic Association has the lowest canopy cover of any neighborhood in District 2 at 18.75%, while Birch Park Finger Streets Association has the highest canopy of any District 2 neighborhood at 55.0% (**Figure 2.9**). The latter has the highest canopy percentage of any entire neighborhood in Fort Lauderdale. This is likely due to the location of Hugh Birch Taylor State Park in this neighborhood, which has a distinctly high tree canopy cover. Conversely, Progresso Village is in the NW Regional Activity Center and has a high incidence of industrial use.

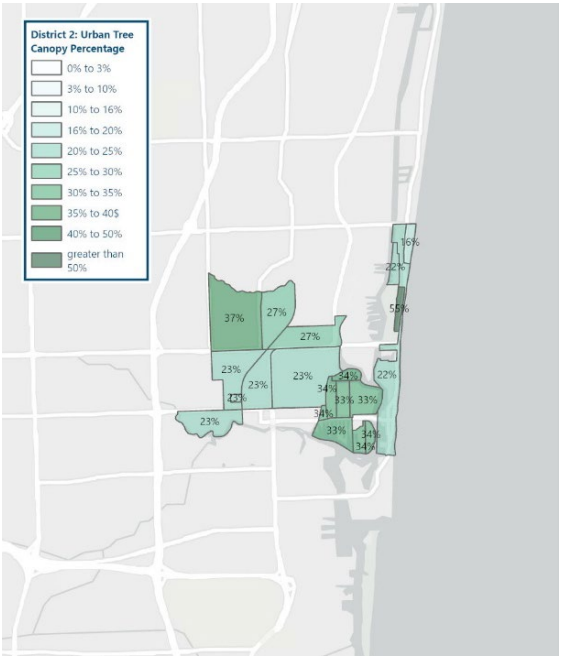


Figure 2.8: District 2's canopy cover is 28.7%.

CLICK TO VIEW THE FULL-PAGE MAP

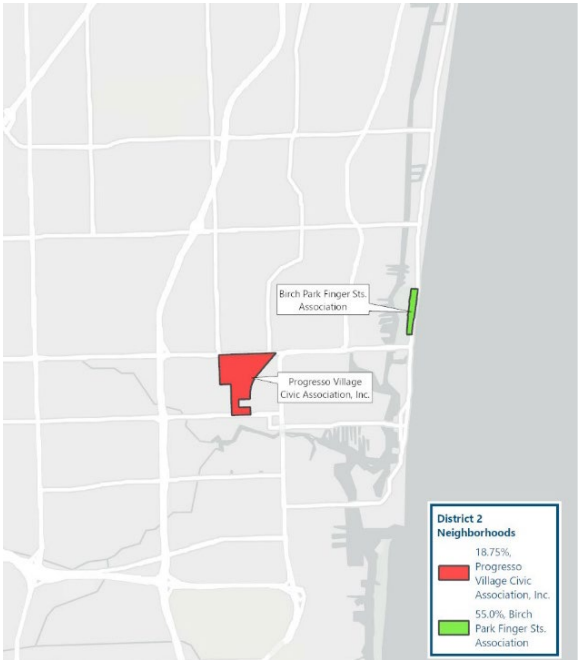


Figure 2.9: Progresso Village Civic Association has the lowest canopy cover in District 2; Birch Park Finger Streets Association has the highest.

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DISTRICT 3

District 3's canopy cover is 20.6% (**Figure 2.10**).

Dillard Park Homeowners' Association has the lowest canopy of any neighborhood in District 3 at 11.5%. Lauderdale Manors Homeowners' Association has the highest canopy of any neighborhood in in District 3 at 25.0% (**Figure 2.11**).

District 3 has the lowest canopy percentage of any Commission District in Fort Lauderdale at 20.6%. Areas with the lowest Tree Equity Scores are primarily located in District 3, indicating that the urban canopy in this neighborhood demonstrates an established correlation between socioeconomic stressors, vulnerable populations, and low tree canopy cover. This indicates that this District may be more vulnerable to environmental impacts, such as urban heat islands, flooding, and severe weather. Investment in tree canopy in neighborhoods across this District, along with other initiatives to improve resilience, is therefore warranted. Appropriate means of conducting outreach and coordinating with community leaders to facilitate a healthy and relevant urban forest is discussed in later sections.

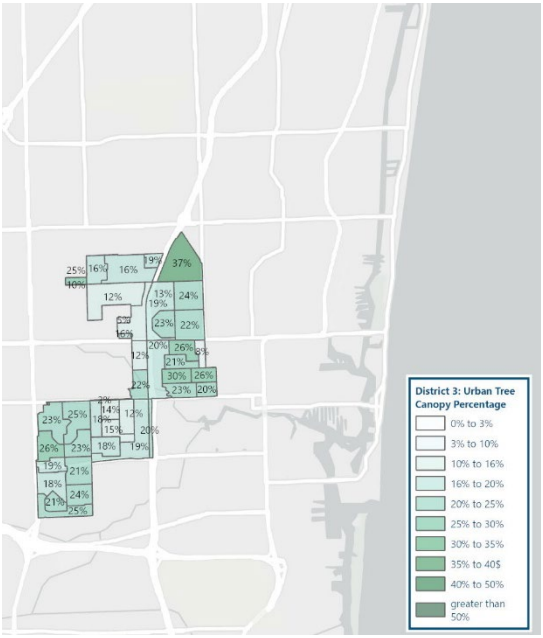

Figure 2.10: District 3's canopy cover is 20.6%.

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Figure 2.11: Dillard Park Homeowners' Association has the lowest canopy cover in District 3; Lauderdale Manors has the highest.

CLICK TO VIEW THE FULL-PAGE MAP

DISTRICT 4

District 4's canopy cover is 27.1% (**Figure 2.12**).

Poinciana Park Civic Association has the lowest canopy cover of any neighborhood in District 4 at 18.8%. The River Landings Homeowners' Association, Riverland Woods Homeowners' Association, and Riverland Manors Homeowners' Association have the highest canopy of any neighborhood in District 4 at 44.0% (**Figure 2.13**). Much of the Poinciana Park Civic Association is zoned commercial and has a high incidence of warehousing and businesses serving the Fort Lauderdale Executive Airport.

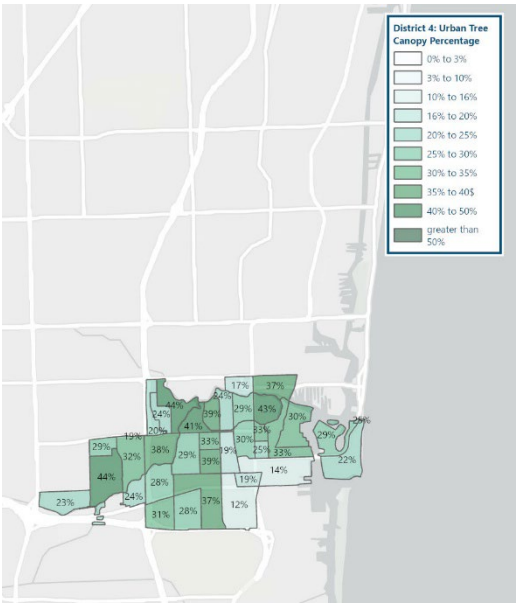

Figure 2.12: District 4's canopy cover is 27.1%.

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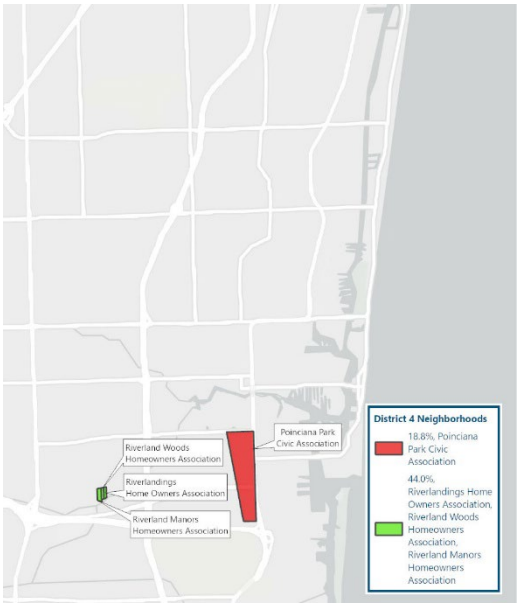

Figure 2.13: Poinciana Park Civic Association has the lowest canopy cover in District 4; River Landings Homeowners' Association, Riverland Woods Homeowners' Association, and Riverland Manors Homeowners' Association have the highest.

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CANOPY DISTRIBUTION BY LAND USE AREA

A total of 96 distinct Zoning types were identified in Fort Lauderdale's Zoning District data. Zoning Districts were consolidated into five zoning categories of Residential, Business/Commercial, Industrial/Aviation/Transportation/Utility, Mixed/Special Use, and Community. Residential zoning types had the highest canopy coverage (25.7%), and Industrial/Aviation/Utility/Transportation zoning types had the lowest canopy coverage (18.9%) (**Figure 2.14**). Residential includes all types of single- and multi-family residential zonings, as well as those where residential is the primary function but that may serve other functions. Business/Commercial includes all kinds of commercial and business zoning. Industrial/Aviation/Utility/Transportation includes all areas zoned as Industrial, Aviation, Transportation, and Utility, as well as the Airport Industrial Park District and Port Everglades. Mixed/Special Use includes mixed-use corridors, Regional Activity Centers, and Master Planned Districts. Community includes City Parks, schools, churches, and other community facilities.

According to estimates from the City's Comprehensive Plan, there are 594 acres of vacant residential land in the City, amounting to 25,874,640 ft^2, and 6,751,800 ft^2 (155 acres) of vacant commercial land, 1,132,560 ft^2 (26 acres) of vacant industrial land, and 1,001,880 ft^2 (23 acres) of vacant institutional or community land. However, it is unclear how much of this area could potentially be planted with trees.

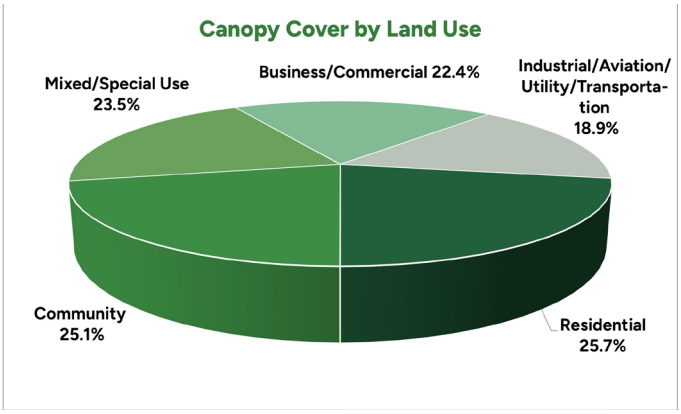

Figure 2.14: Canopy cover by land use area.

TREE EQUITY SCORES

While trees provide numerous benefits to people, infrastructure, and communities, studies show that higher percentages of healthy tree canopy often correlate with areas with higher median incomes, educational outcomes, and rates of investment in services. Conversely, lower percentages of tree canopy often correlate with areas that were historically red-lined, a discriminatory practice in banking and finance in which services, such as financing home loans, were withheld from neighborhoods that have significant numbers of racial and ethnic minorities. The modern-day result is that tree benefits are not equitably distributed geographically or socially in many U.S. cities.

As part of the City's efforts to improve urban forest equity as it strives towards the 33% canopy goal, Tree Equity Scores were obtained from American Forests™, a 501(c)(3) that creates plans and online tools to advance equity and resilience in urban forestry policymaking. Tree Equity Scores measure correlations between tree canopy cover and socioeconomic factors, such as percent population of People of Color, median income, population without a college degree, and population living below the federal poverty line in all U.S. neighborhoods. A low tree equity score indicates that the area has a combination of low tree canopy and increased vulnerability to social, health, and environmental factors and indicates a need for investment in tree canopy to increase the health, economic, and social benefits that trees provide. A score of 100 means that a neighborhood has adequate tree cover and has low socioeconomic vulnerability.

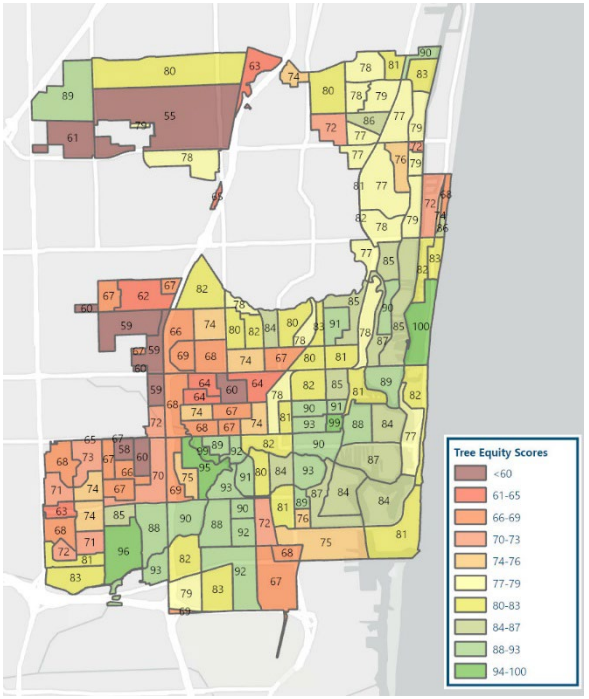

Figure 2.15: Fort Lauderdale's Tree Equity Scores.

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Fort Lauderdale's composite Tree Equity Score is 78, based on 2024 data (**Figure 2.15**). However, tree planting efforts should not target a City's composite score, but rather the specific areas with low Tree Equity Scores. While it may not be possible to achieve a Tree Equity Score of 100 in every area, it is highly likely that scores can be elevated in places where they are currently below the City's average of 78/100. Elevating all of Fort Lauderdale's Tree Equity Scores to 75 can be accomplished by planting 48,068 trees, delivering $624,318 in benefits to the community.

Tree Equity Score data is given at the CBG-level, rather than the neighborhood level. We therefore list the CBGs with the 10 lowest and highest Tree Equity Scores and the neighborhoods where they are located, as well as the neighborhoods with the 10 lowest and highest Tree Equity Scores averaged across their CBGs.

Table A.2 features the Tree Equity Scores for all Fort Lauderdale neighborhoods, and **Table A.3** contains the full set of Fort Lauderdale's Tree Equity Score data (**Appendix A**).

LOWEST TREE EQUITY SCORES

The Tree Equity Scores for the areas listed below indicate that these areas likely have greater vulnerability to social, health and economic stressors and fewer trees, and therefore reduced access to tree-related benefits. These areas are therefore optimum candidates for the City's prioritization of outreach, education, and investment in tree planting and preservation.

CENSUS BLOCK GROUPS WITH THE 10 LOWEST TREE EQUITY SCORES

Figure 2.16 shows the 10 lowest Tree Equity Scores by CBG, along with their corresponding neighborhood and Commission District. District 3 had the most low-scoring CBGs – 16 – followed by District 2 with four, District 1 with two, and District 4 with one.

TEN NEIGHBORHOODS WITH THE LOWEST TREE EQUITY SCORES

Figure 2.17 shows the ten neighborhoods with the lowest Tree Equity Scores. They include Golden Heights Neighborhood Association, Lake Aire Palm View Homeowners Association, Dillard Park Homeowners Association, Home Beautiful Park Civic Association, Durrs Community Association, Riverland Civic Association, Rock Island Community Development, Melrose

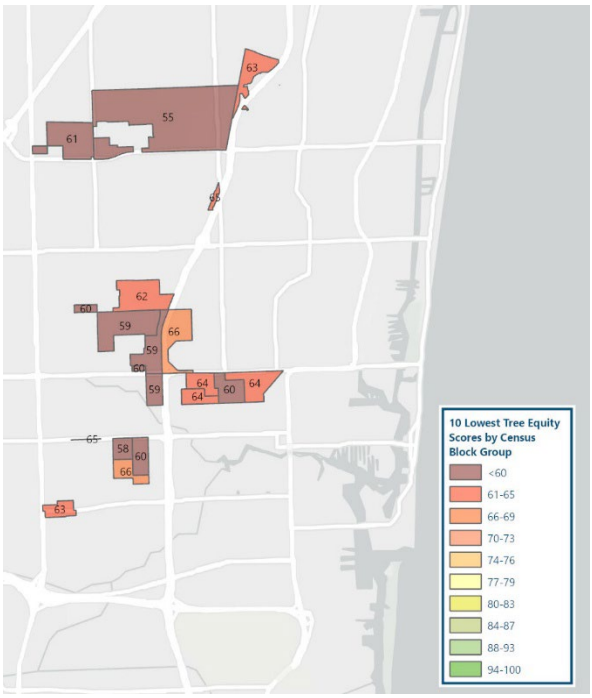

Figure 2.16: CBGs with the 10 lowest Tree Equity Scores.

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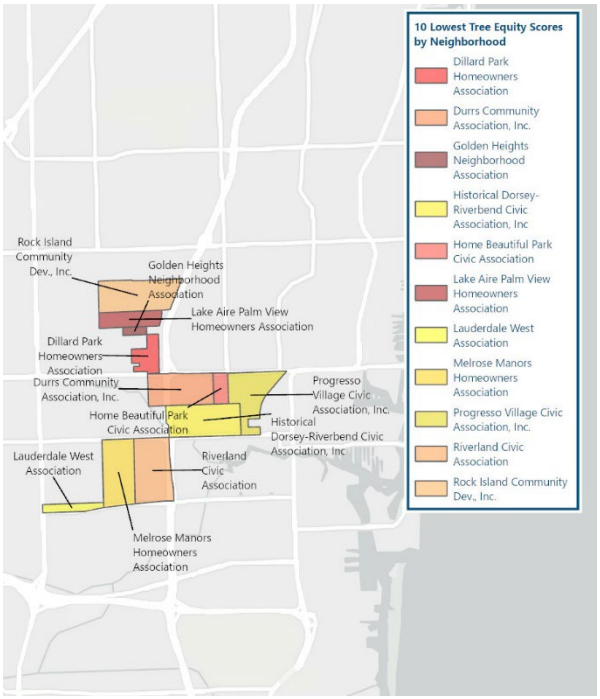

Figure 2.17: Neighborhoods with the 10 lowest Tree Equity Scores.

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Manors Homeowners Association, Progresso Village Civic Association, Historical Dorsey-Riverbend Civic Association, and Lauderdale West Association. All but Progresso Village are found in District 3, which also has the lowest overall canopy cover of any District.

HIGHEST TREE EQUITY SCORES

The Tree Equity Scores for the areas listed below indicate that they have high tree canopy and less social, health, and economic vulnerability. These areas are therefore excellent examples of the results that should be expected from the outreach and investment in areas with lower tree canopy and lower Tree Equity Scores.

CENSUS BLOCK GROUPS WITH THE HIGHEST TREE EQUITY SCORES

Figure 2.18 shows the 10 highest Tree Equity Scores by CBG, along with their corresponding neighborhood and Commission District. Though many CBGs had the same Tree Equity Score, the reason behind this may vary between locations. District 4 had the most high-scoring CBGs – 14 – followed by District 2 with 10 and District 1 with five.

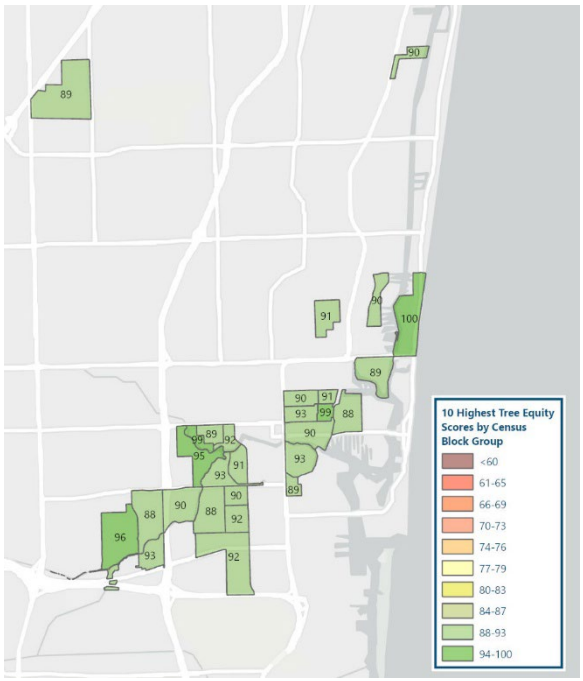

Figure 2.18: CBGs with the 10 highest Tree Equity Scores.

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TEN NEIGHBORHOODS WITH THE HIGHEST TREE EQUITY SCORES

Figure 2.19 shows the 10 neighborhoods with the highest Tree Equity Scores. They include Birch Park Finger Streets Association, Riverland Manors Homeowners' Association, Riverland Woods Homeowners' Association, Riverlandings Homeowners' Association, Dolphin Isles Homeowners Association, Sailboat Bend Civic Association, Chula Vista Isles Homeowners Association, River Run Civic Association, Montego Bay Townhouse HOA, Port Royale Master Association, Beverly Heights Association, Colee Hammock Homeowners Association, and Shady Banks Civic Association. Eight are found in District 4, three in District 2, and two in District 1. There are none found in District 3.

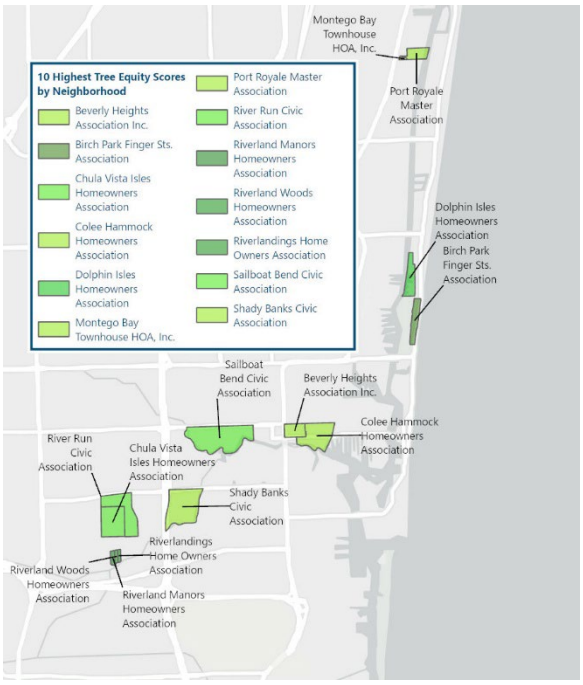

Figure 2.19: 10 neighborhoods with the highest Tree Equity Scores.

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Value of the Urban Forest

I-TREE CANOPY ANALYSIS

The U.S. Forest Service's (USFS) i-Tree® suite of tools is routinely used by planners, foresters, and homeowners to estimate the value of individual or groups of trees. i-Tree® Canopy classifies land and tree cover based on a random sample of points imposed upon recent aerial imagery. The software calculates amounts of carbon dioxide stored and sequestered and air

pollution and stormwater intercepted based on the percentage of tree canopy. Fort Lauderdale's Urban Forester conducts an i-Tree® Canopy analysis annually (**Figure 2.20**).

In 2017, Fort Lauderdale's trees provided $2,107,797 worth of benefits related to air pollution removal. In 2024, the total annual air pollution removal was 12,057 tons, valued at $2,567,120, and 87.2 million gallons of stormwater runoff were avoided, valued at $779,261. These increases in quantities of pollution removed and runoff avoided may be due to increases in tree canopy, strategic planting of trees, and maturation of trees between 2017 and 2024.

The software also calculates overall carbon storage of the urban forest, which measures the total amount of carbon that trees store over their lifetimes, and as such, is not calculated as an annual value. In 2017, Fort Lauderdale's urban forest stored $25,229,234 worth of carbon. By 2024, the City's urban forest stored 192,050 tons of carbon, valued at $32,754,595. These increases in quantity and value may be related to increases in both overall tree canopy and market value of carbon offsets. Note that the i-Tree software does not identify carbon storage for different classifications, such as individual species or palms vs trees.

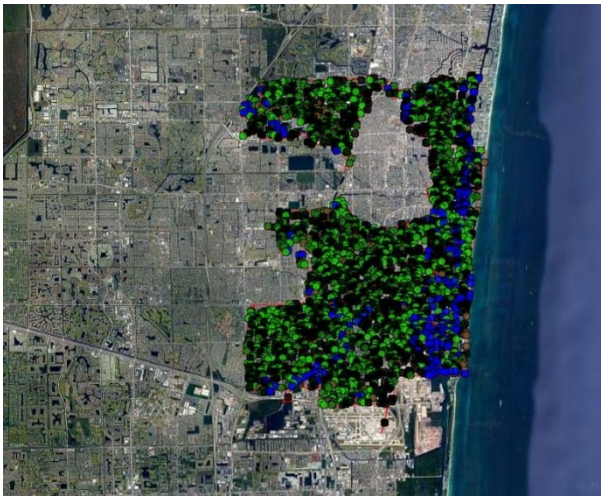


Figure 2.20: The dot matrix canopy analysis implemented with i-Tree Canopy software in 2024. Green dots represent trees, whereas blue dots represent water, black dots represent impervious surfaces, and red dots represent soil/bare ground.

COSTS OF THE URBAN FOREST

The City's urban forest management and operations are spread out among the City's internal stakeholders. The Adopted Budget for Fiscal Year 2025 (FY 2025) does not identify expenditures and budgets specific to urban forestry. As such, identifying an exact cost for urban forestry operations and management in the City is not currently possible without a more dedicated audit. However, **Table 2.6** discusses funding, expenditures, and full-time equivalent (FTE) positions, also known as full-time employees, that are identified in the Adopted Budget under which urban forestry-adjacent services are likely budgeted. However, these totals should not be interpreted as an urban forestry-specific budget.

Table 2.6: **Internal Stakeholder Budgets and FTEs potentially related to urban forestry**

Internal stakeholder	FY 2025 budget for urban forestry-adjacent services	Number of FTEs potentially related to urban forestry
Sustainability and Special Projects Division	$200,000	1
Department of Parks and Recreation	$3.7 million	92
Landscaping	$5.6 million	2
Zoning	N/A	3
Urban Design & Planning	$7.9 million	15
Code Compliance	$5.6 million	31
Stormwater Operations and Engineering	$7.3 million	24
Information and Technology Services	$6.1 million	13
Transportation and Mobility	$2.2 million	10
Total	**$38.6 million**	**191**

CURRENT IMPLICATIONS

Since there is no specific line item in the City's budget for urban forestry, it is appropriate to say that the City's core urban forestry work is embedded within the overall budgets of City Departments, such as Public Works, Parks & Recreation, and Sustainability and Special Projects. The salaries of tree crews, equipment, and the urban forester are part of existing operating budgets and therefore would not be listed as distinct line items. Furthermore, planning enhanced planting or canopy initiatives may be captured through decision making and strategic enhancements rather than embedded baseline costs.

As a Tree City USA, Fort Lauderdale is required to spend at least $2 per capita annually on urban forestry activities. In the years 2015-2023, the City spent an annual average of $1.33 million which greatly exceed the Tree City USA threshold criteria of $2/person, which translates to $370,000 annually for its population of approximately 185,000 people[1]. The City of Tallahassee's 2018 UFMP gives the figure of $1,368,607 as the average annual urban forestry budget for cities with populations between 100,000-249,999, placing Fort Lauderdale's average annual urban forestry budget very close to the mean of cities of similar size[3].

IMPACT OF FUTURE CANOPY CHANGES (FINANCIAL, ECOLOGICAL, SOCIAL)

Regardless of the status quo, increases in spending related to urban forestry across departments will be needed to achieve the goal of 33% canopy. This should include spending on the development and implementation of incentives to retain mature trees, plant new trees on City-owned property, conduct outreach and help facilitate planting projects on private property, pay salaries of new positions that will advance the City's canopy goals, develop plans to solve common tree-related conflicts, coordinate between City departments and outside agencies to ensure more trees are planted and preserved in rights-of-way with shared jurisdictions, and other goals discussed in the UFMP.

The seminal conservationist and scholar Aldo Leopold described ecology as the larger community which humans are a part of that includes other animals, plants, and the land itself. Fort Lauderdale's urban forest is part of the City's urban ecology - the interconnected systems and relationships that make the City what it is. The value of Fort Lauderdale's future urban forest hinges on actions that are done today, and which remain contiguous beyond 2040. While there will be costs associated with expanding, maintaining, and enhancing the urban forest, there will also be tangible benefits in realms of quality of life, commercial success, environmental resilience, energy savings, community health, and many others. Remarkably, many of these fields are directly related to the urban forest, even though this may not be readily apparent. The impact of improving and expanding Fort Lauderdale's urban forest can therefore be thought of as a direct investment into a multitude of aspects of the life of the City itself.

STAKEHOLDER VISION & GOALS

STAKEHOLDER VISIONS AND GOALS

CANOPY CONVERSATIONS: INTERNAL STAKEHOLDERS

The City's urban forestry internal stakeholders are staff across City government whose activities impact the City's urban trees. Changes in urban forest management, expansion, and enhancement therefore hinge on the buy-in, expertise, and coordination among internal stakeholders.

Fort Lauderdale's urban forestry planning, management, operations, and regulation occur across several departments and a wide variety of expertise. It is very common for cities of Fort Lauderdale's size and diversity to have numerous internal stakeholders.

Interviews with these stakeholders were conducted to elucidate how their activities impact the City's urban forest and what changes they believe could be made to improve the City's urban forest management and reach the goal of 33% canopy by 2040. While staff from the Sustainability and Special Projects Division – where the City's Urban Forestry program is housed – were not interviewed, the Urban Forester and other relevant Sustainability staff facilitated and participated in all interviews. Summaries of these interviews and recommendations from staff are provided in **Table 3.1**.

Table 3.1: **Results of Internal Stakeholder Interviews**

Name of Entity	Entity Description	Proposed changes to implement UFMP
Department of Parks and Recreation	Houses City's only tree crew, which conducts limited maintenance on street and median trees and maintenance on all Parks trees. Oversee contracted tree services, who conduct much of the maintenance on street and median trees. Also manage planting and landscaping at all City Parks and many other city properties.	Approve changes to the Code which empower the City to approve tree removal permits much more discriminately. Implement a tree inventory for City-owned trees.
Stormwater Operations	Perform inspections, repairs, and maintenance for stormwater assets. Location of assets may limit street tree planting opportunities and some repairs may require tree removal. Operations directly impact street trees and other trees within utility rights-of-way and stormwater areas.	Adopt a set of SOPs which describe best practices for doing construction work near trees. Implement stormwater impact fees and waive them to incentivize tree preservation. Incorporate low impact stormwater designs into common areas of high-density development.
Stormwater Engineering	Plan, engineer, and construct stormwater improvements for construction projects, potentially impacting existing trees and future locations of street trees. These staff are uniquely positioned to identify potential tree-related conflicts at the design stage of stormwater projects, prior to the commencement of construction.	Submit a tree disposition sheet at the 60% design phase of all projects so that adjustments can be made before the design is complete. Engage contractors earlier in the design process to identify desirable trees and ways to retain and protect them during construction. Adopt standard policies for tree preservation and tree protection in conjunction with City

Name of Entity	Entity Description	Proposed changes to implement UFMP
Stormwater Engineering (*continued*)		projects and contractors. Maintain a limited database of trees in construction areas in rights-of-way.
Landscaping	Handles permitting for landscaping installation, tree removals and relocations, and reviews plans for landscape and tree ordinance requirements. Performs landscape inspections to inspections confirm that the correct quantity, size, and quality of trees planted for mitigation adhere to the landscaping requirements. Determine tree mitigation requirements.	Require landscape installation permits to note the species, and for Florida-friendly species to replace trees that are removed. Use a centralized system to track the number of trees planted, what species they are, and their locations.
Zoning	Review parcel's zoning requirements which determines what the landscape requirements are and therefore shapes the future canopy of a neighborhood or area of the City. Staff will likely have a role in shaping future incentives for developers to retain more trees during development.	Codify exceptions to sidewalk requirements when doing so could save trees. Adopt tree preservation credits in addition to the revisions of ULDR 47-21 adopted by the Commission in October 2024. Increase tree planting requirements in open spaces in the mixed-use and other high-density development areas.
Development Services Engineering	Reviews the locations of trees in public rights-of-way to ensure the tree is adequately offset from the roadway and public utilities and try to accommodate them while ensuring that they do not cause any safety hazards.	Standardize plan details to establish areas for utilities and other areas for trees and landscaping. Such plans would reduce the number of trees that must be removed to facilitate maintenance and repairs and avoid costs to locate, repair, or remove them.
Community Enhancement and Compliance	Cites property owners for tree-related violations, such as tree abuse or non-permitted removals. Currently, no Code Compliance staff have formal arboricultural training. Instead, officers rely on the expert opinions of Landscape Inspectors and the Urban Forester when citing Code violations related to trees. From 2017-2024, there were 2,145 tree-related complaints turned over to Code Compliance.	Code Compliance's ability to identify and cite tree-related violations, including those which would be implemented under the UFMP's proposed Code changes, would be enhanced if Code officers received formal arboricultural training.
Urban Design and Planning (UD&P)	Review and approve site plans, review proposed development designs to meet City standards, coordinate with the Urban Forester to ensure that tree species and planting locations maximize the benefits of the trees. Also collaborate with outside agencies to determine how to include trees along roadway corridors.	Draft standard plans which include street trees for corridors under County or State jurisdiction that can be implemented when other agencies do not prioritize planting street trees. Require increased tree planting in open spaces. Codify setback modifications which can be

Name of Entity	Entity Description	Proposed changes to implement UFMP
UD&P (*continued*)		approved when they facilitate the preservation of a desirable tree.
Transportation and Mobility	Coordinates with other City departments and outside agencies to plan, engineer, and construct roads and sidewalks, which dictates the landscapes of the City's transportation corridors.	Adopt a recommended planting list with "right tree, right place" principles Adopt a standard operating procedure (SOP) of guidance for tree care and establishment after planting; Adopt a set of SOPs that describe best practices for doing construction work near trees. Increase budget for landscaping in transportation projects. Use the City Works program to track trees adjacent to City construction projects. Include a tree inventory in the technical specifications for all City projects so that contractors are aware of trees ahead of time.
Information and Technology Services (IT)	Manages digital databases and datasets which managers across departments use for urban forest planning, budgeting, and data management. This includes the City Works program, cited as a potential dataset of City-owned trees in rights-of-way, and a large LiDAR (Light and Detection and Ranging) dataset which could be used for future Citywide canopy analyses.	Conduct canopy assessments and limited inventories using remote sensing technology, such as LiDAR. Manage a database of trees in the existing City Works software.
Neighbor Support	Directs calls and complaints from residents, including those related to trees.	Violations for newly adopted Code measures will be handled by Neighbor Support
See Click Fix and Accela support	Manage software portals and management software which can be used to submit potential Code violations and manage Code cases, including those related to trees. Manage the database of tree removal permits. From 2020-2022, $137,630.00 was paid to the City for tree removal permits representing an estimated 3,149 trees removed, or an average of 985 trees removed per year, 88% (n=2,603) of which were located non-residential property. Manage the balance sheet for the City's Tree Canopy Trust Fund (TCTF). As of March 2025, the total non-refundable balance of the TCTF was $1,123,885.07.	Tree removal and planting permits and violations related to newly adopted Code measures will be handled by See Click Fix and Accela support.

CANOPY CONVERSATIONS: EXTERNAL STAKEHOLDERS

Reaching the goal of 33% canopy by 2040 will be impossible without the support and action of the urban forest's external stakeholders: the people of Fort Lauderdale. This is because the majority of urban forests in US cities are privately owned[4] – there are more trees, and more room to plant trees, on private property. The vision of a shadier, more resilient, and more equitable urban forest therefore must originate in the imaginations of the people who live within the City.

PUBLIC SURVEY

During the development of Fort Lauderdale's UFMP, residents had the opportunity to complete a 30-question survey which gauged attitudes and vision for the urban forest. Nearly 800 people who live and/or work in Fort Lauderdale responded.

Survey respondents held the urban forest in high regard, routinely discussing how trees improve the quality of their lives by making commuting, recreating, and working more enjoyable. Many said that the presence of large shade trees was central to their sense of place in the City.

Respondents commonly called for development to reduce or eliminate impacts to urban trees and for more trees to be planted across the City, with a greater focus on planting native species and planting in more equitable ways.

QUALITY OF LIFE

One of the strongest responses in the survey was in reference to whether trees improved quality of life, to which 96% either agreed or strongly agreed.

Beautification of the community by trees (26%) and their ability to provide shade (23%) were the most popular benefits selected by respondents (**Figure 3.1**).

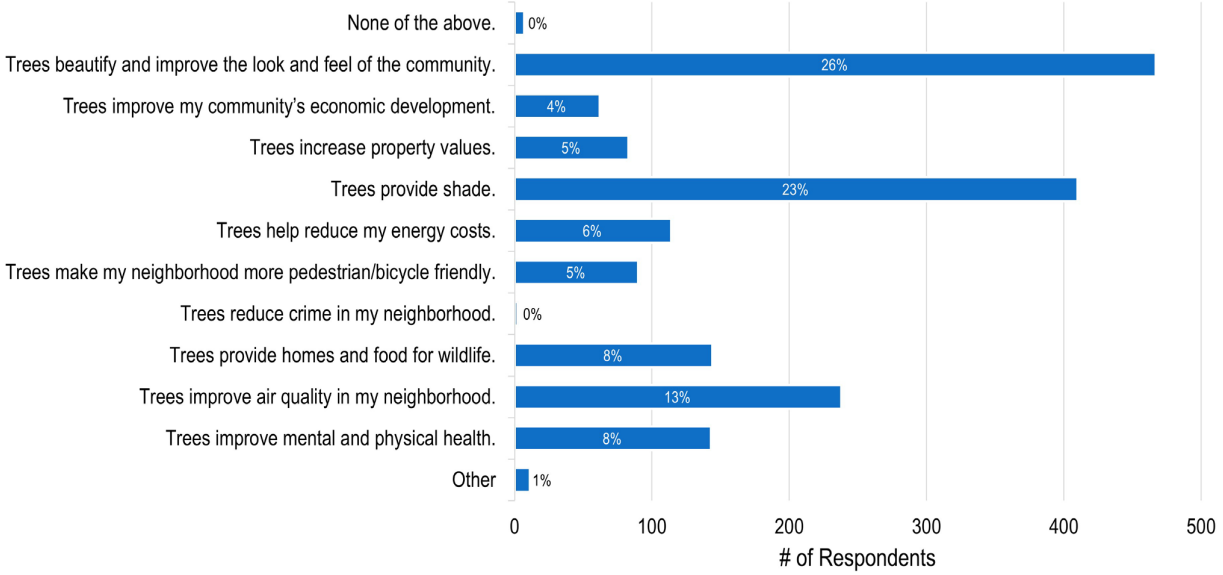


Figure 3.1: Percentages for responses for the most important benefits about trees.

TREES IN THE LANDSCAPE

A total of 83% of respondents either agreed or strongly agreed that they would like to see more trees in their neighborhoods. For those who had strong attitudes (i.e., strongly agree) towards the need for more trees in their neighborhoods, 60% of those respondents believed tree planting is the most urgent need followed by preservation of existing trees.

Perhaps the most notable statistic from this set of questions is that 72% of respondents said that they believed that too many trees are being removed in their neighborhoods to accommodate new development (**Figure 3.2**).

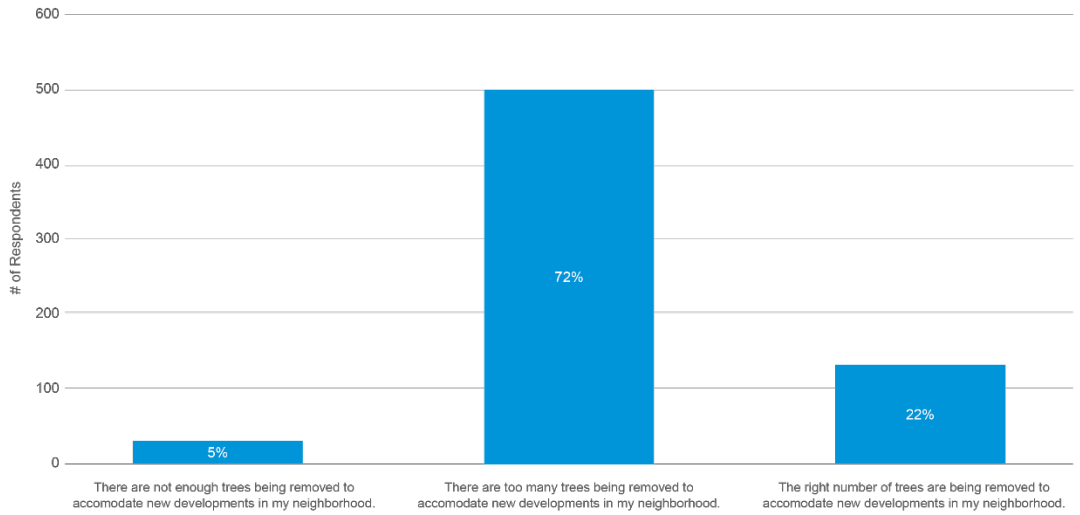


Figure 3.2: Responses to a question in Section 3 about trees that are removed as part of new developments in neighborhoods.

Similarly, 84% said that not enough new trees are being planted in new developments across Fort Lauderdale (**Figure 3.3**).

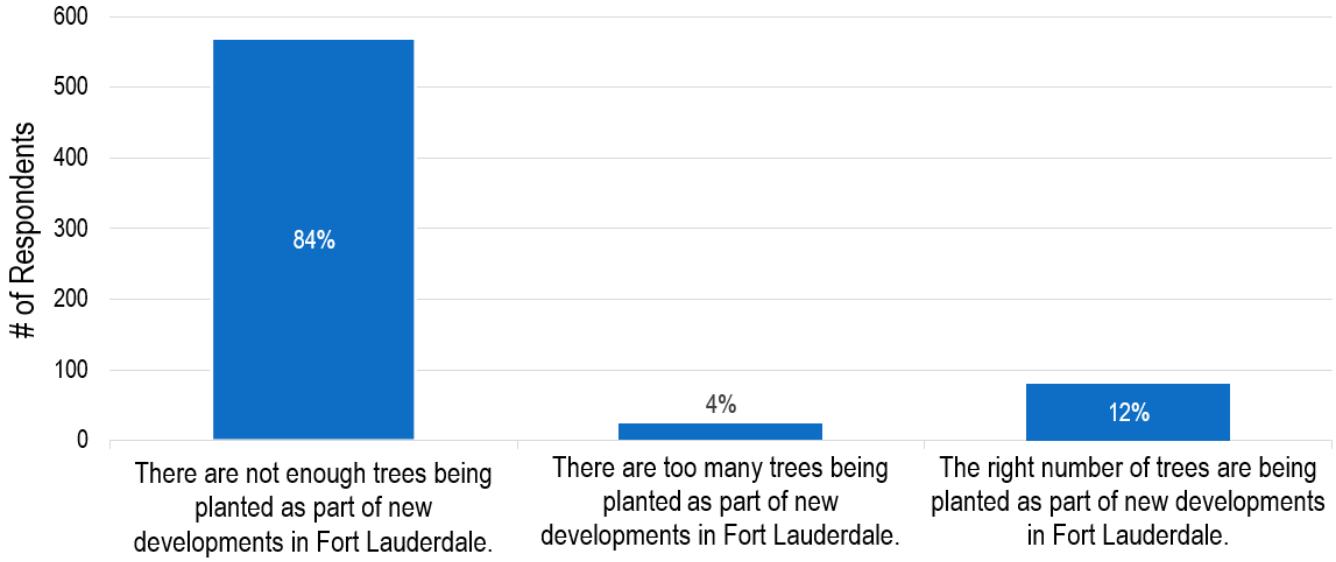


Figure 3.3: Responses to a question in Section 4 about trees that are removed as part of new developments across Fort Lauderdale.

Interestingly, 39% of the respondents who owned a waterfront property indicated a willingness to allow mangrove trees to be planted along their waterfront property, and 27% expressed interest in learning more about the possibility of mangrove tree plantings (**Figure 3.4**).

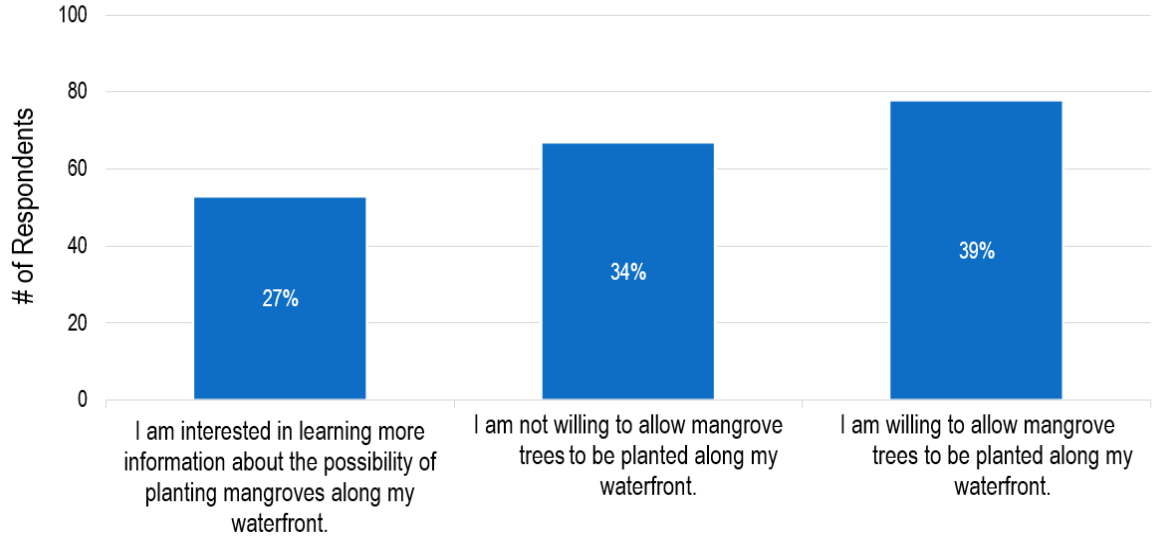


Figure 3.4: Respondents that reported owning a waterfront property (n=198) were asked whether they were willing to plant mangroves along their waterfronts or if they were interested in learning more about mangrove planting.

For a full description of survey results, the development of the survey, and the questions it contained, please refer to **Appendix C**.

PUBLIC MEETINGS

Five public meetings were held, one in each Commission District and one virtually online to present the background, concept, and goals of the UFMP to the public and obtain public comments and questions from attendees. Recordings and minutes from each meeting are publicly available. Overall, 102 comments were submitted by attendees. Comments were grouped into 10 distinct categories: canopy coverage, City practices, climate impacts, community-based solutions, development solutions, tree preservation incentives, private landscaping practices, species recommendations, tree disservices (e.g., branches breaking, roots pushing up sidewalks, cost of tree maintenance), and tree benefits.

The most common types of comments pertained to City practices (n=46) and species recommendations (n=21).

Residents offered critiques of the City's current tree planting and maintenance practices, ordinance enforcement, and tree removal permit process. Many comments indicated that residents wanted the City to approve fewer tree removals and plant more trees. Several attendees voiced that they believed homeowners should receive assistance for growing trees, such as rebates. Another common comment was support for City-sponsored tree giveaways and a desire for them to happen more often.

Many residents' comments reflected "right tree, right place" principles, such as requests that trees be planted to avoid hardscape or utility disruption, while others suggested specific species that they would like the City to plant to meet different canopy goals, such as shade trees for reduced heat and fruit trees for food security.

BRANCH OUT

- Appendix C: Survey Report
- Appendix D: Public Meeting Comments, Tables D.1 – D.6

Many attendees indicated that they want the City to approve fewer tree removals and plant more trees in City rights-of-way. Furthermore, they commented that minimum landscaping requirements do not require developers to plant an adequate amount of replacement trees. Many residents were dissatisfied with how new developments change the tree canopy of the neighborhoods they live in. It is possible that this sentiment could change if new developments were planned to preserve existing mature trees by either building around them or incorporating them into designs in other ways.

A full list of comments from the public meetings is given in **Appendix D** (**Tables D.1 – D.6**).

OTHER PUBLIC COMMENTS

Throughout the duration of data collection and analysis for the UFMP, members of the public have been able to email City staff or its consultant with questions about the Plan or the City's urban forestry practices. Public survey respondents also asked questions when they were completing the survey. Twenty-five such

questions and comments were recorded and answered directly by either City staff or its consultants (**Table D.6**). Additionally, a draft of the UFMP was posted to the City's website from September 19 – October 17, 2025, in order for the public to review the document and submit comments pertaining to it. Overall, 129 comments were received and, where relevant, used to make further edits of the UFMP to generate this final version.

STATE AND COUNTY PARTNERSHIPS

County and State agencies and organizations are external stakeholders whose support and assistance in implementing the UFMP will be critical due to the impact that their activities have on the urban forest. These entities all have urban forestry guides or plans readily available online, some of which outline policies that impact Fort Lauderdale's urban forest. **Table 3.2** lists the main State and County partners and these relevant documents.

Table 3.2: **State and County Urban Forestry Partnerships**

Agency/Organization	Relevant Guides or Plans	Impact on Fort Lauderdale's Urban Forest
Broward County	Broward County Urban Forest Management Plan	The vision of the Plan is to implement tree planting, preservation, and maintenance through coordinated management by relevant stakeholders The Plan includes recommendations for forest enhancement, planting wind- and drought-resistant native species, and outlines pruning guidelines that promote structural stability.
Florida Department of Transportation (FDOT)	Guide for Tree, Palm Maintenance for Urban Roadsides and Landscape Areas	FDOT has jurisdiction over all State-owned roads in the City and is therefore a key external stakeholder in Fort Lauderdale's street tree canopy. The Guide describes practices such as hat racking, topping, and overpruning of palms, which contradict the pruning standards for street trees in Fort Lauderdale's Code. FDOT staff must be consulted by the City to ensure that maintenance practices do not inhibit the City's street trees from contributing to the goal of 33% canopy cover
Florida Department of Agriculture & Consumer Services (FDACS) (includes Florida Forest Service	2023 Statewide Community Tree Canopy Assessment Canopy Assessment Tool	The 2023 Assessment ascertained that Southeast Florida, which includes Fort Lauderdale, had an average overall canopy of 25.3%, the lowest in the State. The Assessment's goals for the Southeast region include promoting the urban forest, prioritizing planting areas, setting canopy goals, developing outreach programs to private landowners, and tracking progress and revising strategies in urban forest management. The Canopy Tool enables users to view canopy cover percentages at the Census Block Group (CBG)-level. It features a plan tool which allows users to identify high priority areas for planting, and its grow tool enables users to forecast canopy changes. The tool also estimates changes to the total value of tree benefits based on changes to tree canopy over time.
University of Florida Institute of Food and Agricultural Sciences (UF/IFAS)	IFAS and EDIS articles	IFAS works with local Extension offices, including in Broward County, whose experts in urban horticulture, Florida-Friendly Landscaping practices, conservation, and other relevant sciences can conduct outreach and workshops and distribute

Agency/Organization	Relevant Guides or Plans	Impact on Fort Lauderdale's Urban Forest
UF/IFAS (*continued*)		plant material that may benefit the City's urban forestry programs. UF's Gainesville campus is home to the Imagining Climate Change organization whose volunteers have planted over 1,500 trees since 2022. With a Research and Education Center (REC) located just outside Fort Lauderdale in Davie, there is potential to expand the chapter to this REC which can act as a planting partner with the City.
Florida Urban Forestry Council (FUFC)	2025-2030 Strategic Work Plan	The FUFC works in partnership with the Florida Forest Service (FFS) to provide urban forestry technical assistance to municipalities and advocates for urban forestry best management practices. The Strategic Work Plan aims to educate, guide, and cultivate urban forestry recommendations and resources in all Florida communities. In 2025, FUFC awarded its Outstanding Tree Ordinance Award to the City of Fort Lauderdale for the changes to the tree ordinance that the City Commission adopted in October 2024.

COMMUNITY PARTNERSHIPS

In Section 5 of the public survey, 110 local partners were recommended by respondents as potentially being interested in sponsoring or participating in a tree planting event in Fort Lauderdale. **Table 3.3** shows the categories that each of these entities were classified as and the quantity of organizations for each classification.

Table 3.3: **Type and Quantity of Potential Tree Planting Partner Organizations**

Type of Organization	Quantity
Business	40
Civic Association	27
Faith-based Organization	6
Government Entity	6
Homeowners' Association	8
Other	23

Examples of organizations given include Action for Literacy, Broward County Master Gardeners, the Sierra Club, and Wallinter Foundation. The Survey Report (**Appendix C**) features the full list of organizations. These organizations should be used as a starting point as the City implements the UFMP recommendations.

BRANCH OUT

» Appendix C: Survey Report

RECOMMENDATIONS

RECOMMENDATIONS

TIMELINE AND EXPECTATIONS FOR IMPLEMENTATION

INITIAL 5-YEAR CYCLE

The best management practices for urban forest management plans recommend implementing a UFMP over a 20-year period in five-year cycles[5]. The actions of the initial five-year cycle lay the groundwork for the implementation of all subsequent actions and should lead to long-term efficiencies in costs and operations.

The following recommendations refer to initial actions to be taken by the City to achieve its goal of 33% canopy by 2040. They are based on a) data analyzed by the UFMP team, b) internal stakeholder interviews with relevant City staff, c) results of the public survey and comments submitted at the five public meetings.

The recommendations are divided into 14 distinct action areas. In each action area, bold text and an identification number indicate the actual recommendations for the City to adopt. Bulleted text below each recommendation includes discussion about the background, reasoning, and impact of the recommendation. Tables at the end of each section provide a timeline for the initial implementation and future milestones for each recommendation between 2026 and 2040.

ACTION AREA 1: TREE PRESERVATION MEASURES

1A. ESTABLISHMENT OF MAXIMUM ALLOWABLE CANOPY SQUARE FOOTAGE REMOVAL

Adopt Code language which places a restriction on the maximum square footage of tree canopy that can be removed per development site.

- While incentives for retaining mature trees are prioritized in the UFMP, the City's current regulations which aim to preserve existing trees should be redesigned to prevent the baseline canopy cover (26.6%) from declining. This approach is similar to how cities such as Seattle, Washington, and Portland, Oregon, restrict how much total DBH can be removed in parcels in some zoning types.
- Canopy cover is the most directly measurable proxy for a tree's utility. The City's Comprehensive Plan and this UFMP seek to manage Citywide canopy cover. Canopy cover is therefore a more practical component of the urban forest for the City to regulate. This restriction must apply to both trees and palms, as defined by the City's tree ordinance. Once Code language which reflects this recommendation is adopted, incentives related to this restriction can be offered. For example, the City's development approval process could be accelerated should the developer document they are preserving more canopy than the minimum specified in the code.

- If a design plan indicates that more than the maximum allowable square footage of canopy is to be removed, the plans must be redesigned to reduce the amount of canopy square footage to be removed.

1B. PRIORITIZATION AND EXPANSION OF PROTECTIONS AND CREDITS FOR SPECIMEN TREES ON DEVELOPMENT SITES

Expand preservation credits for specimen trees on development sites to apply to small trees whose diameters do not typically exceed 12 inches DBH and include parameters for canopy square footage. Additionally, development permit applicants should be required to prioritize Desirable and specimen trees in their calculations of canopy to be preserved.

- The existing protections for specimen trees are reasonable and adequate to increase preservation of those trees. Specimen tree status applies to trees with a) a 60% condition rating or greater, b) are a species protected by the City, and c) have a DBH of 18 inches for large trees, 13 inches for medium trees, and eight inches for small trees. Tree removal permits are required for removal of specimen trees. Each specimen tree between 12-24 inches DBH retained through construction counts towards two onsite required replacement trees. Each specimen tree 24 inches DBH or greater counts towards three onsite required replacement trees. These credits currently only apply to parcels that are zoned single family residential (SFR).
- While these credits are excellent incentives to retain specimen trees on single family residential properties undergoing development, they will likely fail to include many small specimen trees which do not commonly have a DBH of 12 inches or greater. Developers would therefore rarely, if ever, be incentivized to retain them since they would not be eligible for mitigation credits.
- As stated in Recommendation 1A, mitigation should be based on canopy rather than DBH because it is a more accurate reflection of the utility lost when trees are removed. As previously mentioned, canopy is the resource that the UFMP aims to manage. Mitigation for Desirable and specimen trees, as defined by City Code, should likewise incorporate canopy square footage into replacement or payment requirements as an option, with replacement requirement being based on the greater of the number of trees required to replace either the total canopy square footage or the inches of diameter removed.
- As Desirable and specimen trees grow in other areas besides single-family parcels, those growing in other zoning types, such as multi-family, commercial, mixed-use, and Regional Activity Centers should be eligible for these credits to incentivize their retention on developments in those areas.

1C. TREE PRESERVATION ZONES FOR COMMISSION-PROTECTED TREES

Designate the land within the dripline or the critical root zone (CRZ), whichever is larger, of all Commission-protected trees as a tree preservation zone (TPZ) that has the same protections as the CRZ and requires Commission approval before any pruning, or other maintenance to the tree itself deemed appropriate by the City, is conducted.

- City Commission Protected Trees are trees or palms whose size, shape, character, age, aesthetic value, species, historical value, or all the above are declared by a City Commission resolution to be a unique example of a species. The City's 2024 amendments to its tree ordinance specify that removal or relocation of City Commission Protected Trees without approval through a Commission resolution is considered unlawful. Where possible, these trees should be inventoried by the City for the purpose of creating an overlay so that developers, realtors, homeowners' associations, and future property owners will be aware of these trees when properties change hands or undergo new

development and relevant entities will be aware of these trees and the maintenance restrictions for them.

1D. FLORIDA STATUTE 163.045

Develop procedures to minimize improper application of FS 163.045 and investigate the feasibility of allowing the Urban Forester or designee who is an ISA Certified Arborist to override the opinion of a Certified Arborist or landscape architect who incorrectly states that a tree is moderate risk or above where possible.

- Florida Statute 163.045 pre-empts municipal requirements from requiring mitigation and permits to remove a tree which has been rated moderate-risk or above by an ISA-Certified Arborist or a Registered Landscape Architect (RLA). Documentation which proves that the tree was properly risk assessed must be presented upon request to local permitting staff. However, if this documentation does not exist, then the City cannot consider the tree to have been moderate risk or above and should consider it to be a non-permitted removal.
- Under this statute, the possibility exists for a Certified Arborist or RLA to document that a tree is moderate-risk or above when it is, in fact, low risk. To ensure that improper or inaccurate risk assessments are not allowed to exempt desirable trees, the Urban Forester or other eligible City staff should be able to override the opinion of a Certified Arborist or RLA who inaccurately risk assess a tree as moderate risk or above. In such instances, trees would still be able to be removed but would not be exempt from standard mitigation and permitting requirements, if applicable.
- Code Compliance officers should be trained to understand what documentation they can request from tree owners by reviewing the City's limitations and guidelines for compliance with the Urban Forester.

1E. EXPANDING ALLOWABLE USES OF THE TREE CANOPY TRUST FUND MONIES

Expand allowable uses of the Tree Canopy Trust Fund to include partial or total funding of urban forestry training for City employees, providing tree establishment and maintenance assistance to homeowners in low canopy and/or low Tree Equity Score neighborhoods, and reasonable miscellaneous costs necessary for or directly related to the uses allowed herein or expanding, improving, preserving, and managing a healthy and sustainable urban forest. Increase the percentage of the Fund which can be spent per year.

- The City's Tree Canopy Trust Fund (TCTF) stands at $1,123,885 as of March 2025 and can only be used to purchase trees to be planted on public lands and to initiate the drafting of the UFMP. Other Florida municipalities, such as Gainesville, have expanded allowable uses of their Fund beyond simply planting trees. To meet the goal of 33% canopy, actions will need to be taken *in addition to* planting trees. With the potential changes from the October 2024 Code revisions to tree mitigation fees and equivalent replacement value, and future potential changes recommended in this UFMP, the TCTF may experience a short-term increase. The best use of the TCTF will be to meet the goals of the UFMP and improve the quality of Fort Lauderdale's urban forest.
- Currently, only 20% of the Fund can be spent in one year on activities beyond planting trees. This should be increased to support the implementation of the UFMP and responsibly steward the Fund.

Table 4.1: **Recommendations Milestones: Tree Preservation Measures**

Recommendation 1A. Establishment of maximum allowable canopy square footage removal	
2026 - 2030	Adopt Code language which places a restriction on the maximum square footage of tree canopy that can be removed per lot.
2031 - 2035	Evaluate the impact of restricting the maximum amount of canopy that can be removed from any single development. Quantify the number of trees preserved through this policy.
2036 - 2040	Continue action. By 2040, developments should be routinely achieving higher levels of canopy than they were prior to the UFMP.
Ongoing	Continue enforcing maximum allowable square footage of canopy that can be removed.
Recommendation 1B. Prioritization and expansion of protections and credits for specimen trees on development sites	
2026 - 2030	Expand mitigation credits to apply to small trees with diameters less than 12 inches, include parameters for canopy square footage, and include other zoning types. Require development permit applicants to prioritize Desirable and specimen trees in calculations of canopy to be preserved.
2031 - 2035	Evaluate the expansion of specimen tree preservation to small trees (< 12" DBH). Quantify the number of small specimen trees added to the City's inventory.
2036 - 2040	Codify eligibility of all specimen trees for preservation credits beyond single family residential parcels to other zoning types. Continue to quantify specimen trees preserved
Ongoing	Continue action.
Recommendation 1B (continued)	
2026 - 2030	Require development permit applicants to prioritize specimen trees in calculations of canopy to be preserved.
2031 - 2035	Continue previous action. Quantify how many trees have been preserved as a result and evaluate the feasibility for developers and the impact on the overall canopy and quality of life for residents.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 1C. Tree Preservation Zones for Commission-protected trees	
2026 - 2030	Designate tree preservation zone (TPZ) within the dripline or CRZ of all Commission-protected trees and require Commission approval for appropriate maintenance to the tree itself.
2031 - 2035	Evaluate the impact of designating TPZs around Commission-protected trees. Evaluate whether homeowners and developers understand these zones, whether there have been violations, what the nature of the violations were, and how they were addressed. Adjust requirements as necessary.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 1D. Florida Statute 163.045	
2026 - 2030	To the extent possible, ensure that the required documentation exists for all trees which are exempt from local mitigation and permitting requirements under FL Statute 163.045. Investigate the feasibility of allowing the Urban Forester or ISA-Certified Arborist designee to override an opinion which incorrectly states that a tree is moderate risk or above.
2031 - 2035	Evaluate success of dedicated adherence to this statute. Estimate how many trees have been preserved and whether this initiative has led to educational opportunities for residents. If found to be feasible, instruct Urban Forester and/or other Certified Arborist City staff to evaluate requests for exemption and, where applicable, override erroneous tree risk assessments.
2036 - 2040	Continue action.

Ongoing	Continue action.
Recommendation 1E. Expanding allowable uses of the Tree Canopy Trust Fund monies	
2026 - 2030	Evaluate the feasibility of expanding allowable uses of the TCTF.
2031 - 2035	Adopt Code change to allow for other allowable expenditures of the TCTF
2036 - 2040	Evaluate whether trees have been preserved or planted as a result of these expanded uses. Where applicable, the City should promote the Fund's role in supporting high-visibility projects where trees are preserved.
Ongoing	Continue action.

ACTION AREA 2: PERMIT FEES AND PENALTIES

2A. PERIODIC REVIEW OF TREE REMOVAL PERMIT FEE AND EQUIVALENT REPLACEMENT VALUE RATES

Evaluate the tree removal permit fee rate and equivalent replacement value every three to five years to determine whether the permit fee rate is adequate and whether the market rate for equivalent replacement value referenced in the Code changed from the previous rate revision and, if so, increase the baseline equivalent replacement value.

- Currently, a permit must be approved for removal of any dicot or coniferous trees that are three inches Diameter Breast Height (DBH) and desirable palms on any site. Permit fees vary depending on the zoning of the parcel and the reason for removal. For example, a single-family homeowner would pay a flat rate of $159 per tree for the first two trees and $53 per tree after the first two trees if the trees were not being removed for development. These rates are applied in addition to the equivalent replacement value of the tree, which is a market rate determined by the City and currently stands at a minimum of $250/caliper inch for non-specimen and non-desirable trees. The full schedule of tree removal permit fees can be found in Section 9-49 of the City's Code of Ordinances.
- Changes in inflation and other economic factors may reduce the relative value of these rates over time, i.e., the value of $250/caliper inch may be less in 2025 than it will be by 2040. As these fees reflect the appraised value of urban trees, a reduction in the value of fees collected would likely have detrimental effects on the City's tree canopy. Additionally, other similar fees are routinely reviewed by City staff.

2B. LEVYING PENALTIES FOR TREE VIOLATIONS AGAINST COMPANIES RESPONSIBLE

Issue penalties for tree abuse and non-permitted tree removals to both the tree's owner and the tree company responsible for the abuse and/or non-permitted removal.

- Currently, penalties for tree abuse and non-permitted tree work are levied against the tree's owner. For the first non-permitted removal offense committed within a 12-month period, the owner is subject to a penalty of $1,000 per tree plus a payment for the equivalent value of the tree or palm made to the Tree Canopy Trust Fund. For the second non-permitted removal offense within a 12-month period, an additional penalty of $2,000 per tree plus a monetary payment for twice the equivalent value of the tree or palm must be made to the tree canopy trust fund. For tree abuse, the owner of the land where tree abuse has occurred may be required to remove the abused tree and replant an equivalent replacement or make a payment into the TCTF.

- While property owners in Fort Lauderdale are expected to be familiar with the ULDR, which governs how properties can be managed, tree professionals who operate in Fort Lauderdale should likewise be held to the standards and penalties outlined in the City's tree ordinance. However, these professionals are currently not held liable for conducting non-permitted or unlawful tree work, and only the tree owners are penalized for violations.
- To ensure compliance with the City's tree ordinances and standards from the professional tree care community, the City should investigate effective ways to hold these professionals accountable for conducting work which violates the City's ordinances and standards. This may include fining both the tree owner and the arborist(s) responsible for the work, issuing a warning to the owner and company for a first offense, or levying a fine against the owner while reviewing or revoking the company's Local Business Tax receipt.

2C. EDUCATIONAL OUTREACH TO LOCAL ARBORISTS ABOUT NEW POLICIES THAT AFFECT THEM

Conduct educational campaign to communicate relevant changes in UFMP to local arborists.

- To ensure consistent compliance and professional input from the arborist community, the City should communicate these changes before they are made. This can be done through targeted mail blasts and partnership with local chapters of professional organizations. Arborists should understand that if they perform tree work which requires a permit, but fail to do so, they will be held equally liable for any applicable fees as their clients.

2D. CONSISTENCY IN PENALTIES FOR THE DAMAGE OR REMOVAL OF SPECIMEN TREES

Revise the penalties and requirements for the removal of specimen trees for which preservation credits have been issued to be the same as those for which no preservation credits were issued.

- Current replacement requirements for specimen trees is determined by subtracting the retail cost of the replacement tree or trees from the equivalent value of the specimen tree. Entities who remove specimen trees must plant the replacement trees as well as pay the remainder of the equivalent value to the TCTF. However, if preservation credits are issued for a specimen tree and the tree is subsequently damaged or destroyed outside of Force Majeure, it only needs to be replaced by a tree with the same DBH as was listed in tree preservation credit.
- The Code should be revised to require a cash payment into the TCTF for the difference between the appraised value of the specimen tree prior to damage or removal and the retail cost of the replacement tree(s), in addition to the revocation of the preservation credits. This will incentivize holders of preservation credits to protect the trees for which they have been credited during construction and ensure consistent protection of these valuable trees.

2E. PROMOTION OF THE ISA PRESCRIPTION PRUNING QUALIFICATION TO PRUNE TREES IN FORT LAUDERDALE

Work with Homeowners' Associations, Civic Associations, and other community organizations to promote the ISA's Prescription Pruning Qualification (PPQ) for all arborists performing any tree pruning in Fort Lauderdale.

- Although the Broward County Tree Trimmers License has been phased out by the State of Florida, the PPQ credential, developed by the Florida Chapter-ISA and renowned Florida arboriculture experts, incorporates similar principles into its training, methods, and ethics. PPQ is therefore likely an adequate replacement for the Tree Trimmers License, though it is a credential and not a license.
- To ensure that residents know which companies have arborists with this qualification, the City should host a webpage of "verified tree care companies" that lists the name, owner, contact information, and qualifications as confirmed by City staff. "Verified" companies does not entail the City's approval, preference, recommendation, compliance, or any other kind of favoritism – it only indicates that the City has verified that an entity or at least one person working for an entity holds the PPQ, Certified Arborist, or other relevant credentials.

Table 4.2: **Recommendations Milestones: Permit Fees and Penalties**

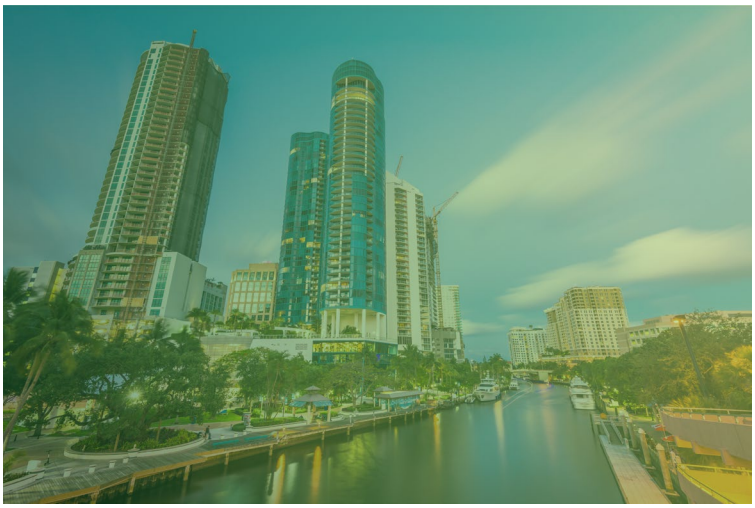
Recommendation 2A. Periodic review of tree removal permit fee and equivalent replacement value rates	
2026 - 2030	Evaluate the 2024 tree removal permit rate and equivalent replacement value no later than 2029 and, if necessary, increase the baseline equivalent replacement value.
2031 - 2035	Evaluate the baseline equivalent replacement value no later than 2034 and increase as appropriate.
2036 - 2040	Repeat action as necessary.
Ongoing	Continue to evaluate the equivalent replacement value base rate for tree mitigation every three to five years and revise as appropriate.
Recommendation 2B. Levying penalties for tree violations against companies responsible	
2026 - 2030	Issue penalties for tree abuse and non-permitted tree removals to both the tree owner and the tree company responsible for the abuse and/or non-permitted removal.
2031 - 2035	Adopt an amendment to the Code of Ordinances that applies penalties for tree abuse and non-permitted removals to both a tree owner and tree company responsible for the work.
2036 - 2040	Evaluate whether citations are paid by violators and whether enforcement has resulted in fewer violations by the company.
Ongoing	Continue action.
Recommendation 2C. Educational outreach to local arborists about new policies that affect them	
2026 - 2030	Begin formulating an educational campaign targeted at tree trimmers and landscapers outlining new provisions in UFMP.
2031 - 2035	Implement an educational campaign and evaluate the impact in terms of number of entities reached, feedback received, and number of tree abuse and non-permitted removal violations.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 2D. Consistency in penalties for the damage or removal of specimen trees	
2026 - 2030	Issue the same penalties and requirements for the removal of specimen trees for which preservation credits as those for which no preservation credits were issued.
2031 - 2035	Evaluate effectiveness of previous action. Quantify how many replacement trees and/or payments to the TCTF have been made for specimen trees which were removed even after credits were issued for it.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 2E. Promotion of the ISA Prescription Pruning Qualification to prune trees in Fort Lauderdale	
2026 - 2030	Promote PPQ to all arborists performing pruning in the City.
2031 - 2035	Evaluate the success of promoting PPQ to all arborists who perform pruning in Fort Lauderdale. Review how many such companies or individuals have these qualifications. Launch a webpage of verified companies.
2036 - 2040	Review whether the number of verified companies has increased and identify obstacles to increasing the number of them. Evaluate any connection between citing companies whose work violates the tree ordinance and the number of companies whose staff have the desired credentials.
Ongoing	Continue action.

ACTION AREA 3: REPLACEMENT STANDARDS

3A. EXTENSION OF GUARANTEE PERIOD FOR REPLACEMENT TREES

Extend guarantees for replacement trees outside of City right-of-way for up to three years following the completion of construction and should be transferrable between owners.

- Replacement requirements are effective at ensuring future canopy is planted. However, many urban trees die within five years after the specified guarantee period, which is currently up to one year in the City of Fort Lauderdale per the City's Code and only pertains to trees planted in rights-of-way. Certificates of Occupancy are often issued less than a year after trees are planted, reducing the City's ability to ensure that replacement plantings establish and continue to grow into mature trees. Rather than making issuance of the final certificate of occupancy contingent on inspection of replacement trees, the City should require developers to enter into a maintenance agreement for all replacement trees not located within City right-of-way. This agreement should specify that the trees and the responsibility for establishment practices be transferred to whoever the property is sold to. This ensures that whoever owns the property in the short-term after construction is complete remains responsible for establishing replacement trees and replacing them if they die within a time period specified by the City.



3B. IMPLEMENTATION OF CANOPY-BASED REPLACEMENT STANDARDS

Revise mitigation criteria so that the replacement of trees removed is based on canopy size, not diameter.

- Under current City Code, mitigation plantings do not require the replacement of all trees removed. It is therefore not a sufficient means of ensuring canopy stability.
- In order to more closely track the amount of canopy that is removed and project the amount of canopy that replacement trees will provide, mitigation must therefore be based on canopy size. However, replacement tree standards should still include non-canopy requirements, such as height, caliper inch, and grade.
- The City's current metric for calculating the number of replacement trees is based on the total stem diameter, or DBH, that is removed under one removal permit. In neighboring Dania Beach, mitigation requirements for replacement trees are based on species and square footage of canopy removed. In that city species are categorized according to how long-lived and resilient they are in the urban environment, as well as how large their canopies will be at maturity. Replacement trees must be a species of the same category as those which are removed. The square footage of replacement trees' mature canopy must equal 100% of the canopy removed.
- Canopy-based mitigation fees can likely raise more money than diameter-based mitigation. To give an example, a live oak in excellent condition (100%) that is 15 inches DBH with a 40-foot-wide canopy (1,256.6 ft^2) that gets removed would require a mitigation payment of $3,750.

  {(15 inches DBH) x (1.00 [100% condition]) x ($250.00/inch [minimum per inch retail cost]) x (1.00 [100% species classification])} = $3,750

- However, applying a canopy-based metric based on the dollar value per square foot of a replacement tree with a 10-foot-wide (78.5 ft^2 canopy) with the same replacement cost of $250 that the City currently uses, multiplied by an installation factor of 2.7, as is done in neighboring Dania Beach which also uses a canopy-based mitigation metric, would result in a payment of $10,805.16.

  {(1,256.6 ft^2 canopy/$78.5 per ft^2 replacement canopy) x (1.00 [100% condition]) x ($250.00 retail cost) x (1.00 [100% species classification]) x 2.7 installation factor} = $10,805.16

- The City should continue use a diameter-based mitigation formula where necessary. In cases where there is no room for replacement trees on a site, payments to the TCTF must be made per the current Code.

3C. CATEGORIZATION OF ELIGIBLE REPLACEMENT TREE SPECIES ACCORDING TO PREFERABLE CHARACTERISTICS

Group replacement tree species into categories based on their longevity, failure profile, adaptability to the urban environment, and other characteristics.

- Many municipalities such as Dania Beach and Tampa categorize species according to their traits and require that replacement trees be a species from the same category or a higher category as the tree(s) removed. This ensures that both the quantity and quality of replacement canopy is as resilient as the canopy it is replacing, if not more so.

Table 4.3: **Recommendations Milestones: Replacement Standards**

Recommendation 3A. Extension of guarantee period for replacement trees	
2026 - 2030	Begin formulating code language and maintenance agreements to extend the guarantees for replacement trees outside of City right-of-way up to three years following the completion of construction that requires the guarantee be transferrable between owners.
2031 - 2035	Adopt and implement extended guarantee periods and maintenance agreements. Evaluate whether the extended establishment period for replacement tree plantings has resulted in a 90% survival rate of newly planted trees.
2036 - 2040	Determine whether there are compliance issues. Evaluate survival rate. Adjust as needed.
Ongoing	Continue action.
Recommendation 3B. Implementation of canopy-based replacement standards	
2026 - 2030	Mitigation for trees removed should be based on canopy square footage, not diameter.
2031 - 2035	Evaluate the canopy-based parameters for specimen tree preservation. Quantify the square footage of canopy preserved.
2036 - 2040	Continue to quantify canopy square footage of specimen trees preserved.
Ongoing	Continue action.
Recommendation 3C. Categorization of eligible replacement tree species according to preferrable characteristics	
2026 - 2030	Group replacement tree species into categories based on their longevity, failure profile, adaptability to the urban environment, and other characteristics.
2031 - 2035	Evaluate whether codified species categories resulted in high quality trees being commonly planted to meet minimum landscaping requirements.
2036 - 2040	Continue action.
Ongoing	Continue action.

ACTION AREA 4: TREE PRESERVATION INCENTIVES FOR DEVELOPERS

4A. USE OF SETBACK MODIFICATIONS TO PRESERVE MATURE TREES

Adopt ULDR revisions that outline parameters for acceptable offsets and setback reductions to save desirable trees.

- Setback modifications and variances which are granted in residential lots may encourage homeowners and developers to preserve mature trees. Codifying setback modifications or variances specifically to preserve trees may give developers the flexibility they need to preserve trees while achieving their construction/development goals. The City's Board of Adjustment may grant variances on setback requirements to preserve existing trees. RES proposes that such variances could be an effective tool to incentivize developers and homeowners to retain trees located near or within the footprint of proposed development. The goal of this recommendation is for the City to enable homeowners and developers to use setback modifications to preserve trees as well as the character

of neighborhoods and quality of residents' properties. These modifications could take the form of either reduced front and rear setbacks or increased side setbacks to preserve existing trees or plant new ones.

4B. DENSITY-RELATED INCENTIVES FOR THE PRESERVATION OF MATURE TREES

Incentivize developers, where possible, to increase the building height on new developments in order to offset a smaller project footprint which would provide a larger unobstructed site area for tree planting and reduce impacts to existing trees while supporting density requirements.

- These incentives could take the form of credits related to floor area ratio (FAR) or transfer development rights (TDR). The City's Code does not currently restrict FAR in several land use areas. However, in some cities that do (such as Miami, Tampa, and Orlando), planners currently allow developers to receive credits for reducing FAR to preserve existing high-quality trees. These credits are transferable from one parcel to another and allow developers to build above a district's codified FAR. TDR credits allow the transfer of unused development rights from one property, or "sending site," to another property, or "receiving site." Development on sending sites is limited to less than what is allowed under the relevant jurisdiction to preserve desirable resources, such as trees. In turn, development on the receiving site is allowed to proceed at a more intense pace than would be normally permitted. Tree preservation incentives should be appealing to developers and, most importantly, effective at preserving trees. They should not be limited to FAR or TDR credits.

4C. USE OF STORMWATER IMPACT FEES TO INCENTIVIZE THE PRESERVATION OF MATURE TREES

Create a structure for charging stormwater impact fees and then allowing developers who retain trees to minimize increases in runoff either reduce or avoid those fees.

- The City does not charge stormwater impact fees to developers, a common practice in many cities where developments impact stormwater conveyance and hydrology which can affect residences, businesses, roads, and other amenities. Stormwater staff suggested that establishing a stormwater impact fee schedule could provide a significant opportunity to incentivize developers to preserve trees. For example, developers interviewed in Willis et al. (2023) specifically indicated that waiving stormwater impact fees in exchange for preserving mature trees would incentivize them to do so[6].

4D. TRANSFERABLE CANOPY CREDITS

Grant transferable canopy credits to developers when they preserve below the maximum allowable square footage (as established per Recommendation 3B) of canopy on one site that can be transferred to another site where no more than 50% of the canopy is comprised of high quality, desirable trees.

- To incentivize the preservation of high-quality canopy in Fort Lauderdale, the City should create a market wherein an entity could receive credits for preserving more high-quality canopy than they would normally be required to on one site ("sending site") in exchange for being able to remove more lower quality canopy on another site ("receiving site"). The caveat for this system would be that the preserved canopy on the sending site would need to be high-quality canopy – comprised of species with high longevity, low failure profile, and valuable ecological benefits, i.e., species that would be prioritized in the species categories proposed in Recommendation 3C – and the canopy on the receiving site could not be greater than 50% high quality canopy. Replacement requirements for the canopy removed on the sending site would still need to be fulfilled for the credits to be issued.

Table 4.4: **Recommendations Milestones: Developer Incentives**

Recommendation 4A. Use of setback modifications to preserve mature trees	
2026 - 2030	Formulate Codified guidelines, such as a matrix or variable, into the ULDR that outlines parameters for acceptable offsets and setback reductions to save desirable trees.
2031 - 2035	Implement Code language. Evaluate effectiveness according to the quantity of trees preserved by this policy.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 4B. Density-related incentives for the preservation of mature trees	
2026 - 2030	Assess the feasibility of incentivizing developers to reduce the footprint of their buildings to preserve existing trees and/or provide adequate planting space for new trees through FAR and/or TDR credits.
2031 - 2035	Initiate pilot program to allow FAR/TDR credits to be transferred from one parcel to another where applicable.
2036 - 2040	Identify the number of lots where this has occurred and how many trees have been preserved.
Ongoing	Continue action.
Recommendation 4C. Use of stormwater impact fees to incentivize the preservation of mature trees	
2026 - 2030	Create a structure for charging stormwater impact fees and allowing developers who retain trees to minimize increases in runoff either reduce or avoid those fees.
2031 - 2035	Implement stormwater impact fees and include a waiver of those fees which can be claimed to preserve trees. If possible, use a portion of the fees to install low impact designs or other green infrastructure that include flood and/or salt tolerant tree species at a viable site.
2036 - 2040	Evaluate the stormwater fee impact on development and the preservation of trees to either avoid paying those fees or paying a reduced fee. Quantify how many trees are preserved as a result of this initiative.
Ongoing	Continue action.
Recommendation 4D. Transferable canopy credits	
2026 - 2030	Investigate the feasibility of granting transferable canopy credits to developers when they preserve below the maximum allowable square footage of canopy on one site that can be transferred to another site where no more than 50% of the canopy is comprised of high quality, desirable trees.
2031 - 2035	Adopt Code language that establishes a system for granting tree canopy credits. Evaluate effectiveness of previous action. Quantify number of trees/square footage of canopy that has been preserved as a result of this initiative. Quantify number of participants. Adjust as necessary.
2036 - 2040	Repeat action.
Ongoing	Continue action.

ACTION AREA 5: HOMEOWNER ASSISTANCE

5A. TECHNICAL ASSISTANCE AND OVERSIGHT FOR HOMEOWNERS WHO PLANT SWALE TREES

Coordinate community outreach meetings with Neighborhood Associations to explain the permitting processes and requirements for planting trees in the right-of-way, and allow the Association Board or similar entity to apply for the permit on behalf of the homeowner and coordinate technical assistance on planting and establishing the tree from the City to the homeowner.

- Landscape installation permits, which include tree planting in City rights-of-way, require the applicant to provide a landscape plan drawn to scale and prepared by a Registered Landscape Architect (RLA). These plans must indicate the location of existing trees, infrastructure, and utilities on site, as well as the proposed sizes and locations of hydrozones to irrigate the installed landscaping. However, single-family property owners may submit drawings of their own and are not required to obtain a planting permit if the planting is not associated with development.
- Several comments were recorded at public meetings and in responses to the public survey indicating that homeowners were enthusiastic about planting trees in swales. Based on that feedback, there is significant potential for the City to partner with communities, increase awareness of proper tree care, and create opportunities to increase canopy in neighborhoods, all of which are stated goals of the UFMP. If the City intends to maintain that the care and establishment of swale trees are the responsibility of the adjacent homeowner, it should coordinate with interested Associations and other civic groups to empower stakeholders to navigate the proper avenues to plant trees in swales adjacent to their homes.
- These meetings should include instructions provided to the homeowner by the City for navigating the Right-Of-Way (ROW) Landscape permit application process, instructions for properly planting and establishing trees, and what species of trees are approved for planting. Many public meeting attendees expressed a desire for more opportunities to learn about trees and tree care. As a City which has several employees who are ISA-Certified Arborists, and even more involved community members who are respected in Florida's professional tree care community, there is significant potential to bridge knowledge gaps between the City and the community.
- Homeowners who want to plant trees but cannot undergo the ROW Landscape permit application themselves should be able to provide their Association with the permit fee and ask the Association to apply for the permit for them. The maintenance agreement that applicants must adopt would reflect this.
- This program should be prioritized in neighborhoods with low canopy and/or low Tree Equity Scores.

There is significant potential for the City to partner with communities, increase awareness of proper tree care, and create opportunities to increase canopy in neighborhoods, all of which are stated goals of the UFMP.

5B. INDIRECT COST-SHARING AND TECHNICAL ASSISTANCE FOR TREE PLANTING ON PRIVATE PROPERTY

Provide indirect maintenance cost sharing from the TCTF to homeowners in low canopy and low Tree Equity Score neighborhoods who want to plant trees on their properties or in their swales.

- Cities such as Parker, Colorado, and Frederick, Maryland, provide reimbursements to a limited number of residents annually for tree planting. Gainesville and Orlando plant trees free of charge in City rights-of-way for homeowners and Alachua County plants trees on private property within unincorporated County land, contingent on property owners entering into a maintenance agreement with the County.
- According to public comments, homeowners may also be incentivized to plant and care for trees in swales if they receive some compensation for the time, labor, and money spent on tree maintenance. In Fort Lauderdale, such support from the City must be contingent upon the City approving the tree species to be planted and providing clear technical recommendations to the homeowner, as well as the execution of a maintenance and liability agreement between the homeowner and the City.

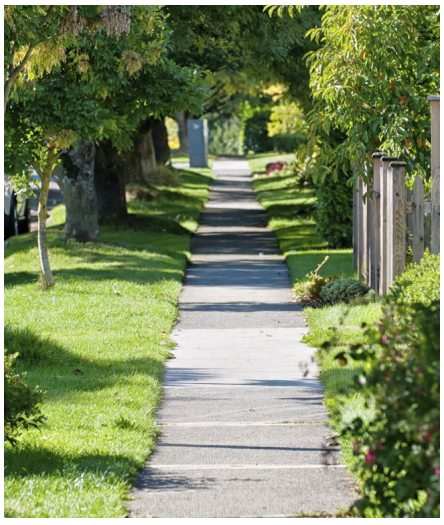
5C. IRRIGATION-RELATED REBATES FOR TREES ("TREE-BATES")

Offer irrigation-related tree-related rebates, or "tree-bates" to homeowners who plant trees on their property(ies).

- Several public meeting attendees requested assistance in maintaining their swale trees, either in the form of direct financial assistance or a rebate of some kind. Assistance through rebates could come through energy savings achieved through upgrades to an existing irrigation system.
- Broward County currently offers a Residential Irrigation Rebate Program (RIRP) to residents who upgrade their irrigation systems to be more water efficient. The City and County may be able to partner to provide irrigation rebates to homeowners who use upgraded and/or already have efficient irrigation systems to water newly planted trees. A homeowner could enroll in the RIRP and apply to receive a tree from the City or purchase one on their own. The City and County could use a predetermined formula to calculate the amount of irrigation required to establish the tree and keep it reasonably irrigated over the first three to five years, the period during which newly planted trees are prone to dying. Each year, the homeowner would receive a rebate equivalent to the cost of irrigating the tree. If the tree is alive at the end of the establishment period, the homeowner can qualify for another tree, if desired, which would also be eligible for an irrigation rebate. Additional rebates for maintenance below a certain threshold could be available at the seven-, ten-, and fifteen-year marks if the homeowner can demonstrate that they have been good stewards of the tree in the meantime. Eligibility should be contingent on the enrollee planting a tree from the City's tree palette and on receiving technical assistance on where to plant the tree.
- The City could further promote this program by issuing annual "Tree Steward" awards to participating homeowners.
- This program should be prioritized in neighborhoods with low canopy and/or low Tree Equity Scores.

5D. TECHNICAL ASSISTANCE TO NEIGHBORHOODS WHOSE MOBILITY MASTER PLANS PRIORITIZE TREE PLANTING

Work with neighborhoods whose Mobility Master Plans identify tree planting and preservation as priorities to increase and enhance tree canopy.



From Tarpon River Mobility Master Plan

- Seven neighborhoods have completed Neighborhood Mobility Master Plans: Tarpon River, Coral Ridge County Club Estates, Lake Ridge, Palm Aire Village West, Shady Banks, Twin Lakes North, and Victoria Park. Each one recognizes the importance of street trees. Several propose using City or other funds to enhance tree canopy by planting new trees. As a part of the City's efforts to partner with community organizations to plant trees, these neighborhoods could provide the ideal conditions to pilot such a tree planting partnership program.
- This program should be prioritized in neighborhoods with low canopy and/or low Tree Equity Scores (**Table 2.4, Figure 2.17**).

5E. TECHNICAL ASSISTANCE TO NEIGHBORHOODS TO DEVELOP A TREE PLAN

Help forge Tree Planting Plans with neighborhoods that do not have such a plan.

- For neighborhoods that do not have a Mobility Master Plan which indicates the willingness to engage in a tree planting program the City should consider using the format of the Mobility Master Plans to collaborate with community leaders in priority neighborhoods to outline a Neighborhood Tree Plan, which may be more feasible and directly impactful to the goal of increasing tree equity than coordinating a comprehensive Neighborhood Mobility Master Plan. This will provide a framework for the City to familiarize itself with the priorities of low-canopy neighborhoods and provide technical assistance that supports tree plantings and related programs that are culturally relevant to these communities.
- This program should be prioritized in neighborhoods with low canopy and/or low Tree Equity Scores (**Table 2.4**, **Figure 2.17**).

5F. TECHNICAL ASSISTANCE TO HOMEOWNERS WHO PLANT STRATEGIC ENERGY-SAVING TREES

Offer utility-based "tree-bates" to homeowners who strategically plant trees on their property which can provide sufficient shade resulting in lower energy consumption.

- Some communities have seen success by partnering with local utility providers to offer rebates for purchasing and planting trees on private property through rebate programs, for example San Antonio, Texas, and Anaheim, California. Fort Lauderdale's "tree-bates" initiative for utilities could be based on annual tree benefits calculated with the MyTree tool and would require coordination with Florida Power & Light.
- These "tree-bates" could be one-time payments (as they are in San Antonio and Anaheim), or they could be graduated reimbursements based on the size and condition of the tree at seven-, ten-, and fifteen-year marks.
- Eligibility should be contingent on the enrollee planting a tree from the City's tree palette and on receiving technical assistance from a Certified Arborist on where they should plant the tree. Technical assistance related to structural pruning and tree risk assessment must be provided by the Urban Forester to ensure that trees do not go unmaintained and subsequently pose a hazard to the property or its occupants.
- Applicants should submit plans that describe the species they are planting, where in relation to the house it is planted, and whether they are in a low canopy area of the City. The Urban Forester and other staff can select one or more candidates annually who have the greatest need and the tree most likely to provide the greatest reduction in energy consumption, as determined by analysis using the MyTree tool.
- This rebate should be based on the projected benefits over the course of three to five years, as calculated through MyTree, with optional rebates available after seven, ten, and fifteen years if the homeowner can demonstrate that they have been good stewards of the tree in the meantime.
- The City could further promote these programs by issuing annual "Tree Steward" awards to participating homeowners.
- This program should be prioritized in neighborhoods with low canopy and/or low Tree Equity Scores.

5G. TREE REPLACEMENT PROGRAMS FOR HOMEOWNERS

Offer tree replacement programs to private homeowners in which participants can receive a free high quality native species in exchange for removing invasives or otherwise undesirable trees.

- The program would accomplish the planting of high-quality canopy through replacing invasive trees with a native tree(s), replacing hedges with shade trees, and replacing declining early succession trees (e.g., laurel oak, red maple, black olive) with more resilient species (such as live oak, bald cypress, mahogany). The homeowner would be responsible for the removal costs, and the City would provide the tree based on a site assessment by the Urban Forester.
- To enhance and promote the program, the City should partner with organizations such as the Master Gardener program who have frequent interactions with homeowners regarding irrigation, native landscaping, and other sustainability initiatives.
- This program should be prioritized in neighborhoods with low canopy and/or low Tree Equity Scores.

Table 4.5: **Recommendations Milestones: Homeowner Assistance**

Recommendation 5A. Technical assistance and oversight for homeowners who plant swale trees	
2026 - 2030	Begin providing technical assistance to homeowners who plant trees in swales. Implement maintenance and liability agreements for such prior to planting. Require all species to be listed in the City's tree planting palette.
2031 - 2035	Evaluate the impact of technical assistance to individual homeowners who want to plant trees, pursuant to City criteria, in swales adjacent to their homes. Quantify number of swale trees planted by homeowners and number of homeowners who have received technical assistance.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 5B. Indirect cost-sharing and technical assistance for tree planting on private property	
2026 - 2030	Investigate whether indirect maintenance cost sharing from the TCTF can be provided to eligible homeowners who plant trees.
2031 - 2035	If found to be feasible, provide indirect maintenance cost sharing from the TCTF for eligible households based on annual tree benefits calculated with i-Tree Landscape.
2036 - 2040	Evaluate the popularity of indirect maintenance cost sharing and its impact on the balance of the Tree Canopy Trust Fund. If so, continue providing. If not, adjust and implement changes.
Ongoing	Continue action.
Recommendation 5C. Irrigation-related rebates for trees ("Tree-bates")	
2026 - 2030	Investigate the feasibility of offering a tree-related rebates, or "tree-bates," through partnership with eligible agencies.
2031 - 2035	Implement on private property. Pilot the tree-bate program to support the cost of irrigating and establishing trees in at least three neighborhoods – preferably those with low Tree Equity Score – and identify the number of participating homeowners and trees planted. Pilot the home energy savings by offering a one-time rebate to participants who purchase a tree and seek technical assistance in planting it.
2036 - 2040	Evaluate the success of the pilot programs. Adjust as necessary. Make the programs available Citywide. Quantify the number of trees planted as a part of these programs.
Ongoing	Continue action.

Recommendation 5D. Technical assistance to neighborhoods whose Mobility Master Plans prioritize tree planting	
2026 - 2030	Initiate tree planting projects in at least three of the seven neighborhoods who identified tree canopy enhancement as a major goal of their Neighborhood Mobility Master Plans.
2031 - 2035	Evaluate progress in neighborhoods whose Mobility Master Plans call for tree canopy enhancement. Quantify number of trees and approximate canopy added. Begin similar project in the other four neighborhoods.
2036 - 2040	Evaluate progress on previous neighborhoods. Quantify number of trees and approximate canopy added.
Ongoing	Monitor trees, canopy at the neighborhood level.
Recommendation 5E. Technical assistance to neighborhoods to develop a Tree Plan	
2026 - 2030	Initiate Neighborhood Tree Plans in three of the neighborhoods with the lowest Tree Equity Scores (TES)
2031 - 2035	Evaluate progress on Neighborhood Tree Plans in low TES neighborhoods. Initiate Plans in five others.
2036 - 2040	Evaluate progress on previous neighborhoods. Initiate Tree Plans in five more low canopy and low TES neighborhoods.
Ongoing	Evaluate progress on previous neighborhoods. Identify how many more neighborhoods require Tree Plans to accomplish tree equity Citywide. If any neighborhoods remain, initiate Plans in five more low canopy and low TES neighborhoods.
Recommendation 5F. Technical assistance to homeowners who plant strategic energy-saving trees	
2026 - 2030	Identify how to partner with eligible agencies to support efforts to strategically grow trees on private property that reduce energy consumption.
2031 - 2035	Pilot this program in at least three neighborhoods – preferably those with low Tree Equity Score – and identify the number of participating homeowners and trees planted. Evaluate the feedback participants have given about the program and used it to adjust practices
2036 - 2040	Make the program available Citywide.
Ongoing	Evaluate effectiveness of 2035 program. Quantify how many trees have been planted. Adjust if necessary
Recommendation 5G. Tree replacement programs for homeowners	
2026 - 2030	Develop and launch a tree replacement program.
2031 - 2035	Evaluate the success of the program in terms of how many homeowners have participated, how many trees have been planted, and what feedback has been given about the program.
2036 - 2040	Evaluate previous action. Quantify how many participants, how many trees have been planted. Adjust if necessary
Ongoing	Continue action.

ACTION AREA 6: STAFFING

6A. PROPOSED NEW POSITIONS

Internal stakeholder interviews revealed that the City's urban forestry activities are spread across several departments and programs, including Public Works; Parks and Recreation; Urban Design and Planning, Landscaping, Zoning, and Code Compliance; Transportation and Mobility; Neighbor Support; and SeeClickFix. However, very few employees of these departments with tree-related responsibilities have

training or credentials in urban forestry. In addition, coordination between departments for urban forestry activities was reported as somewhat difficult.

The following proposed new urban forestry positions are based on direct responses from internal stakeholders as well as the UFMP Team's analysis of the City's status quo of urban forest management.

URBAN FORESTRY ADMINISTRATOR

The Urban Forestry Administrator would work with department heads to coordinate funding and scheduling urban forestry activities across departments. They would ensure that recommendations and milestones of the UFMP, which span across multiple departments and areas of expertise, are met and that issues are addressed in a timely manner. They would lead coordination on feasibility studies for recommendations which require legal, engineering, and other review. They would work with other department heads and directly with City Management to appropriate adequate funding for urban forestry-related projects across departments and monitor progress of all internal stakeholders' implementation of UFMP recommendations.

This position would ideally be held by an experienced municipal employee with at least five years of managerial experience, preferably in urban forestry or an adjacent field, and a background and/or training in arboriculture and urban forestry. The Urban Forestry Administrator will need to understand the roles of all internal stakeholders in managing the urban forest and how each one will fit into the implementation of the UFMP. This position will therefore hold the responsibility of leading the UFMP Work Group as well as maintaining the interdepartmental coordination that the Board determines is necessary to implement the UFMP on a day-to-day basis.

ASSISTANT URBAN FORESTER

The Assistant Urban Forester would assist the Urban Forester with their daily workload, assisting with implementing urban forestry programs, supervising tree maintenance and planting; providing technical expertise on urban forestry related issues; supporting Code enforcement, plan review, ordinance development, and other planning related to trees; maintaining records; preparing and presenting arborist reports; performing tree assessments on select job sites; investigating concerns and complaints related to trees and recommending appropriate corrective measures; and offering input at City Commission meetings, advisory board meetings, and other citizen review boards.

Therefore, the purpose of this position would be to simultaneously assist with the expected additional workload for the Urban Forester, as this will likely be beyond the scope of one person (at the time of this writing, Fort Lauderdale only has one Urban Forester). The addition of an Assistant Urban Forester will free up the Urban Forester to work directly with the Urban Forestry Administrator to implement the UFMP and, through coordination with members of the proposed Tree Advisory Board, to ensure that the City adheres to the timeline recommended by the UFMP.

As the success of this position becomes apparent with time, a second Assistant Urban Forester position should be considered by the City to continue increasing the capacity of urban forest management. ISA-Certified Arborists should be prioritized when filling this position. Otherwise, the person in this position should be required to become ISA-Certified within six months after accepting the job. The creation of a Assistant Urban Forester position would expand the capabilities of urban forestry and widen the City's dedicated urban forestry program.

HORTICULTURIST AND TREE ESTABLISHMENT CREW

There is currently no position within the City fully dedicated to planting and caring for trees in City rights-of-way, parks, and other City properties. The City Horticulturist would be tasked with procuring, planting, and establishing trees across the City; managing the vendor pool of nursery growers and associated purchase orders specifically for planting trees; and managing trees for later planting in a City-run nursery. Considering the large scope of tree planting that will need to be completed by 2040, at least one person at the City must be planting and establishing trees full-time. The Horticulturist should work with a one- to three-person tree establishment crew whose jobs are to assist the Horticulturist with tree planting and to water all newly planted trees to establishment. This crew will require, at minimum, a vehicle and watering tank, pump, and hose. The tree establishment crew's role will be critical in minimizing mortality among newly-planted trees, especially in the initial five-year cycle of the UFMP, when newly planted trees will still have the potential to reach maturity by 2040.

CLIMBING ARBORIST

This position was identified by the Parks Department as a critical addition to their existing Citywide tree crew. Currently, Parks must utilize a bucket truck to perform high pruning, which increases the use and maintenance of that equipment, increases the cost of pruning, and requires specialized staff to operate it. The equipment is also limited in its ability to traverse some kinds of terrain. A climbing arborist would be more equipped to perform narrow extractions of trees and require minimal tree crews when performing pruning. The person who fills this position should be a PPQ arborist. If this position proves to be successful in streamlining urban forest maintenance work, a second climbing arborist position should be created.

ISA-CERTIFIED ARBORIST LANDSCAPE INSPECTOR

In order to fulfill the recommendations and goals outlined in the UFMP, the City will likely need to increase its capacity to conduct landscape inspections. Therefore, at least one additional landscape inspector should be hired during the initial five-year cycle to conduct additional landscape inspections and follow-ups. The person who holds this position should be an ISA-Certified Arborist.

ISA-CERTIFIED ARBORIST CODE COMPLIANCE OFFICERS

In the interview with Code Compliance staff, arboricultural training, such as ISA-Certified Arborist training/certification, was recommended for an existing Code Compliance officer who is interested in specializing in the enforcement of tree-related Code violations. Therefore, the creation of a new dedicated Tree Preservation/Landscape Code compliance position is recommended. An ISA-Certified Arborist should be hired to fill this position. This officer would be able to confidently address enforcement of tree abuse, tree removal without a permit, and other tree preservation & landscape infractions, reducing the workloads of Landscape Inspectors and the Urban Forester. In time, three more ISA-Certified Arborists should be hired so that each Commission District could have an ISA-Certified Arborist Code Compliance officer before 2040.

6B. UFMP WORK GROUP

Create a UFMP Work Group to implement the best strategies to reach the 33% canopy goal, facilitate communication between relevant departments and monitor progress of the implementation of the UFMP.

- A UFMP Work Group dedicated solely to the City's urban forestry programs is necessary to provide a venue for collaboration among relevant City staff.
- The initial cycle of implementing the UFMP should entail a coordinated effort by department heads, directors, and managers of all internal stakeholders to understand the goals of the UFMP, what actions are required by their teams to realize the recommendations, and establish a system of accountability and monitoring to ensure that their efforts align and that achievable goals and deadlines are set.
- The Work Group should include City staff from relevant departments, including but not limited to Sustainability and Special Projects, Parks, Landscaping, Zoning, Urban Design & Planning, Transportation and Mobility, and Public Works.

6C. TREE ADVISORY BOARD

Create a Tree Advisory Board to provide a venue for public comments related to urban forestry, a valuable resource for City Commissioners, and fulfill a requirement for Tree City USA status.

- A Tree Advisory Board that advises the City Commission on urban forestry practices and policies recommended in the UFMP and provides a forum to realize the vision of the UFMP will be a valuable tool to facilitate collaboration between the City and community and ensure that City staff consider public sentiment regarding their practices.
- The Board should have at least five appointed members of the public with expertise and background in urban forestry or related fields and liaison with relevant internal stakeholders, including but not limited to the Urban Forester and Parks staff.
- A qualification for receiving Tree City USA status by the Arbor Day Foundation is the existence of a tree board. While the Sustainability Advisory Board currently acts as such a board, having a Tree Advisory Board will likely be helpful in maintaining higher levels of engagement with internal and external stakeholders as the UFMP is implemented.

6D. UFMP GOALS IN CITY PROJECTS

Include the 33% canopy goal in all City projects.

- The activity of the proposed UFMP Work Group and Tree Advisory Board will be to delegate activities to the relevant entities according to the recommendation timelines, ensuring that the elements of the UFMP are introduced and incorporated in all City departments which impact the urban forest. The proposed new staff positions should be maximally utilized to facilitate the inclusion of the 33% canopy goal in departments and projects which have not previously prioritized the goals of the UFMP. Additionally, a committee should undertake interviewing and selecting an Urban Forestry Administrator from a pool of candidates.

Table 4.6: **Recommendations Milestones: Staffing**

Recommendation 6A. Proposed new positions	
2026 - 2030	Establish Urban Forestry Administrator, City Horticulturist, Junior Urban Forester, climbing arborist, ISA-Certified Arborist Landscape Inspector and ISA-Certified Arborist Code Compliance positions. Obtain necessary approval to create them. Fill all positions.
2031 - 2035	Positions for Urban Forestry Administrator, City Horticulturist, Junior Urban Forester, and climbing arborist should be filled. Evaluate impact of additional staff.
2036 - 2040	Review forestry staffing and reassess needs. Seek additional forestry positions as necessary.
Ongoing	Continually evaluate the quality of interdepartmental urban forestry strategy and communication as to what is working and what can be changed.
Recommendation 6B. UFMP Work Group	
2026 - 2030	Create a UFMP Work Group to implement a coordinated effort by department heads, directors, and managers of all internal stakeholders to understand the goals of the UFMP, what actions are required by their teams to realize the recommendations, and establish a system of accountability and monitoring to ensure that their efforts align and that achievable goals and deadlines are set.
2031 - 2035	Evaluate the effectiveness of the Work Group. Identify and resolve any obstacles to achieving the 33% canopy goal.
2036 - 2040	Continue previous action.
Ongoing	Continue action.
Recommendation 6C. Tree Advisory Board	
2026 - 2030	Create a Tree Advisory Board to advise the City Commission on the best strategies to reach the 33% canopy goal.
2031 - 2035	Evaluate the effectiveness of the Tree Advisory Board, including the regularity with which it meets and can form a quorum, its ability to motivate internal stakeholders to implement the recommendation of the UFMP, the ability to recommend policy and Code changes related to UFMP recommendations that the Commission approves and adopts, public awareness and participation in the public comment portion of meetings, and internal and external stakeholder sentiments about the Board.
2036 - 2040	Tree Advisory Board to continue to provide guidance and monitoring of UFMP progress. Identify and resolve any obstacles to achieving canopy goals.
Ongoing	Continue action.
Recommendation 6D. Urban forestry principles in City projects	
2026 - 2030	Initiate coordination between directors, managers, etc., of internal stakeholder departments to facilitate the implementation of relevant components of the UFMP.
2031 - 2035	Review success and adjust accordingly. Use template of inter-departmental coordination to outline the duties of the Urban Forestry Administrator. Continue facilitating coordination among internal stakeholders.
2036 - 2040	Continue previous action. Continue periodic meetings, coordination, etc., among internal stakeholders.
Ongoing	Continue action

ACTION AREA 7: INVASIVE SPECIES, TREE PESTS, AND DISEASES

7A. VOLUNTARY INVASIVE SPECIES MANAGEMENT PROGRAM ON PRIVATE LAND

Launch an invasive species management program to support efforts to remove invasive tree species and replace them with native ones on both City- and privately-owned land.

- In order to ensure the sustainability, longevity, and overall benefits of the urban forest canopy, the City should take steps to reduce or eliminate invasive tree species where it can. Invasive species are designated as such by the Florida Invasive Species Council (FISC) due to their propensity to proliferate unchecked by natural predators across the landscape, reducing habitat for native species. These species may also cause potential risks to people and property in Florida, as they have not evolved to withstand the severe weather common to this area, such as hurricanes and wildfires. Mature invasive tree species create seeds which result in the spread of invasives across the landscape. Removing these species is a valuable management action that will have positive implications for the City's long-term canopy goals. To incentivize the replacement of invasive canopy with more resilient native canopy, the City should offer a tree or trees to homeowners who remove invasive trees on their property. This could be a component of a larger effort to create tree stewardship agreements with residents and community organizations.

7B. INTERAGENCY PARTNERSHIP IN TREE DISEASE OUTBREAK RESPONSE AND PREVENTION

Work with County, State, and academic experts to identify means of educating residents on ways they can protect their trees in the event of an outbreak of tree pests or disease.

- When outbreaks of tree pests and diseases occur, they rarely, if ever, adhere to political boundaries such as city limits or county lines. Prevention and treatment therefore must include coordination between local governments, relevant agencies, and other experts to ensure that proven methods are effectively implemented, monitored, and managed at the landscape-level. Additionally, caution must be exercised to avoid removing potentially resistance specimens or varieties from the gene pool of a local population.
- The City currently coordinates with the University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) and Broward County Extension to provide free education and technical assistance to homeowners to monitor for termites and address infested trees. Such efforts must continue and expand as new biological stressors are identified.

7C. DISTRIBUTION OF TRAPS TO PARTICIPATING HOMEOWNERS WITH TERMITE-INFESTED TREES

Expand current educational outreach to homeowners and distribute traps to residents and interested parties whose trees may be infested with the termites to slow the insects' spread.

- Fort Lauderdale's urban forest is threatened by three species of termites: Formosan subterranean termites (*Coptotermes formosanus*), Asian subterranean termites (*Coptotermes gestroi*), and West Indian drywood termites *(Cryptotermes dudleyi*).
- Public meeting attendees expressed concern that termites are attacking mature trees and would continue to do so faster than the City could plant new trees. Other participants expressed concern that trees affected by these termites were more likely to fail and impact people and property.

- Chouvenc & Brown (2025) conducted a five-year study on 1,304 trees in eight Fort Lauderdale parks to demonstrate how a simple visual monitoring and bait approach can identify and eliminate termite colonies in trees and maintain minimal termite activity within public green spaces. The authors showed that municipalities may have to establish perennial programs that include regular monitoring and treatment with a termite-specific formulated pesticide. The study demonstrates that this can be achieved. In order to ensure that termite infestations in trees are addressed in a meaningful way, traps should be implemented on public property and distributed to participating private property owners to install themselves.
- In addition to this initiative, the City should expand its partnership with local and state agencies, such as Broward County Extension and UF/IFAS, in educating homeowners about the threat of termites to their trees. Additional educational outreach should include publicly available information, workshops, and other options facilitated through partnerships with agencies.

7D. SYSTEMATIC TRACKING OF PUBLIC TREES INFESTED WITH TERMITES

Train all relevant City staff who work on trees to identify and report signs of infestation on trees.

- As recommended by Chouvenc & Brown (2025), relevant City staff, such as landscape inspectors, Code compliance officers, and urban foresters, must be able to identify trees with active signs of infestation for prevention and treatment efforts to be effective. Therefore, such staff should be trained to do so.
- Staff with access to termite-specific insecticides (i.e., hold an applicable pesticide applicator license) who can safely and effectively apply to them trees should be mobilized to do so on public property. All infested trees should be reported to a specific department or staff member in order to track how many trees are lost to termite infestation.

Table 4.7: **Recommendations Milestones: Invasive Species, Tree Pests, and Diseases**

Recommendation 7A. Voluntary invasive species management program on private land	
2026 - 2030	Implement invasive species removal and replacement program. Quantify how many invasive species are removed, how many native species are planted, and approximate canopy subtracted and added.
2031 - 2035	Evaluate effectiveness of previous action. Adjust as necessary
2036 - 2040	Repeat previous action.
Ongoing	Continue action.

Recommendation 7B. Interagency partnership in tree disease outbreak response and prevention	
2026 - 2030	Collaborate with outside agencies and experts to prepare response to outbreaks of tree pests or disease. Identify means of prevention and outreach to residents that can be implemented in the event of an outbreak.
2031 - 2035	Evaluate effectiveness of previous action. Update existing response protocols, especially if an outbreak has actually occurred.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 7C. Distribution of traps to participating homeowners with termite-infested trees	
2026 - 2030	Partner with local and state agencies to educate homeowners about the threat of termites to their trees. Evaluate the feasibility of distributing traps to those residents/interested parties whose trees may be infested with the termites to slow the insects' spread.
2031 - 2035	Continue public outreach with relevant agencies on best practices. Evaluate the impact of distributing traps to interested parties whose trees are infested with the termites. Quantify the number of trees treated and participants in this program.
2036 - 2040	Evaluate the programs implemented to address this issue and how it and its partners can improve on them, including the distribution of traps to homeowners with affected trees.
Ongoing	Continue action.
Recommendation 7D. Systematic tracking of public trees infested with termites	
2026 - 2030	Train all City staff who work on trees to identify and report signs of infestation on trees.
2031 - 2035	Identify how much canopy has been lost due to termite infestation and what species are at higher risk than others. Discontinue allowing species at higher risk of infestation to meet minimum landscaping requirements.
2036 - 2040	Continue previous action.
Ongoing	Continually evaluate resilience to relevant tree diseases and pests and responses to pest and disease outbreaks.

ACTION AREA 8: TREE PLANTING

8A. RIGHT TREE, RIGHT PLACE

Conduct a Citywide campaign to plant trees that will contribute significantly to the goal of 33% canopy by 2040 which incorporates the principles of "right tree, right place."

- According to the City's past Tree City USA applications, a total of 11,051 trees were planted between 2015 and 2023, an average of 1,381 trees per year. However, it is not clear which Departments were responsible for the plantings or whether they were part of a targeted tree planting campaign.
- Tree species which can be expected to live for several decades to over a century, cause minimal disruptions and risk to people and property, and withstand significant environmental stressors such as construction activities and severe weather, should be prioritized in both planting and preservation.
- The phrase "right tree, right place" is a ubiquitous saying across the industries of arboriculture and urban forestry. It refers to the principle that, in order to maximize the benefits of the urban forest through ensuring longevity and minimizing the risk to people and property, trees should be planted

in places where they can reach maturity and become assets to communities that have minimal to no negative impacts to infrastructure, people, and activities.

- "Right tree" means that species which are native or adapted to a landscape where they will be able to establish in a reasonable amount of time and need minimal maintenance inputs as they mature. Once mature, the "right tree" should be expected not to cause disruptions or pose risk for a reasonable amount of time. So-called early successional, or "pioneer," species are typically not the right tree for urban settings, as they have evolved to grow large very quickly and fail at a relatively young age. Ecologically, these species facilitate more advanced stages of forest growth and are therefore very useful. However, when powerlines, homes, and people are coexisting with them, they may pose unacceptable risk unless proper maintenance is employed.
- "Right place" means that a tree should be planted where it will succeed. Large shade trees planted near houses or underneath powerlines may require frequent, extensive maintenance, such as pruning, that is costly and reduces their benefits and structural stability. In some cases, these trees are preemptively removed to eliminate the risk they pose. The "right place" for such trees is a reasonable distance away from infrastructure where it has enough room to grow naturally and become an asset or landmark to the community. The "right tree" for such situations may be a tree that grows to a smaller stature. Conversely, small statured trees planted in large medians or along pedestrian routes may not provide the shade that pedestrians need to comfortably travel on sunny days. Large shade trees may therefore be the right tree for such planting spaces.

8B. PRIORITIZATION OF NEIGHBORHOODS WITH LOW CANOPY AND LOW TREE EQUITY SCORES

Prioritize the neighborhoods listed as having low canopy cover and low Tree Equity Scores in the tree planting campaign to address inequity in the urban tree canopy.

- Urban forest equity is not simply an effective way of delivering tree-related benefits to communities that are not experiencing them - It ensures that the urban forest is resilient to landscape-level impacts and cultivates a broader appreciation for the urban forest that is personally and culturally significant across geographies. A healthy, intact urban forest is an integral part of the functional utilities, safe homes, and neighborhoods where the bonds of community can be forged that everyone in Fort Lauderdale deserves.
- Importantly, an urban forest in one neighborhood may look different than it does in another, depending on the history of land use, the motivations of residents, and other factors. Therefore, tree planting and preservation efforts must reflect what is practical and what is desirable according to the people who live in communities where they take place. The City's efforts to prioritize low canopy and low Tree Equity Score neighborhoods in its urban forestry outreach and technical assistance efforts must be conducted in concert with community leaders in those areas. The goals and objectives of these efforts must be shaped by the people who live in these neighborhoods, such as what is outlined in Recommendation 5E. Ultimately, the success of any tree planting effort depends on the community's buy-in. While community leaders should understand how they can work with the local government to secure assistance, the public is more likely to value the planting effort if it comes from a collaboration led by people who live where the trees are planted.

A healthy, intact urban forest is an integral part of the functional utilities, safe homes, and neighborhoods where the bonds of community can be forged that everyone in Fort Lauderdale deserves.

- These efforts, as well as those outlined in Recommendation 5E, must be shaped through open and transparent forums such as community meetings that are advertised and facilitated by City staff. The City should engage in surveys, public commentary, and workshops to gauge attitudes and opinions and provide education on the City's canopy goals and the importance of urban forest management. Volunteer tree planting events coupled with tree giveaways that feature species preferred by residents should take place to demonstrate proper planting techniques and desirable outcomes. Iterative processes should shape community-wide planting goals. The results of such efforts should be consolidated into the Neighborhood Tree Plans outlined in Recommendation 5E.

8C. COMMUNITY TREE PLANTING PARTNERSHIPS

Collaborate with civic associations and other community groups located inside low canopy and low Tree Equity Score neighborhoods to select the locations of planting projects and outline maintenance agreements for newly planted trees.

- According to comments received at the public meetings as well as best industry practices, this type of community collaboration could help ensure that trees are planted where they are most needed and in ways that reflect residents' preferences, while also fostering a sense of place among community members that positively impacts their quality of life and relationship with their local urban forest.
- Residents in these neighborhoods are likely to understand which areas planting projects are likely to be the most successful and impactful to the community. However, they must be organized in such a way that interested parties can participate in ways that empower them and that responsibilities are understood. According to comments received during public meetings, civic associations and neighborhood association boards are often comprised of individuals who can communicate goals and act as mediaries between the City and the community. The recommendation therefore urges the City to identify these groups and partner with them to mobilize efforts to improve urban forest management in these areas.
- The City should partner with community organizations and other third parties to identify potential planting areas and come up with maintenance agreements that outline the most effective way to maintain trees within the common areas, what entities should care for trees when they are established, and how they can be protected from other landscaping activities, such as mowing. Potential planting areas and maintenance requirements should be developed with the input of members to maximize their interest and engagement. The City should also provide technical support for trees that HOAs plant, such as routine check-ups and guidance on structural pruning, fertilization, and irrigation.

8D. TECHNICAL ASSISTANCE WITH TREE PLANTING AND PRESERVATION IN FORTIFY LAUDERDALE PHASE I & II NEIGHBORHOODS

Take steps to ensure that current and future tree canopy is resilient to potential inundation events in the neighborhoods identified as vulnerable to flooding in Fortify Lauderdale.

- On development sites where trees are to be preserved, those which can withstand moderate impacts from flooding, such as bald cypress, live oak, and sea grape, should be prioritized for preservation as much as possible.
- As the stormwater management systems in these areas are renovated, redesigned, and maintained, City engineers should incorporate low impact designs which include flood and salt tolerant trees into their plans, where possible.
- The City should advise future tree planting permit applicants in these areas to plant salt and flood tolerant tree species. Examples of such species are included in Recommendation 14A.
- The City should coordinate with civic associations in these neighborhoods to provide technical assistance and education about the importance of how "right tree, right place" principles apply in these areas.
- Phase I of Fortify Lauderdale identifies nine priority neighborhoods which are in watersheds with areas significantly prone to flooding: Edgewood, Victoria Park, Progresso Village, Southeast Isles (which consists of 10 distinct neighborhoods), Durrs, Dorsey-Riverbend, River Oaks, Melrose Manors, and Riverland Civic Association.
- Phase II of Fortify Lauderdale includes an additional 19 neighborhoods: Chula Vista, Croissant Park, Flagler Village, Harbour Inlet, Imperial Point, Lake Ridge, Lauderdale Isles, Melrose Park, Middle River Terrace, Oak River, Poinsettia Heights, River Landings, Riverland Manors, Riverland Woods, Riverland Village, Sailboat Bend, Riverside Park, Shady Banks, and Tarpon River.
- While none of the Phase II neighborhoods are among those with the ten lowest Tree Equity Scores, they still rank among some of Fort Lauderdale's most vulnerable to impacts of climate change, such as severe flooding.

8E. TECHNICAL ASSISTANCE WITH TREE PLANTING AND PRESERVATION IN NEIGHBORHOODS IMPACTED BY PROJECTED SEA LEVEL RISE

Plant species with high salt and flood tolerance in areas that are likely to be impacted by increases in coastal flooding and in green infrastructure designed to redirect, absorb, exclude, or otherwise mitigate stormwater and nuisance tidal floodwater.

- Models from the 2019 Southeast Florida Regional Climate Compact's Regionally Unified Sea Level Rise projections predicts sea level rise of 10-17 inches above current average levels by 2040 and 21-40 inches by 2070 in many areas of Fort Lauderdale.
- An increase of 12 inches above normal levels is possible by 2040 and would result in local flooding in the areas listed below. While the waterfronts in these areas are under the jurisdiction of other agencies, the City will be able to plant appropriate species and implement green stormwater management designs in City rights-of-way adjacent to these areas.
    - along the North Fork New River
    - Hugh Taylor Birch State Park
    - Bonnet Museum
    - Mills Pond Park
- An increase of 18 inches above normal is possible by 2040 and would result in more extensive flooding in the above-listed areas, as well as:
    - Las Olas Isles neighborhoods
    - Rio Vista
    - Seven Isles
    - Tarpon River
    - Sailboat Bend
    - Dorsey-Riverbend
    - along the South Fork Middle River.

- An increase of 24 inches is possible by 2070 and would result in increases in all above-listed areas, plus the following:
    - Coral Ridge Isles
    - Coral Ridge Country Club Estates
    - Galt Ocean Mile
    - Victoria Park
- An increase of 42 inches is possible by 2070 and would result in increases in all above-listed areas, and the following:
    - Downtown
    - Dolphin Isles
    - Bal Harbor
    - Central Beach
    - Sunrise Key
    - Hendricks and Venice Isles
    - Las Olas Isles
    - Colee Hammock
    - Harbor Beach
    - Harbor Isles
    - Harbordale
    - Shady Banks
    - Riverside Park
    - River Oaks
    - River Landings
    - Chula Vista
    - Oak River
- In all these scenarios, overflow of stormwater retention ponds across the City are likely. These areas are also at risk of high tide flooding as sea levels rise. Even temporary saltwater inundation can injure or kill young and mature trees as well as create hostile soil conditions in which many trees will not grow. To this point, planting a tree in an elevated planter or mound which excludes floodwater may extend its life and protect it from the rising salty groundwater table.

8F. TREE SHADING REQUIREMENTS IN OPEN SPACES

Require that open spaces include a certain percentage of shade that comes from trees rather than other shade structures to ensure that developers include trees in open spaces in high-density development. Furthermore, investigate the feasibility of allowing above-grade landscaping to count towards a maximum of 50% of required open space canopy for multistory developments.

- A challenge for multistory urban neighborhood structures, such as parking garages, is incorporating trees and landscaping into the footprint. While some of these areas often have open space and canopy requirements, open spaces in RACs do not have explicit landscaping requirements, which can lead to a lack of tree canopy, and canopy requirements in many high-density areas can be satisfied with shade structures, rather than by trees.
- Landscaping, Zoning, and Urban Design & Planning staff stated that adjustments to existing landscaping requirements for shading could be made to facilitate increased tree planting area, especially in RACs. Requiring that shade come from trees will facilitate innovation in design and construction that will creatively incorporate trees into new developments across the City. Combined with preservation incentives, high-density developments may increasingly incorporate existing trees into their footprint to maximize housing, commercial, and environmental functions.

- Currently, above-grade landscaping cannot be counted towards landscaping requirements due to challenges with inspecting to ensure Code specifications are met. However, with an increase in multi-story development across Fort Lauderdale and a common practice of incorporating landscaping into rooftop recreational areas, such landscaping should be allowed to count towards a maximum of 50% of required canopy for multi-story developments. Although the shade may not directly affect pedestrian activity at the ground level, ecological benefits and a reduction in ambient heat from the buildings' rooftops may still be likely. If above-grade landscaping were to count toward minimum landscaping requirements, property owners should be required to enter into maintenance and access agreements with the City which obligate them to maintain the canopy into the future as is required by conventional maintenance agreements for landscaping at grade.

Table 4.8: **Recommendations Milestones: Tree Planting**

Recommendation 8A. Right tree, right place	
2026 - 2030	Practice and promote "right tree, right place" principles in a Citywide tree planting campaign and in all City planting projects and to all parties who propose to plant trees on private property.
2031 - 2035	Continue action.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 8B. Prioritization of neighborhoods with low canopy and low Tree Equity Scores	
2026 - 2030	Prioritize neighborhoods with low canopy cover and low Tree Equity Scores as a focus for tree planting programs.
2031 - 2035	Evaluate whether these neighborhoods have experienced an increase in tree canopy. Review the latest Tree Equity Scores or similar data to see if changes appear in the latest data.
2036 - 2040	Repeat previous action. The City should have worked with 75% of the lowest canopy neighborhoods to a Neighborhood Tree Plan or similar strategy to increase tree planting and promote tree preservation.
Ongoing	Where possible, the lowest Tree Equity Score in the City should be no less than 80/100, or, if that metric is no longer viable, the lowest canopy cover for any neighborhood should be no less than 30%.
Recommendation 8C. Community tree planting partnerships	
2026 - 2030	Initiate tree planting projects in partnership with at least three community groups, such as civic associations. Implement a maintenance agreement for these trees. Provide all partners with technical assistance to establish and care for their trees. Identify how many trees have been planted, what their mortality rate was, and the effectiveness of technical assistance provided to partner organizations.
2031 - 2035	Evaluate the popularity and effectiveness of these efforts and adjust as necessary. Identify five more relevant areas and associated partner organizations and implement similar program. Identify the number of trees that have been planted. Review how often the City provides assistance to community organizations, including evaluating the survival rate for trees planted by people who have received this assistance and any feedback the community gives regarding how the assistance could improve.
2036 - 2040	Identify three more neighborhoods and associated organizations and implement similar programs. Repeat previous action as necessary.
Ongoing	Identify three more neighborhoods and associated organizations and implement similar programs. Repeat previous action as necessary.
Recommendation 8D. Technical assistance with tree planting and preservation in Fortify Lauderdale Phase I & II neighborhoods	
2026 - 2030	Initiate planning for planting projects in three of the nine Phase I neighborhoods that include flood and salt tolerant species. Provide appropriate technical assistance to these neighborhoods.

2031 - 2035	Complete planting projects in three of the nine Phase I neighborhoods that include flood and salt tolerant species. Provide technical assistance to homeowners in these neighborhoods who want to plant trees on their properties.
2036 - 2040	Complete similar planting project in six remaining Phase I neighborhoods and three Phase II neighborhoods. Evaluate survival rate of trees from previous projects.
Ongoing	Complete similar planting projects in eight to 16 Phase II neighborhoods. Evaluate success of previous projects.
Recommendation 8E. Technical assistance with tree planting and preservation in neighborhoods impacted by projected sea level rise	
2026 - 2030	Initiate planning for tree planting projects which feature floor and salt tolerant species in three neighborhoods identified as at-risk of flooding.
2031 - 2035	Complete tree planting projects which feature floor and salt tolerant species in three neighborhoods identified as at-risk of flooding.
2036 - 2040	Evaluate success of previous projects. Complete six more similar projects in at-risk neighborhoods.
Ongoing	Evaluate success of previous and previous projects. Complete ten more similar projects in at-risk neighborhoods.
Recommendation 8F. Tree shading requirements in open spaces	
2026 - 2030	Formulate requirements that a certain percentage of canopy in high density development come from trees.
2031 - 2035	Adopt Code language requiring that a certain percentage of canopy in high density development come from trees. Evaluate whether these efforts have been successful. Quantify survival rate, participation/compliance by developers.
2036 - 2040	Continue previous action.
Ongoing	Continue action.

ACTION AREA 9: MANGROVES

9A. MANGROVE PLANTING, ENHANCEMENT, AND RESTORATION OF ELIGIBLE CITY-OWNED PROPERTIES

Plant mangroves in feasible locations on City-owned land to pilot a program for planting, maintaining, and monitoring new mangrove installations as a part of the City's tree planting campaign.

- Thirty-five City-owned properties were identified as potential candidates for mangrove planting and/or restoration. The following lists should be maintained so that mangrove planting, restoration, and/or enhancement may be considered as a component of future improvements. Additionally, although survey respondents expressed interest or support in planting mangroves in residential settings, the City should engage in an educational campaign when enhancing, restoring, or installing mangrove habitat on City-owned property to address potential public concerns of reduced vistas and navigability of waterways. The City should also consider structural solutions to these concerns, such as installing mangroves in the required setback for docks from a property line and maintaining them at the height of the dock.

CANDIDATE PROPERTIES WITH HARDENED SHORELINES

- The following properties may already have impediments to planting mangroves, such as existing seawalls and hardened shorelines. However, mangroves may be a viable incorporation during future infrastructure improvements or if they are converted into living shorelines. In some places, mangroves can thrive when planted adjacent to seawalls and hardened shorelines.
    - Idlewyld/Merle Fogg Park
    - Colee Hammock Park
    - Along the riverwalk by History Fort Lauderdale and Pioneer House Museums and Pamela's Pointe (Parcels 504210010220, 504210970020, and 504210BJ9999)
    - Smoker Park
    - Cooley's Landing Marine Facility
    - Lewis Landing Park
    - At the dead end of SW 12th Ave, directly east of Seafarer's Church (Parcels 504209460010, 504209460020, 504209460030, 504209460040, 504209460050, 504209460060, and 504209460060)
    - Mitchell Family Park
    - The dead end of North Andrews Way (Parcel 494234000380)
    - Secretary School Park
    - Francis L. Abreu Place
    - Bayview Drive canal ends
    - Ann Murray Greenway
    - Rivermont Park
    - New River Park
    - Ann Herman Park
    - Victoria Park

CANDIDATE PROPERTIES WITH LIVING/NATURAL SHORELINES

- The properties listed as having natural or living shorelines may also have hardened shorelines on site, but their waterfronts are not completely hardened.
    - North Fork Riverfront Park
    - Sailboat Bend Preserve
    - Townsend Park
    - Coontie Hatchee Park
    - Bill Keith Preserve Park
    - George English Park
    - The water frontage along the Middle River directly behind Fire Station 29 (Parcel 494236260010)
    - William J. Kelly Rookery
    - Warbler Wetlands
    - Osswald Park
    - Annie Beck Park

- Tarpon Cove Park
- Sara Horn Greenway
- Cliff Lake Park
- Tarpon River Park
- Riverland Preserve
- Snyder Park
- Sweeting Park

9B. PILOT MANGROVE PLANTING PROGRAM ON PRIVATE PROPERTY

Implement an initiative to encourage education on the importance of mangroves, increase the availability of juvenile mangroves for planting sites, and assist homeowners who want to plant mangroves along the waterfronts of their own properties.

- Sixty-six percent of public survey respondents who reported owning a home along a waterway were either willing to allow mangrove trees to be planted along their waterfronts (39%, n=78) or were interested in learning more about planting mangroves along their waterfronts (27%, n=53) (Figure 3.5).
- These results indicate there could be success in working with homeowners to expand mangrove installations across the City. In Sanibel, Cape Canaveral, and Brevard County, residents can participate in "adopt-a-mangrove" initiatives where they care for mangroves at home before planting them in a designated mitigation site.

9C. REPLACEMENT OF INVASIVE VEGETATION WITH MANGROVES

Perform invasive vegetation removal in existing and potential mangrove habitats to facilitate natural or planted mangrove propagation, including on any of the City-owned properties listed in Recommendation 9A.

- Removing invasive vegetation is critical for the growth and establishment of sustainable tree canopy in Fort Lauderdale. Waterways enhance the spread of many invasive species in Florida. As such, the removal of invasive species from brackish and riparian areas can be an effective way to facilitate the establishment of mangroves, either naturally or through planting efforts.
- Homeowners who remove invasive species from their waterfronts should be eligible to receive mangrove trees through the tree replacement program described in Recommendation 7A.

9D. INTERDEPARTMENTAL COORDINATION TO ENSURE LONG-TERM MANGROVE MAINTENANCE

Coordinate between relevant departments and agencies to ensure that any long-term maintenance and impacts to infrastructure from mangrove plantings is understood and protected from future development.

- The Florida Department of Environmental Protection (FDEP) delegated the authority to regulate alteration and trimming mangroves to the Broward County Environmental Protection and Growth Management Department in a 1996 agreement as long as the activity does not require an FDEP Environmental Resource Permit. The agreement also notes that no mangrove trimming, or alteration shall occur on land that has been set aside for mitigation. Therefore, any mangroves planted as part of mitigation efforts of the UFMP shall not be able to be altered due to potential future development.
- Stormwater Operations and other teams which routinely perform maintenance and repairs to utilities and stormwater assets may work in or around areas where mangroves are growing or in

areas that the City will perform mangrove planting. Coordination with these entities must take place to ensure that impacts to mangroves are minimized and that teams understand that they should avoid any activities within mangrove habitats.

9E. PURSUIT OF EXEMPT ACTIVITIES RELATED TO MANGROVE PLANTING, ENHANCEMENT, AND RESTORATION

Pursue mangrove planting opportunities that fall within the exempt activities as designated by the Florida Department of Environmental Protection (FDEP).

- Mangroves planted below the Mean High Water line require a General Permit from FDEP (62-330.631 F.A.C.), unless they fall within exempt activities per Ch. 62-330.051(12)(e)) F.A.C., or the United States Army Corps of Engineers (Nationwide Permit 54). Mangroves planted adjacent to federal waters, the Intracoastal Waterway, cannot extend 30 feet past the Mean Low Water line or cause an adverse effect on navigation. However, planting mangroves in areas under 500 ft of shoreline do not require an FDEP General Permit. Therefore, planting efforts which follow these parameters may be a more expeditious undertaking for the City when it initiates mangrove planting on City properties.

9F. ENHANCEMENTS AND OUT-PLANTING OF EXISTING MANGROVE HABITATS

Partner with relevant agencies to conduct enhancements and planting efforts in existing mangrove habitats in Fort Lauderdale.

- Maintaining and enhancing existing mangrove habitat is the most efficient way to increase mangrove canopy cover throughout the City. There are two mangrove habitats recognized by the State of Florida in the City limits. One is in Hugh Taylor Birch Park, which is owned and maintained by the Florida Department of Environmental Protection through Florida State Parks, and the other is in the Bonnet House Museum and Gardens, which is owned and maintained by the Bonnet House Estate. Additionally, there is existing mangrove habitat in the County-owned waterfront in Mill Pond Park.

Table 4.9: **Recommendations Milestones: Mangroves**

Recommendation 9A. Mangrove planting, enhancement, and restoration of eligible City-owned properties Recommendation 9B. Pilot mangrove planting program on private property Recommendation 9C. Replacement of invasive vegetation with mangroves	
2026 - 2030	Identify at least three candidate City-owned properties for planting, restoring, or enhancing mangroves. Plan for all necessary operations, such as invasive removal and neighbor outreach.
2031 - 2035	Initiate mangrove planting on at least four candidate City-owned properties suitable for planting, restoring, or enhancing mangrove. Where applicable, perform invasive species removal that will facilitate the expansion or installation of mangrove trees. Quantify how many trees have planted and what their survival rate has been.
2036 - 2040	Complete mangrove plantings on at least five more City-owned candidate properties. Evaluate success of previous projects. Implement a pilot version of this program to participating homeowners interested in planting mangroves along their waterfronts. Make the program available to all waterfront homeowners within the City.
Ongoing	Continue planting, maintaining, restoring, and enhancing mangrove habitat on City-owned waterfront properties. Where applicable, include mangrove plantings in maintenance and repair of flood protection infrastructure, such as seawalls.

Recommendation 9D. Interdepartmental coordination to ensure long-term mangrove maintenance	
2026 - 2030	Coordinate with relevant City departments and other agencies to avoid impacts to mangrove plantings and restoration when conducting maintenance nearby. Adopt appropriate SOPs.
2031 - 2035	Evaluate effectiveness of previous action. Adjust as necessary
2036 - 2040	Repeat previous action.
Ongoing	Continue action.
Recommendation 9E. Pursuit of exempt activities related to mangrove planting, enhancement, and restoration	
2026 - 2030	Evaluate the feasibility of conducting mangrove planting and restoration as exempt activities. If necessary, study the feasibility or necessity of obtaining an FDEP General Permit.
2031 - 2035	Conduct mangrove planting and restoration as exempt activities where possible. If necessary, study the feasibility or necessity of obtaining an FDEP General Permit. Adjust as necessary.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 9F. Enhancements and out-planting of existing mangrove habitats	
2026 - 2030	Evaluate the feasibility of partnering with relevant outside agencies to conduct maintenance and enhancement of existing mangrove habitats within the City.
2031 - 2035	Evaluate the success of partnering with relevant outside agencies to conduct maintenance and enhancement of existing mangrove habitats within the City. Adjust as necessary.
2036 - 2040	Continue action.
Ongoing	Continue action.

ACTION AREA 10: CITY DESIGN PRACTICES

10A. STANDARD GENERIC PLAN DETAILS/SPECIFICATIONS TO ADDRESS OR AVOID COMMON TREE-RELATED INFRASTRUCTURE CONFLICTS

Create standard generic plans and specifications to address or avoid common tree-related infrastructure conflicts.

- To increase tree canopy, removal of right-of-way trees should be the last resort when performing right-of-way maintenance. In internal stakeholder meetings, City staff cited a need for standard technical specifications and plans which would help preserve trees that conflict with infrastructure.
- Such plans should include installing root barriers, silva cells, and bridging or modular sidewalks over large surface roots; working near trees which conflict with utilities; pruning disruptive roots in ways that cause minimal harm to the tree; erecting tree protection barricades which are Code compliant; incorporating structural soil or similar product into tree wells; and other relevant activities.
- Along with these plans, the City should also issue fact sheets for private property owners who request sidewalk waivers due to tree impacts to show the alternative designs, facilitating safe pedestrian mobility while still preserving trees.

10B. STANDARDIZED STREETSCAPES TO REDUCE TREE-RELATED INFRASTRUCTURE CONFLICTS

Standardize the general location of utilities and common streetscape features to provide for street trees on at least one side of every street wherever possible.

- Both Stormwater and Right-of-Way engineers suggested that standard plans for streetscapes could be implemented to avoid future removals and "surprises" when utilities need to be repaired. City engineers noted that Miami-Dade County adopted standards which locate sewer, stormwater, overhead power lines, and other utilities on designated sides of streets with standard setbacks to ensure there is sufficient room between utilities, trees, and landscaping. Such plans would standardize locations for street trees, ensuring that they are a component of all future new and renovated streetscapes.

10C. STANDARD GENERIC PLAN DETAILS/SPECIFICATIONS TO PRESERVE EXISTING TREES OR SPECIFY TREES IN DESIGNS FOR ROAD AND BUILDING ELEVATIONS

Draft standard generic plan details and specifications which demonstrate how to preserve existing trees or specify new tree plantings for road and building elevation projects.

- With current and future flooding issues and sea level rise, road and building elevations are becoming increasingly critical components to infrastructure construction in Fort Lauderdale. However, there are currently no standards for completing such projects which show how onsite trees can be preserved or ways in which new tree plantings can be incorporated into the designs. In many instances for building elevations, trees and other assets in rights-of-way need to be removed or access redesigned for the footprint to remain the same and so that the ingress and egress are accessible. For road elevations, the width of the right-of-way must be expanded, requiring the elimination of street trees within the construction footprint.
- Standard plans for building elevations may demonstrate that a smaller footprint with increased building height can preserve trees. Such situations would likely align with the tree preservation approach outlined in Recommendation 4B, making the developer eligible for credits for preserving trees.
- According to Transportation and Mobility staff, preserving trees adjacent to road elevation projects may require specialized barriers or tree wells installed around existing trees retroactively or one-way pairing, in which two adjacent formerly two-way streets which run parallel to each other are converted to one-way streets in which traffic travels in opposite directions following elevation.
- For situations in which preservation of existing street trees is not possible, standard designs for elevated roads and buildings should be drafted which include roadside bio-swales and rain gardens which feature flood-tolerant tree species.

10D. LOW IMPACT DESIGNS FOR STORMWATER MANAGEMENT WHICH INCLUDE TREES

Increase the incorporation of low impact stormwater designs and green infrastructure, which include shade trees, into streetscapes adjacent to buildings and roadways, being elevated or hardened to protect against flooding and sea level rise.

- Low impact designs are detailed and recommended in the City's Design and Construction Manual, Stormwater Master Plan, the Net Zero Plan, and other documents.
- Low impact designs are being discussed for some of the Fortify Lauderdale Phase II stormwater projects. While trees alone cannot prevent flooding, they can augment green infrastructure meant to prevent and store stormwater.

10E. IDENTIFICATION OF ALTERNATE METHODS OF DEVELOPMENT TO PRESERVE MATURE TREES EARLY IN PLAN REVIEW PROCESS

Revise ULDR to require submittal of landscape plans earlier in the process and to encourage preservation of specimen and desirable trees.

- The City has the discretion to not approve tree removal permit applications. Currently, the Urban Forester and Landscape Inspector may not see development plans until they have passed the 100% design phase, at which point, altering the plans to preserve desirable trees is difficult and cost prohibitive.
- The City currently requires that a Tree and Palm Survey and tree inventory be submitted before a landscape permit is issued. However, landscape permits are issued after development permits are issued, which means that by the time desirable trees are required to be identified, plans which require that they remove may have already been approved.
- Developers should work with relevant City urban forestry staff and/or an ISA-Certified Arborist prior to the 60% design phase to create tree disposition plans that identify which trees must be retained, ways to avoid them, which ones should be removed, and what the square footage of their canopies are.
- Code language outlining when removal permits can and cannot be approved should be adopted in order to allow permit reviewers to require plan revisions from applicants who propose to remove excessive amounts of canopy or otherwise desirable trees.
- This language should emphasize that developers identify these trees before plans are approved, ensuring that they can adjust their plans if necessary and avoid unforeseen impacts to trees. Additionally, the City should ensure that designated staff enforce tree protection measures and standards.
- Development plans must therefore accurately indicate the extant canopy cover and prove that they are not removing more than the maximum canopy square footage allowed per Recommendation 1A by identifying trees that should remain onsite for developers to stay below this maximum. Additionally, in order to protect preserved trees during construction, they must be included in plans so that routes which avoid them can be established ahead of construction and materials to protect them can be budgeted for.

10F. STANDARD GENERIC PLAN DETAILS/SPECIFICATIONS FOR ROAD IMPROVEMENTS ACCEPTED BY COUNTY AND STATE TRANSPORTATION ENGINEERS WHICH INCLUDE STREET TREES

Collaborate with County and State transportation engineers to draft standard plans for roadway maintenance and renovation that include street and median trees, designated canopied areas in public rights-of-way, and/or open and green space components of mixed-use and Interdistrict Corridors.

- To ensure that rights-of-way along County and State roads contribute to, rather than restrict, the City's goal of increasing canopy cover, City Urban Design and Planning and Transportation and Mobility staff noted that standard plan details and specifications for streetscapes with shared jurisdictions should include street and median trees. Many main arteries throughout Fort Lauderdale have shared jurisdictions.
- City staff suggested that an inter-agency agreement on such plans could reduce instances in which roads are renovated or repaired without street trees. As the City seeks to expand mixed-use corridors on roads with shared jurisdictions, buy-in from transportation engineers from outside agencies on street tree designs will be a critical component of increasing canopy cover in major rights-of-way.

10G. DESIGNATION OF DESIRABLE TREES IN AREAS OF INTEREST FOR ALL CITY BID PACKAGES

Conduct an inventory of trees within project areas for City maintenance and repair projects that are put out to bid, and include trees which must be protected in the bid package.

- By specifying which trees should be protected ahead of plans being drafted and construction starting, the City will reduce or eliminate instances in which contractors unknowingly remove or fail to protect desirable trees. This recommendation aims to encourage vendors operating within the City to incorporate desirable, existing trees into their designs and make it easier for the City to enforce tree protection measures.

10H. REDUCTION OF SPACING REQUIREMENTS AND ADJUSTMENT OF PLANTING SPACE VOLUME FOR STREET TREES

Reduce spacing recommendations to encourage more street trees be planted along streets and change tree well sizes to reflect volumes of soil as appropriate for different sizes of trees.

- To the extent that this does not eliminate or impact swale drainage, planting street trees more closely together than is currently recommended in the City's Design & Construction Manual may result in increased canopy cover in a short amount of time along rights-of-way. Reducing spacing recommendations may also reduce structural defects in shade trees, potentially reducing future maintenance costs and risks to people and property.
- The City's current tree well size requirements are in square feet. Although minimum dimensions are included to ensure that tree wells are reasonable shapes, they do not specify how deep the tree well should be. The City's Design & Construction Manual provides additional guidance on planting in tree wells. Furthermore, current specifications for tree well sizes are insufficient in that they describe square footage, rather than volume, for trees. Additionally, these specifications vary according to the caliper inches of tree planted, which does not account for the size at maturity.
- The following changes to tree well size requirements should be adopted:
    - 900 cubic feet for tree wells for large shade trees, with 15 feet being the smallest horizontal dimension
    - 400 cubic feet for medium trees, with 10 feet being the smallest horizontal dimension
    - 256 cubic feet for small trees, with 8 feet being the smallest horizontal dimension
    - 100 cubic feet for palms, with five feet being the smallest dimension

Table 4.10: **Recommendations Milestones: City Design Practices**

Recommendation 10A. Standard generic plan details/specifications to address or avoid common tree-related infrastructure conflicts	
2026 - 2030	Develop standard plans for preserving trees which apply to the most common issues related to tree preservation.
2031 - 2035	Implement standard plans for preserving trees which apply to the most common issues related to tree preservation.
2036 - 2040	Review popularity, efficiency, and efficacy of plans created in previous action. Quantify how many trees have been preserved as a result of the implementation of these plans.
Ongoing	Routinely implement these plans on developments where similar plans are not submitted to preserve trees on lots undergoing development.

Recommendation 10B. Standardized streetscapes to reduce tree-related infrastructure conflicts	
2026 - 2030	Initiate feasibility study of standardizing streetscape infrastructure locations to support increased street tree planting.
2031 - 2035	Complete a feasibility study for standardizing locations of utilities and other street amenities to ensure that less tree removal is needed for utility maintenance and repairs. Implement standard plans for these types of streetscapes in at least one project
2036 - 2040	Evaluate success of project. Adjust accordingly and apply to three more streetscape improvement projects.
Ongoing	Continue action.
Recommendation 10C. Standard generic plan details/specifications to preserve existing trees or specify trees in designs for road and building elevations **Recommendation 10D. Low impact designs for stormwater management which include trees**	
2026 - 2030	Make standard plans for preserving trees adjacent to road and building elevations available to developers and relevant City staff. Implement these plans in at least one City elevation project. Begin routinely incorporating bio-swales or other green stormwater infrastructure which feature salt and flood tolerant tree plantings in areas where preservation was not possible, especially in neighborhoods identified in Phase I and II of Fortify Lauderdale.
2031 - 2035	Evaluate the success of the previous project. Routinely implement these plans in all road and building elevation projects.
2036 - 2040	Repeat previous action.
Ongoing	Continue action.
Recommendation 10E. Identification of alternate methods of development to preserve mature trees early in plan review process	
2026 - 2030	Draft Code language which outlines the identification of alternative means of development to preserve trees and justifications for denying removal permits for desirable trees that are critical to the City's existing canopy cover. Once done, do not approve plans that propose to remove canopy beyond the proposed maximum square footage. Plans must identify trees that should remain onsite for developers to stay below this maximum.
2031 - 2035	Evaluate how many trees have been preserved as a result of this initiative. Evaluate impact on review staff and applicants. Adjust as necessary.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 10F. Standard generic plan details/specifications for road improvements accepted by County and State transportation engineers which include street trees	
2026 - 2030	Initiate creation of standard plans for streetscapes with shared jurisdictions that include street and median trees. Reach out to relevant staff from outside agencies to ensure that they be adopted by those agencies.
2031 - 2035	Finalize standard plans for streetscapes with shared jurisdictions that include street and median trees. Work with relevant staff from outside agencies to get plans adopted by those agencies.
2036 - 2040	Review whether plans have been used for any projects on County or State roads in the City.
Ongoing	These plans should be implemented on all roads with shared jurisdictions within the City limits.
Recommendation 10G. Designation of desirable trees in areas of interest for all City bid packages	
2026 - 2030	Develop a requirement for City bid packages for conducting a tree inventory in an area of interest and designating specific trees to be retained.
2031 - 2035	Adopt this requirement as Code language. Evaluate success of conducting a tree inventory in an area of interest and designating specific trees to be retained. Quantify how many trees have been retained since implementing this initiative.
2036 - 2040	Evaluate success of previous action. Adjust and implement accordingly.
Ongoing	Continue action.

Recommendation 10H. Reduction of spacing requirements and adjustment of planting space volume for street trees	
2026 - 2030	Reduce spacing recommendations to encourage more street trees be planted along streets. Require that tree wells meet certain volumetric thresholds for small, medium, and large trees. Provide standard plans for how developers can add structural soil and other technologies to tree wells to support these trees.
2031 - 2035	Implement the recommended changes to the City's street tree planting plans so that larger shade trees are planted more closely together and in correspondingly larger planting spaces and more small and medium trees and palms are planted in small spaces and under utility lines.
2036 - 2040	Evaluate impact of this policy. Quantify how many shade trees have been planted in larger planting spaces and how many small and medium trees have been installed under utility lines and in small planting spaces.
Ongoing	Reduce spacing recommendations to encourage more street trees be planted along streets. Require that tree wells meet certain volumetric thresholds for small, medium, and large trees. Provide standard plans for how developers can add structural soil and other technologies to tree wells to support these trees.

ACTION AREA 11: CENTRALIZED TREE DATABASES

11A. IMPLEMENTATION OF A CITYWIDE TREE INVENTORY

Conduct and maintain a Citywide tree inventory that utilizes the City's existing resources where possible.

- Contemporary research and industry standards in arboriculture conclusively agree that an inventory is the most effective way to manage an urban forest. In order for the City to effectively track its progress on its canopy goals, it needs to have a foundational knowledge of the trees that are currently growing in City-owned properties and rights-of-way.
- Data for each tree should include, at minimum, tree location, species, diameter, condition, and average canopy width. The overall goal of 33% canopy cover must be carefully managed and closely monitored between the adoption of the UFMP and 2040. A tree inventory is the best way to accomplish this goal.
- Tree inventories typically include publicly owned trees only. However, remote sensing technologies, such as LiDAR (Light Detecting And Ranging), can be used to assess canopy on all land.

EXISTING LIDAR DATA

The City currently has a LiDAR dataset from 2021 that could serve as a foundation for an internal tree inventory or GIS canopy layer. However, this data has not been pre-processed and cannot be analyzed in its current state. The City's GIS staff should pre-process the existing LiDAR data to create rasters, such as a digital elevation model, which could be paired with ground LiDAR data to identify tree locations and overall canopy cover. While this LiDAR was acquired from a flight chartered by the City, the City should collaborate with Broward County, the South Florida Water Management District, National Oceanic Atmospheric Administration, and other private vendors who collect LiDAR data on an annual basis to create canopy layers that can be compared to the 2021 data to track canopy losses and gains over time. This can be supplemented with Citywide sample-based inventories and complete inventories of areas of special interest.

11B. TRACKING NEWLY PLANTED TREES

Closely track trees that are planted by City staff and, where possible, by private developers who must meet minimum landscaping standards and plant replacement trees to mitigate trees removed.

- Although most cities do not track plantings on private property, Landscape Inspection staff may be able to enter data into a GIS tree inventory when they complete inspections for minimum landscaping, allowing the City to track canopy beyond what is planted on City property.
- Action 30 of the Net Zero Plan recommends implementing planting and preservation initiatives from the UFMP to advance the Comprehensive Plan's goal of 33% canopy. A widespread, concerted planting effort by the City in accordance with the recommendations of the UFMP will meet the metrics of this Action.

11C. INVENTORY OF ALL SPECIMEN AND COMMISSION-PROTECTED TREES

Inventory all trees which qualify as specimen and Commission-protected trees to create a special tree overlay zone which allows developers and property owners to know about them before any impacts to them are made and, if necessary, make necessary plans to build around them or avoid conducting improper maintenance on them.

- Specimen and Commission-protected trees, which have special protections in the tree ordinance, should be inventoried to provide a foundational database for City staff and other relevant entities.
- In cities with similar kinds of environmental overlay zones, such as Portland, Oregon, developers and property owners are given flexibility with where they can develop on properties which fall within the overlay zone. In Fort Lauderdale, this overlay zone could provide for setback flexibilities or variances that allow developers or homeowners to build outside the typical perimeter of a given setback for the explicit and exclusive reason to preserve and build around a specimen or Commission-protected tree. The creation of an overlay zone with these trees would provide predictability to prospective developers and home buyers, giving them the opportunity to adequately prepare and adjust any plans to develop on such parcels.

11D. USE OF CITY WORKS TO TRACK TREES IMPACTED BY CITY INFRASTRUCTURE OPERATIONS

Create an accessible, editable, centralized dataset of trees already in City Works.

- Updating and maintenance were cited by internal stakeholders as obstacles to conducting and maintaining a formal GIS tree inventory. However, in several internal stakeholder meetings, staff referred to the City Works program as a method which City-owned trees could potentially be inventoried and monitored in a way that would require minimal additional effort to maintain and update.
- The City Works program is currently used to inventory stormwater assets, and trees adjacent to those assets are often logged in a tree disposition sheet when maintenance and repairs are conducted.
- City Works could therefore be used to centralize tree data if relevant staff routinely imported tree disposition data from the field. This data could be updated and monitored by the Urban Forester.

Table 4.11: **Recommendations Milestones: Centralized Tree Databases**

Recommendation 11A. Implementation of a Citywide tree inventory	
2026 - 2030	Use the existing LiDAR data to create a GIS canopy layer. Initiate a Citywide tree inventory.
2031 - 2035	Collaborate with other agencies to obtain, pre-process, and analyze LiDAR or other aerial and ground data to update the existing canopy analysis obtained from its current LiDAR dataset.
2036 - 2040	Continue to update inventory as necessary.

Ongoing	Continue annual canopy assessments with i-Tree Canopy and the latest available aerial imagery. Assessments with LiDAR or similar imagery should be done every three to five years.
Recommendation 11B. Tracking newly planted trees	
2026 - 2030	Create a centralized digital database of City-owned trees, specimen trees, and newly planted trees. Use this dataset to identify and prioritize areas for maintenance, planting, and other activities.
2031 - 2035	Update the existing inventory database with newly planted, specimen, and Commission-protected trees.
2036 - 2040	Continue to update inventory as necessary.
Ongoing	Routinely update this database as necessary, such as when landscape inspections are conducted, when maintenance on City infrastructure adjacent to street trees is performed, or when new specimen trees are identified.
Recommendation 11C. Inventory of all specimen and Commission-protected trees	
2026 - 2030	Implement an overlay zone of Commission-protected and specimen trees.
2031 - 2035	Evaluate whether this approach facilitated the preservation of those trees located on parcels where development occurred. Identify how many of them were preserved. Evaluate whether this provided a degree of predictability that allowed developers to plan to protect and avoid these types of trees.
2036 - 2040	Evaluate success of previous action and adjust as necessary.
Ongoing	Continue to update as necessary.
Recommendation 11D. Use of City Works to track trees impacted by City infrastructure operations	
2026 - 2030	Create an accessible, editable, centralized dataset of trees already in City Works and that all relevant staff continue inventorying trees in City Works when operations in rights-of-way impact City-owned trees.
2031 - 2035	Evaluate the impact of requiring all users of City Works entering data for projects adjacent to or including trees enter specific tree data into the program. Quantify the number of existing trees and canopy square footage entered into the program.
2036 - 2040	Repeat previous action.
Ongoing	Continue to update as necessary.

ACTION AREA 12: COMMUNITY ENGAGEMENT

12A. INCREASING FREQUENCY OF PUBLIC TREE EVENTS

Hold frequent public tree events in order to promote a Citywide tree planting campaign and demonstrate the technical assistance that the City will offer to make tree planting feasible for community members.

- While the City has held tree giveaways and other events in the past, the City's Adopt-A-Tree program is currently on hold. This and the Energy Saving Trees programs were both lauded by participants at multiple public meetings, indicating that, although the City does not appear to consistently host these events, there is widespread support and enthusiasm for them. The City should resume these programs whenever staffing levels are adequate.
- Tree giveaways and volunteer planting events should be held frequently between October and April and feature educational opportunities. Volunteer planting events should be coordinated by relevant urban forestry staff and entail a planting and establishment demonstration, the planting of several trees on public land by volunteers, and a tree giveaway featuring a wide variety of species that meet different planting goals for a variety of community members. At the end of the demonstration,

volunteers should expect to confidently understand how to properly plant and establish a tree in their own properties or communities. The planting event should take place on public land to underscore the City's commitment to doing its part to reach the canopy goal of 33%. The tree giveaway should act as an introduction to the assistance homeowners can receive from the City to increase canopy on private property. By offering relevant species, from shade trees to fruit trees, the City will ensure that people with a wide variety of urban forestry needs will be able to fulfill them while simultaneously contributing to the goal of 33% canopy cover.

- During the event, City staff should explicitly promote the goal of 33% canopy by 2040, as well as all the programs, technical assistance, tree-bates, and preservation incentives that it offers to private property owners. Any relevant enrollment forms and brochures for these programs and services should be available at the event. Attendees should be encouraged to enter their information into a digital sign-in sheet so that the City can keep them appraised of urban forestry news and events.
- As a Tree City USA, the City holds an annual Arbor Day celebration during the last week in April. In the future, this event should include a tree giveaway and a tree planting component open to volunteers in which members of the community can participate in the reforestation of public parcels of land, such as school grounds. Maintenance tutorials should also be given at such events to increase participant confidence and, in turn, successful planting rates on private property. The goal of such events is to ensure that attendees of any educational or volunteer tree planting events take a tree home to plant, learn about tree care, and participate in planting trees in their community.
- All events should be promoted in a variety of venues and online platforms, to achieve greater public participation.
- To enhance awareness and engagement, the City should partner with local organizations and institutions to increase turnout and engagement. Partnerships should be undertaken where a specific audience that will result in large turnout and participation can be reached. For example, in Gainesville, teachers from local schools and colleges give students extra credit for participating in such events. Similarly, church and social groups may participate to both plant trees on their campuses and promote their organizations. By having targeted pools of participants for these events, rather than a passive open invitation to the public, participant engagement in these events is generally high and engaged Feedback at public meetings for the UFMP indicated that there is widespread public interest in such events, and similar recurring events have gained significant popularity in other Florida cities.

12B. TRACK TREES PLANTED IN PARTNERSHIP WITH COMMUNITY ORGANIZATIONS

Track all new tree plantings conducted by third parties on City owned property in a digital database.

- As part of the technical assistance and collaboration with community partners described in Recommendation 8C, the City should also track these tree plantings in a shared database to streamline operations, plan maintenance, and identify potential planting areas, including where trees must be replaced. This database should be able to be incorporated into a larger Citywide tree inventory maintained by the City.

12C. PRIORITIZATION OF NEIGHBORHOODS WITH LOW CANOPY COVER AND TREE EQUITY SCORES

Prioritize areas with the 10 lowest Tree Equity Scores and lowest canopy percentages in all of the above efforts.

- As outlined in Recommendations 8B and 8C, the City should emphasize identifying community leaders, holding public meetings to understand community goals, and providing education and

technical assistance to local homeowners, civic associations, businesses, faith-based organizations, and other community groups interested in planting and maintaining trees in these neighborhoods.

12D. ONGOING PUBLIC ENGAGEMENT

Continually engage in community-based tree planting projects and invest in urban forestry at the community level.

- Reaching 33% canopy cover by 2040 will require significant shifts in development to preserve trees and massive efforts by both the City and the community to plant and establish trees. For the latter, motivation of the community will need to be continuously catalyzed and centrally organized, and the City's team of urban forestry experts will need to be the force behind this effort. While the community's role will be critical, the City should act as a hub of expertise through its technical assistance, collaboration, support, organization, and provision of plant materials.
- It is unlikely that tree planting programs outlined in the Recommendations of the UFMP will be complete by 2040. Regardless, efforts to enhance the urban forest in these areas should continue after 2040. Once programs are complete, or in an iterative cycle of adjustment and maintenance, neighborhoods with moderate canopy or Tree Equity Scores should be considered for assistance. Community urban forestry outreach should be regarded as a perpetual activity for the City to undertake as a key component of urban forest management.

Table 4.12: **Recommendations Milestones: Community Engagement**

Recommendation 12A. Increasing frequency of public tree events	
2026 - 2030	Increase the frequency of tree giveaways and volunteer planting events in low canopy neighborhoods, especially between October and National Arbor Day (last weekend in April). Promote them in a variety of venues and online platforms, to achieve greater public participation. In addition, tutorials should be conducted at each event by the Urban Forester or other qualified staff on proper planting techniques.
2031 - 2035	Evaluate the increased frequency of tree giveaways and volunteer tree planting events, especially in low canopy neighborhoods. Identify how many trees have been given away, how many trees have been planted, and whether it has been necessary to increase the frequency of these events. Quantify the number of participants in the planting events. Consider viable means to follow up with giveaway trees to evaluate their survival rate. Determine whether these events have facilitated tree stewardship with community members and civic associations.
2036 - 2040	Repeat previous action.
Ongoing	Continue to hold these events regularly.
Recommendation 12B. Track trees planted in partnership with community organizations	
2026 - 2030	Roll out a centralized digital database that documents all trees planted by third parties on City property (such as swales). Quantify the number of trees and approximate canopy.
2031 - 2035	Continue previous action.
2036 - 2040	Continue action.
Ongoing	Continue action.
Recommendation 12C. Prioritization of neighborhoods with low canopy cover and Tree Equity Scores	
2026 - 2030	Continually prioritize actions for 12A and 12B in low canopy and low Tree Equity Score neighborhoods
2031 - 2035	Continue previous action.
2036 - 2040	Continue action.
Ongoing	Continue action.

Recommendation 12D. Ongoing public engagement	
2026 - 2030	Facilitate ongoing public engagement.
2031 - 2035	Continue previous action.
2036 - 2040	Continue action.
Ongoing	Continue action.

ACTION AREA 13: INTERAGENCY ENGAGEMENT

13A. INTERAGENCY AGREEMENT WITH BROWARD COUNTY SCHOOL DISTRICT

Partner with the Broward County School District to forge interlocal agreements to authorize the City's tree planting program expand onto School District grounds located within Fort Lauderdale.

- As one of the largest landowners in the City of Fort Lauderdale, Broward County Schools holds unique potential to enhance the City's urban forest. Not only is there potential planting area for trees, trees planted on those properties are likely to deliver positive benefits to students and faculty, both through environmental benefits and educational opportunities.
- Currently, the City lacks the ability to plant trees on public school grounds. Through an interlocal agreement, the City will be able to coordinate with the School District Superintendent, school principals, and other relevant County entities to designate quantities and appropriate locations for new tree plantings.
- For all new tree plantings under interlocal agreements, the City should be responsible for planting and maintaining the trees for up to three years after planting. Where appropriate, City staff should coordinate with relevant School staff to facilitate learning opportunities related to trees, including how to plant and care for them, the importance of urban trees, and potential career opportunities in the fields of arboriculture and urban forestry.

13B. ACQUISITION, RE-ZONING, AND RESTORATION OF LAND FOR CONSERVATION

Acquire land for conservation both on its own and in partnership with other agencies.

- The City's Parks Bond allocates approximately $10 million specifically for land acquisition. Although conservation land may not be an appropriate use of that entire allocation, recreational land in urban areas is often multi-use, offering both active and passive outdoor experiences and potentially fulfilling conservation opportunities.
- Acquiring land where mature trees are already growing and can be managed to enhance environmental benefits beyond those related to trees, such as flood mitigation, will add to the City's canopy as well as protect that land from future development that could require the removal of canopy.
- The Broward County Urban Forest Management Plan includes recommendations for forest enhancement, which outlines species recommendations for a variety of planting sites, pruning guidelines, risk mitigation, and ecological enhancement. The guidelines reflect "right tree, right

place" principles as well as current industry standards for maintenance. Natural lands that overlap with drainage canals and restored wetland communities, where trees (especially mangrove trees) can be instrumental in reducing or mitigating flooding, may be within the jurisdiction of Broward County or other outside agencies. The City should therefore seek to partner with relevant agencies where necessary to acquire land with high conservation value.

Table 4.13: **Recommendations Milestones: Interagency Engagement**

Recommendation 13A. Interagency agreement with Broward County School District	
2026 - 2030	Implement an interlocal agreement with the Broward County School District to plant more trees on school grounds, especially in schools located in low canopy neighborhoods. Execute agreements and complete planting events at a minimum of three schools.
2031 - 2035	Evaluate effectiveness of 2026 action. Quantify how many trees have been planted, what their mortality rate has been, and what kinds of educational opportunities have arisen from this program.
2036 - 2040	Continue previous action.
Ongoing	Continue action.
Recommendation 13B. Acquisition, re-zoning, and restoration of land for conservation	
2026 - 2030	Identify potential parcels that could be rezoned conservation or where ecological restoration and conservation activities could take place to enhance ecological value.
2031 - 2035	Initiate ecological enhancement or restoration on at least three City-owned parcels zoned conservation or purchased at least three parcels with high conservation value and designated them as conservation land.
2036 - 2040	Evaluate effectiveness of previous action. Adjust as repeat as necessary.
Ongoing	Continually evaluate the status of lands acquired for or rezoned as conservation, such as whether the ecological and economic value of the land has increased and identification of additional needs for each parcel.

ACTION AREA 14: REVISED TREE PALETTE

BRANCH OUT

» Appendix B: Tree Palette

14A. NEW SPECIES RECOMMENDATIONS

Add new species to the existing tree palette. Extend protections during development to all species in the palette. Lastly, include all or some species in specific landscaping requirements for RACs and that their size at maturity, irrigation requirements, required sun exposure, soil preference, and overall structure be considered as they relate to landscaping requirements outlined in Section 47-21 of the City's Unified Land Development Regulations (ULDR).

- The City's current tree palette features recommended species, general guidance on where those species will grow, how large they can grow, and their salt tolerance. Relatedly, the Design and Construction Manual also features descriptions of common planting space types which provides an effective foundation for a robust tree palette.
- The species listed in **Table B.1** (Appendix B) should be utilized to meet minimum landscaping requirements by developers as well as planted as part of the City's tree planting campaigns to expand species diversity and enhance the function and aesthetics of the City's urban forest.
- The additional species should be eligible to meet these requirements and should be considered a list of species that shall be protected under the City's tree ordinance.

- Eligibility for planting in mixed-use and other special districts, such as RACs, is limited by the Code. In the interest of expanding species diversity in these areas, all or some of the species from the revised palette should be eligible for planting in these areas, especially in open spaces and other designated canopy areas.

14B. NEW CATEGORY RECOMMENDATIONS

Add new categories for each species to the existing tree palette. The revised palette proposes adding the tree species listed in **Table B.1** (Appendix B), then grouping those trees into large, medium, and small categories, as well as the following categories for each tree:

- Native/non-native
- Tree size
- Wind, flood, salt, and drought tolerance
  - Poor: Low tolerance to wind, flood salt and drought.
  - Fair: Moderate tolerance to wind, flood salt and drought.
  - Good: High tolerance to wind, flood salt and drought.
- Root system characteristics
  - Poor: Extensive root system, likely to cause issues to adjacent infrastructure.
  - Fair: Roots may cause moderate damage to adjacent infrastructure.
  - Good: Roots less likely to cause damage to adjacent infrastructure.
- Candidate for relocation
  - Poor: Tree or palm unlikely to relocate well.
  - Fair: Tree or palm moderately relocates well.
  - Good: Tree or palm relocates well.
- Overall longevity
  - Short: Less than 30 years.
  - Semi-Moderate: 31 to 80 years.
  - Moderate: 81 to 150 years.
  - Long: 151 years or greater.
- Suitability for street tree planting
  - Yes: A good candidate for street tree planting.
  - No: A poor candidate for street tree planting.

Table 4.14: **Recommendations Milestones: Revised Tree Palette**

Recommendation 14A. New species recommendations **Recommendation 14B. New category recommendations**	
2026 - 2030	Adopt revised tree palette.
2031 - 2035	Assess species list. Remove any species which have recently been listed as invasive by FISC, found to be prone to pests or disease or otherwise undesirable. Revise categories as necessary.
2036 - 2040	Continue previous action.
Ongoing	Continue action.

IMPLEMENTATION

IMPLEMENTATION

DISCUSSION OF NUMBER OF TREES TO BE PLANTED

Achieving the 33% canopy goal by 2040 will require a dedicated and sustained tree planting and preservation effort. To achieve its goal, the City and community will need to grow 58,691,368.4 ft^2, or 2.1 square miles, of additional canopy. This equates to 3,912,758 $ft^2$of mature canopy per year, equivalent to 0.4% of the City's total area and 1.6% per year of the current canopy square footage. According to Florida's 2023 Statewide Canopy Assessment, 17%, or 155,898,947 ft^2 (5.6 square miles), of Fort Lauderdale is potential planting area for trees[7], meaning that there are no existing conflicts that would prevent some kind of tree from being planted and growing there without obstruction. This includes the 3% (34,760,880 ft^2) of land in the City that is vacant.

The City will need to install 58,691,368.4 ft^2, or 2.1 square miles, of additional canopy and 10,694 - 18,411 trees per year will need to be planted by the City, community, businesses, and organizations to meet the 33% canopy goal.

Although the City will be responsible for adopting the UFMP and spearheading its recommendations, most of the urban forest canopy and potential planting areas are privately owned. The 2040 Comprehensive Plan estimates that 13%, or 137,606,040 ft^2, of the City are owned by government entities, as opposed to 40% (439,302,600 ft^2) that is residential, 22% (235,703,160 ft^2) that is commercial, and 9% (94,394,520 ft^2) that is industrial. The number of trees that must be planted to increase the City's canopy to 33% will therefore need to be planted on both public and private lands.

While most trees planted at the time of this writing will have reached maturity by 2040, planting efforts will need to be consistent and widespread through 2040 to achieve 33% canopy cover. With each year approaching 2040, newly planted trees will have fewer years to reach maturity and trees planted in the final years of the time frame will still be young.

The following scenarios describe how many trees will need to be planted by the City and private property owners to achieve this goal depending on the average size of mature tree canopy. Most newly planted trees have approximately 25 ft^2 of canopy. However, at maturity, live oak and mahogany canopies can be 75-100 ft across, or 4,418 – 7,854 ft^2, while palm canopies may only be five to 10 ft across, or 20-79 ft^2.

Scenario 1 outlines the potential number of trees that would need to be planted per year if the average canopy per tree is 707 ft^2 (15 feet from the center of the trunk to the dripline) (**Table 5.1**). This scenario could cost an average of $1.2 million to $2.4 million per year from 2026-2040, though this burden will likely not be the responsibility of a single entity.

This scenario may be the most feasible means of reaching 33% canopy by 2040 in that shade trees provide higher canopy square footage per tree. Additionally, installation costs for shade trees are lower than they are for palms.

Table 5.1. **Scenario 1: Average 707-ft^2 mature canopy**

Year	Years to Grow	Avg ft^2/tree by 2040	Trees/year	Total ft^2 by 2040
2026	14	707	10,694	7,558,519.2
2027	13	658	10,694	7,037,721.4
2028	12	609	10,694	6,516,923.6
2029	11	561	10,694	5,996,125.8
2030	10	512	10,694	5,475,328.0
2031	9	463	10,694	4,954,530.2
2032	8	415	10,694	4,433,732.4
2033	7	366	10,694	3,912,934.6
2034	6	317	10,694	3,392,136.8
2035	5	269	10,694	2,871,339.0
2036	4	220	10,694	2,350,541.2
2037	3	171	10,694	1,829,743.4
2038	2	122	10,694	1,308,945.6
2039	1	74	10,694	788,147.8
2040	0	25	10,694	267,350.0
Total			160,410	58,694,019

Scenario 2 assumes an average of 500 ft^2 (12.6 ft from the center of the trunk to the dripline), which still requires planting 14,906 trees per year across the City to reach 33% canopy cover by 2040 (**Table 5.2**), a potential average annual cost of $1.9 million and $3.9 million from 2026-2040.

Table 5.2. **Scenario 2: Average 500-ft^2 mature canopy**

Year	Years to Grow	Avg ft^2/tree by 2040	Trees/year	Total ft^2 by 2040
2026	14	500	14,906	7,453,298.1
2027	13	466	14,906	6,947,537.5
2028	12	432	14,906	6,441,777.0
2029	11	398	14,906	5,936,016.4
2030	10	364	14,906	5,430,255.8
2031	9	330	14,906	4,924,495.2
2032	8	296	14,906	4,418,734.6
2033	7	263	14,906	3,912,974.1
2034	6	229	14,906	3,407,213.5
2035	5	195	14,906	2,901,452.9
2036	4	161	14,906	2,395,692.3
2037	3	127	14,906	1,889,931.7
2038	2	93	14,906	1,384,171.2
2039	1	59	14,906	878,410.6
2040	0	25	14,906	372,650.0
Total			223,590	58,694,610.9

Scenario 3 assumes that each tree will have an average canopy square footage of 400 ft^2 at maturity (11.3 feet from the center of the trunk to the dripline), requiring approximately 18,411 trees to be planted annually by the City and the community to reach the goal of 33% canopy cover (**Table 5.3**). Such an undertaking could cost between $2.7 million and $5.5 million per year from 2026-2040, on average, though it would be shouldered by several different entities, including the City and other stakeholders. This highlights the importance of preserving, where practical, as many mature trees as possible and planting large shade trees that grow larger canopies than small trees and palms.

BRANCH OUT

» Appendix F: Cost Estimates for UFMP Recommendations

Table 5.3. **Scenario 3: Average 400-ft^2 mature canopy**

Year	Years to Grow	Avg ft^2/tree by 2040	Trees/year	Total ft^2 by 2040
2026	14	400	18,411	7,365,104.6
2027	13	373	18,411	6,871,900.7
2028	12	346	18,411	6,378,696.8
2029	11	320	18,411	5,885,492.9
2030	10	293	18,411	5,392,289.0
2031	9	266	18,411	4,899,085.1
2032	8	239	18,411	4,405,881.2
2033	7	213	18,411	3,912,677.3
2034	6	186	18,411	3,419,473.4
2035	5	159	18,411	2,926,269.5
2036	4	132	18,411	2,433,065.6
2037	3	105	18,411	1,939,861.7
2038	2	79	18,411	1,446,657.8
2039	1	52	18,411	953,453.9
2040	0	25	18,411	460,250.0
Total			276,165	58,693,347.5

The numbers above assume that the City's baseline canopy coverage will not decline. There is no belief that tree removals or natural tree failure will cease, but it is possible that the number of trees growing to maturity could balance out removals and natural attrition. The recommendations of the UFMP and adaptive management should help minimize overall loss while new canopy is added.

COST ESTIMATES FOR TREE PLANTING SCENARIOS

Cost estimates for the three tree planting scenarios outlined in **Tables 5.1 – 5.3** are provided in **Appendix E**. They use a baseline 2025 cost estimate of the average wholesale (low) and retail (high) cost for trees commonly planted in Fort Lauderdale that increases year over year using a multiplier of 3.92%, which is based on the average inflation rate from 2019-2024. A low and high range is given for overall and average annual costs for each scenario in **Table 5.4**.

Table 5.4. **Cost Estimates for Tree Planting Scenarios**

	Scenario 1	Scenario 2	Scenario 3
Average Cost Per Year (Low)	$1,163,645	$1,859,363	$2,687,503
Average Cost Per Year (High)	$2,447,913	$3,857,186	$5,497,156
Total Cost 2026-2040 (Low)	$17,454,670	$27,890,449	$40,312,545
Total Cost 2026-2040 (High)	$36,718,702	$57,857,783	$82,457,342

COST ESTIMATES FOR RECOMMENDATIONS

Cost estimates for all 62 recommendations are provided in **Appendix F**. They use a baseline cost estimate for 2026 that increases year over year using a multiplier of 3.92%, which is based on the average inflation rate from 2019-2024. They do not include the costs of the tree planting scenarios. A low and high range is given for overall and average annual costs per recommendation and for all recommendations together in **Table 5.5**.

BRANCH OUT

» Appendix E: Cost Estimates for Tree Planting Scenarios, Tables 5.1 – 5.3

Table 5.5. **Cost Estimates for Recommendations**

	Low	High
Average Annual Cost Per Recommendation 2026-2040	$20,217	$34,787
Average Annual Cost for All Recommendations 2026-2040	$1,253,432	$2,156,804
Total Cost for All Recommendations 2026-2040	$18,801,482	$34,204,276

FUNDING AND COST-SHARING

GRANTS AND FELLOWSHIPS

Thirteen State and Federal grants valued at as much as $21.9 million were identified as potential resources to fund urban forestry management and enhancement during data acquisition and analysis from 2023-2024. Please note that funding from these sources may not be available at the time of application and that new sources of funding may become available in the future. The names of these opportunities and their maximum award amount are shown in **Table 5.6**.

Table 5.6: **Outside Grants and Funding Opportunities for Urban Forestry**

Name of Grant	Name of Awarding Agency	Eligibility Criteria	Maximum Award
Arboriculture Grant Program	Florida Chapter – International Society of Arboriculture	The program funds the development of research, educational and promotional materials, and research symposia relevant to Florida arboriculture. Projects should emphasize traditional arboriculture (care for individual trees) as opposed to urban forestry	$150,000
Urban & Community Forestry Capacity Grant	Florida Forest Service	The grant funds activities related to: • Public Tree Canopy Improvement (Tree Planting) • Public Tree Inventory or Urban Tree Canopy Assessment • Urban Forest Management Planning • Urban Forestry Information and Education	$50,000
Urban & Community Forestry and Inflation Reduction Act Grant Program	Florida Forest Service/USDA Forest Service	The grant funds initiatives to conduct tree planting projects and conduct maintenance operations for public trees.	$75,000
Urban & Community Forestry Planting, Preservation, and Invasive Control grant	Florida Forest Service	The grant funds initiatives to: Remove invasive plants and replace them with native trees in areas where they will provide direct benefit to Floridians. Plant trees in riparian or coastal waterway areas to decrease erosion, improve stormwater runoff capture, and enhance the water quality of Florida's waterways. Provide a service that enhances tree preservation during construction by offering advising to developers and homebuilders at no cost to the builder.	$50,000
Urban & Community Forestry Hurricane Recovery grants	Florida Forest Service	The grant funds initiatives in eligible Florida counties to: Plant storm-resistant species of trees in areas where they would provide tangible benefits to Floridians.	$50,000

Name of Grant	Name of Awarding Agency	Eligibility Criteria	Maximum Award
Urban & Community Forestry Hurricane Recovery grants (*continued*)	Florida Forest Service	Conduct maintenance operations for public trees in areas that improve resiliency to future tropical cyclones through preventative pruning. Develop community tree inventories or urban tree canopy assessments to help prepare for future natural disasters. Develop urban forest management plans to help a community become better prepared for future natural disasters.	$50,000
Florida Forever Parks & Open Spaces grant	Florida Communities Trust/Florida Department of Environmental Protection	The grant helps Florida communities help local governments with the acquisition of community-based parks, open spaces, and greenways that further outdoor recreation and natural resource protection needs identified in local government comprehensive plans.	$5,000,000
Outdoor Recreation Legacy Partnership	National Park Service/Florida Department of Environmental Protection	The grant funds projects in cities and densely populated urbanized areas that create new outdoor recreation spaces, reinvigorate existing parks, and form connections between people and the outdoors.	$15,000,000
Land and Water Conservation Fund Program	US Department of the Interior/National Parks Service/Florida Department of Environmental Protection	Grants available through the fund can be used to purchase land with adjacent waterbodies to manage it for conservation, create outdoor recreation opportunities, and protect cultural and historic resources.	$1,500,000
Florida Recreation Development Assistance Program	Florida Department of Environmental Protection	Grants through the program can fund the acquisition or development of land for outdoor recreational trail use.	$200,000

The organizations listed in **Table 5.7** provide services, but not funding, that have proven to be impactful for urban forestry programs in Florida and across the US. Note, the following programs and services were discovered during data acquisition and analysis from 2023-2024 and may not be available at the time of application.

Table 5.7. **Volunteer and Cost-sharing Opportunities for Urban Forestry**

Name of Organization	Services Offered	Approximate Value of Services
Community Greening	Based in Palm Beach, Community Greening's team of experts and volunteers has helped numerous communities in South Florida achieve its urban forestry goals by facilitating and assisting with: • Tree giveaways • Tree plantings • Volunteer events • City partnerships • Residential & private partnerships • Tree delivery	$25,000 per year
Urban Sustainability Directors Network	The USDN offers an Urban Forestry Fellowship, which selects fellows from underrepresented communities to help local governments mitigate the impacts of extreme heat, enhance urban forests, promote tree survival, and achieve "tree equity" by ensuring the benefits of urban forestry are distributed equitably, particularly in historically underserved areas.	$89,000 per year
BOLD Justice	The organization is currently exploring issues of climate and environmental services and strategizing how to address these issues to their congregations. The potential exists to partner with and mobilize a tree planting effort.	$10,000 per year
Student Conservation Association	This volunteer organization mobilizes youth and young adults for hyper-local projects related to sustainability, environmental education, outreach, and restoration.	$15,000 per year
Groundsworks USA	This national non-profit helps communities redevelop brownfields and vacant land into public parks, with a focus on smaller industrial sites that are often not the target for large CIP projects. Jacksonville's branch has helped install low impact stormwater designs that feature flood-tolerant trees.	$25,000 per year

CITY FUNDING

To pay for the additional staff and time to realize the goals of the UFMP, funding for urban forestry must increase. While Fort Lauderdale's urban forestry budget has been relatively average for a city of its size in the recent past ($1.33 million/year on average), this budget has not been adjusted in many areas. Additionally, with the City's canopy cover remaining essentially stagnant for the last seven years, an increase in funding is likely necessary if the City wants to begin increasing the canopy by 1.6% per year between 2025 and 2040.

The City currently funds urban forestry through allocations from the General Fund, deposits in the Tree Canopy Trust Fund (TCTF) from tree removals, and various grants. As of March 2025, the total in this fund was $1,123,885.07. Allowable expenditures are limited to obtaining and planting trees on public lands, distributing trees to the public, relocating trees to public land, and other uses outlined in Section 47-21.15.G of the City's Code.

Utilization of the TCTF must increase in order to implement the UFMP as well as spend the money down at the rate that it is deposited into the Fund. Currently, no more than 20% of the Fund may be spent in one year on activities beyond planting trees. In order to allow the Fund to support the implementation of the UFMP, that figure should increase (Recommendation 1E).

The City does not have a specific urban forestry budget, and urban forestry operations and management are spread across its internal stakeholders. While the budget for the dedicated urban forestry program housed within the Sustainability and Special Projects Division was $1,998,346 (0.4% of the General Fund) for FY 2025, only $150,000-200,000 per year is allocated specifically to urban forestry.

Tree removal permit fees from 2020-2022 totaled $137,630, representing approximately 3,149 trees removed.

A $10 million portion of the City's Parks Bond was originally allocated to obtain land for conservation, which could expand and enhance the City's urban forestry canopy. However, the Bond is limited to land purchases and cannot be used to purchase trees or implement other components or recommendations of the UFMP.

Recommendations in the UFMP could raise revenues by levying additional penalties for tree violations (Recommendations 2B and 2C), implementing new impact fees (Recommendation 4C), raising mitigation fees (Recommendations 1A and 3B), increasing removal permit fees and mitigation paid based on the equivalent replacement value (Recommendation 2A), and making penalties for damage to specimen trees consistent (Recommendation 1B).

CONCLUSION

CONCLUSION

The UFMP is a road map to 33% canopy based on extensive research into existing data and policies in Fort Lauderdale and beyond, extensive conversations with City staff, lengthy public meetings in all four Commission Districts, and nearly 800 responses to a public survey on attitudes about the urban forest. In each of these instances, the goal of the UFMP team has been to understand what the City and community are currently doing to protect and expand the City's urban forest and identify opportunities to accelerate increases in the City's tree canopy.

The recommendations in the UFMP are therefore based on public sentiment, expert knowledge of internal stakeholders, guidance from key role players in the City's urban forest management, and success stories in other cities. Much of the work remains to be completed – this UFMP simply outlines the steps that will deliver the City to its goal of a larger, stronger, more vibrant urban forest. The steps taken along the way will not only result in trees planted and preserved, but also in a sense of place that comes from building bridges and working with community partners to realize a goal that can be enjoyed by everyone. The implementation of this UFMP is the first step on the road to a bigger Citywide tree canopy and enhanced access to trees and their benefits for everyone in Fort Lauderdale.

The UFMP is guided by public input, expert knowledge, and success stories from other cities. Implementing these recommendations is the first step to increasing Fort Lauderdale's tree canopy, ensuring that everyone has enhanced access to trees and their benefits.

POTENTIAL OBSTACLES

Obstacles to achieving these goals are funding, required planting goals, limited ability to incentivize and monitor progress on private property, fulfillment of new responsibilities in internal stakeholder departments, participation in new outreach and planting programs by community members, and multiple stressors on the urban forest including pests, disease, changing climate, storm events, and development pressures.

As outlined above, the UFMP recommendations may generate new revenue for urban forestry. However, an element of instability has arisen around the funding sources outlined in the UFMP. Much federal funding for conservation and urban forestry was cut in 2025, and there are no indications whether that funding will ever be restored. Cuts to federal funding occurred after the data analysis period of the UFMP, and the UFMP Team was therefore unable to confirm whether all sources listed were affected by those cuts.

As noted previously, the potential number of trees needed to be planted annually on both public and private property to meet the 33% canopy goal range from 10,694 - 18,411. Historically, the City plants less than 2,000 trees per year. Furthermore, it may be difficult for the City to monitor the number of trees planted by private entities outside of trees that require periodic inspections from City staff. Conducting routine remote sensing analyses (Recommendation 11A) will be instrumental in monitoring canopy growth on private property.

OUTCOMES OF SUCCESS

ENVIRONMENTAL, SOCIAL, ECONOMIC BENEFITS

If the recommendations of the UFMP go according to plan, the City will achieve 33% canopy cover by 2040. This will have tangible environmental, social, and economic benefits for everyone in the City. The US Forest Service defines a healthy urban tree canopy as being 40% of land cover, and the Nature-Based Solutions

Institute (NBSI) identifies a multi-tier standard for urban tree canopy called the 3-30-300 rule. This concept suggests that every home in a City should have at least three trees visible from the front door, that every street should have at least 30% canopy cover, and 300 meters (~0.25 miles) from the nearest greenspace or park. These goals are recommended by communities, educators, researchers, and experts across the globe because trees are good for people.

When trees are distributed equitably within a community, these benefits are experienced by everyone. American Forests notes that trees are "life-saving infrastructure." Through their filtration of airborne pollutants, interception of stormwater, reduction of extreme heat, and positive impacts on mental and physical health, trees combine a multitude of familiar services that we prioritize in our communities. Trees are also a central component to the character of neighborhoods. Trees therefore facilitate the formation of personal and community pride and well-being.

By investing in the urban forest equitably across Fort Lauderdale, this "City of Neighborhoods" can become a "City of Neighborhood Forests" that are as diverse, active, and resilient as the people who live there. The path to 33% canopy cover is open, and the City will be able to complete it with a little help from its neighbors, experts, and leaders who believe in a greener future.

The UFMP outlines how the City of Neighborhoods can become the *City of Neighborhood Forests*.

APPENDICES

APPENDIX A: TABLES

Table A.1: **Canopy Cover by Neighborhood**

District	Neighborhood	Percent Canopy Average
1	Bal Harbour Homeowners Association	19.00
1	Bay Colony Club Condominium	33.00
1	Bay Colony Homeowners Association	33.00
1	Bermuda Riviera Association	19.00
1	Boulevard Park Isles Homeowners Association	22.00
1	Coral Ridge Association Inc.	28.67
1	Coral Ridge Country Club Estate	18.67
1	Coral Ridge Isles Association	19.25
1	Coral Shores Civic Association	23.00
1	Galt Mile Community Association	15.75
1	Imperial Point Association	23.25
1	Knoll Ridge Homeowners Association	23.50
1	Lake Estates Improvement Association	20.00
1	Landings Residential Association	19.50
1	Laudergate Isles Civic Association, Inc.	19.00
1	Lofts of Palm Aire Village	32.00
1	Montego Bay Townhouse HOA, Inc.	38.00
1	North Golf Estates Homeowners Association	20.00
1	Palm Aire Village 1 Condominium Association	25.00
1	Palm Aire Village Homeowners Association (West)	32.00
1	Palm-Aire Village Homeowners Association (East)	25.00
1	Poinsettia Heights Civic Association	29.67
1	Port Royale Master Association	38.00
1	Sunrise Intracoastal Homeowners Association	23.00
1	Twin Lakes North Homeowners Association	28.00
2	Birch Park Finger Sts. Association	55.00
2	Central Beach Alliance HOA	27.83
2	City View Townhomes Association	23.00
2	Dolphin Isles Homeowners Association	38.50
2	Flagler Village Civic Association	20.67
2	Hendricks and Venice Isles	34.00
2	Idlewyld Improvement Association	34.00
2	Lake Ridge Civic Association, Inc.	25.33
2	Las Olas Isles Homeowners Association	34.00
2	Lauderdale Beach Homeowners Association	24.00
2	Middle River Terrace Neighborhood	23.67
2	Navarro Isle Homeowners Association	34.00
2	Nurmi Isles Homeowners Association, Inc.	33.50
2	Progresso Village Civic Association, Inc.	18.75
2	Riviera Isles Improvement Association	34.00

District	Neighborhood	Percent Canopy Average
2	Sailboat Bend Civic Association	36.25
2	Seven Isles Homeowners Association, Inc.	33.00
2	South Middle River Civic Association	27.71
2	Sunrise Key Neighborhood Improvement District	30.00
2	Victoria Park Civic Association	35.89
3	Dillard Park Homeowners Association	11.50
3	Durrs Community Association, Inc.	19.75
3	Golden Heights Neighborhood Association	12.00
3	Historical Dorsey-Riverbend Civic Association, Inc	23.80
3	Home Beautiful Park Civic Association	18.33
3	Lake Aire Palm View Homeowners Association	12.00
3	Lauderdale Manors Homeowners Association	25.00
3	Lauderdale West Association	22.00
3	Melrose Manors Homeowners Association	16.80
3	Melrose Park	24.25
3	River garden Sweeting Estate HOA	22.00
3	Riverland Civic Association	16.50
3	Riverland Village	23.33
3	Rock Island Community Dev., Inc.	17.00
3	Sunset Civic Association	20.80
4	Beverly Heights Association Inc.	37.00
4	Breakwater Surf Club HOA	22.00
4	Chula Vista Isles Homeowners Association	36.50
4	Colee Hammock Homeowners Association	37.00
4	Croissant Park Civic Association	28.00
4	Downtown Fort Lauderdale Civic Association	25.33
4	Edgewood Civic Association	27.00
4	Flamingo Park Civic Association	29.67
4	Harbor Beach Homeowners Association	25.50
4	Harbor Drive Association	29.00
4	Harbordale Civic Association, Inc.	25.67
4	Harbour Inlet Association	22.00
4	Harbour Isles of Fort Lauderdale	22.00
4	Lauderdale Harbours Association	31.50
4	Lauderdale Isles	23.00
4	Oak River Homeowners Association	32.00
4	Poinciana Park Civic Association	18.80
4	Rio Vista Civic Association	35.33
4	River Oaks Civic Association	31.33
4	River Run Civic Association	36.50
4	Riverland Manors Homeowners Association	44.00
4	Riverland Woods Homeowners Association	44.00

District	Neighborhood	Percent Canopy Average
4	Riverlandings Home Owners Association	44.00
4	Riverside Park Residents Association	29.33
4	Shady Banks Civic Association	38.00
4	Tarpon River Civic Association	34.67

Table A.2: **Tree Equity Score by Neighborhood**

District	Neighborhood	Tree Equity Score
1	Bal Harbour Homeowners Association	78.00
1	Bay Colony Club Condominium	83.00
1	Bay Colony Homeowners Association	83.00
1	Bermuda Riviera Association	72.00
1	Boulevard Park Isles Homeowners Association	78.00
1	Coral Ridge Association Inc.	83.67
1	Coral Ridge Country Club Estate	76.83
1	Coral Ridge Isles Association	76.33
1	Coral Shores Civic Association	77.00
1	Galt Mile Community Association	75.00
1	Imperial Point Association	79.00
1	Knoll Ridge Homeowners Association	81.50
1	Lake Estates Improvement Association	77.00
1	Landings Residential Association	79.67
1	Laudergate Isles Civic Association, Inc.	78.00
1	Lofts of Palm Aire Village	89.00
1	Montego Bay Townhouse HOA, Inc.	90.00
1	North Golf Estates Homeowners Association	77.00
1	Palm Aire Village 1 Condominium Association	80.00
1	Palm Aire Village Homeowners Association (West)	89.00
1	Palm-Aire Village Homeowners Association (East)	80.00
1	Poinsettia Heights Civic Association	86.33
1	Port Royale Master Association	90.00
1	Sunrise Intracoastal Homeowners Association	89.00
1	Twin Lakes North Homeowners Association	78.00
2	Birch Park Finger Sts. Association	100.00
2	Central Beach Alliance HOA	84.67
2	City View Townhomes Association	74.00
2	Dolphin Isles Homeowners Association	91.00
2	Flagler Village Civic Association	74.25
2	Hendricks and Venice Isles	88.00
2	Idlewyld Improvement Association	87.00

District	Neighborhood	Tree Equity Score
2	Lake Ridge Civic Association, Inc.	79.67
2	Las Olas Isles Homeowners Association	87.00
2	Lauderdale Beach Homeowners Association	83.00
2	Middle River Terrace Neighborhood	75.00
2	Navarro Isle Homeowners Association	88.00
2	Nurmi Isles Homeowners Association, Inc.	86.00
2	Progresso Village Civic Association, Inc.	67.80
2	Riviera Isles Improvement Association	87.00
2	Sailboat Bend Civic Association	90.50
2	Seven Isles Homeowners Association, Inc.	80.50
2	South Middle River Civic Association	77.50
2	Sunrise Key Neighborhood Improvement District	81.00
2	Victoria Park Civic Association	88.63
3	Dillard Park Homeowners Association	61.25
3	Durrs Community Association, Inc.	63.75
3	Golden Heights Neighborhood Association	59.00
3	Historical Dorsey-Riverbend Civic Association, Inc	68.80
3	Home Beautiful Park Civic Association	62.67
3	Lake Aire Palm View Homeowners Association	59.00
3	Lauderdale Manors Homeowners Association	71.80
3	Lauderdale West Association	69.33
3	Melrose Manors Homeowners Association	65.60
3	Melrose Park	71.50
3	River garden Sweeting Estate HOA	72.00
3	Riverland Civic Association	65.33
3	Riverland Village	75.33
3	Rock Island Community Dev., Inc.	65.33
3	Sunset Civic Association	71.60
4	Beverly Heights Association Inc.	90.00
4	Breakwater Surf Club HOA	81.00
4	Chula Vista Isles Homeowners Association	90.50
4	Colee Hammock Homeowners Association	90.00
4	Croissant Park Civic Association	82.60
4	Downtown Fort Lauderdale Civic Association	82.33
4	Edgewood Civic Association	80.25
4	Flamingo Park Civic Association	89.00
4	Harbor Beach Homeowners Association	82.50
4	Harbor Drive Association	84.00
4	Harbordale Civic Association, Inc.	79.00
4	Harbour Inlet Association	81.00
4	Harbour Isles of Fort Lauderdale	81.00
4	Lauderdale Harbours Association	85.50

District	Neighborhood	Tree Equity Score
4	Lauderdale Isles	83.00
4	Oak River Homeowners Association	88.00
4	Poinciana Park Civic Association	72.60
4	Rio Vista Civic Association	88.25
4	River Oaks Civic Association	87.33
4	River Run Civic Association	90.50
4	Riverland Manors Homeowners Association	96.00
4	Riverland Woods Homeowners Association	96.00
4	Riverlandings Home Owners Association	96.00
4	Riverside Park Residents Association	79.67
4	Shady Banks Civic Association	90.00
4	Tarpon River Civic Association	88.00

Table A.3: **Tree Equity Score Data by Census Block Group**

District	Census Block Group	CBG Population	Land area (sq km)	Priority Index (0-1)	Tree Canopy (%)	Population People of Color (%)	Population under Federal Poverty Line (%)	Population Unemployed (%)	Dependency Ratio per Adult	Linguistic Isolation (%)	Average Temperature Difference (°F)	Tree Equity Score
1	120110502083	1579	5.4719	0.52699	9.94	73.16	46.10	15.64	0.86	17.47	5.95	55
1	120110502082	1215	1.4258	0.586735	18.81	96.62	97.56	10.03	0.71	17.47	2.48	61
1	120110405061	2201	0.1724	0.373946	9.99	16.80	21.96	2.12	1.78	4.37	0.82	68
1	120110403001	1537	0.6005	0.432229	19.98	51.27	57.84	8.58	0.58	2.47	6.94	72
1	120110404013	548	0.08	0.358053	13.03	31.98	14.73	14.29	0.97	1.10	2.95	72
1	120110405031	1887	0.5848	0.389756	16.8	17.13	24.33	11.13	1.50	5.63	2.18	72
1	120110405052	477	0.0946	0.355484	16.06	0.00	7.83	0.00	2.05	1.09	5.08	74
1	120110404022	916	0.549	0.354039	18.41	41.29	5.28	0.00	1.21	1.05	5.76	76
1	120110402031	1728	0.7504	0.330622	18.05	21.33	16.88	8.56	0.73	5.26	3.95	77
1	120110403002	498	0.383	0.309539	16.03	13.49	25.87	0.65	0.18	2.47	9.1	77
1	120110403003	1019	0.3572	0.376897	21.17	40.46	38.88	3.12	0.51	2.47	6.63	77
1	120110404023	1353	1.5314	0.299952	14.51	17.73	23.33	7.90	0.63	1.05	-0.6	77
1	120110406023	564	0.412	0.36174	20.69	30.10	30.93	5.06	1.00	2.71	3.67	77
1	120110421002	1853	0.5484	0.276745	11.31	25.85	7.28	3.79	0.65	7.40	-4.67	77
1	120110402052	1184	0.4075	0.338026	20.17	45.42	11.26	1.93	0.66	1.91	5.62	78
1	120110402062	1951	0.6565	0.333259	19.33	28.36	18.75	4.47	0.78	2.15	4.88	78
1	120110404021	753	0.7467	0.309723	17.37	27.62	10.62	0.00	0.62	1.05	6.85	78
1	120110407021	846	0.5916	0.309957	16.67	17.71	10.97	0.00	0.83	3.52	3.45	78
1	120110408023	1486	0.3579	0.347605	21	53.97	12.77	2.78	0.27	3.98	6.18	78
1	120110502071	1455	1.3239	0.393592	23.44	56.87	36.70	0.00	0.63	8.98	2.78	78
1	120110402042	718	0.3795	0.296751	17.1	26.69	7.67	2.14	0.72	6.63	0.74	79
1	120110402051	1535	0.6366	0.331504	20.07	23.21	7.55	20.87	0.35	1.91	7.04	79
1	120110404011	567	0.1837	0.293646	16.67	9.48	26.08	0.00	0.74	1.10	1.77	79

District	Census Block Group	CBG Population	Land area (sq km)	Priority Index (0-1)	Tree Canopy (%)	Population People of Color (%)	Population under Federal Poverty Line (%)	Population Unemployed (%)	Dependency Ratio per Adult	Linguistic Isolation (%)	Average Temperature Difference (°F)	Tree Equity Score
1	120110404012	1129	0.4361	0.303298	17.43	22.65	20.87	1.42	0.81	1.10	-0.02	79
1	120110402053	2260	0.9961	0.330014	21.45	34.07	26.14	0.53	0.60	1.91	4.14	80
1	120110407023	1667	0.4332	0.350646	23.12	41.85	35.22	1.85	0.30	3.52	5.51	80
1	120110502042	1675	3.045	0.368031	24.65	56.15	21.04	0.00	0.55	10.51	4.52	80
1	120110402061	1352	0.3591	0.324965	23.46	20.47	26.66	7.85	0.49	2.15	5.65	81
1	120110407022	1548	0.4926	0.364413	25.23	48.34	35.89	7.49	0.24	3.52	4.56	81
1	120110418023	1181	0.4529	0.353744	25.16	31.14	44.81	2.97	0.83	2.74	-0.35	81
1	120110405023	1186	0.3366	0.272262	18.71	4.29	23.25	10.35	0.45	1.16	-1.46	82
1	120110421001	1156	0.771	0.297731	22.1	19.25	30.27	7.00	0.57	7.40	-5.04	82
1	120110402043	965	0.3994	0.356499	27.46	13.38	32.34	3.64	1.48	6.63	-0.83	83
1	120110405022	1136	0.3413	0.306488	23.68	21.75	13.27	0.00	1.05	1.16	0.6	83
1	120110407011	654	0.2593	0.286591	21.92	22.31	27.93	1.99	0.23	1.69	3	83
1	120110406011	2926	1.1936	0.252906	22.05	15.01	9.92	1.18	0.60	0.87	-0.96	85
1	120110406024	918	0.4958	0.321405	28.82	27.88	10.27	8.97	0.81	2.71	2.03	85
1	120110407013	788	0.6586	0.293958	25.76	15.28	11.54	5.20	0.71	1.69	3.02	85
1	120110403004	949	0.4186	0.344821	20.99	43.59	10.22	2.52	0.55	2.47	6.5	86
1	120110405051	963	0.1007	0.347872	21.38	17.20	20.59	5.49	1.53	1.09	-1.4	86
1	120110406022	642	0.434	0.276358	28.74	22.57	7.33	1.82	0.66	2.71	-0.25	87
1	120110406012	1185	0.5912	0.25407	19.58	3.69	3.40	0.00	0.80	0.87	2.28	89
1	120110502043	2296	1.6566	0.34345	35.01	63.49	31.40	3.89	0.43	10.51	-6.93	89
1	120110402041	1735	0.2464	0.292886	34.74	41.90	8.67	4.51	0.17	6.63	2.1	90
1	120110406021	946	0.4247	0.273202	32.55	8.47	7.07	0.00	0.92	2.71	0.35	90
1	120110407012	1319	0.5324	0.262899	34.07	17.04	14.07	2.69	0.35	1.69	1.06	91
2	120110415001	893	0.4733	0.590232	7.77	96.96	69.58	18.66	0.66	2.10	10.34	60
2	120110417003	1257	0.6356	0.505192	16.8	83.51	56.00	16.95	0.24	10.38	6.03	64
2	120110416011	820	0.2369	0.488252	18.23	87.57	57.17	10.33	0.45	4.78	3.93	67
2	120110416013	1457	0.4058	0.544407	21.11	100.00	69.15	5.72	1.17	4.78	1.04	67
2	120110417001	978	0.5029	0.511386	19.97	88.27	69.80	5.57	0.40	10.38	5.16	67
2	120110409022	1764	0.7018	0.522835	21.22	95.77	52.21	12.11	0.77	3.03	3.95	68
2	120110414001	1333	0.8203	0.508648	20.04	98.67	55.39	7.98	0.67	1.21	1.17	68
2	120110416021	1674	0.3427	0.526131	21.05	94.53	88.72	10.56	0.42	1.14	3.13	68
2	120110409021	1805	0.6606	0.487184	24.94	98.01	59.54	4.59	0.40	3.03	1.95	74
2	120110416012	972	0.456	0.408067	19.6	75.27	30.15	3.76	0.38	4.78	1.22	74
2	120110417002	1907	0.5789	0.494817	25.59	83.60	63.37	4.99	0.46	10.38	3.95	74
2	120110421002	1853	0.5484	0.276745	11.31	25.85	7.28	3.79	0.65	7.40	-4.67	77
2	120110407021	846	0.5916	0.309957	16.67	17.71	10.97	0.00	0.83	3.52	3.45	78
2	120110408013	1296	0.2409	0.40262	24.32	60.51	37.40	6.09	0.72	6.69	-2.61	78
2	120110408023	1486	0.3579	0.347605	21	53.97	12.77	2.78	0.27	3.98	6.18	78
2	120110425012	2763	0.5983	0.288355	14.43	38.12	26.50	0.00	0.07	1.95	3.24	78
2	120110407023	1667	0.4332	0.350646	23.12	41.85	35.22	1.85	0.30	3.52	5.51	80
2	120110408011	1937	0.4773	0.477143	30.21	85.54	47.23	11.96	0.61	6.69	3.14	80

District	Census Block Group	CBG Population	Land area (sq km)	Priority Index (0-1)	Tree Canopy (%)	Population People of Color (%)	Population under Federal Poverty Line (%)	Population Unemployed (%)	Dependency Ratio per Adult	Linguistic Isolation (%)	Average Temperature Difference (°F)	Tree Equity Score
2	120110408022	1838	0.6393	0.398254	26.94	46.35	49.21	13.22	0.24	3.98	4.63	80
2	120110426013	1194	0.4758	0.333791	22.8	44.34	42.03	2.92	0.38	1.19	-0.15	80
2	120110407022	1548	0.4926	0.364413	25.23	48.34	35.89	7.49	0.24	3.52	4.56	81
2	120110418023	1181	0.4529	0.353744	25.16	31.14	44.81	2.97	0.83	2.74	-0.35	81
2	120110425011	2263	0.2794	0.286482	18.87	27.83	33.84	2.79	0.15	1.95	1.18	81
2	120110405023	1186	0.3366	0.272262	18.71	4.29	23.25	10.35	0.45	1.16	-1.46	82
2	120110408012	1407	0.4273	0.460384	31.56	79.65	56.68	10.04	0.44	6.69	1.64	82
2	120110409011	1549	1.1874	0.553715	34.78	95.73	71.59	15.83	1.00	4.29	-3.49	82
2	120110418012	968	0.6921	0.297613	22.47	40.13	15.75	1.92	0.30	4.14	2.89	82
2	120110421001	1156	0.771	0.297731	22.1	19.25	30.27	7.00	0.57	7.40	-5.04	82
2	120110425022	3027	0.5993	0.24517	16.5	29.79	7.90	1.99	0.41	2.83	-5.26	82
2	120110405022	1136	0.3413	0.306488	23.68	21.75	13.27	0.00	1.05	1.16	0.6	83
2	120110407011	654	0.2593	0.286591	21.92	22.31	27.93	1.99	0.23	1.69	3	83
2	120110408021	1220	0.3886	0.388376	30.77	62.27	44.79	3.50	0.37	3.98	1.68	84
2	120110420002	631	0.5432	0.293277	25.35	22.52	0.00	0.00	1.54	0.00	-4.63	84
2	120110422001	679	0.7593	0.267512	21.73	10.56	7.04	0.00	1.46	0.00	-8.52	84
2	120110423014	1308	0.6255	0.265337	22.17	11.02	18.59	7.97	0.67	0.74	-6.57	84
2	120110406011	2926	1.1936	0.252906	22.05	15.01	9.92	1.18	0.60	0.87	-0.96	85
2	120110418021	2037	0.4588	0.350166	29.99	36.73	40.06	10.06	0.35	2.74	2.27	85
2	120110405051	963	0.1007	0.347872	21.38	17.20	20.59	5.49	1.53	1.09	-1.4	86
2	120110406022	642	0.434	0.276358	28.74	22.57	7.33	1.82	0.66	2.71	-0.25	87
2	120110420001	1597	0.9149	0.246553	25.86	15.09	15.58	0.00	0.89	0.00	-8.19	87
2	120110423013	1842	0.7582	0.27684	29.04	23.79	35.14	0.00	0.33	0.74	-3.53	87
2	120110420003	1138	0.4998	0.216854	24.59	10.95	6.70	1.49	0.37	0.00	-4.14	88
2	120110406012	1185	0.5912	0.25407	19.58	3.69	3.40	0.00	0.80	0.87	2.28	89
2	120110426023	942	0.3024	0.288521	32.67	43.46	35.25	0.00	0.05	0.76	-1.86	89
2	120110418011	955	0.3705	0.27566	33.74	9.77	12.93	10.93	0.55	4.14	-0.62	90
2	120110419002	1769	0.7217	0.276894	33.49	36.55	19.10	4.91	0.40	1.93	-4.22	90
2	120110418022	600	0.1752	0.323158	37.76	48.25	7.93	0.00	0.80	2.74	0.4	91
2	120110426012	1040	0.4073	0.293281	35.89	26.33	42.87	6.15	0.23	1.19	-3.95	91
2	120110426022	579	0.2469	0.277173	36.76	18.43	27.06	13.14	0.19	0.76	-3.22	92
2	120110419003	1763	0.3676	0.262424	28.11	26.66	14.10	0.00	0.31	1.93	0.7	93
2	120110419001	825	0.1837	0.239875	38.46	17.06	23.68	1.64	0.09	1.93	-2.03	99
2	120110426021	729	0.2082	0.272189	49.08	47.50	20.08	6.01	0.20	0.76	-7.64	99
2	120110405021	1438	1.0715	0.295805	60.6	17.24	14.66	3.84	1.39	1.16	-8.19	100
3	120110428014	886	0.2755	0.553312	14.45	100.00	64.40	17.54	0.82	3.10	3.82	58
3	120110410001	885	0.6414	0.515002	12.69	83.27	55.08	0.00	1.20	2.03	4.94	59
3	120110410002	1993	1.091	0.534233	13.9	98.58	53.18	17.77	0.78	2.03	2.79	59
3	120110414002	1516	0.5047	0.586975	16.97	97.08	82.84	19.09	0.85	1.21	3.58	59
3	120110415001	893	0.4733	0.590232	7.77	96.96	69.58	18.66	0.66	2.10	10.34	60
3	120110428022	713	0.3955	0.510515	13.24	97.69	87.37	0.00	0.54	0.00	1.93	60

District	Census Block Group	CBG Population	Land area (sq km)	Priority Index (0-1)	Tree Canopy (%)	Population People of Color (%)	Population under Federal Poverty Line (%)	Population Unemployed (%)	Dependency Ratio per Adult	Linguistic Isolation (%)	Average Temperature Difference (°F)	Tree Equity Score
3	120110508001	1960	0.9826	0.540361	17.03	99.38	59.42	25.60	0.60	5.13	2.3	62
3	120110430021	1070	0.2943	0.536338	17.7	83.38	79.60	17.52	0.51	17.62	3.66	63
3	120110415002	1434	0.3104	0.567435	19.97	92.37	51.70	29.57	0.71	2.10	5.45	64
3	120110415003	1654	0.3637	0.611187	22.08	96.77	74.94	17.91	1.21	2.10	5.74	64
3	120110417003	1257	0.6356	0.505192	16.8	83.51	56.00	16.95	0.24	10.38	6.03	64
3	120110409013	1696	0.8167	0.530034	19.93	88.12	63.15	9.60	0.73	4.29	3.02	66
3	120110428021	1525	0.3378	0.468302	16.14	96.15	49.31	3.00	0.45	0.00	3.84	66
3	120110416011	820	0.2369	0.488252	18.23	87.57	57.17	10.33	0.45	4.78	3.93	67
3	120110416013	1457	0.4058	0.544407	21.11	100.00	69.15	5.72	1.17	4.78	1.04	67
3	120110428012	773	0.4157	0.484181	17.83	96.96	54.13	0.00	0.51	3.10	5.05	67
3	120110428013	1132	0.318	0.477446	17.82	99.05	24.71	12.91	0.63	3.10	3.42	67
3	120110508002	1408	0.4346	0.457431	16.4	98.33	28.82	5.76	0.51	5.13	3.78	67
3	120110409022	1764	0.7018	0.522835	21.22	95.77	52.21	12.11	0.77	3.03	3.95	68
3	120110414001	1333	0.8203	0.508648	20.04	98.67	55.39	7.98	0.67	1.21	1.17	68
3	120110416021	1674	0.3427	0.526131	21.05	94.53	88.72	10.56	0.42	1.14	3.13	68
3	120110429004	2521	0.811	0.521761	21.46	89.70	58.54	21.75	0.50	10.29	3.72	68
3	120110430023	1439	0.5536	0.44849	16.68	84.93	31.13	2.99	0.63	17.62	2.74	68
3	120110409012	1362	0.4344	0.540896	23.49	97.36	67.98	5.09	0.72	4.29	3.75	69
3	120110427004	1125	0.5833	0.518851	21.68	89.75	86.09	7.28	0.90	11.51	-3.12	69
3	120110428011	2002	1.0091	0.460758	19.02	86.06	49.59	10.99	0.36	3.10	0.94	70
3	120110429003	1580	0.5435	0.508343	23.31	94.30	62.39	3.39	0.81	10.29	2.44	71
3	120110430022	1030	0.4253	0.496943	22.51	60.61	50.17	16.79	1.03	17.62	2.67	71
3	120110414003	529	0.5934	0.4711	21.78	83.04	35.97	14.19	0.69	1.21	-0.5	72
3	120110430025	744	0.2564	0.429479	19.24	39.22	47.03	17.18	0.43	17.62	3.03	72
3	120110429002	1836	0.6975	0.511307	25.44	99.86	58.97	9.78	0.73	10.29	0.54	73
3	120110409021	1805	0.6606	0.487184	24.94	98.01	59.54	4.59	0.40	3.03	1.95	74
3	120110416012	972	0.456	0.408067	19.6	75.27	30.15	3.76	0.38	4.78	1.22	74
3	120110416022	1484	0.3341	0.524563	26.82	92.53	42.00	15.64	1.26	1.14	2.31	74
3	120110429001	1335	0.4469	0.451244	22.8	96.68	26.06	15.17	0.27	10.29	1.52	74
3	120110430026	1787	0.5714	0.417148	20.27	86.81	21.83	0.00	0.34	17.62	3.46	74
3	120110430024	895	0.4818	0.317349	22.88	15.60	12.10	0.00	0.56	17.62	1.07	81
3	120110409011	1549	1.1874	0.553715	34.78	95.73	71.59	15.83	1.00	4.29	-3.49	82
3	120110430011	1433	0.7844	0.28211	22.89	22.68	11.78	1.12	0.69	5.42	-2.63	83
3	120110431003	1018	0.3979	0.32875	28.7	38.04	6.83	12.69	0.59	5.56	0.59	85
3	120110431001	1888	0.9409	0.330658	33.29	35.96	19.67	9.97	0.70	5.56	-2.55	88
4	120110433021	547	1.5814	0.410441	12.11	50.64	32.10	3.82	0.50	13.50	4.75	67
4	120110414001	1333	0.8203	0.508648	20.04	98.67	55.39	7.98	0.67	1.21	1.17	68
4	120110433023	655	0.2957	0.476172	18.14	82.65	51.19	9.00	0.37	13.50	4	68
4	120110427004	1125	0.5833	0.518851	21.68	89.75	86.09	7.28	0.90	11.51	-3.12	69
4	120110428011	2002	1.0091	0.460758	19.02	86.06	49.59	10.99	0.36	3.10	0.94	70
4	120110430022	1030	0.4253	0.496943	22.51	60.61	50.17	16.79	1.03	17.62	2.67	71

District	Census Block Group	CBG Population	Land area (sq km)	Priority Index (0-1)	Tree Canopy (%)	Population People of Color (%)	Population under Federal Poverty Line (%)	Population Unemployed (%)	Dependency Ratio per Adult	Linguistic Isolation (%)	Average Temperature Difference (°F)	Tree Equity Score
4	120110433022	769	0.5789	0.409705	18.18	58.96	36.22	0.00	0.52	13.50	2.41	72
4	120110416012	972	0.456	0.408067	19.6	75.27	30.15	3.76	0.38	4.78	1.22	74
4	120110430026	1787	0.5714	0.417148	20.27	86.81	21.83	0.00	0.34	17.62	3.46	74
4	120110423021	1382	1.5087	0.313479	12.28	35.06	21.18	2.75	0.13	8.32	1.54	75
4	120110427003	1607	0.426	0.44983	24.04	70.44	59.49	14.97	0.41	11.51	-1.81	75
4	120110423011	806	0.2009	0.407664	22.13	45.22	68.96	11.89	0.42	0.74	3.28	76
4	120110425012	2763	0.5983	0.288355	14.43	38.12	26.50	0.00	0.07	1.95	3.24	78
4	120111106003	968	1.1666	0.396479	24.88	60.74	46.02	0.00	0.40	22.93	-2.34	79
4	120110426013	1194	0.4758	0.333791	22.8	44.34	42.03	2.92	0.38	1.19	-0.15	80
4	120110422002	2561	1.1351	0.288459	19.77	10.87	14.85	5.47	1.14	0.00	-3.87	81
4	120110423022	590	0.6136	0.36979	25.86	35.86	39.53	0.00	0.71	8.32	1.53	81
4	120110425011	2263	0.2794	0.286482	18.87	27.83	33.84	2.79	0.15	1.95	1.18	81
4	120110430024	895	0.4818	0.317349	22.88	15.60	12.10	0.00	0.56	17.62	1.07	81
4	120110421001	1156	0.771	0.297731	22.1	19.25	30.27	7.00	0.57	7.40	-5.04	82
4	120110425022	3027	0.5993	0.24517	16.5	29.79	7.90	1.99	0.41	2.83	-5.26	82
4	120111106001	1520	0.7933	0.37464	27.53	38.15	45.04	2.88	0.51	22.93	-3.47	82
4	120110430011	1433	0.7844	0.28211	22.89	22.68	11.78	1.12	0.69	5.42	-2.63	83
4	120111106002	1622	0.8978	0.364522	27.93	50.16	16.65	0.23	0.61	22.93	-1.01	83
4	120110422001	679	0.7593	0.267512	21.73	10.56	7.04	0.00	1.46	0.00	-8.52	84
4	120110423014	1308	0.6255	0.265337	22.17	11.02	18.59	7.97	0.67	0.74	-6.57	84
4	120110425021	3200	0.4908	0.286437	24.46	50.83	25.39	0.06	0.22	2.83	-3.34	84
4	120110431003	1018	0.3979	0.32875	28.7	38.04	6.83	12.69	0.59	5.56	0.59	85
4	120110420001	1597	0.9149	0.246553	25.86	15.09	15.58	0.00	0.89	0.00	-8.19	87
4	120110423013	1842	0.7582	0.27684	29.04	23.79	35.14	0.00	0.33	0.74	-3.53	87
4	120110420003	1138	0.4998	0.216854	24.59	10.95	6.70	1.49	0.37	0.00	-4.14	88
4	120110431001	1888	0.9409	0.330658	33.29	35.96	19.67	9.97	0.70	5.56	-2.55	88
4	120110433011	1856	0.786	0.260163	29.42	10.59	26.51	0.00	0.52	1.40	-3.25	88
4	120110423012	618	0.1918	0.257055	29.9	10.03	18.15	0.00	0.42	0.74	-0.25	89
4	120110419002	1769	0.7217	0.276894	33.49	36.55	19.10	4.91	0.40	1.93	-4.22	90
4	120110427002	1108	0.7874	0.375598	38.17	42.16	32.97	10.45	0.74	11.51	-5.54	90
4	120110433012	794	0.3119	0.2419	31.28	12.14	6.71	0.73	0.44	1.40	-1.06	90
4	120110426012	1040	0.4073	0.293281	35.89	26.33	42.87	6.15	0.23	1.19	-3.95	91
4	120110426022	579	0.2469	0.277173	36.76	18.43	27.06	13.14	0.19	0.76	-3.22	92
4	120110433013	1238	1.4431	0.263573	35.57	39.50	15.20	0.00	0.27	1.40	-3.95	92
4	120110433014	1152	0.445	0.263202	36.79	13.67	18.13	12.06	0.37	1.40	-4.63	92
4	120110424001	1332	0.6016	0.256925	38	15.81	11.73	1.73	0.84	0.00	-5.17	93
4	120110426011	1271	0.4725	0.266746	38.63	16.56	19.63	7.58	0.62	1.19	-6.8	93
4	120110427001	1657	0.6844	0.333765	42.92	42.53	23.55	4.34	0.59	11.51	-7.32	95
4	120110431002	2069	1.1949	0.327126	44.48	58.80	14.49	6.22	0.70	5.56	-6.76	96

APPENDIX B: TREE PALETTE

Appendix B: Tree Palette

Common Name	Scientific Name	Tree Size	FL Native (Y/N)	Wind Tolerance	Flood Tolerance	Salt Tolerance	Drought Tolerance	Life Span	Root System Characteristics	Suggested Planting Space Size	Street Tree (Y/N)	Candidate For Relocation
All-Spice Tree	*Pimenta dioica*	Small	No	Fair	Fair	Poor	Good	Moderate	Good	225ft^3	Yes	Fair
Bahama Strongbark	*Bourreria succulenta*	Small	Yes	Good	Poor	Moderate	Good	Long	Fair	225ft^3	Yes	Fair
Blackbead	*Pithecellobium keyense*	Small	Yes	Fair	Fair	Good	Good	Moderate	Fair	225ft^3	No	Fair
Buttercup Tree	*Cochlospermum vitifolium*	Small	No	Good	Good	Fair	Good	Semi-Moderate	Fair	225ft^3	No	Poor
Button Bush	*Cephalanthus occidentalis*	Small	Yes	Fair	Good	Poor	Poor	Moderate	Fair	225ft^3	Yes	Fair
Cinnecord	*Vachellia choriophylla*	Small	No	Fair	Fair	Good	Good	Moderate	Fair	225ft^3	Yes	Fair
Crabwood	*Gymnanthes lucida*	Small	Yes	Good	Poor	Fair	Good	Long	Good	225ft^3	Yes	Good
Crape Myrtle*	*Lagerstroemia indica*	Small	No	Good	Fair	Poor	Good	Moderate	Good	225ft^3	Yes	Fair
Darling Plum	*Reynosia septentrionalis*	Small	Yes	Fair	Fair	Good	Good	Moderate	Fair	225ft^3	No	Fair
Fiddlewood	*Citharexylum spinosum*	Small/Medium	Yes	Fair	Good	Poor	Poor	Moderate	Fair	225-400ft^3	Yes	Fair
Geiger Tree	*Cordia sebestena*	Small	Yes	Fair	Poor	Good	Good	Moderate	Good	225ft^3	Yes	Fair
Glossy Shower	*Cassia surattensis*	Small	No	Poor	Poor	Poor	Fair	Short	Good	225ft^3	No	Good
Golden Apple / Ambarella	*Spondias dulcis*	Small	No	Poor	Poor	Poor	Fair	Semi-Moderate	Fair	225ft^3	No	Fair
Glossy Privet	*Ligustrum lucidum*	Small	No	Good	Fair	Poor	Fair	Moderate	Good	225ft^3	Yes	Fair
Jabuticaba	*Plinia cauliflora*	Small	No	Fair	Poor	Poor	Fair	Moderate	Fair	225ft^3	Yes	Fair
Jamaica Caper	*Capparis cynophallophora*	Small	Yes	Fair	Fair	Good	Good	Moderate	Fair	225ft^3	Yes	Fair
Jamaican Rain Tree	*Brya ebenus*	Small	No	Fair	Fair	Fair	Good	Moderate	Fair	225ft^3	Yes	Fair
Japanese Privet	*Ligustrum japonicum*	Small	No	Good	Fair	Fair	Good	Moderate	Good	225ft^3	Yes	Fair
Jerusalem Thorn	*Parkinsonia aculeata*	Small	No	Poor	Poor	Good	Good	Moderate	Fair	225ft^3	No	Fair
Lignum Vitae	*Guaiacum officinale*	Small	Yes	Good	Poor	Good	Good	Long	Good	225ft^3	Yes	Poor
Locust Berry	*Byrsonima lucida*	Small	Yes	Fair	Poor	Fair	Good	Moderate	Fair	225ft^3	Yes	Fair
Loquat	*Eriobotrya japonica*	Small	No	Poor	Fair	Fair	Good	Moderate	Fair	225ft^3	Yes	Fair
Marlberry	*Ardisia escallonioides*	Small	Yes	Fair	Fair	Good	Fair	Moderate	Fair	225ft^3	Yes	Fair
Myrsine	*Myrsine guianensis*	Small	Yes	Good	Fair	Good	Good	Long	Good	225ft^3	Yes	Fair
Myrtle of the River	*Myrcia zuzygium*	Small	Yes	Good	Good	Fair	Poor	Moderate	Fair	225ft^3	Yes	Fair
Pond Apple*	*Annona glabra*	Small	Yes	Good	Good	Fair	Poor	Moderate	Fair	225ft^3	No	Poor
Powderpuff Tree	*Calliandra haematocephala*	Small	No	Good	Fair	Poor	Good	Moderate	Fair	225ft^3	No	Fair
Purple Tabebuia	*Tabebuia impetiginosa*	Small	No	Poor	Poor	Fair	Good	Moderate	Good	225ft^3	Yes	Fair
Red Stopper	*Eugenia rhombea*	Small	Yes	Good	Fair	Good	Good	Long	Good	225ft^3	Yes	Good
Sand Live Oak	*Quercus geminata*	Small	Yes	Good	Poor	Good	Good	Long	Good	225ft^3	No	Fair
Seven Year Apple	*Casasia clusiifolia*	Small	Yes	Fair	Poor	Good	Good	Moderate	Fair	225ft^3	Yes	Fair
Silver Buttonwood*	*Conocarpus erectus var. sericeus*	Small	Yes	Fair	Poor	Good	Good	Moderate	Good	225ft^3	Yes	Fair
Simpson's Stopper*	*Myrcianthes fragrans*	Small	Yes	Good	Poor	Good	Good	Long	Good	225ft^3	Yes	Fair
Spanish Lime	*Melicoccus bijugatus*	Small/Medium	No	Fair	Poor	Fair	Fair	Moderate	Fair	225-400ft^3	No	Poor
Spanish Stopper*	*Eugenia foetida*	Small	Yes	Good	Fair	Good	Good	Long	Good	225ft^3	Yes	Good
Spicewood	*Myrcia neopallens*	Small	Yes	Fair	Fair	Fair	Good	Moderate	Fair	225ft^3	Yes	Fair
Spiny Black Olive	*Terminalia molinetii*	Small	No	Good	Poor	Fair	Good	Moderate	Fair	225ft^3	Yes	Good
Sugar Apple	*Annona squamosa*	Small	No	Poor	Poor	Poor	Fair	Moderate	Poor	225-400ft^3	No	Poor
Tallow Wood Plum	*Ximenia americana*	Small	Yes	Fair	Fair	Good	Good	Moderate	Fair	225ft^3	No	Fair
Wax Myrtle	*Morella cerifera*	Small	Yes	Fair	Poor	Good	Good	Long	Fair	225ft^3	Yes	Fair
White Geiger Tree/Anacahuita	*Cordia boissieri*	Small	No	Fair	Poor	Fair	Good	Moderate	Good	225ft^3	Yes	Fair
White Indigo Berry	*Randia aculeata*	Small	Yes	Fair	Fair	Good	Good	Long	Fair	225ft^3	No	Fair
White Stopper	*Eugenia axillaris*	Small	Yes	Good	Fair	Good	Good	Long	Good	225ft^3	Yes	Good
Wild Cinnamon	*Canella winterana*	Small	Yes	Good	Fair	Fair	Good	Moderate	Good	225ft^3	Yes	Fair
Wild Lime	*Zanthoxylum fagara*	Small	Yes	Fair	Fair	Good	Good	Moderate	Fair	225ft^3	Yes	Fair
Yellow Elder	*Tecoma stans*	Small	No	Fair	Fair	Fair	Good	Moderate	Good	225ft^3	Yes	Fair
Caribbean Trumpet Tree	*Tabebuia aurea*	Small	No	Poor	Poor	Fair	Good	Semi-Moderate	Good	225ft^3	Yes	Good
Black Ironwood	*Krugiodendron ferreum*	Medium	Yes	Good	Fair	Good	Good	Moderate	Good	400ft^3	Yes	Fair
Black Mangrove	*Avicennia germinans*	Medium	Yes	Good	Good	Good	Poor	Long	Poor	400-900ft^3	No	Fair
Blolly	*Guapira discolor*	Medium	Yes	Fair	Fair	Good	Good	Long	Good	400ft^3	Yes	Fair
Bridalveil Tree	*Caesalpinia granadillo*	Medium	No	Fair	Fair	Fair	Fair	Moderate	Fair	400ft^3	Yes	Fair
Calabash Tree	*Crescentia cujete*	Medium	No	Fair	Fair	Fair	Fair	Moderate	Good	400ft^3	No	Fair
Dahoon Holly	*Ilex cassine var. cassine*	Medium	Yes	Good	Good	Good	Good	Moderate	Good	400ft^3	Yes	Fair
Frangipani	*Plumeria sp.*	Medium	No	Poor	Poor	Good	Good	Moderate	Good	400ft^3	No	Good
Golden Trumpet Tree *	*Handroanthus chrysotrichus*	Medium	No	Poor	Poor	Fair	Good	Semi-Moderate	Good	400ft^4	Yes	Fair
Guiana Plum	*Drypetes lateriflora*	Medium	Yes	Good	Fair	Fair	Good	Moderate	Good	400ft^3	Yes	Fair
Jamaican Dogwood*	*Piscidia piscipula*	Medium	Yes	Fair	Good	Good	Good	Long	Fair	400ft^3	Yes	Fair
Japanese Fern Tree	*Filicium decipiens*	Medium	No	Poor	Fair	Fair	Good	Moderate	Fair	400ft^3	Yes	Fair
Krug's Holly	*Ilex krugiana*	Medium	Yes	Fair	Fair	Good	Good	Long	Good	400ft^3	Yes	Fair
Lancewood	*Damburneya coriacea*	Medium	Yes	Poor	Poor	Poor	Good	Short	Fair	400ft^3	Yes	Good
Logan	*Dimocarpus longan*	Medium	No	Good	Poor	Poor	Fair	Moderate	Poor	400-900ft^3	No	Poor
Lychee	*Litchi chinensis*	Medium	No	Poor	Fair	Poor	Fair	Long	Poor	400-900ft^3	No	Poor
Macadamia Nut	*Macadamia sp.*	Medium	No	Poor	Poor	Poor	Fair	Long	Fair	400ft^3	No	Poor
Madagascar Olive	*Noronhia emarginata*	Medium	Yes	Good	Fair	Good	Good	Moderate	Fair	400ft^3	Yes	Fair

Appendix B: Tree Palette

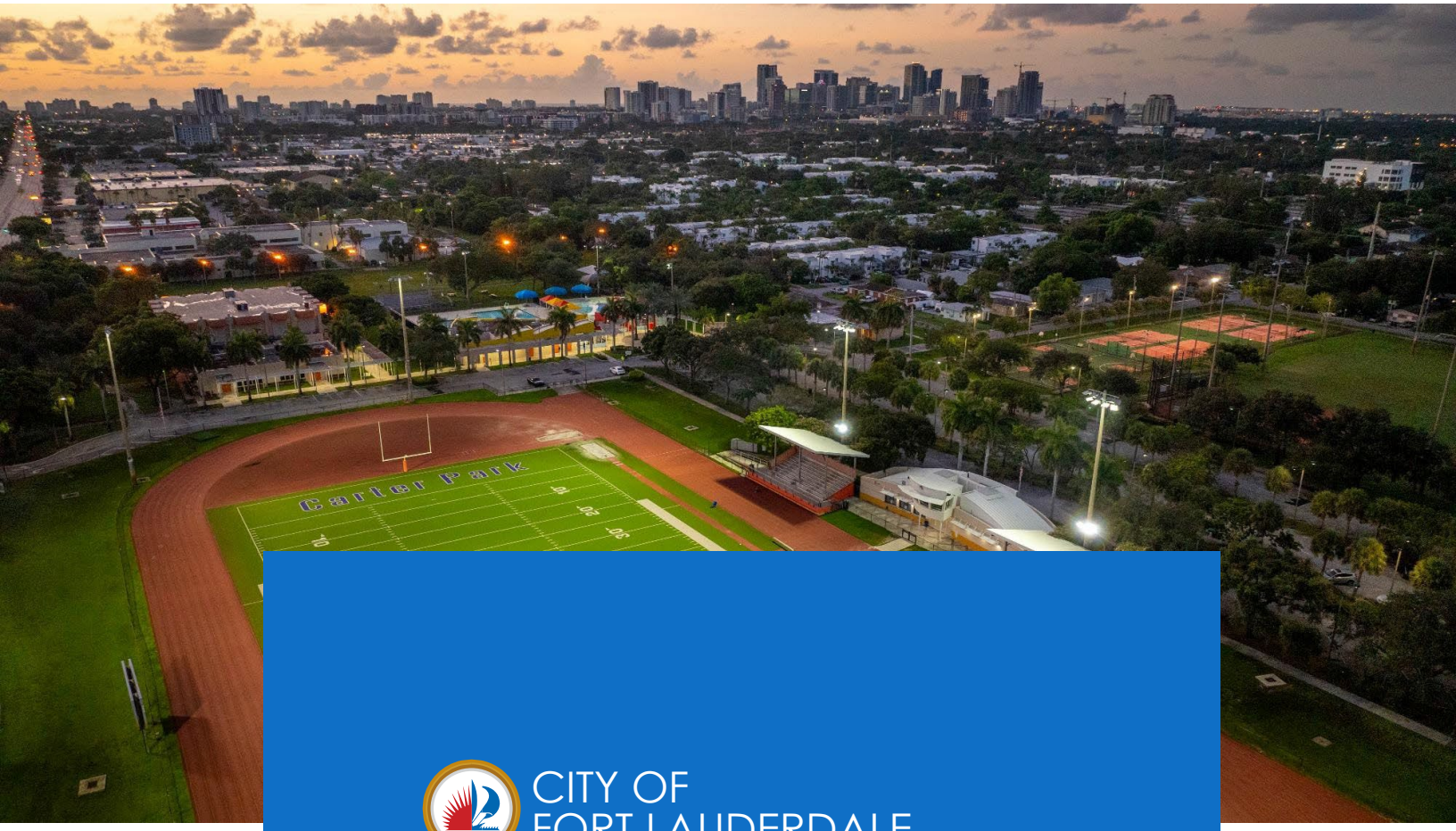
Common Name	Scientific Name	Tree Size	FL Native (Y/N)	Wind Tolerance	Flood Tolerance	Salt Tolerance	Drought Tolerance	Life Span	Root System Characteristics	Suggested Planting Space Size	Street Tree (Y/N)	Candidate For Relocation
Milkbark	*Drypetes diversifolia*	Medium	Yes	Good	Fair	Fair	Good	Moderate	Good	400ft^3	Yes	Fair
Pigeon Plum*	*Coccoloba diversifolia*	Medium	Yes	Good	Fair	Good	Good	Moderate	Fair	400ft^3	Yes	Fair
Pink Tabebuia Tree*	*Tabebuia heterophylla*	Medium	Yes	Poor	Fair	Good	Good	Moderate	Fair	400ft^3	Yes	Good
Pitch Apple*	*Clusia rosea*	Medium	Yes	Good	Fair	Good	Good	Long	Poor	400-900ft^3	Yes	Fair
Red Mangrove	*Rhizophora mangle*	Medium	Yes	Good	Good	Good	Fair	Long	Poor	400-900ft^3	No	Poor
Red Mulberry*	*Morus rubra*	Medium	No	Fair	Good	Poor	Good	Moderate	Fair	400ft^3	No	Fair
Rusty Leaf Fig	*Ficus rubiginosa*	Medium	No	Good	Fair	Fair	Fair	Long	Fair	400ft^3	Yes	Fair
Horseflesh Mahogany	*Lysiloma sabicu*	Medium	Yes	Fair	Good	Good	Good	Moderate	Good	400ft^3	Yes	Good
Satin Leaf Tree	*Chrysophyllum oliviforme*	Medium	Yes	Good	Good	Good	Good	Moderate	Fair	400ft^3	Yes	Fair
Screw Pine	*Pandanus utilis*	Medium	Yes	Fair	Fair	Good	Good	Long	Poor	400-900ft^3	Yes	Poor
Shady Lady Black Olive	*Bucida buceras 'Shady Lady'*	Medium/Large	No	Fair	Good	Good	Good	Moderate	Fair	900 ft^3	Yes	Good
Starfruit	*Averrhoa carambola L.*	Medium	No	Poor	Fair	Poor	Fair	Semi-Moderate	Good	400ft^3	No	Poor
White Mangrove	*Laguncularia racemosa*	Medium	Yes	Good	Good	Good	Poor	Long	Poor	400-900ft^3	No	Poor
Willow Bustic	*Sideroxylon salicifolium*	Medium	No	Fair	Fair	Fair	Good	Moderate	Fair	400ft^3	Yes	Fair
Yew Podocarpus	*Podocarpus macrophyllus*	Medium	Yes	Good	Fair	Fair	Fair	Long	Fair	400ft^3	Yes	Fair
African Tulip Tree	*Spathodea campanulata*	Large	No	Poor	Fair	Fair	Good	Moderate	Fair	900 ft^3	No	Fair
American Persimmon	*Diospyros virginiana*	Large	Yes	Fair	Fair	Poor	Fair	Moderate	Fair	900 ft^3	No	Fair
Apple Blossom Shower	*Cassia javanica var. indochinensis*	Large	No	Poor	Fair	Fair	Good	Semi-Moderate	Fair	900 ft^3	Yes	Fair
Avocado	*Persea americana*	Large	No	Fair	Poor	Fair	Poor	Moderate	Fair	900 ft^3	No	Poor
Bald Cypress*	*Taxodium distichum*	Large	Yes	Good	Good	Fair	Good	Long	Poor	900 ft^3	Yes	Poor
Big Leaf Seagrape	*Coccoloba pubescens*	Large	No	Fair	Fair	Good	Good	Long	Fair	900 ft^3	Yes	Poor
Black Olive	*Terminalia buceras*	Large	No	Poor	Poor	Good	Good	Long	Poor	900 ft^3	No	Good
Black Sapote	*Diospyros nigra*	Large	No	Fair	Fair	Poor	Fair	Semi-Moderate	Fair	900 ft^3	No	Fair
Brazilian Beautyleaf	*Calopyllum inophyllum*	Large	No	Good	Fair	Good	Fair	Moderate	Fair	900 ft^3	Yes	Fair
Cockspur Coral Tree	*Erythrina crista-galli*	Large	No	Fair	Fair	Fair	Good	Moderate	Poor	900 ft^3	No	Fair
False Mastic	*Sideroxylon foetidissimum*	Large	Yes	Good	Fair	Good	Good	Long	Fair	900 ft^3	Yes	Fair
Florida Soapberry	*Sapindus saponaria*	Large	No	Poor	Fair	Good	Good	Moderate	Fair	900 ft^3	No	Fair
Golden Shower	*Cassia fistula*	Large	No	Poor	Poor	Fair	Fair	Long	Fair	900 ft^3	Yes	Fair
Green Buttonwood	*Conocarpus erectus*	Large	Yes	Good	Fair	Good	Good	Long	Good	900 ft^3	Yes	Fair
Guiana Chestnut Tree	*Pachira aquatica*	Large	No	Poor	Fair	Fair	Good	Moderate	Fair	900 ft^3	Yes	Fair
Gumbo Limbo*	*Bursera simaruba*	Large	Yes	Good	Fair	Good	Good	Moderate	Fair	900 ft^3	Yes	Good
Indian Tamarind Tree	*Tamarindus indica*	Large	Yes	Good	Fair	Fair	Good	Long	Fair	900 ft^3	Yes	Fair
Inkwood	*Exothea paniculata*	Large	Yes	Good	Fair	Fair	Fair	Moderate	Fair	900 ft^3	No	Fair
Jacaranda*	*Jacaranda mimosifolia*	Large	No	Poor	Fair	Poor	Good	Semi-Moderate	Fair	900 ft^3	No	Fair
Jackfruit	*Artocarpus heterophyllus*	Large	No	Good	Poor	Poor	Fair	Moderate	Poor	900 ft^3	No	Poor
Japanese Blueberry	*Elaeocarpus decipiens*	Large	No	Fair	Fair	Good	Good	Moderate	Fair	900 ft^3	Yes	Fair
Kapok Tree	*Ceiba pentandra*	Large	No	Poor	Fair	Fair	Good	Long	Poor	900 ft^3	No	Poor
Live Oak*	*Quercus virginiana*	Large	Yes	Good	Good	Good	Good	Long	Fair	900 ft^3	Yes	Fair
Mahogany*	*Swietenia mahagoni*	Large	Yes	Fair	Good	Good	Good	Long	Fair	900 ft^3	Yes	Fair
Mango	*Mangifera indica*	Large	Yes	Poor	Fair	Fair	Fair	Moderate	Fair	900 ft^3	No	Fair
Mast Tree	*Polyalthia longifolia*	Large	No	Fair	Fair	Fair	Good	Moderate	Fair	900 ft^3	Yes	Fair
Paradise Tree*	*Simarouba glauca*	Large	Yes	Good	Fair	Good	Good	Long	Poor	900 ft^3	Yes	Fair
Pink Shower	*Cassia grandis*	Large	No	Poor	Fair	Fair	Good	Semi-Moderate	Fair	900 ft^3	Yes	Fair
Pond Cypress*	*Taxodium ascendens*	Large	Yes	Good	Good	Fair	Good	Long	Fair	900 ft^3	Yes	Poor
Queen's Crape Myrtle	*Lagerstroemia speciosa*	Large	No	Fair	Fair	Poor	Fair	Moderate	Good	900 ft^3	Yes	Fair
Red Bay	*Persea borbonia var. borbonia*	Large	Yes	Good	Good	Good	Good	Moderate	Fair	900 ft^3	Yes	Fair
Red Maple*	*Acer rubrum*	Large	Yes	Fair	Good	Poor	Poor	Semi-Moderate	Fair	900 ft^3	No	Fair
Royal Poinciana*	*Delonix regia*	Large	No	Poor	Fair	Good	Good	Moderate	Poor	900 ft^3	No	Fair
Sapodilla	*Manilkara zapota*	Large	No	Fair	Fair	Good	Good	Moderate	Fair	900 ft^3	Yes	Fair
Sausage Tree	*Kigelia pinnata*	Large	No	Poor	Fair	Poor	Poor	Moderate	Poor	900 ft^3	Yes	Fair
Seagrape*	*Coccoloba uvifera*	Large	No	Good	Fair	Good	Good	Long	Fair	900 ft^3	Yes	Poor
Short-leaf Fig*	*Ficus citrifolia*	Large	Yes	Fair	Fair	Fair	Good	Long	Poor	900 ft^3	Yes	Good
Silk Floss Tree	*Ceiba speciosa*	Large	No	Poor	Good	Poor	Good	Semi-Moderate	Fair	900 ft^3	No	Fair
South Florida Slash Pine	*Pinus elliottii 'var densa'*	Large	Yes	Fair	Fair	Good	Good	Long	Poor	900 ft^3	No	Poor
Southern Magnolia	*Magnolia grandiflora*	Large	Yes	Good	Poor	Fair	Fair	Long	Poor	900 ft^3	Yes	Poor
Star Apple	*Chrysophylum cainito*	Large	No	Fair	Fair	Fair	Fair	Moderate	Good	900 ft^3	No	Fair
Strangler Fig	*Ficus aurea*	Large	Yes	Fair	Fair	Fair	Good	Long	Poor	900 ft^3	Yes	Good
Sweetbay Magnolia	*Magnolia virginiana*	Large	Yes	Fair	Good	Poor	Fair	Semi-Moderate	Fair	900 ft^3	No	Poor
Verawood	*Bulnesia arborea*	Large	No	Poor	Fair	Poor	Good	Semi-Moderate	Good	900 ft^3	Yes	Fair
Weeping Podocarpus	*Podocarpus gracilior*	Large	No	Good	Fair	Fair	Fair	Long	Fair	900 ft^3	Yes	Poor
Wild Tamarind*	*Lysiloma latisiliquum*	Large	Yes	Fair	Fair	Good	Good	Long	Fair	900 ft^3	Yes	Fair
Yellow Poinciana	*Peltophorum pterocarpum*	Large	No	Poor	Poor	Fair	Good	Moderate	Poor	900 ft^3	No	Fair
Bismarck Palm	*Bismarckia nobilis*	Palm	No	Good	Poor	Fair	Good	Moderate	Good	225-400 ft^3	Yes	Good
Blue Latan Palm	*Latania loddigesii*	Palm	No	Good	Good	Fair	Fair	Moderate	Good	100 ft^3	No	Fair

Common Name	Scientific Name	Tree Size	FL Native (Y/N)	Wind Tolerance	Flood Tolerance	Salt Tolerance	Drought Tolerance	Life Span	Root System Characteristics	Suggested Planting Space Size	Street Tree (Y/N)	Candidate For Relocation
Bottle Palm	*Hyophorbe lagenicaulis*	Palm	No	Good	Fair	Good	Good	Moderate	Good	100 ft^3	No	Fair
Buccaneer Palm	*Pseudophoenix sargentii*	Palm	Yes	Good	Poor	Good	Good	Moderate	Good	225-400 ft^3	Yes	Good
Cabbage Palm*	*Sabal palmetto*	Palm	Yes	Good	Good	Good	Good	Long	Good	100-400 ft^3	Yes	Good
Canary Island Date Palm	*Phoenix canariensis*	Palm	No	Good	Poor	Fair	Good	Long	Good	100-400 ft^3	Yes	Poor
Carpenter Palm	*Carpentaria acuminata*	Palm	No	Good	Poor	Low	Fair	Low	Fair	100-400 ft^3	No	Fair
Chinese Fan Palm	*Livistona chinensis*	Palm	No	Good	Poor	Fair	Good	Semi-Moderate	Fair	100 ft^3	Yes	Fair
Christmas Palm*	*Adonidia merrillii*	Palm	No	Good	Poor	Fair	Fair	Semi-Moderate	Good	100-400 ft^3	Yes	Good
Coconut Palm*	*Cocos nucifera*	Palm	No	Good	Fair	Good	Good	Long	Good	100-400 ft^3	No	Fair
Florida Silver Palm*	*Coccothrinax argentata*	Palm	Yes	Good	Poor	Good	Good	Moderate	Good	100 ft^3	Yes	Fair
Florida Thatch Palm*	*Thrinax radiata*	Palm	Yes	Good	Poor	Good	Good	Long	Good	100 ft^3	Yes	Fair
Foxtail Palm	*Wodyetia bifurcata*	Palm	No	Good	Poor	Fair	Fair	Long	Fair	100-400 ft^3	Yes	Good
Hurricane Palm	*Dictyosperma album*	Palm	No	Good	Poor	Good	Poor	Low	Good	100-225 ft^3	Yes	Fair
Medjool Palm	*Phoenix dactylifera*	Palm	No	Good	Fair	Fair	Good	Long	Good	225-400 ft^3	Yes	Poor
Paurotis Palm*	*Acoelorrhaphe wrightii*	Palm	Yes	Good	Good	Fair	Fair	Long	Fair	100-400 ft^3	No	Fair
Pindo Palm	*Butia capitata*	Palm	No	Good	Fair	Fair	Good	Moderate	Good	100-225 ft^3	Yes	Good
Red Latan Palm	*Latania lontaroides*	Palm	No	Good	Good	Fair	Fair	Moderate	Good	100 ft^3	No	Fair
Royal Palm*	*Roystonea regia*	Palm	Yes	Good	Good	Fair	Fair	Long	Fair	100-400 ft^3	No	Fair
Seashore Palm*	*Allagoptera arenaria*	Palm	No	Good	Good	Good	Good	Moderate	Good	100 ft^3	Yes	Fair
Solitaire Palm*	*Ptychosperma elegans*	Palm	No	Good	Good	Low	Fair	Moderate	Good	100 ft^3	Yes	Good
Sylvester Palm	*Phoenix sylvestris*	Palm	No	Good	Poor	Fair	Good	Long	Good	100-400 ft^3	Yes	Poor
Triangle Palm	*Dypsis decaryi*	Palm	No	Good	Poor	Poor	Good	Moderate	Good	100-400 ft^3	Yes	Good
Windmill Palm	*Trachycarpus fortunei*	Palm	No	Good	Fair	Fair	Poor	Moderate	Good	100 ft^3	Yes	Fair

NOTE :

*= Species included in Fort Lauderdale's Design and Construction Manual.

APPENDIX C: SURVEY REPORT



CITY OF
FORT LAUDERDALE

URBAN FORESTRY MASTER PLAN SURVEY

Table of Contents

Executive Summary

In 2024 the City of Fort Lauderdale embarked on the development of an Urban Forestry Master Plan (UFMP) to guide the preservation, management, and strategic expansion of the City's urban forest, with the long-term goal of achieving 33% tree canopy coverage by 2040. To support this initiative, RES Florida Consulting, LLC (RES) and Dickey Consulting Services, Inc. (DCS) (the Consultant Teams) were tasked with conducting a Citywide UFMP survey and coordinating/executing a comprehensive public engagement process.

The UFMP survey was designed to capture public perspectives on tree canopy conditions and needs. The survey was developed and piloted with Civic and Homeowners Association leaders. After revisions and approval, the final survey was administered Citywide between February 28 and April 30, 2025. A total of **42 pilot and 794 final** survey responses were collected electronically. The survey analysis relied on descriptive statistics and visual representations to highlight community sentiments and trends.

Key Survey Findings:

- Strong community recognition on the importance of urban forestry, with broad agreement on the benefits of trees.
- General concern about the uneven distribution of tree canopy across neighborhoods, often attributed to new development.
- Preservation of existing trees and increased tree planting emerged as top priorities. Community leaders prioritized planting, while residents emphasized preservation.
- Native shade trees were strongly preferred for both new planting and replacement for invasive species.
- Major barriers to tree planting included cost, maintenance, and a lack of public knowledge about proper tree care.
- Concerns raised about development-related tree removal, infrastructure conflicts (e.g., power lines), and property risks during hurricanes.
- Over 70 organizations expressed interest in organizing or supporting future planting events to advance the UFMP goals.

In tandem with the survey, public engagement efforts included a series of district-based meetings, one Citywide virtual meeting, stakeholder workshops, social media outreach, and virtual commissioner-led sessions. These activities ensured broad, representative input from diverse communities across all four districts.

Public Engagement Highlights:

- **District Meetings**: Held between March and April 2025 at community parks and civic centers in all four districts. RES gave a presentation about the UFMP, and attendees submitted public comments regarding their questions and expectations for the UFMP and their concerns about the City's urban forest. The UFMP survey was available to be taken at each public meeting.
- **Citywide Virtual Meeting**: Held on April 7, 2025, on Zoom. RES gave a presentation about the UFMP, and online attendees submitted public comments regarding their questions and expectations for the UFMP and their concerns about the City's urban forest.

- **Neighborhood & Business Outreach**: Presentations and materials were distributed through the Council of Fort Lauderdale Civic Associations and local businesses.
- **Online & Social Media**: This effort targeted messaging to environmental groups and digital platforms to encourage participation and feedback.

Through these efforts, several key themes consistently emerged:

1. **Tree Preservation and Protection**
   Residents voiced strong concerns about tree removal—especially mature trees—and called for stricter enforcement of protection policies. New development or re-development was frequently cited as a driver of canopy loss.
2. **Species Selection and Diversity**
   The community showed high awareness of native and invasive species. Native trees like gumbo limbo and slash pines were favored, while concern was raised over the proliferation of invasive species.
3. **Development and Urban Design**
   Participants identified a need for design standards that prioritize green space, limit impervious surfaces, and preserve existing trees during development. Suggestions included requiring underground utilities and incentivizing green infrastructure.
4. **Education and Community Involvement**
   Residents emphasized education as key to improving urban forestry outcomes. Ideas included homeowner resources, youth programs, technical assistance, and neighborhood-led initiatives.
5. **Maintenance and Management Challenges**
   Community members cited cost, pest infestations (notably invasive termites), and maintenance burdens as significant concerns. Differing views were expressed on leaf litter, wildlife interactions, and species upkeep.
6. **Access and Equity**
   Unequal distribution of the tree canopy was a recurring concern. Many residents emphasized the value of parks, street trees, and improved connectivity to green spaces across the City.

The results of this UFMP community engagement and survey effort clearly demonstrated strong public support for enhancing and protecting Fort Lauderdale's urban forest. This data will be used in the development of recommendations for the City's UFMP and its implementation. These findings will inform the development of actionable strategies that reflect residents' priorities, ensure equitable access to tree canopy benefits, and guide the City toward its 2040 goal.

Below you will see multiple illustrations and pictures that provided data used in the development of the recommendations for the City's next steps after UFMP adoption.

Introduction, Methodology, and Survey Administration

The City of Fort Lauderdale's goal is to increase the City's overall tree canopy coverage from 26.6% in 2024 to 33% by 2040. The City partnered with Resource Environmental Solutions, LLC (RES) to develop and implement the Urban Forestry Master Plan (UFMP). The UFMP evaluates the status of the urban forest and collects information and data from stakeholders. These steps help the City establish a clear set of priorities and objectives to create a framework to enhance the City's urban forest. RES enlisted the services of Dickey Consulting Services, Inc. (DCS) to assist/facilitate with the UFMP's public survey and outreach.

Online Survey

RES and DCS (the Consultant Team) developed and administered the UFMP survey from July 2024 through April 2025. A pilot survey was first developed and deployed to community leaders, such as Civic Association and Homeowners Association's leadership, to understand their attitudes and views towards their neighborhood's and Fort Lauderdale's urban forest. The pilot survey received 42 responses between Dec 6, 2024 and Jan 20, 2025. The survey questions and flow were subsequently updated based on the respondent feedback, with the objective of getting clearer and more informative responses relevant to the overall survey's goals. The updated, or final survey, was deployed on the UFMP website, through in person meetings, and social media channels such as Instagram and Facebook between Feb 28 and April 30, 2025. This survey was only administered electronically using the Survey Monkey platform.

The survey used a non-probability sampling method entailing specifically voluntary response sampling, since participants volunteered to respond to the survey (i.e., not selected by the survey administrator). This sampling method causes at least some bias to the responses as some people will inherently be more likely to volunteer than others (self-selection bias). No individual names or contact information was solicited as part of this survey.

Survey Monkey was selected as the raw data repository due to its features, including access management (permissions, survey open and close date restrictions), uniform entry screens, and ease of data download. After the survey was administered, the Consultants manually reviewed the data for each survey question, then interpreted the raw data. Examples of interpretation included spelling preferences and errors, or identified areas defined by intersecting street names. The data was then manually categorized to analyze trends and draw insights. Microsoft Excel pivot tables were used to complete the analysis. If necessary, categories were adjusted based on new raw data received during the survey time period. Descriptive statistics, tables, and simple graphs are used to present the results of the analyses in the presentation and this report.

Stakeholder and Public Meetings

A series of meetings were held to engage local stakeholders, including neighborhood organizations, environmental groups, and City officials. The meetings provided opportunities for attendees to discuss priorities, concerns, and ideas for enhancing urban forestry initiatives in their community. The Stakeholder meetings were very effective for promoting the survey.

Key meetings included:

- **District 1: April 2, 2025 - Fort Lauderdale Executive Airport**
- **District 2: March 11, 2025 - Holiday Park**
- **District 3: March 18, 2025 - Lauderdale Manors Park**
- **District 4: April 3, 2025 - Hortt Park**
- **Citywide Virtual Meeting: Online via Zoom**
- **Neighborhood and Business Outreach** (March 31-April 21): Special invitations from the Council of Fort Lauderdale Civic Association and other neighborhood groups to present the project and flyer distribution to some local businesses.
- **Online and Social Media Engagement**: To ensure broad outreach, digital engagement played a crucial role in the public engagement process. Social media campaigns and online discussions targeted the environmental groups and local community pages to share project updates and encourage participation. Some great examples of these strategies were the following:
    - ***Social Media Messaging to Environmental Groups*** *(April 2): Outreach to groups such as Residents for Resilience, Youth Environment Alliance, and Sierra Club Broward to promote survey participation and,*
    - ***Virtual Commissioner Meetings*** *(March 31-April 2): Commissioners used online platforms to share information and encourage public feedback.*

Responses by Question

#	Question	Answered	Skipped	Type
1	Do you live and/or work in Fort Lauderdale?	794	0	MC - Select One
2 (live)	Please provide the name of the Fort Lauderdale neighborhood where you live and/or work.	690	104	Open-ended
2 (work)	Please provide the name of the Fort Lauderdale neighborhood where you live and/or work.	528	266	Open-ended
3	Trees help keep my home cooler.	712	82	MC - Select One
4	Trees make it cooler when I am outside.	712	82	MC - Select One
5	Trees help reduce the risk of my home flooding.	712	82	MC - Select One
6	Trees help reduce air pollution in my neighborhood.	712	82	MC - Select One
7	Trees enhance my quality of life.	686	108	MC - Select One
8	How would you describe the distribution of your neighborhood's trees?	686	108	MC - Select One
9	I would like to see more trees in my neighborhood.	686	108	MC - Select One
10	What is the most urgent tree-related need in your neighborhood?	686	108	MC - Select One
11	What of the following statements most closely aligns with your opinion about trees that are removed as part of new developments in your neighborhood?	686	108	MC - Select One
12	How would you describe the distribution of Fort Lauderdale's trees?	675	119	MC - Select One
13	I would like to see more trees in Fort Lauderdale.	675	119	MC - Select One
14	What is the most urgent tree-related need in Fort Lauderdale?	675	119	MC - Select One
15	Which of the following statements most closely aligns with your opinion about trees that are planted as part of new developments in Fort Lauderdale?	675	119	MC - Select One
16	If I could plant any tree on my property or along the street in front of my house, I would plant:	654	140	MC - Select All
17	What, if anything, prevents you from planting a tree on your own property?	654	140	MC - Select All
18	I know of, or am a member of, an organization that would be interested in organizing a tree planting event in my neighborhood.	654	140	MC, Open-ended
19	I own or work for a company that would be interested in sponsoring or participating in a tree planting event in Fort Lauderdale.	654	140	MC, Open-ended
20	Which of the following statements most closely aligns with your opinion about planting mangrove trees along water-facing properties and coastal areas?	654	140	MC - Select One
21	If you own property along a waterway (such as a river, canal, or coastline), which of the following statements most closely aligns with your willingness to participate in a pilot program in which mangrove trees would be planted along your waterfront?	654	140	MC - Select One
22	Select the three least desirable things about trees.	641	153	MC - Select Three
23	Select the three most desirable benefits that trees provide.	641	153	MC - Select Three

#	Question	Answered	Skipped	Type
24	My age is	630	164	MC - Select One
25	My household's annual income is	628	166	MC - Select One
26	How many people live in your household?	627	167	MC - Select One
27	What ethnicity do you consider yourself?	624	170	MC - Select All
28	Do you own or rent the home that is your primary residence?	632	162	MC - Select One

Table 1. Number of responses by question.
MC = Multiple Choice.

Table 1 and Figure 1 present the response rate by question for the final survey. Most questions were multiple choice, and the respondents were allowed to choose only one answer. Questions 1 to 23 required an answer, and respondents could only skip the question if they did not continue the survey. Questions 24 to 28 were optional. Multiple choice questions 8, 10, 12, 14, 17, 18, 22, and 23 allowed for free-form input via the "other" option in the answer choices. There were clear breakpoints where respondents chose not to continue through the survey, specifically after questions 6, 11 (end of section 3), 15 (end of section 4), 21 (end of section 5), and 23 (end of section 6).

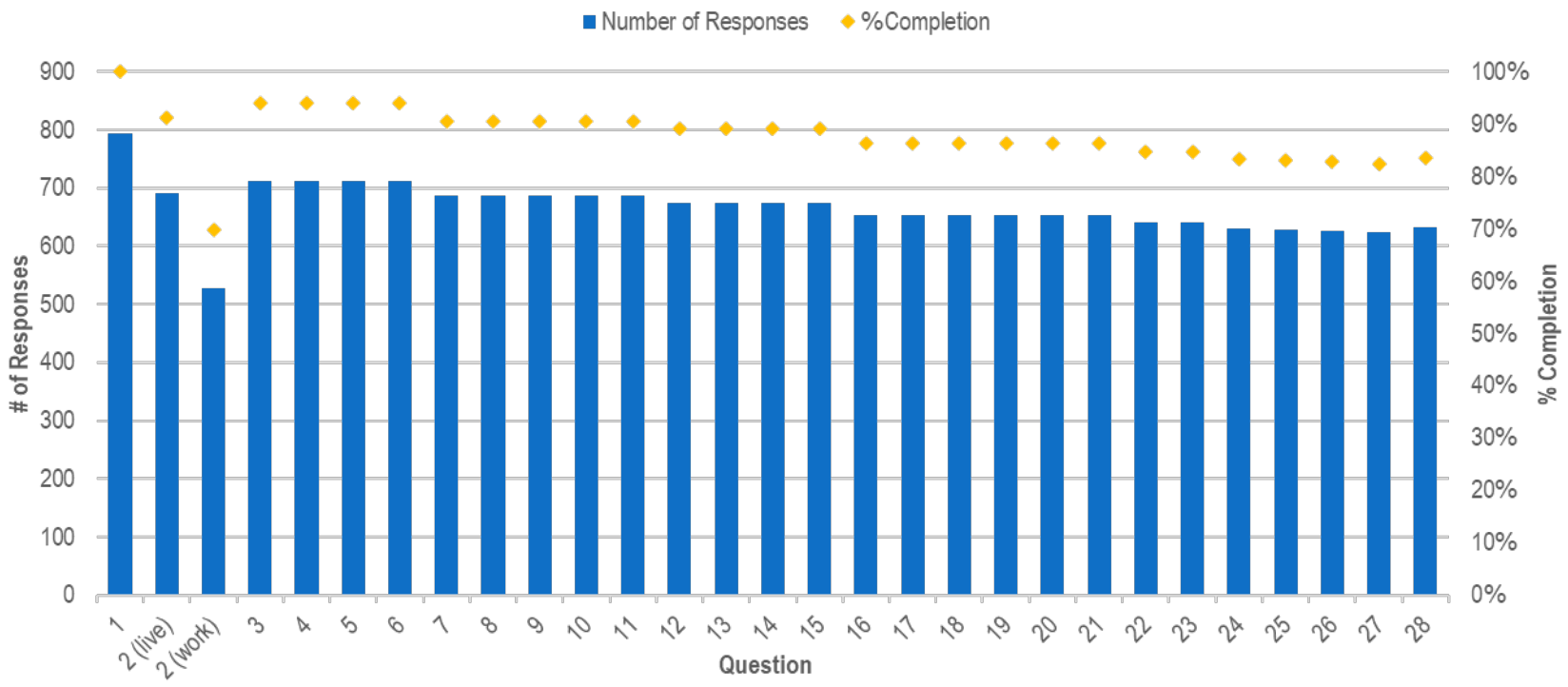


Figure 1. Number of responses by question and % completion.

Section 1: Background Information

Respondents' residence and workplace neighborhoods

Among the 794 respondents who began the UFMP survey, 95% or 757 respondents were able to proceed to the rest of the survey by indicating either their residence or workplace was located in Fort Lauderdale at the time the survey was taken. Four percent of the total respondents selected "No" or "Preferred not to Answer" and therefore were ineligible to proceed to the rest of the survey.

Live or work in Fort Lauderdale?	# of Respondents	% of Respondents
Yes	757	95%
No	18	2%
Prefer not to Answer	19	2%
Total	**794**	

Table 2. Respondents' eligibility to continue the UFMP survey.

Of the 757 self-identified eligible respondents, 698, or 92%, indicated the City of Fort Lauderdale or locations within the City as their residence and/or their workplace. Twenty-five respondents provided neighborhood names outside of the City, despite being self-identified as living or working in the City previously. It is possible that these respondents were not familiar with the City's boundaries or were considering commission districts instead. Thirty-four respondents did not proceed with the rest of the survey when this question was presented. Table 2 illustrates the response.

# of Responses	Work in the City	Do not work in the City	Total
Live in the City	324	312	636
Do not live in the City	18	25	87
Total	**386**	**337**	**723**

Table 3. Respondents' residence and workplace relative to the City of Fort Lauderdale.

Each free-form residence and workplace answer was categorized into "insufficient information," "Outside of the City of Fort Lauderdale," or a neighborhood. The neighborhood list references the City of Fort Lauderdale 2025 Officially Recognized Neighborhood Associations. Answers that are considered "insufficient information" are primarily variations of "Fort Lauderdale." These residence and/or workplace responses are considered to be in the City but not categorized into a specific neighborhood. Note that any responses that are variations of "downtown Fort Lauderdale" are categorized as "downtown" specifically. The full list of neighborhoods identified can be found in Appendix A.

Analysis of the residence and workplace combinations indicates a snapshot of neighborhoods accounting for 51% of the survey responses, respectively.

Neighborhoods	# of Responses	% of Responses*
Downtown Fort Lauderdale Civic Assoc.	58	9%
Lauderdale Harbours Assoc.	35	5%
Tarpon River Civic Assoc.	33	5%
River Oaks Civic Assoc.	32	5%
South Middle River Civic Assoc.	30	5%
Coral Ridge Association Inc.	30	5%
Victoria Park Civic Assoc.	29	5%
Coral Ridge Country Club Estate	27	4%
Central Beach Alliance	26	4%
Imperial Point Assoc.	24	4%

Table 4. Complete analysis of neighborhoods represented may be found in Appendix A
**Percentages are calculated as % of identified neighborhood combinations.*

Respondents' residence and workplace commission districts

Each free-form residence and workplace answer is also categorized into City Commission Districts 1 through 4, "Adjacent City" or "Within City". Answers that are considered "Within City" are primarily variations of "Fort Lauderdale" but lack detailed information to classify them to specific City Commission Districts.

# of Responses	Residence	Workplace	Total
District 1	134	38	172
District 2	145	67	212
District 3	33	16	49
District 4	228	99	327
Within City	101	137	238
Adjacent City	47	83	130
Total	**688**	**440**	

Table 5. Residence and workplace responses broken down by City District Commission.

Section 2: Trees and Your Home

Five Likert scale questions were presented to respondents to gauge their attitudes and perceptions of trees and their benefits. Majority of respondents either strongly agreed (74% average) or agreed (17% agree) that trees are beneficial to their home, environment, or them. Respondents had markedly weaker opinions on whether trees help reduce the risk of flooding.

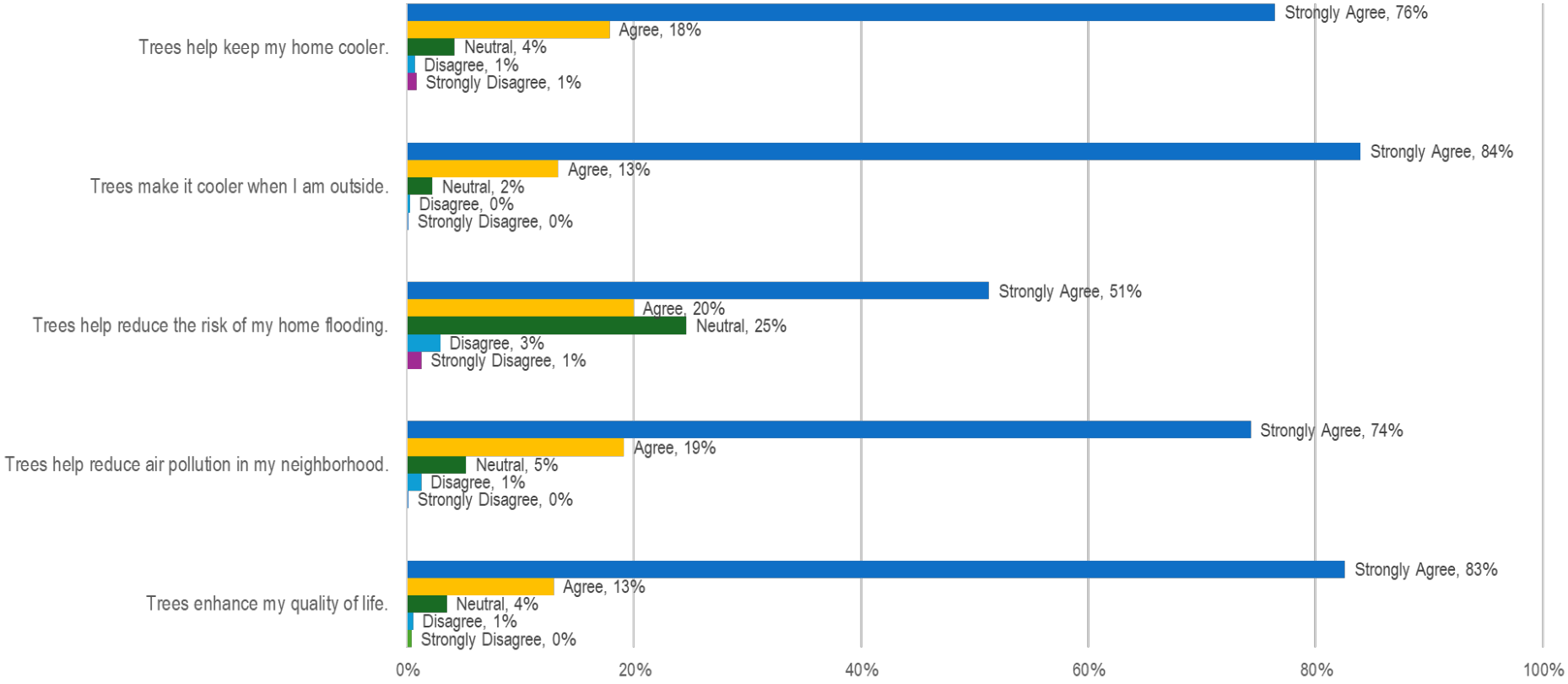


Figure 2. Perception of tree benefits on Likert scale.

Section 3: Trees and Your Neighborhood

In this section, respondents were asked to consider the following parameters about trees in their neighborhoods: distribution, the most urgent need, and impact of new developments. Overall, many respondents indicated that there are not enough trees in all parts of their neighborhoods and would like to see more trees. Based on open ended responses, the respondents believed this should be driven primarily by tree-planting, followed by tree preservation efforts, especially with respect to new developments.

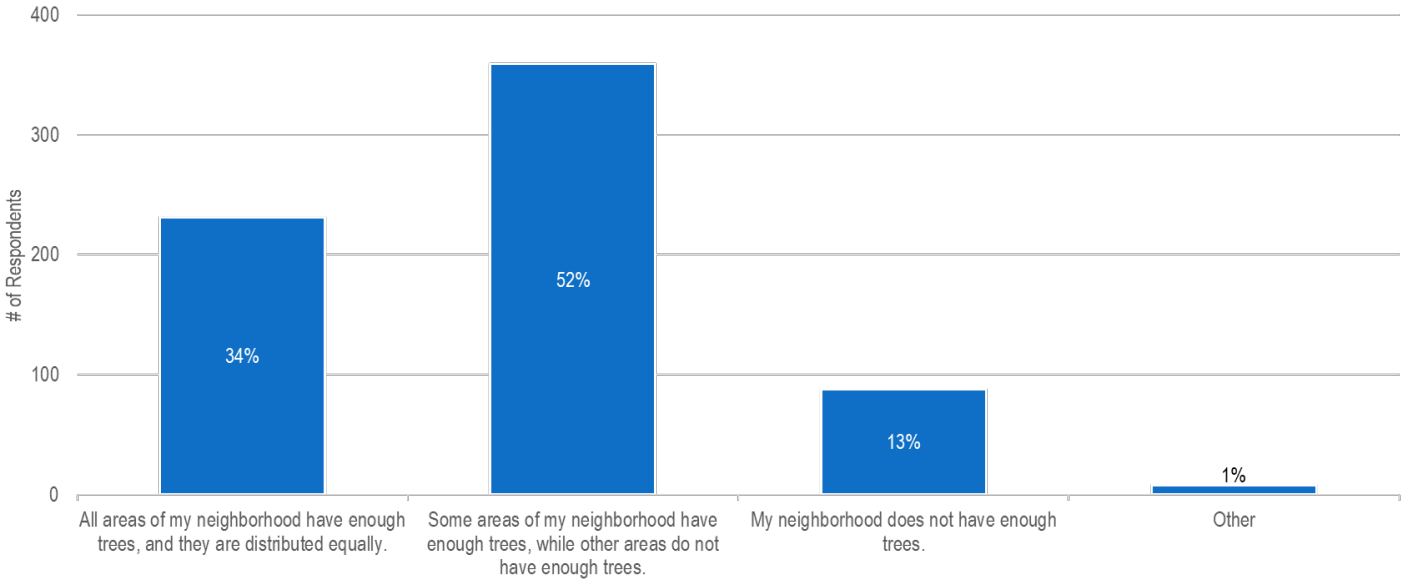


Figure 3. Respondents' opinion about distribution of neighborhood's trees.

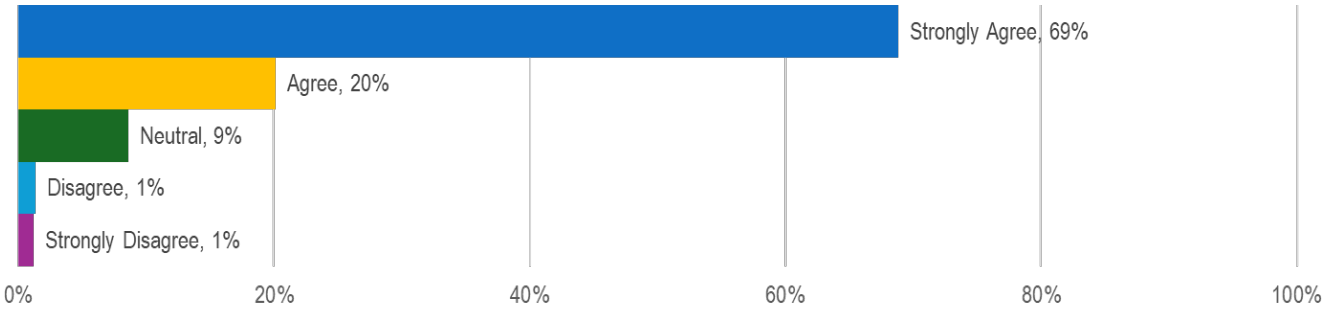


Figure 4. Likert scale response to "I would like to see more trees in my neighborhood" statement.

Eighty-three percent of respondents who believed there are not enough trees or evenly distributed trees in their neighborhood either agreed or strongly agreed that they would like to see more trees.

For those who had strong attitudes (i.e., *strongly agree*) towards the need for more trees in their neighborhoods, 60% of those respondents believed tree planting is the most urgent need followed by

preservation of existing trees (32%). For those who only *agreed* that they would like to see more trees in their neighborhood, their opinions about the most urgent tree-related needs were split equally between preservation of existing trees and tree planting.

Most urgent tree-related need in neighborhoods	# of Responses	% of Responses
Preservation of existing trees from damage or removal	189	28%
Tree planting – adding more trees	283	41%
Removing dead or dying trees	21	3%
Tree maintenance, such as trimming	115	17%
Educating the community about trees	36	5%
More volunteer opportunities for community tree planting and care	18	3%
Other	24	3%
Total	**686**	

Table 6. Most urgent tree-related need in the respondent's neighborhood

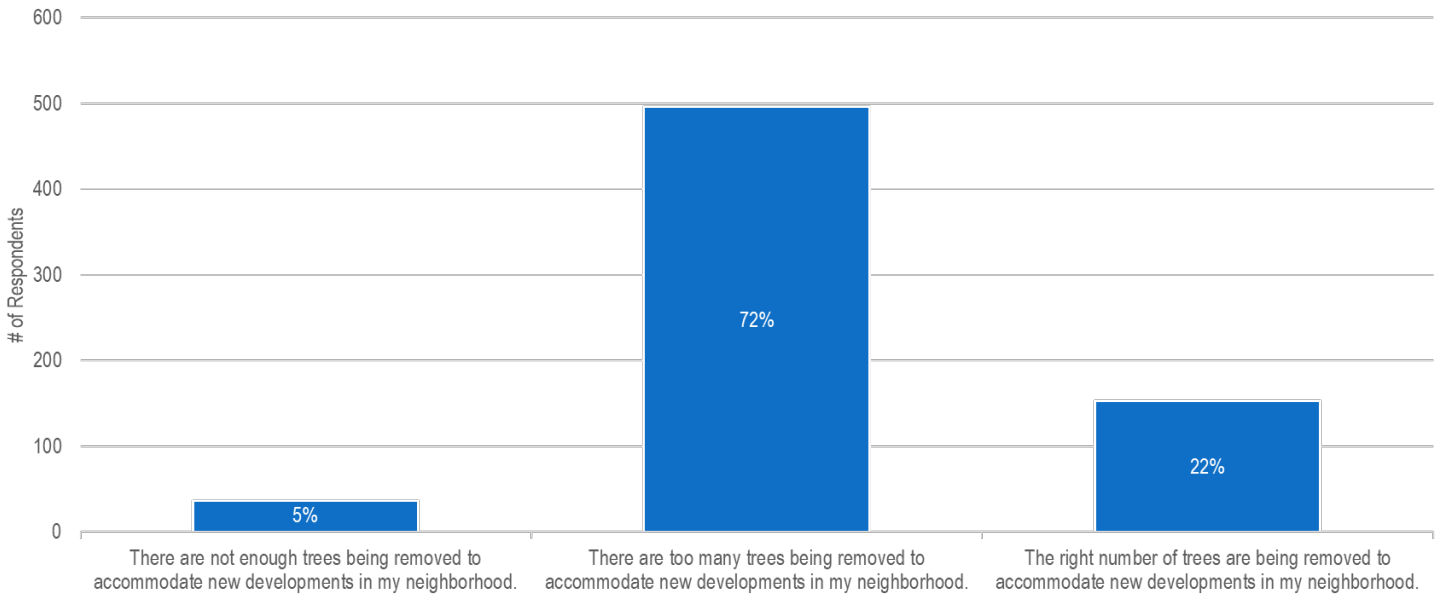


Figure 5. Respondents' opinion about trees that are removed as part of new developments in their neighborhoods.

Section 4: Trees and Your City

Respondents were asked to consider the following parameters regarding the trees in the City of Fort Lauderdale: distribution, the most urgent need, and the impact of new developments. 596 respondents, or 88%, believed some of the City's neighborhoods have more trees than others. Of these respondents, 87% had the same view about their neighborhoods.

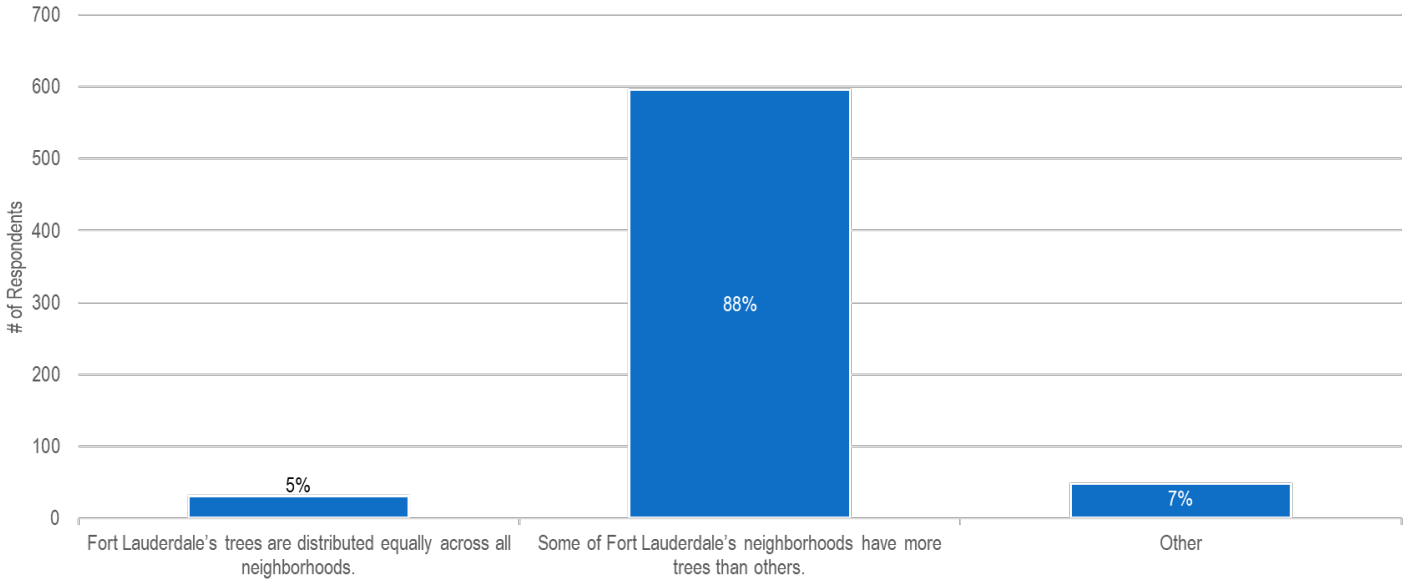


Figure 6. Respondents' opinion about distribution of Fort Lauderdale's trees

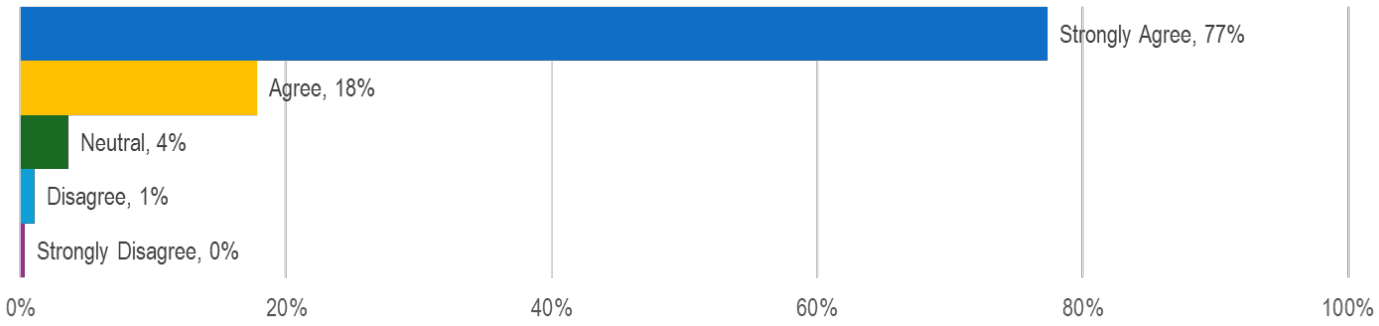


Figure 7. Likert scale response to "I would like to see more trees in Fort Lauderdale" statement.

Like the respondents' view of their neighborhood trees, tree-planting was indicated as the most urgent tree-related need in Fort Lauderdale, followed by preservation of existing trees.

Most urgent tree-related need in Fort Lauderdale	# of Responses	% of Responses
Preservation of existing trees from damage or removal	204	30%
Tree planting – adding more trees	318	47%
Removing dead or dying trees	24	4%
Tree maintenance, such as trimming	71	11%
Educating the community about trees	31	5%
More volunteer opportunities for community tree planting and care	15	2%
Other	12	2%
Total	**675**	

Table 7. Most urgent tree-related need in Fort Lauderdale.

Eighty-four percent of the survey takers believed there are not enough trees being planted as part of new developments in Fort Lauderdale. This sentiment was expressed by majority (91%) of respondents who also previously indicated that some of the City's neighborhoods have more trees than other neighborhoods.

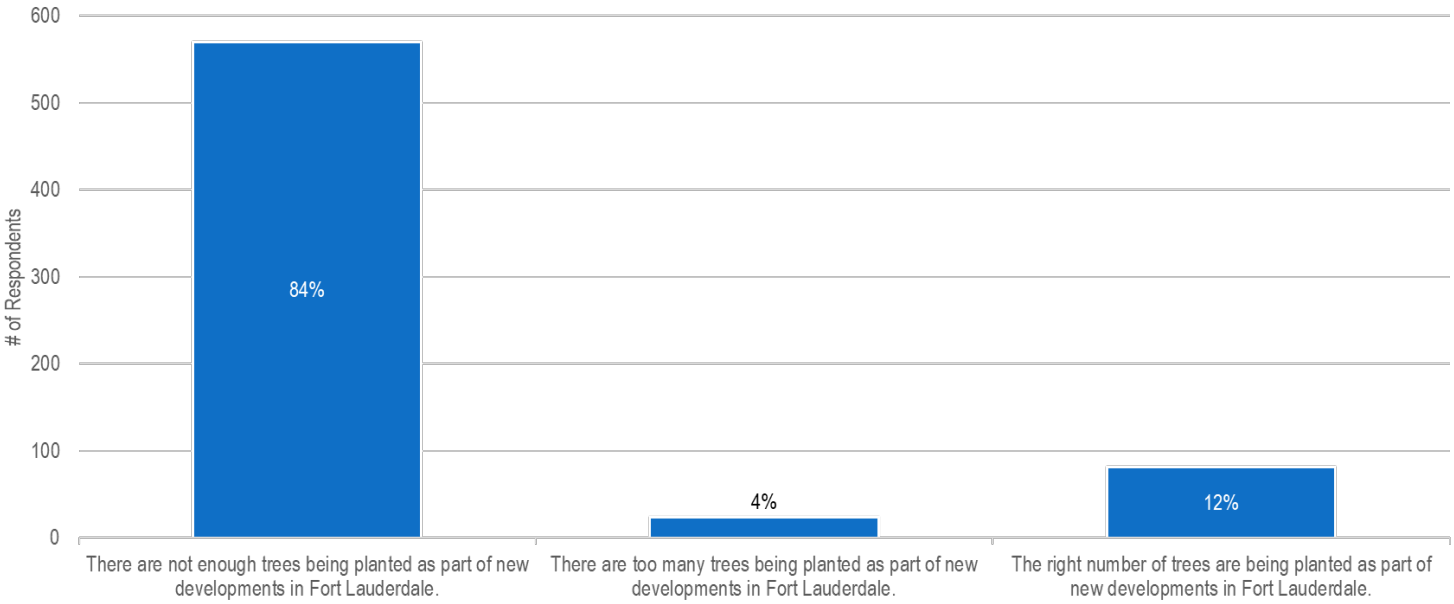


Figure 8. Respondents' opinion about trees that are being planted as part of new developments in Fort Lauderdale

Section 5: Tree Plantings and Removals

Tree preferences and barriers to tree plantings

Table 6 shows the respondents' tree preferences, if they could plant any tree on their property or along the street in front of their houses. On average, respondents selected one to two of the choices below. Shade trees were the most favored.

Tree preferences	# of Responses	% of Responses
I would not like to plant a tree on my property or along the street in front of my house	33	3%
A palm	121	12%
A shade tree	386	37%
A fruit tree	179	17%
A showy, flowering tree	195	19%
An evergreen tree (leaves stay green year-round)	126	12%
Total	**1040**	

Table 8. Preferred type of trees.

Respondents were asked what prevents them from planting trees on their own property and selecting all provided choices that apply. Results are shown in Figure 8. Majority of the respondents selected one provided choice. Free-form answers submitted under "other" are variations of:

- Lack of control because home is a condominium or an apartment
- Does not apply (already planted trees)
- None of the above (no barriers)
- Concerns of tree disservices, specifically infrastructure conflicts

Additional breakdown of unique free-form comments can be found in Appendix C. The next largest group of respondents believed there is not sufficient space in their yard for a tree.

A similar number of respondents were concerned about the high cost of planting and maintaining trees as well as lacking the knowledge of the type and size of trees to plant. The remaining respondents were split between not knowing how to plant trees, concerned that trees will fall and cause damage, and concerned that trees will attract wildlife.

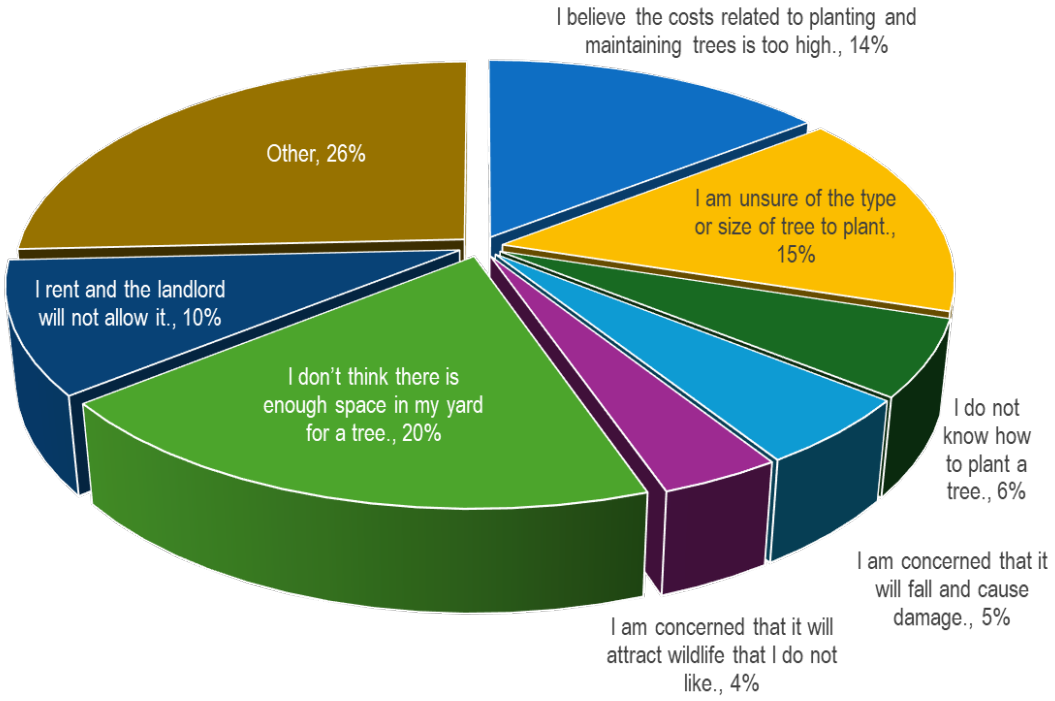


Figure 9. Barriers for respondents to plant trees on their own property.

Organizations suggested for interest in organizing or sponsoring tree planting events

Organizing *neighborhood* tree planting events	**# of Responses**	**% of Responses**
Business	7	11%
Civic Association	25	40%
Faith-based Organization	5	8%
Homeowner Association	8	13%
Other Non-profit Organization	16	26%
Government	1	2%
Total	**62**	

Table 9. Organizations suggested for interest in organizing neighborhood tree planting events.

Sponsoring or participating in *City* tree planting events	**# of Responses**	**% of Responses**
Business	33	69%
Civic Association	2	4%
Faith-based Organization	1	2%
Other Non-profit Organization	7	15%
Government	5	10%
Total	**62**	

Table 10. Organizations suggested for interest in sponsoring or participating in City tree planting events.

Mangrove tree plantings

Most respondents were indifferent about the benefits of mangrove trees. For those who expressed an opinion, many believed mangrove trees provide habitat and benefit coastlines.

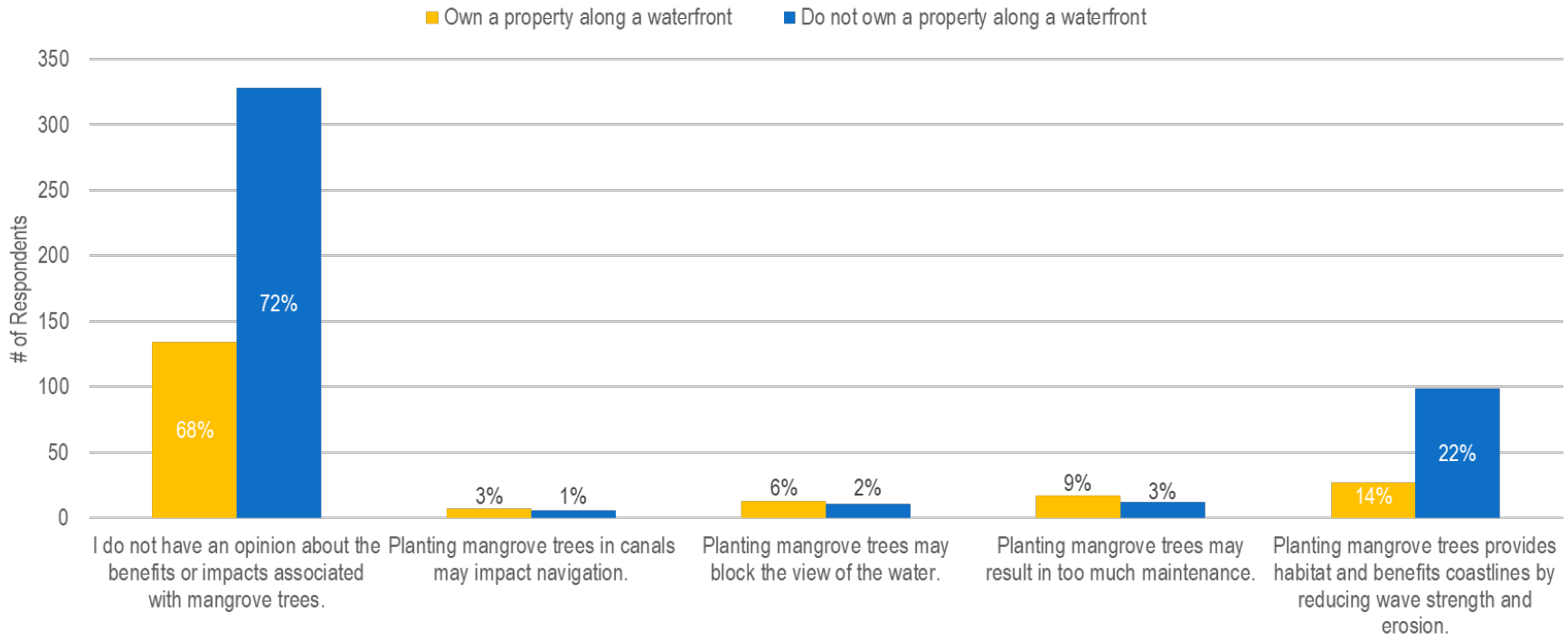


Figure 10. Opinion towards mangrove trees' benefits or impacts.

Of the 198 respondents who own a waterfront property, 39%, or 78, indicated a willingness to allow mangrove trees to be planted along their waterfront property; 27%, or 53, expressed interest in learning more about the possibility of mangrove tree plantings.

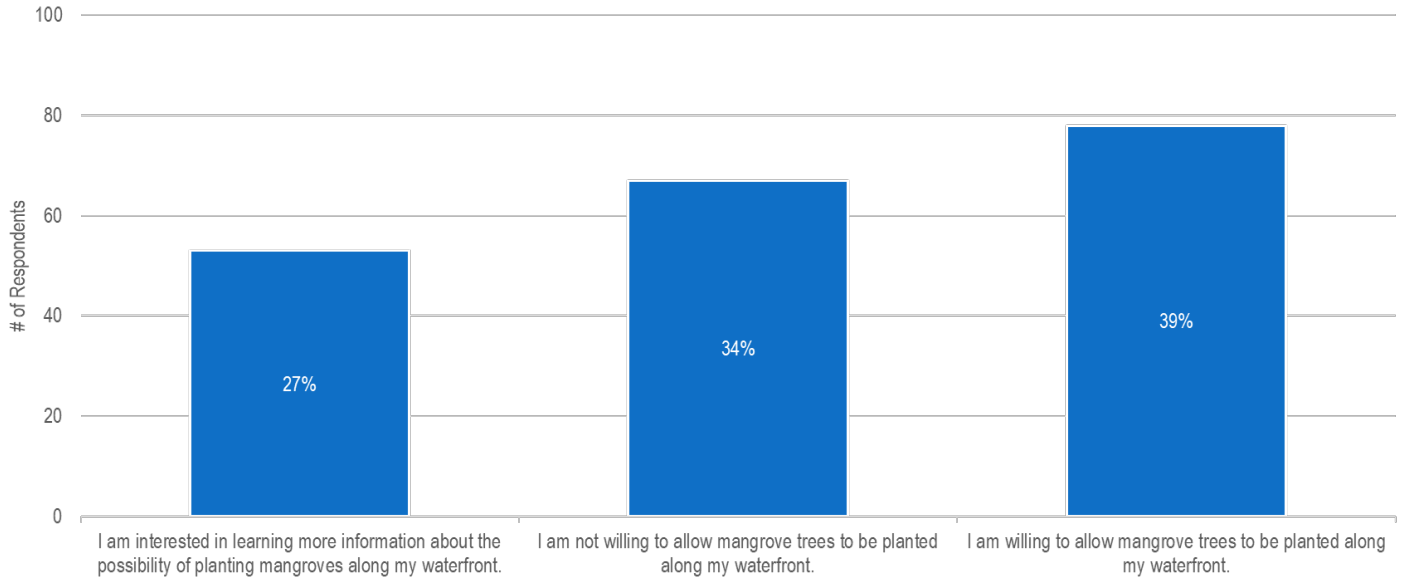


Figure 11. Interest in mangrove tree plantings expressed by waterfront property homeowners.

Section 6: Aesthetics, Benefits, and Costs

Respondents were asked to select the three least desirable things about trees. The leading concern was potential damage to sidewalks, utilities, and roads. This sentiment was supported by free-form comments collected across the entirety of the survey. Tree disservices, specifically regarding overhead powerlines and damage during hurricanes, were also mentioned. The next three concerns had essentially the same number of response counts: cost to purchase and install trees, effort and cost to maintain trees, and messes potentially caused by trees.

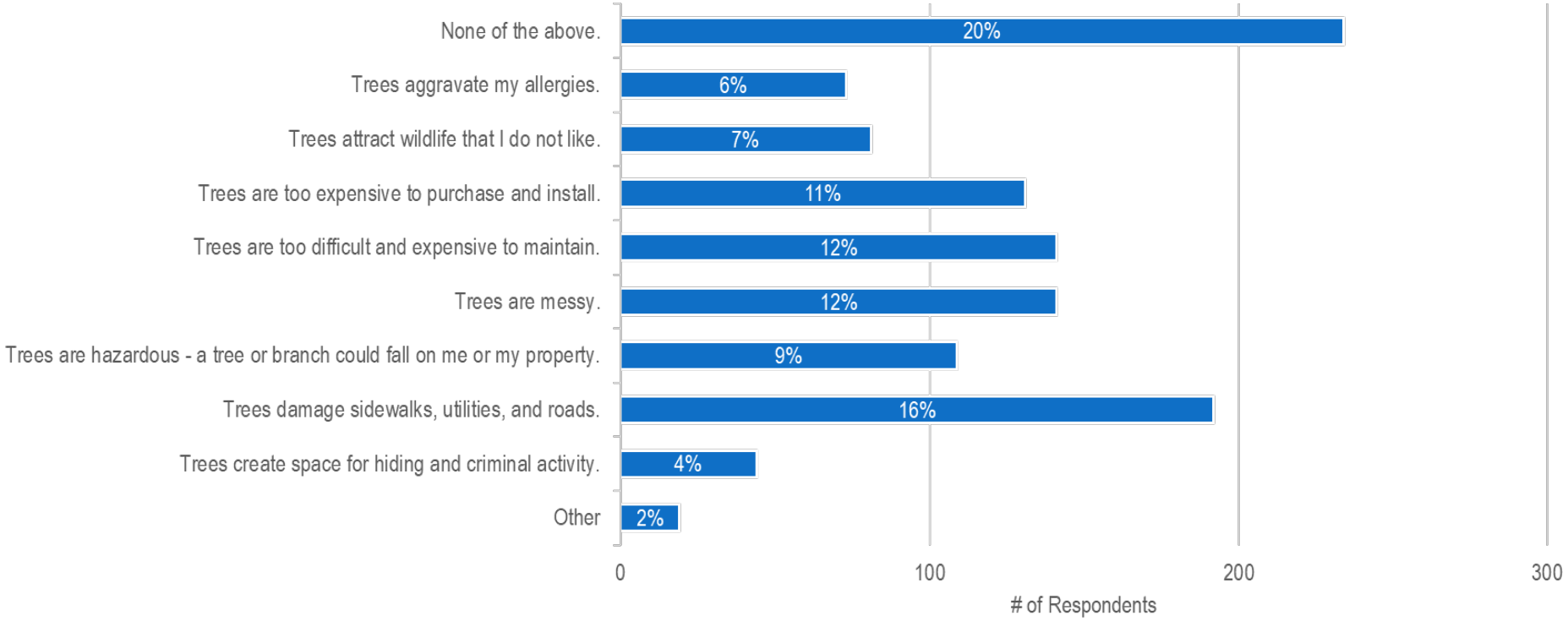


Figure 12. Three least desirable things about trees.

Respondents were asked to select the three most important benefits provided by trees. Beautification of the community by trees and their ability to provide shade were widely supported by respondents. This is congruent to shade trees being the preferred tree type in Section 5 of the survey and shade trees appeared repeatedly in species related free-form input across the survey.

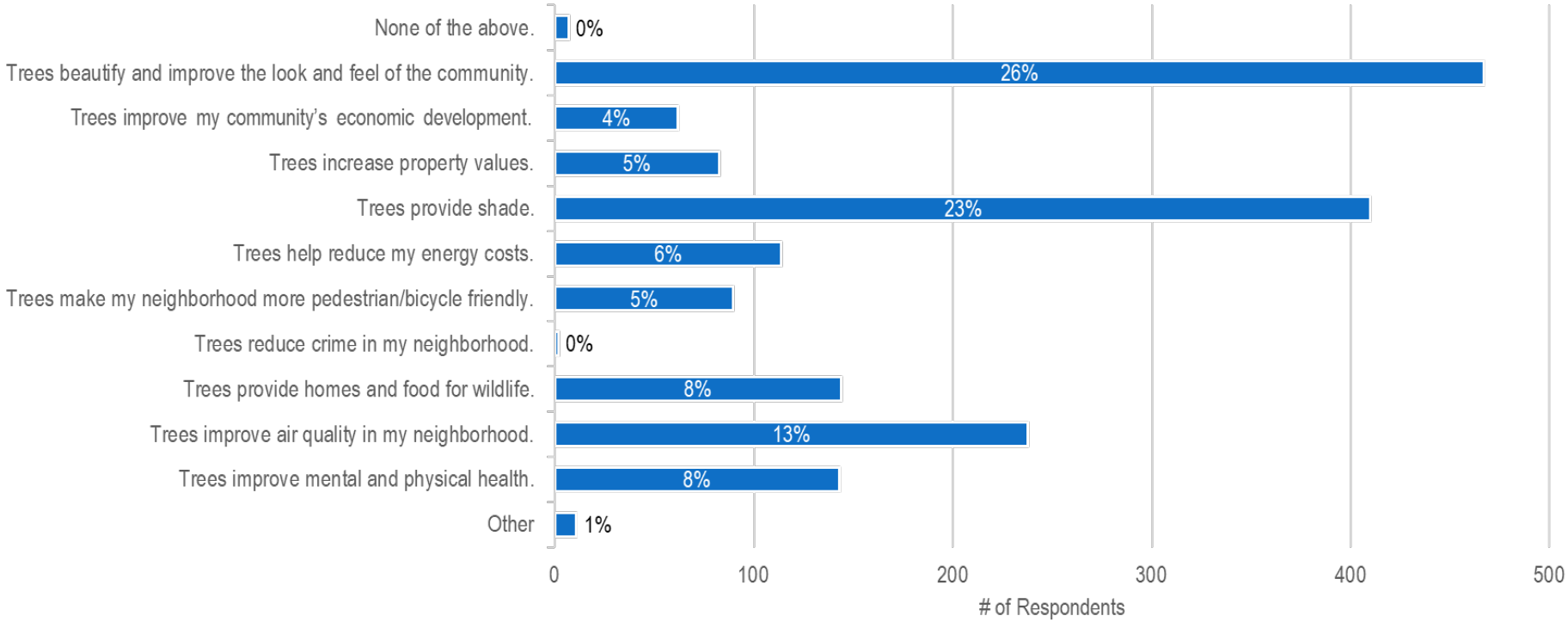


Figure 13. Three most important benefits provided by trees.

Section 7: Optional Demographic Information

Respondents were asked to provide various demographic information on a voluntary basis. These questions could either be skipped or the choice "prefer not to answer" could be selected for some questions.

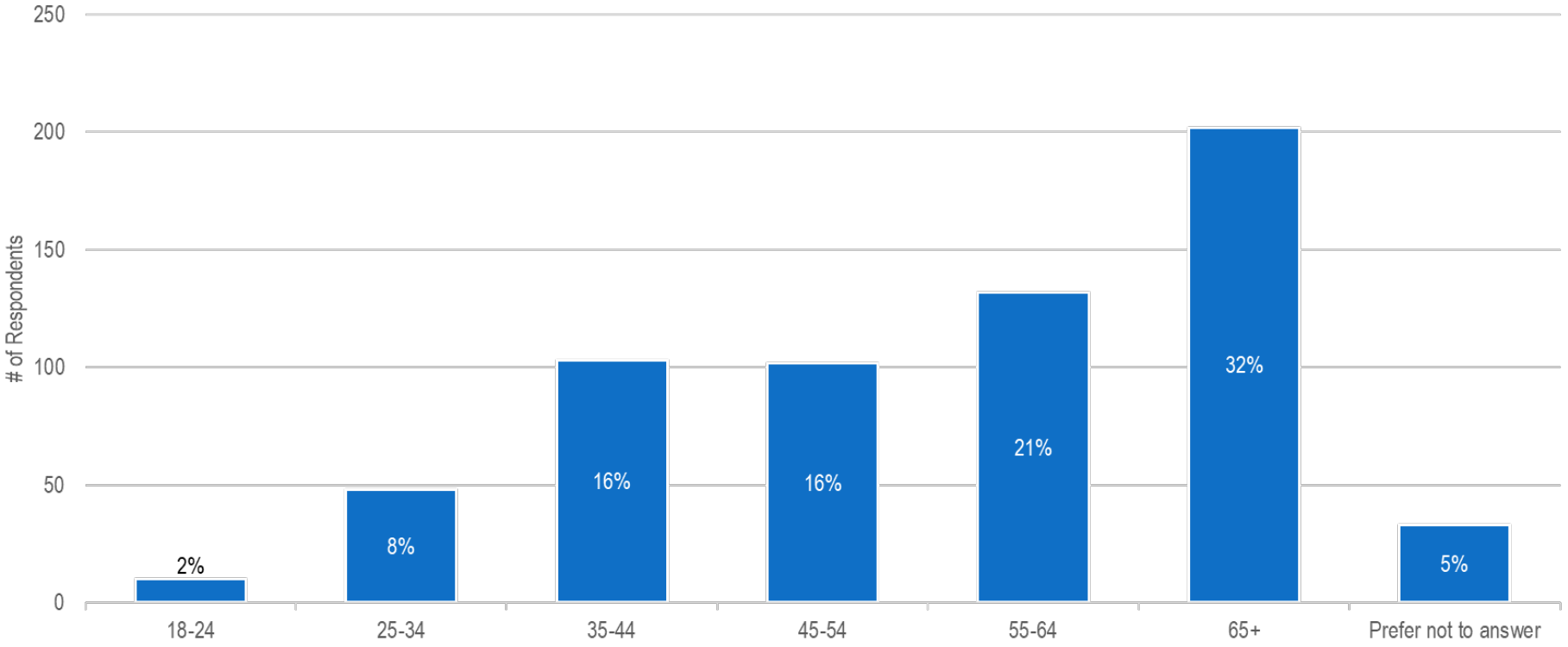


Figure 14. Respondent's age.

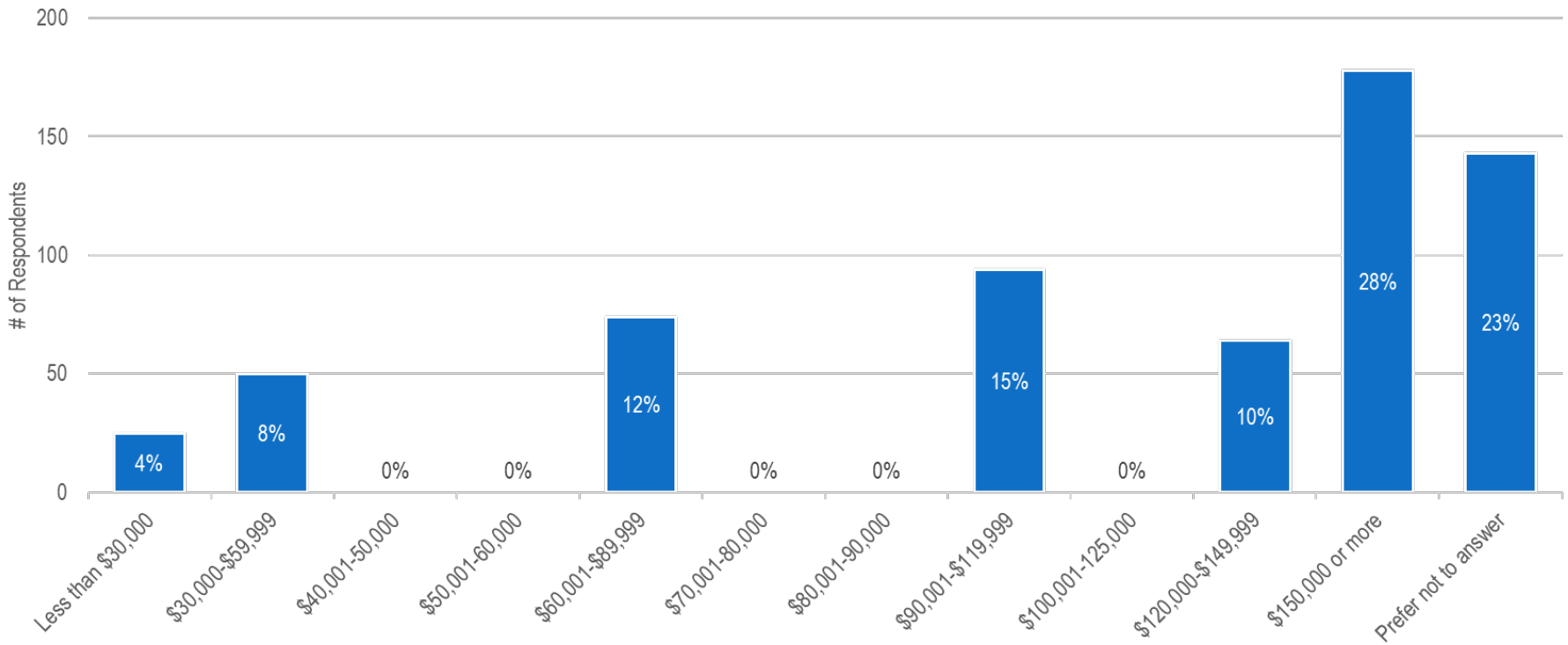


Figure 15. Respondent's household's annual income.

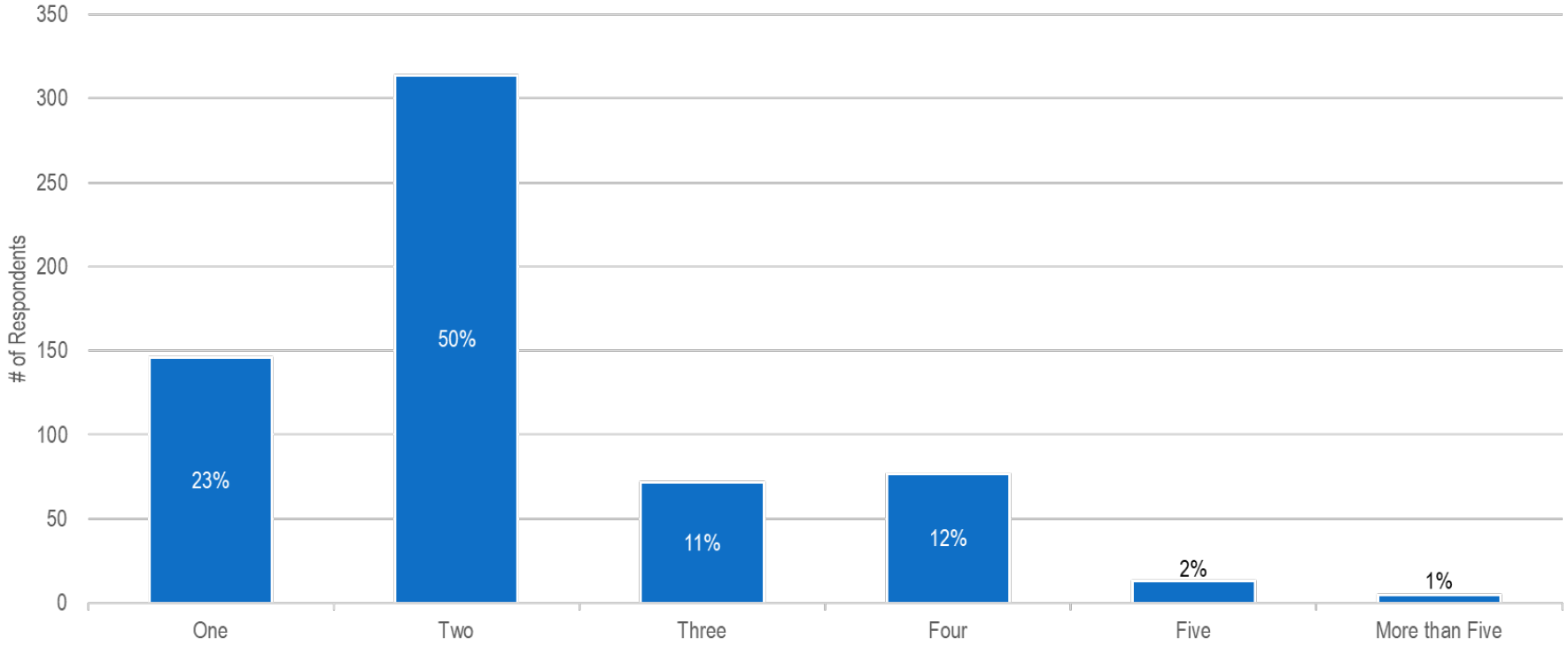


Figure 16. Respondent's household size.

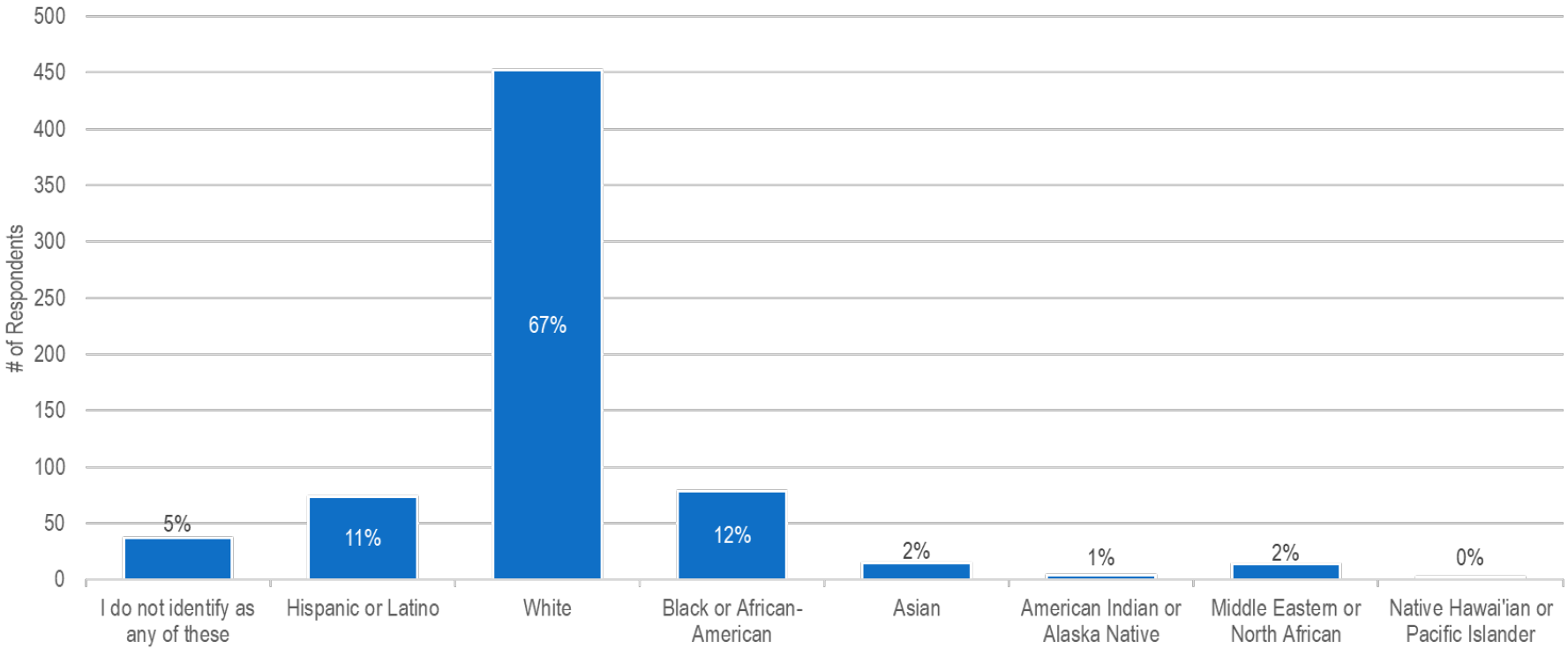


Figure 17. Respondent's ethnicity.

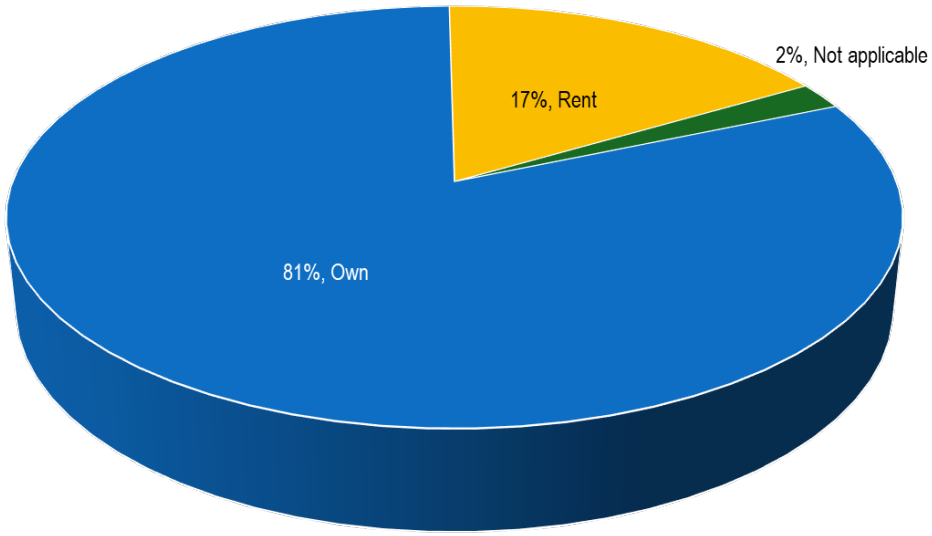


Figure 18. Own or Rent Primary Residence.

Appendix C.1: Detailed Neighborhood Information

Residence neighborhoods

	# of Responses
Bal Harbour HOA	6
Bay Colony Club Condominium	2
Bermuda Riviera Assoc.	1
Beverly Heights	8
Central Beach Alliance	18
Colee Hammock HOA	8
Coral Ridge Association Inc.	29
Coral Ridge Country Club Estate	26
Coral Ridge Isles Assoc.	3
Coral Shores Civic Assoc.	1
Croissant Park Civic Assoc.	11
Dorsey-Riverbend HOA	8
Downtown Fort Lauderdale Civic Assoc.	12
Durrs Homeowners Assoc.	2
Edgewood Civic Assoc.	7
Flagler Village Civic Assoc,	8
Flamingo Park Civic Assoc.	6
Galt Mile Community Assoc.	4
Golden Heights Neighborhood	1
Harbor Beach HOA	6
Harbordale Civic Assoc.	13
Harbour Inlet Assoc.	4
Hendricks and Venice Isles	1
Home Beautiful Park Civic Assoc.	2
Idlewyld Improvement Assoc.	3
Imperial Point Assoc.	22
Knoll Ridge HOA	2
Lake Air Palm View HOA	1
Lake Ridge Residents Assoc.	8
Landings Residential Assoc.	4
Las Olas Isles Homeowners Assoc.	13
Lauderdale Beach HOA	8
Lauderdale Harbours Assoc.	35
Lauderdale Isles	4
Lauderdale Manors HOA	4
Melrose Manors HOA	2
Melrose Park	3
Middle River Terrace Assoc.	13
Oak River Homeowners Assoc.	2
Palm Aire Village HOA	3
Poinciana Park Civic Assoc.	4

	# of Responses
Poinsettia Heights Civic Assoc	19
Progresso Village	8
Rio Vista Civic Assoc.	14
River Garden Sweeting Estate	1
River Oaks Civic Assoc.	28
Riverland Civic Assoc.	9
Riverland Village	1
Riverside Park Residents Assoc.	13
Rock Island Community Development	6
Sailboat Bend Civic Assoc.	8
Seven Isles Homeowners Assoc.	1
Shady Banks Civic Assoc.	12
South Middle River Civic Assoc.	29
Sunrise Intracoastal HOA	4
Sunset Civic Assoc.	1
Tarpon River Civic Assoc.	33
Victoria Park Civic Assoc.	25
Insufficient Information	108
Outside of the City of Fort Lauderdale	52
Total	**690**

Workplace neighborhoods

	# of Responses
Bal Harbour HOA	4
Beverly Heights	1
Central Beach Alliance	14
Coral Ridge Association Inc.	9
Coral Ridge Country Club Estate	4
Coral Ridge Isles Assoc.	2
Croissant Park Civic Assoc.	3
Dillard Park HOA	2
Dorsey-Riverbend HOA	2
Downtown Fort Lauderdale Civic Assoc.	48
Durrs Homeowners Assoc.	1
Edgewood Civic Assoc.	4
Flagler Village Civic Assoc,	4
Galt Mile Community Assoc.	2
Harbor Beach HOA	2
Harbordale Civic Assoc.	10
Harbour Inlet Assoc.	2
Hendricks and Venice Isles	1
Home Beautiful Park Civic Assoc.	2
Idlewyld Improvement Assoc.	1
Imperial Point Assoc.	9
Lake Ridge Residents Assoc.	3

	# of Responses
Landings Residential Assoc.	1
Las Olas Isles Homeowners Assoc.	8
Lauderdale Beach HOA	5
Lauderdale Harbours Assoc.	7
Lauderdale Isles	1
Middle River Terrace Assoc.	2
Oak River Homeowners Assoc.	1
Poinciana Park Civic Assoc.	4
Poinsettia Heights Civic Assoc	4
Progresso Village	3
River Oaks Civic Assoc.	7
Riverland Civic Assoc.	1
Riverside Park Residents Assoc.	2
Shady Banks Civic Assoc.	2
South Middle River Civic Assoc.	4
Sunrise Intracoastal HOA	1
Sunset Civic Assoc.	1
Tarpon River Civic Assoc.	4
Victoria Park Civic Assoc.	13
Insufficient Information	188
Outside of the City of Fort Lauderdale	67
Total	**456**

Appendix C.2: Organizations Supporting Tree Planting Events

Organizations suggested for organizing a tree planting event in a neighborhood

Organization Name	Type of Organization
Action For Literacy	Other Non-profit Organization
Bal Harbor HOA	HOA
BOLD Justice	Faith-based Organization
Broward County Black Chamber of Commerce	Other Non-profit Organization
Broward County Master Gardener Volunteers	Other Non-profit Organization
Broward Trust for Historic Preservation	Other Non-profit Organization
Central City Alliance	Civic Association
Colee Hammock HOA	HOA
Coral Ridge Association	Civic Association
Coral Ridge Country Club Estates HOA	HOA
Croissant Park Civic Association	Civic Association
Cross Fox Condominium Associates	HOA
Durrs Homeowners Association	HOA
Edgewood Civic Association	Civic Association
Equality Garden Club	Other Non-profit Organization
Florida Native Plant Society, Broward Chapter	Other Non-profit Organization
Fort Lauderdale Garden Club	Other Non-profit Organization
Ft Lauderdale Surf Club	Civic Association
Harbor Beach HOA	HOA
Harbordale Civic Association	Civic Association
Harbour Inlet Association	Civic Association
Heal the Planet	Other Non-profit Organization
Healing Arts Institute of South Florida International, Inc.	Other Non-profit Organization
Home Beautiful Park Civic Association	Civic Association
Imperial Point Association	Civic Association
Knoll Ridge HOA	HOA
Lake Ridge Civic Association	Civic Association
Lauderdale Harbors Improvement	Civic Association
Lauderdale Harbors Improvement Association	Civic Association
Lauderdale Isles Civic Improvement Association	Civic Association
Marsh McLennan Agency	Business
Middle River Terrace Association	Civic Association
Poinsettia Heights Civic Association	Civic Association
Pride of Fort Lauderdale Elks Lodge 652 and Temple 395	Other Non-profit Organization
Progresso Village Civic Association	Civic Association
Project Management Institute, South Florida	Business
Republic Services	Business
Rio Vista Civic Association	Civic Association
Ritz Carlton Fort Lauderdale	Business
River Oaks Civic Association	Civic Association

Organization Name	Type of Organization
Riverland Preservation Society	Civic Association
Riverside Park Residents Assoc.	Civic Association
Riverside Park Residents Association	Civic Association
Rock Island Community Development	Civic Association
Rotary Club of Fort Lauderdale	Other Non-profit Organization
Rotary Club of Fort Lauderdale South	Other Non-profit Organization
Shady Banks Civic Association	Civic Association
Sierra Club	Other Non-profit Organization
Smurfit Westrock	Business
South Middle River Civic Association	Civic Association
St Demetrios Greek Orthodox Church	Faith-based Organization
St. John the Baptist women's guild	Faith-based Organization
Stranahan High School	Government
Tarpon River Civic Association	Civic Association
The Fruitful Field	Other Non-profit Organization
The PEMS Collaborative	Business
The Red Schoolhouse	Business
The Wallinter Foundation	Other Non-profit Organization
TREEmendous Miami	Other Non-profit Organization
United Church of Christ Fort Lauderdale	Faith-based Organization
Villas at Oak Hammock Homeowners Association	HOA
Women's Guild at Saint Anthony's Church	Faith-based Organization

Organizations suggested for interest in sponsoring or participating in a tree planting event in Fort Lauderdale

Organization Name	Type of Organization
Affordably Lavish Foundation	Other Non-profit Organization
American Express	Business
B Ocean Resort	Business
Be Your Own Answer, LLC	Business
Broward County	Government
Broward County Schools	Other Non-profit Organization
CareerSource Broward	Business
City of Fort Lauderdale	Government
Community Resource LLC	Business
Coral Ridge Association	Civic Association
Destination Sistrunk Cultural Center	Government
Fort Lauderdale Garden Club	Other Non-profit Organization
Healing Arts Institute of South Florida International, Inc.	Other Non-profit Organization
Home Beautiful Park Civic Association	Civic Association
Ideal thinkers Inc.	Business
JetBlue Airways	Business

Organization Name	Type of Organization
JF Smith Design and Build Inc	Business
Just Salad	Business
Lexant Title & Escrow, LLC	Business
Marsh McLennan Agency	Business
Miller Legg	Business
New River Middle School	Government
Perfect properties of Florida Real Estate	Business
Plantation Seventh-day Adventist Church	Faith-based Organization
Publix	Business
Republic Services	Business
Resource Environmental Solutions, LLC	Business
Rick's Lawn Service	Business
Ritz Carlton	Business
Robert A. Butler Silversmith	Business
School Board of Broward County	Government
Seven Hills Garden and Soil	Business
Shaw Lewenz, LLLP	Business
Showering Love, inc.	Other Non-profit Organization
Smitty's Wings Sistrunk	Business
Smurfit Westrock	Business
Stiles Property Management	Business
Tara A Chadwick at Fort Lauderdale Historical Society	Other Non-profit Organization
Taylor's Tots Preschool, Inc Fort Lauderdale	Business
The Mirror of Paradise Landscape Architecture	Business
The MPH Team at Compass Fort Lauderdale Realtors	Business
The Red Schoolhouse	Business
Thornton Tomasetti, Inc.	Business
Virginia S Young Elementary	Other Non-profit Organization
WGI Engineering	Business
Wright Maritime Group	Business
Write Stuff Enterprises, LLC	Business
ZM Development Group	Business

Appendix C.3: Free-form response categorization

Free-form responses from questions 8, 10, 12, 14, 17, 22, and 23 were reviewed in detail and classified into the informative categories shown below.

Categories	# of Responses	% of Responses
City tree management practices	11	11%
Policy recommendations	20	21%
Species recommendations	25	26%
Tree benefits (shade, food, etc.)	7	7%
Tree disservices (e.g., infrastructure conflicts, damage to property)	21	32%
Wildlife (good or bad)	3	3%
Total	**97**	

Unaltered free-form comments classified under each category are shown in tables below.

Q#	City tree management practices related comments
8	There are a lot of poorly trimmed or never trimmed trees
8	A lot of old and diseased trees
10	Removal of invasive species such as carrotwood and Brazilian pepper, which are common streetside and on properties and replacement with desirable native species.
10	Removing invasive trees
12	not enough trees everywhere; not enough protected green spaces/parks; too much light pollution; too much litter, noise, lack of regard for others and our environments
12	Stop cutting down trees, stop creating plastic grass parks, Shane on you all for putting a picklecourt in Snyder park!!!!!
12	Ft. Lauderdale pays lip service to tree canopy.
12	If you add more trees, trim them!
14	doing a root assessment of our existing trees being threatened my new construction/demolition
17	The city will kill them like the orange trees
22	they can block the view of the road sometimes if not trimmed in a timely manner

Q#	Tree benefits related comments
10	trees that bare food, avocado, sapodilla, etc.
12	Not enough trees at all for shade
12	There are not enough shade trees in Fort Lauderdale
14	trees placed so people can walk and bike in shade
23	Trees can prevent soil erosion & flooding
23	Contributes to ameliorating climate change
23	Trees mitigate flooding, erosion, and overheating

Q#	Wildlife related comments
10	Protecting existing trees from termite infestation
10	Termites are destroying all efforts to maintain the canopy
17	Iguanas

Q#	Policy recommendation related comments
10	FPL lines and communication lines being buried to allow tree canopy's to prosper
10	Stopping developers from cutting down trees on lots they are developing. (Giant zero lot line townhomes)
10	Low grade in Lauderdale Harbors will affect the ability of trees to thrive in the ever increasing salt water table. Establishing a min grade elevation for new construction will help insure the tree initiatives success. Most if not all species prefer to have less salinity.
12	we need our trees; especially our old growth trees, which have become more rare due to overdeveloopment
12	Diminishing all over due to overdevelopment
12	Too many old trees are being removed to accommodate new developments
12	Some neighborhoods have suffered from overdevelopment, and the impact on flooding, air and noise pollution, heat, and quality of life are starkly evident
12	I see more concrete than ever, no green space
12	Development causes loss of canopy because city doesn't have enough punch against removal
12	Too many trees being cut down citywide
14	the right of a homeowner to remove a huge tree too close to the home without financial penalty
14	Way too much building development and not enough tree coverage
17	I wanted to plant trees in the swale but the city forbade me to do it. The city rules made it too costly to pursue as I was not allowed to do it myself, and the tree planting program offered by the city was discontinued. Seems like the city is getting in its own way here.
17	City code prevents me from planting trees in the swale after it was restored
17	I am worried about the regulations for planting in the swale
17	This can be done, the city should do more to offset the costs of larger canopy trees, and native species. The city should also make it harder for existing larger canopy trees not to be relocated or removed.
17	The city does not let me plant trees in my swale.
17	Difficulty with permitting department in the past, makes me not want to embark on the journey
17	Not sure how that will affect us by code.
22	The city permit process

Q#	Species recommendation related comments
10	Remove wrong trees, wrong place and replace with right tree, right place
10	Shade
10	We need trees that are mature. Not the Charlie brown looking trees. Trees that can stand up to hurricanes
10	Need native trees, palms, live oaks, etc
10	Invasive tropical almond trees competing with native plants and old oaks/cabbage palms. Trop. Almond creates deep shade, killing all plants under it. They are getting out of control and I don't think people realize their negative impact and how quickly they are spreading through the iconic neighborhood of river oaks - a place known for its impressive oak hammock and native plants. Please help us maintain this old forest community by removing tropical almond trees! (and throughout fort lauderdale wherever they wreck havok)
10	We need flowering trees!
12	Horrible they are killing them all and replacing with garbage trees
12	There is not enough canopy coverage and big large trees. Need more shade and trees that can absorb the excess water that keeps causing flooding.
12	Inappropriate, non native trees, , royal poinciana, in round-abouts
14	planting the right kind of trees. small trees do NOTHING. they dont provide shade, or support wildlife or reduce temperatures. we need LARGE CANOPY trees like live oaks.
14	Exotic removal and replacement with native species
14	Planting the correct type of trees
14	The right tree species for right place. Urban development street trees and their placement needs to be better considered and implemented.
17	Won Emerald Award in 2014 99% Native trees/plants NEED NATIVES not invasives
22	too many trees planted in the wrong place. Right tree or palm in the Right Place
22	planting the right kind of trees is what matters. small trees do NOTHING. they dont provide shade, or support wildlife or reduce temperatures. we need LARGE CANOPY trees like live oaks.
22	People don't understand how native trees contribute to raised property values so they are always planting the wrong trees that look orderly but require too much maintenance.
22	Exotic trees are highly detrimental and should be aggressively removed from public and private property
22	the wrong species of trees are often planed
22	Wrong or cheap trees can cause more problems than they help ameliorate.
22	Brazil Peeper
22	Right Tree and Right Placement is important
22	Trees that are not native
23	planting the right kind of trees is what matters. small trees do NOTHING. they dont provide shade, or support wildlife or reduce temperatures. we need LARGE CANOPY trees like live oaks.

Q#	Tree disservices related comments
8	trees too close to houses persent a hurrican danger and the city makes no provision for removal without penalty
8	The only concern is the leaves shedding in retain e
8	FPL does not seem to take into account the royal palms, other palms, and large trees when they are running their electric lines. We have had several instances where dropped fronds have taken out an e FPL electric line.
10	The city will charge me over $8,000 to remove a tree too close to my house and this is outrageous because I worry what will happen in a cat 4 or 5 hurricane.
10	proper placement of trees to avoid utilities
10	Do not plant immature street trees that will eventually grow tall and invade invade electric power lines and require annual trimming. Street trees are better suited where their are underground utilities. Also, do not plant small wide canopy trees at street intersections that cause driver “line of sight” issues. We already have plenty of that problem in the City.
10	Tree roots buckling sidewalks
10	Planting them properly so they don't block the views of cars pulling out of driveways
10	removal of large trees inappropriate for hurricane prone areas
17	Above Ground Powerlines limit Tree Options
17	Power lines. They really need to go underground.
17	I am concerned that pipes will get damage from the roots
17	Concerned about the health of the tree with flooding that happens during storms. Storm water control needs to be fast tracked in Fort Lauderdale neighborhoods
17	Overhead lines are are a problem
17	Neighbors complain p
17	ELECTRICAL lines
17	Powerlines
17	I have utility lines in my front swale and 2 AT&T boxes in my side swale.
17	My husband and I have overhead powerlines in our property
17	Low grade i will affect the ability of trees to thrive in the ever increasing salt water table.
17	hurricanes and overhead power lines prevent trees in my yard
17	Obstruction from an overhead power line limits choice and selection of safe trees.
17	Above ground Power lines
17	Power lines
17	Power lines
17	I wanted to plant a Slash Pine or a Live Oak in my front yard but I have an overhead power line.
22	Clearance on streets for trucks, EMS, and RVS.

Q#	Tree disservices related comments (continued)
22	trees in the wrong location can make the inside of a house too dark
22	Some trees are just planted wrong. When we walk our neighborhood we see things like a coconut palm obstructing driveway views or street lights. Did they city plant this oddity?
23	Needs balance and space. Planting next to homes is dangerous
23	It depends where the tree is on one's property. We were encouraged to plant trees when we moved in, but not given information on how tall the tree might get or how far from the home would be wise since this is tornado and hurricane territory.

APPENDIX D: PUBLIC MEETING COMMENTS

Table D.1: **Public Comments from the District 1 Public Meeting**

Questions/Comments	Category
A resident complained that homeowners who allow non-permitted tree removals on private property are often fined by the City after the trees have already been removed. They urged the City to stop cutting down so many trees and expressed a desire that the City prevent homeowners from doing so as well.	City practices
A resident wants to know what the percentage of native vs. non-native canopy is.	Canopy coverage
A resident wants to know what the City's plan is to prevent people from planting the wrong tree in the wrong place.	City practices
A resident wants to know if the plan will recommend planting on private property.	Private landscaping practices
A resident wants to know how many urban foresters the City employs.	City practices
A resident said that some of the financial contributions to Community Redevelopment Agencies should go into maintaining or expanding tree canopy.	City practices
A resident wants to know if the City has a plan to address invasives such as Australian pine.	City practices
A resident expressed that some areas could be improved by removing invasives and replacing with mangroves.	Species recommendations
A resident noted that removing mature trees and replacing them with smaller trees does not provide the same amount or quality of tree canopy.	Canopy coverage
A resident wants to know if all planting recommended by the Plan will occur in City-owned lands.	City practices
A resident wants to know if the adoption and implementation of the Plan will follow a similar timeline as the changes to the City's tree ordinance.	City practices
A resident wants to know if the City will plant in the swales and take care of them.	City practices
A resident suggested a modest tax break for major trees in yard.	Incentives
A resident thinks that empty lots of land must have trees on them if they are not being developed.	Private landscaping practices
A resident believes that Australian pines provide habitat for many species of wildlife in Fort Lauderdale and wants to know if there is any use for these trees.	Tree benefits
A resident wants to know if other attendees near waterways are losing trees due to saltwater intrusion.	Climate impacts
A resident noted that they operate a garden in Flager Village and want to know if the mature trees nearby could be protected from removal for development.	Development solutions

Table D.2: **Public Comments from the District 2 Meeting**

Questions/Comments	Category
A resident said that powerlines and trees don't match. Powerlines should be buried or large trees should not be planted underneath power lines.	Species recommendations
A resident noted that ground cover still needs to be installed under existing trees, according to the existing code.	City practices
A resident thinks that homeowners should be rewarded for maintaining and growing trees.	Incentives
A resident believes that shrubs should be prioritized where trees cannot be planted.	Species recommendations
A resident believes that wildlife associated with trees, such as rats and squirrels, is a disservice.	Tree disservices

Questions/Comments	Category
A resident believes that making it harder to remove trees will discourage homeowners from planting trees in the first place. If it is very difficult to remove a tree, people will determine ways to go around it.	City practices
Resident does not think the photo in the slide show is a good example of what the urban forest should look like. The Plan should seek to change the image of a desirable new development or house to make trees more appealing. Hugh Taylor Birch is an example of an attractive landscape that is not manicured.	Private landscaping practices
A resident expressed that trees create debris that the community needs to be willing to manage and live with if they are to accept trees as a component of our landscapes	Tree disservices
Mahogany trees drops their leaves in the winter. A resident does not think that it supports wildlife for this reason. Resident's favorite trees are poincianas, but he also likes fruit trees such as macadamia, avocado, lychee, and olives.	Species recommendations
A resident thinks that parking spaces should be paved with pervious materials and that high rises should be encouraged to have green roofs.	Private landscaping practices
A resident wants the City to incentivize people to plant trees, ie, "make it sexy to have trees."	Incentives
A resident likes that trees make the City beautiful and resilient and improve drainage.	Tree benefits
A resident expressed that the plan must recommend that Sustainability work with Transportation and other departments to implement components of the Plan, including drainage, which trees help with.	City practices
A resident thinks there is not enough enforcement of required replacement planting for mature trees which are removed. The City needs to step up its enforcement of this part of the Code so that if a mature tree is removed, it is replaced with an equal tree.	City practices
A resident noted that Victoria Park, Holiday Park and Hugh Tayler Birch Park have beautiful trees. Resident likes the birds and sounds. Trees are essential in the City for the quality of life.	Tree benefits
Resident would like for there to be more fruit trees in rights-of-way but understands that may not be reasonable	Species recommendations
A resident believes that developers in Fort Lauderdale install excessive amounts of concrete and plant too few trees on their developments.	Private landscaping practices
A way that one resident tries to make a positive impact is to talk his neighbors or lead by example. For example, he had swale filled with concrete, which he called the City about and requested that the concrete be removed so he could plant peanut grass, which will absorb water. The City did so, and it has helped with flooding near his home. It is important for the community to show up to meetings, spread the message, and lead by example.	Private landscaping practices
A resident said that the master plan needs to identify greenspaces that will not be developed and encourage the City to designate them as a park into perpetuity. Additionally, land must be restricted as open green space. Otherwise, there will be no land for trees. The City should consider acquiring golf courses for the express purpose of planting trees and creating greenspace.	City practices
A resident is pleased that Hugh Taylor Birch is a state park because that means the city can't change the natural beauty there. Overall, there is better quality of life with more tree canopy cover.	Tree benefits
A resident has concerns over coconut palms. He thinks they are a poor choice and that landscape architects should think about the best species to plant before just planting random trees.	Species recommendations
A resident said that it is a problem when the City plants trees where their roots cannot grow or survive. This becomes apparent during hurricanes. A resident doesn't think that community members should put a fruit tree in a ROW [right-of-way] because it	Species recommendations

Questions/Comments	Category
could ruin the sidewalk. Ideally, it would be nice if there were large enough ROW's which would prevent fruit from falling on the sidewalk from fruit trees.	
A resident pointed out that astroturf has a purpose but is a Code violation when installed in ROW.	City practices
A resident wants the City to plant more trees which are native to the Caribbean, such as lignum vitae (Bulnesia arborea) and bay rum (Pimenta racemosa).	Species recommendations
A resident has gumbo limbo trees that he loves. It sheds once a year but is very hurricane resistant. Sweet almond is another species he prefers because it attracts butterflies and hummingbirds.	Species recommendations
A resident likes riding his bicycle and finding neat trees. Unfortunately, a lot of them get cut down.	Tree benefits
A resident expressed that trees create sense of place.	Tree benefits
A resident wants to know if the UFMP will designate specific trees for specific places. For example, the black olive trees in Las Olas.	Species recommendations
A resident would like to see more slash pines planted along streets, if that is possible.	Species recommendations
A resident wants the City to increase the required planting for parking spaces, which is currently 1 tree for every 10 spaces.	City practices
A resident thinks that people need to understand trees require maintenance. Also, they feel that it is sad to see things planted that don't get watered and die.	Species recommendations
A resident thinks that astroturf should be removed and replaced with grass.	Private landscaping practices
Resident suggested starting an adopt-a-road program where participants could plant trees in the ROW.	City practices
A resident wants the City to consider incorporating food trees for migrating birds that travel through the city.	Species recommendations
A resident thinks that the City should be more strict with maintenance requirements and enforcement.	City practices
A resident wants to make sure that community members don't blow leaves into the street because they make their way into our treatment plants and waterways.	Private landscaping practices
A resident believes that it is important to have a fast track process for city permits in order to plant trees.	City practices
A resident would like to know when the tree giveaways are.	City practices

Table D.3: **Public Comments from the District 3 Meeting**

Questions/Comments	Category
A resident expressed concerns about salt intrusion causing her trees to die and with development which leads to the removal of trees.	Climate impacts
A resident is concerned about how much tree canopy has been removed over the last 40 years.	Canopy coverage
A resident noted that the City's initial efforts to promote citywide recycling began as a grassroots initiative of volunteers. This approach might be an effective way to promote tree planting.	Community-based solutions
A resident wants everyone to contact their local U.S. Congressional representatives to request federal funding to meet some of the community's needs related to tree planting.	Community-based solutions
A resident feels that education about trees is the key, as is proper maintenance, especially for older trees. Trees are dying because there is a lack of understanding of	Community-based solutions

Questions/Comments	Category
how to maintain them. The resident tries to educate their neighbors on the importance of trees. Educating neighbors and homeowners is paramount in getting the community involved in meeting the goal of 33% canopy. This is especially important for younger generations, who may not have the knowledge of growing trees that her parents' generation had.	
A resident urged community members to attend HOA and District Commission meetings to express their concerns.	Community-based solutions
A resident thinks there are many trees are removed because they are said to be in decline, though they are not actually in decline.	Private landscaping practices
A resident would like the City to plant more trees.	City practices
A resident would like to know how developers can be stopped from impeding and removing trees. Builders and developers need to be more creative when planning their developments to build structures which include trees and does not require them to be removed.	Development solutions
A resident likes the shade that trees provide.	Tree benefits
A resident does not like the trees which are in decline because they are infested with termites. Recently, an old tree on Powerline Road fell onto a home and caused significant damage. It turned out to be decayed on the inside.	Tree disservices
A resident would like the City to educate residents on the importance of planting native trees. Her daughter's home in Naples has a beautiful tree canopy, which has shown a resident that planting native trees can bring a lot of benefits. She also thinks that the University of Florida and Fort Lauderdale's Homeowner's Associations (HOA's) could also play a role in educating residents.	City practices
A resident noted that in the Durrs and Dorsey-Riverbend neighborhoods, the City has invested significant resources into improving stormwater management, including a new pump station. Trees continue to be a desired component of sustainable stormwater management, but the City is using other approaches in addition to planting trees to accomplish that.	City practices
A resident notes that in addition to coming to meetings, it is important for the City to work with communities to organize events such as tree walks to promote interest and education.	Community-based solutions

Table D.4: **Public Comments from the District 4 Meeting**

Questions/Comments	Category
A resident said that the City and the Commission have been insincere about retaining and protecting trees. When a forest in the neighborhood was leveled and totally destroyed, residents from 18 neighborhoods came to the site to protest. They believe that this indicates widespread support for retaining trees across Fort Lauderdale.	City practices
A resident was shocked to see the percentage of trees remaining in my neighborhood after referring to historic aerials on Google maps.	Canopy coverage
A resident wants to know if the Plan will analyze the proportion of native trees vs non-native and/or invasive trees, as well as the diseases that impact them.	Species recommendations
A resident believes that crape myrtles should not be used to replace native shade trees.	Species recommendations
A resident wants to know if the Plan will address the need for trees to create wildlife habitat.	Tree benefits
A resident wants to know if the Plan will recommend collaboration to create wildlife habitat, such as the butterfly garden at Hortt Park.	Tree benefits

Questions/Comments	Category
The goal of 33% canopy cover is not going to be achievable given the impacts of invasive termites. These must be addressed by certified pest controllers because they are destroying mature trees.	Canopy coverage
A resident believes that native shade trees should be sparingly removed, whereas coconut palms should be replaced with shade trees.	Species recommendations
A resident wants to know if the UFMP will take the same amount of time as the ordinance revisions.	City practices
A resident wants to know if there a way the City can coordinate with FP&L to ensure that they work around private trees when installing underground utilities.	City practices
A resident noted that there is a lack of species diversity with newly planted trees.	Canopy coverage

Table D.5: **Public Comments from the Citywide Virtual Meeting**

Questions/Comments	Category
A resident thinks there should be an ordinance requiring developers to put shade trees, not palms, in parking lots.	City practices
A resident wants to know if the updated ordinances address tree cover in commercial parking lots, noting it is common to have large asphalt spaces with palms, which do not provide shade.	City practices
A resident noted that their neighbors obtained trees from a City tree giveaway, but they were later removed by the City. They lamented that they have been unable to get replacement trees since then.	City practices
A resident wants dead trees on SW 20th Ave removed	City practices
A resident expressed concern that many trees in their neighborhood were removed after an arborist pronounced the trees to be in good health, while another assessed them to be in poor health. A resident was unhappy that the neighbor was able to defer to the arborist whose opinion aligned with their pre-determined goals for removing the trees. A resident expressed that such assessments should be conducted by the City or another impartial third party.	Private landscaping practices
A resident about what kind of evidence needs to be presented whenever a Certified Arborist deems a tree to be hazardous.	Private landscaping practices
A resident asked if the Plan addresses canopy coverage in commercial parking lots.	Private landscaping practices
A resident asked if homeowners who plant trees on their property or swale could receive a discount on their water bill or that those trees come with water bags to ensure that the trees can be established.	Incentives
A resident said that trees make Fort Lauderdale a nice place to live. They added that there have been many studies that show how important greenery can be for mental and physical well-being.	Tree benefits
A resident noted that on the map of the City's canopy, it looks like the north part of town has a lot fewer trees.	Canopy coverage
A resident said they moved to Victoria Park because of the mature oaks and gumbo limbo trees. Aside from the shade, the trees make the neighborhood more inviting, which likely helps the property values.	Tree benefits
A resident said that they do not like how trees need to be trimmed to accommodate power lines. As a result, they must plant shorter trees because of the overhead powerlines. They wondered if there was something Florida Power and Light could do to help with this.	Private landscaping practices

Questions/Comments	Category
A resident said they would like to see more trees that do not lose their leaves in the fall.	Species recommendations
A resident praised the huge sea grape growing in front of their house because it is salt tolerant and grows quickly.	Species recommendations
A resident noted that on the map shown in the presentation, their neighborhood shows up as having high tree canopy. However, they feel like the neighborhood still needs more trees.	Canopy coverage
A resident said that, based on the map, their neighborhood has 16-20% canopy, which they interpreted to mean that their neighborhood needs more trees. They believe this will increase the overall enjoyment of the community and mitigate the heat islands.	Canopy coverage
A resident asked whether the City's minimum height of 12 feet for replacement trees can be increased to 16 feet because they thought this would achieve greater canopy coverage more quickly.	City practices
A resident suggested that members of Civic Associations advocate to their Association Presidents to establish tree planting sites and designate volunteer tree-planting days.	Community-based solutions
A resident suggested that the City should partner with the School District to plant trees on school properties.	Community-based solutions
A resident asked if the City does tree giveaways.	City practices
A resident asked if there are any studies which correlate planting the right tree in the right place to longevity.	Private landscaping practices
A resident asked whether the Plan is going to be heard at City Commission or the advisory board meeting.	City practices

Table D.6: **Public Comments Submitted Via Email or Alongside the Public Survey**

Questions/Comments	Category
The resident wants to know if RES can provide what the city's tree/canopy coverage percentage is today.	Canopy coverage
The resident wants to know how the current and future canopy is calculated.	Canopy coverage
The resident asked how many new trees are being planted and removed by the city's various departments each year.	City practices
The resident asked how many trees are being removed/replaced under permit from DSD.	City practices
The resident asked how many trees would be needed to achieve the level of coverage that is the goal of the Plan.	Canopy coverage
The resident wants an explanation of how the City or it's consultants calculate coverage of newly planted trees.	City practices
The resident pointed out that current regulations prioritize deciduous trees to meet required caliper inches for tree cover and on-site mitigation. Expanding the approved tree palette to include a greater variety—particularly palm trees—could yield better results, especially in subdivisions with smaller side yard setbacks.	Species recommendations
The resident noted that eastern areas of Fort Lauderdale face challenges where existing grades are significantly below acceptable levels for tree root balls to thrive long-term. Without proactive solutions to elevate tree root systems, saltwater intrusion will cause root contraction, leading to structural instability in wind events.	Development solutions
The resident believes that the City should prioritize tree species that can withstand high-wind events.	Species recommendations

Questions/Comments	Category
The resident believes that mandating underground utility connections for new developments will contribute significantly to expanding tree cover while also improving the stability of the power grid.	Development solutions
The resident said that a phased approach to transitioning overhead utility lines underground—starting with main thoroughfares—will create an immediate and noticeable transformation, reinforcing Fort Lauderdale's image as a green city while simultaneously enhancing power grid reliability.	Development solutions
The resident thinks that the master plan should consider appropriate street lighting. Without careful planning, tree coverage may unintentionally obscure lighting, leading to potential safety concerns in parking areas and pedestrian pathways.	Species recommendations
The resident noted that there are several large lots just north of Broward Blvd on 7th Ave which have all been stripped of greenery and have been sitting vacant for many years. The resident wants the City to look into buying the lots and planting on them, or making it necessary for owners of vacant land to keep trees on them until built upon. She feels that the community would be getting something back for the environment while the land is vacant.	City practices
The resident wants the City to give residents a tax rebate if they plant trees in the swales in front of their homes and make it City property.	Incentives
The resident wants to know how RES was hired by the city. More specifically, she wants to know who they are other than a group of arborists and how long their contract with the City is.	City practices
The resident wants the City to incorporate bald cypress into infrastructure improvements to build resilience to flooding and for homeowners to plant them on their properties	Development solutions, species recommendations, City practices, private landscaping practices
When is a permit required to remove a tree on private property in Fort Lauderdale, and what types of trees are protected? How can I see it?	City practices
What is the application process for obtaining a tree removal permit in Fort Lauderdale, and how long does it typically take for approval?	City practices
Where can residents find the local tree protection ordinance or Urban Forestry guidelines specific to Fort Lauderdale?	City practices
Where is the handout or Q&As after this is done?	City practices
Are there fines or penalties for removing a tree without a permit in Fort Lauderdale? Where does the money go?	City practices
What factors does the city consider when deciding whether a tree removal permit is approved or denied?	City practices
Are residents required to replace a tree after it's removed, and if so, are there specific guidelines for replanting?	City practices
Does the city offer any programs or incentives for planting new trees or preserving existing ones that lower taxes?	City practices
Who should a resident contact if they see a tree being removed and suspect it may not be permitted?	City practices

APPENDIX E: COST ESTIMATES FOR TREE PLANTING SCENARIOS

Appendix E:
Cost Estimates for Tree Planting Scenarios
2026-2032

Planting Scenario	Cost/Year*														Potential Low and High Cost Per Recommendation (2026 - 2032)	
	2026		2027		2028		2029		2030		2031		2032			
	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Scenario 1 10,694 trees/year. Average canopy 707 sq ft	$876,900.00	$1,844,700.00	$911,274.48	$1,917,012.24	$946,996.44	$1,992,159.12	$984,118.70	$2,070,251.76	$1,022,696.15	$2,151,405.63	$1,062,785.84	$2,235,740.73	$1,104,447.05	$2,323,381.76	$6,909,218.66	$14,534,651.23
Scenario 2 18,411 trees/year. Average canopy 400 sq ft	$2,025,250.00	$4,142,550.00	$2,104,639.80	$4,304,937.96	$2,187,141.68	$4,473,691.53	$2,272,877.63	$4,649,060.24	$2,361,974.44	$4,831,303.40	$2,454,563.84	$5,020,690.49	$2,550,782.74	$5,217,501.56	$15,957,230.12	$32,639,735.17
Scenario 3 14,906 trees/year. Average canopy 500 sq ft	$1,401,180.00	$2,906,700.00	$1,456,106.26	$3,020,642.64	$1,513,185.62	$3,139,051.83	$1,572,502.50	$3,262,102.66	$1,634,144.60	$3,389,977.09	$1,698,203.06	$3,522,864.19	$1,764,772.62	$3,660,960.47	$11,040,094.66	$22,902,298.88

Data Source: U.S. Bureau of Labor Statistics: All Items in U.S. city average, all urban consumers, not seasonally adjusted.

* - Inflation rate percentage based on the average of 2019-2024 annual inflation rates per year = 3.92%

** - 2026 = Base cost per recommendation.

Assumptions:

All potential costs are estimates and subject to variable market conditions over time.

A fixed inflation rate/percentage was used for this table, however, inflation rate precentage will vary over time thereby affecting costs.

2026 costs are based on the average anticipated wholesale (low) and retail (high) costs for live oak, black olive, gumbo limbo, mahogany, red and white mangrove, silver and green buttonwood, royal palm, bald cypress, and cabbage palm in seven- to 30-gallon containers.

Blue highlighted cells indicate the year in which the recommendations will be implemented.

Appendix E:
Cost Estimates for Tree Planting Scenarios
2033-2040

Planting Scenario	Cost/Year*																		Potential Low and High Cost Per Recommendation (2033 - 2040)	
	2033		2034		2035		2036		2037		2038		2039		2040			
	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Scenario 1 10,694 trees/year. Average canopy 707 sq ft	$ 1,147,741.37	$ 2,414,458.33	$ 1,192,732.83	$ 2,509,105.09	$ 1,239,487.96	$ 2,607,462.01	$ 1,288,075.89	$ 2,709,674.53	$ 1,338,568.46	$ 2,815,893.77	$ 1,391,040.35	$ 2,926,276.80	$ 1,445,569.13	$ 3,040,986.85	$ 1,502,235.44	$ 3,160,193.54	$ 10,545,451.43	$ 22,184,050.92
Scenario 2 18,411 trees/year. Average canopy 400 sq ft	$ 2,650,773.42	$ 5,422,027.62	$ 2,754,683.74	$ 5,634,571.10	$ 2,862,667.34	$ 5,855,446.29	$ 2,974,883.90	$ 6,084,979.78	$ 3,091,499.35	$ 6,323,510.99	$ 3,212,686.12	$ 6,571,392.62	$ 3,338,623.42	$ 6,828,991.21	$ 3,469,497.46	$ 7,096,687.67	$ 24,355,314.76	$ 49,817,607.28
Scenario 3 14,906 trees/year. Average canopy 500 sq ft	$ 1,833,951.71	$ 3,804,470.12	$ 1,905,842.62	$ 3,953,605.34	$ 1,980,551.65	$ 4,108,586.67	$ 2,058,189.27	$ 4,269,643.27	$ 2,138,870.29	$ 4,437,013.29	$ 2,222,714.01	$ 4,610,944.21	$ 2,309,844.40	$ 4,791,693.22	$ 2,400,390.30	$ 4,979,527.60	$ 16,850,354.24	$ 34,955,483.72

Data Source: U.S. Bureau of Labor Statistics: All Items in U.S. city average, all urban consumers, not seasonally adjusted.

* - Inflation rate percentage based on the average of 2019-2024 annual inflation rates per year = 3.92%

** - 2026 = Base cost per recommendation.

Assumptions:

All potential costs are estimates and subject to variable market conditions over time.

A fixed inflation rate/percentage was used for this table, however, inflation rate precentage will vary over time thereby affecting costs.

2026 costs are based on the average anticipated wholesale (low) and retail (high) costs for live oak, black olive, gumbo limbo, mahogany, red and white mangrove, silver and green buttonwood, royal palm, bald cypress, and cabbage palm in seven- to 30-gallon containers.

Blue highlighted cells indicate the year in which the recommendations will be implemented.

APPENDIX F: COST ESTIMATES FOR UFMP RECOMMENDATIONS

UFMP Reference	Recommendation	Cost/Year*														Potential Low and High Cost Per Recommendation (2026 - 2032)	
		2026		2027		2028		2029		2030		2031		2032			
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
1A	Adopt Code language which places a restriction on the maximum square footage of tree canopy that can be removed per development site.	$ 2,206.00	$ 6,618.00	$ 2,292.48	$ 6,877.43	$ 2,382.34	$ 7,147.02	$ 2,475.73	$ 7,427.18	$ 2,572.78	$ 7,718.33	$ 2,673.63	$ 8,020.89	$ 2,778.44	$ 8,335.31	$ 17,381.38	$ 52,144.15
1B	Expand preservation credits on development sites to apply to small specimen trees. Require development permit applicants to prioritize Desirable and specimen trees in their preserved canopy.	$ 2,206.00	$ 6,618.00	$ 2,292.48	$ 6,877.43	$ 2,382.34	$ 7,147.02	$ 2,475.73	$ 7,427.18	$ 2,572.78	$ 7,718.33	$ 2,673.63	$ 8,020.89	$ 2,778.44	$ 8,335.31	$ 17,381.38	$ 52,144.15
1C	Designate the land within the dripline or CRZ of all Commission-protected trees as a tree preservation zone (TPZ) that has the same protections as the CRZ and requires Commission approval before any appropriate maintenance is conducted.	$ 1,471.00	$ 4,412.00	$ 1,528.66	$ 4,584.95	$ 1,588.59	$ 4,764.68	$ 1,650.86	$ 4,951.46	$ 1,715.57	$ 5,145.55	$ 1,782.82	$ 5,347.26	$ 1,852.71	$ 5,556.87	$ 11,590.22	$ 34,762.77
1D	Develop procedures to minimize improper application of FS 163.045 and investigate the feasibility of allowing the Urban Forester to override the opinion of a person who do so.	$ 1,912.00	$ 5,736.00	$ 1,986.95	$ 5,960.85	$ 2,064.84	$ 6,194.52	$ 2,145.78	$ 6,437.34	$ 2,229.90	$ 6,689.69	$ 2,317.31	$ 6,951.92	$ 2,408.15	$ 7,224.44	$ 15,064.92	$ 45,194.75
1E	Expand allowable uses of the Tree Canopy Trust Fund and increase the percentage of the Fund which can be spent per year.	$ 2,206.00	$ 6,618.00	$ 2,292.48	$ 6,877.43	$ 2,382.34	$ 7,147.02	$ 2,475.73	$ 7,427.18	$ 2,572.78	$ 7,718.33	$ 2,673.63	$ 8,020.89	$ 2,778.44	$ 8,335.31	$ 17,381.38	$ 52,144.15
2A	Evaluate the tree removal permit rate and equivalent replacement value every three to five years to determine whether they should be increased.							$ 2,494.81	$ 4,988.49							$ 2,494.81	$ 4,988.49
2B	Issue penalties for tree abuse and non-permitted tree removals to both the tree's owner and the tree company responsible for the abuse and/or non-permitted removal.	$ 2,223.00	$ 4,445.00	$ 2,310.14	$ 4,619.24	$ 2,400.70	$ 4,800.32	$ 2,494.81	$ 4,988.49	$ 2,592.60	$ 5,184.04	$ 2,694.23	$ 5,387.25	$ 2,799.85	$ 5,598.43	$ 17,515.33	$ 35,022.78
2C	Conduct educational campaign to communicate relevant changes in UFMP to local arborists.	$ 1,852.00	$ 3,704.00	$ 1,924.60	$ 3,849.20	$ 2,000.04	$ 4,000.09	$ 2,078.44	$ 4,156.89	$ 2,159.92	$ 4,319.84	$ 2,244.59	$ 4,489.18	$ 2,332.58	$ 4,665.15	$ 14,592.17	$ 29,184.34
2D	Revise the penalties and requirements for the removal of specimen trees for which preservation credits have been issued to be the same as those for which no preservation credits were issued.	$ 1,852.00	$ 3,704.00	$ 1,924.60	$ 3,849.20	$ 2,000.04	$ 4,000.09	$ 2,078.44	$ 4,156.89	$ 2,159.92	$ 4,319.84	$ 2,244.59	$ 4,489.18	$ 2,332.58	$ 4,665.15	$ 14,592.17	$ 29,184.34
2E	Work with community organizations to promote PPQ for all arborists performing any tree pruning in Fort Lauderdale.	$ 1,852.00	$ 3,704.00	$ 1,924.60	$ 3,849.20	$ 2,000.04	$ 4,000.09	$ 2,078.44	$ 4,156.89	$ 2,159.92	$ 4,319.84	$ 2,244.59	$ 4,489.18	$ 2,332.58	$ 4,665.15	$ 14,592.17	$ 29,184.34
3A	Extend guarantees for replacement trees outside of City right-of-way for up to three years following the completion of construction and should be transferrable between owners.	$ 4,286.00	$ 8,572.00	$ 4,454.01	$ 8,908.02	$ 4,628.61	$ 9,257.22	$ 4,810.05	$ 9,620.10	$ 4,998.60	$ 9,997.21	$ 5,194.55	$ 10,389.10	$ 5,398.18	$ 10,796.35	$ 33,770.00	$ 67,540.00
3B	Revise mitigation criteria so that the replacement of trees removed to be based on canopy size, not diameter.	$ 6,429.00	$ 12,856.00	$ 6,681.02	$ 13,359.96	$ 6,942.91	$ 13,883.67	$ 7,215.07	$ 14,427.91	$ 7,497.91	$ 14,993.48	$ 7,791.82	$ 15,581.22	$ 8,097.26	$ 16,192.01	$ 50,655.00	$ 101,294.24
3C	Group replacement tree species into categories based on desirable characteristics.	$ 4,286.00	$ 8,572.00	$ 4,454.01	$ 8,908.02	$ 4,628.61	$ 9,257.22	$ 4,810.05	$ 9,620.10	$ 4,998.60	$ 9,997.21	$ 5,194.55	$ 10,389.10	$ 5,398.18	$ 10,796.35	$ 33,770.00	$ 67,540.00
4A	Adopt ULDR revisions that outline parameters for acceptable offsets and setback reductions to save desirable trees.	$ 4,000.00	$ 10,000.00	$ 4,156.80	$ 10,392.00	$ 4,319.75	$ 10,799.37	$ 4,489.08	$ 11,222.70	$ 4,665.05	$ 11,662.63	$ 4,847.92	$ 12,119.81	$ 5,037.96	$ 12,594.90	$ 31,516.56	$ 78,791.41
4B	Incentivize developers, where possible, to increase the building height on new developments in order to offset a smaller footprint to provide an unobstructed site area for tree planting and reduce impacts to existing trees.	$ 6,000.00	$ 15,000.00	$ 6,235.20	$ 15,588.00	$ 6,479.62	$ 16,199.05	$ 6,733.62	$ 16,834.05	$ 6,997.58	$ 17,493.95	$ 7,271.88	$ 18,179.71	$ 7,556.94	$ 18,892.35	$ 47,274.85	$ 118,187.11
4C	Create a structure for charging stormwater impact fees and then allowing developers who retain trees to minimize increases in runoff either reduce or avoid those fees.	$ 4,000.00	$ 10,000.00	$ 4,156.80	$ 10,392.00	$ 4,319.75	$ 10,799.37	$ 4,489.08	$ 11,222.70	$ 4,665.05	$ 11,662.63	$ 4,847.92	$ 12,119.81	$ 5,037.96	$ 12,594.90	$ 31,516.56	$ 78,791.41
4D	Grant canopy credits to developers who preserve below the maximum allowable square footage of canopy on one site that can be transferred to another site where no more than 50% of the canopy is comprised of high quality, desirable trees.	$ 6,000.00	$ 15,000.00	$ 6,235.20	$ 15,588.00	$ 6,479.62	$ 16,199.05	$ 6,733.62	$ 16,834.05	$ 6,997.58	$ 17,493.95	$ 7,271.88	$ 18,179.71	$ 7,556.94	$ 18,892.35	$ 47,274.85	$ 118,187.11

Appendix F:
Cost Estimates for UFMP Recommendations 2026-2032

UFMP Reference	Recommendation	Cost/Year*														Potential Low and High Cost Per Recommendation (2026 - 2032)	
		2026		2027		2028		2029		2030		2031		2032			
5A	Coordinate outreach with Neighborhood Associations to explain the requirements for planting trees in rights-of-way. Allow the Association Board to apply for permits and coordinate assistance from the City for homeowners.	$ 4,737.00	$ 9,474.00	$ 4,922.69	$ 9,845.38	$ 5,115.66	$ 10,231.32	$ 5,316.19	$ 10,632.39	$ 5,524.59	$ 11,049.18	$ 5,741.15	$ 11,482.30	$ 5,966.21	$ 11,932.41	$ 37,323.49	$ 74,646.98
5B	Provide indirect maintenance cost sharing from the TCTF to homeowners in low canopy and low Tree Equity Score neighborhoods who want to plant trees on their properties or in their swales.	$ 4,737.00	$ 9,474.00	$ 4,922.69	$ 9,845.38	$ 5,115.66	$ 10,231.32	$ 5,316.19	$ 10,632.39	$ 5,524.59	$ 11,049.18	$ 5,741.15	$ 11,482.30	$ 5,966.21	$ 11,932.41	$ 37,323.49	$ 74,646.98
5C	Offer irrigation-related tree-related rebates, or "tree-bates" to homeowners who plant trees on their property(ies).	$ 3,158.00	$ 6,316.00	$ 3,281.79	$ 6,563.59	$ 3,410.44	$ 6,820.88	$ 3,544.13	$ 7,088.26	$ 3,683.06	$ 7,366.12	$ 3,827.43	$ 7,654.87	$ 3,977.47	$ 7,954.94	$ 24,882.33	$ 49,764.65
5D	Work with neighborhoods whose Mobility Master Plans identify tree planting and preservation as priorities to increase and enhance tree canopy.	$ 4,737.00	$ 9,474.00	$ 4,922.69	$ 9,845.38	$ 5,115.66	$ 10,231.32	$ 5,316.19	$ 10,632.39	$ 5,524.59	$ 11,049.18	$ 5,741.15	$ 11,482.30	$ 5,966.21	$ 11,932.41	$ 37,323.49	$ 74,646.98
5E	Help forge Tree Planting Plans with neighborhoods that do not have such a plan.	$ 4,737.00	$ 9,474.00	$ 4,922.69	$ 9,845.38	$ 5,115.66	$ 10,231.32	$ 5,316.19	$ 10,632.39	$ 5,524.59	$ 11,049.18	$ 5,741.15	$ 11,482.30	$ 5,966.21	$ 11,932.41	$ 37,323.49	$ 74,646.98
5F	Offer utility-based "tree-bates" to homeowners who strategically plant trees on their property which can provide sufficient shade resulting in lower energy consumption.	$ 4,737.00	$ 9,474.00	$ 4,922.69	$ 9,845.38	$ 5,115.66	$ 10,231.32	$ 5,316.19	$ 10,632.39	$ 5,524.59	$ 11,049.18	$ 5,741.15	$ 11,482.30	$ 5,966.21	$ 11,932.41	$ 37,323.49	$ 74,646.98
5G	Offer tree replacement programs to private homeowners in which participants can receive a free high quality native species in exchange for removing invasives or otherwise undesirable trees.	$ 3,158.00	$ 6,316.00	$ 3,281.79	$ 6,563.59	$ 3,410.44	$ 6,820.88	$ 3,544.13	$ 7,088.26	$ 3,683.06	$ 7,366.12	$ 3,827.43	$ 7,654.87	$ 3,977.47	$ 7,954.94	$ 24,882.33	$ 49,764.65
6A	Establish and fill Urban Forestry Administrator, City Horticulturist, Assistant Urban Forester, climbing arborist, ISA-Certified Arborist Landscape Inspector and Code officer positions.	$582,957.52	$842,420.26	$470,713.46	$735,151.13	$489,165.42	$763,969.05	$508,340.71	$793,916.64	$528,267.66	$825,038.17	$548,975.76	$857,379.67	$570,495.61	$890,988.95	$ 3,698,916.13	$ 5,708,863.88
6B	Establish a UFMP Work Group.	$ 19,149.00	$ 38,298.00	$ 19,899.64	$ 39,799.28	$ 20,679.71	$ 41,359.41	$ 21,490.35	$ 42,980.70	$ 22,332.77	$ 44,665.55	$ 23,208.22	$ 46,416.44	$ 24,117.98	$ 48,235.96	$ 150,877.67	$ 301,755.34
6C	Establish a Tree Advisory Board.	$ 4,737.00	$ 9,474.00	$ 4,922.69	$ 9,845.38	$ 5,115.66	$ 10,231.32	$ 5,316.19	$ 10,632.39	$ 5,524.59	$ 11,049.18	$ 5,741.15	$ 11,482.30	$ 5,966.21	$ 11,932.41	$ 37,323.49	$ 74,646.98
6D	Include the 33% canopy goal in all City projects.	$ 12,767.00	$ 25,532.00	$ 13,267.47	$ 26,532.85	$ 13,787.55	$ 27,572.94	$ 14,328.02	$ 28,653.80	$ 14,889.68	$ 29,777.03	$ 15,473.36	$ 30,944.29	$ 16,079.91	$ 32,157.31	$ 100,592.99	$ 201,170.23
7A	Launch an invasive species management program to support efforts to remove invasive tree species and replace them with native ones on both City- and privately-owned land.	$ 7,500.00	$ 15,000.00	$ 7,794.00	$ 15,588.00	$ 8,099.52	$ 16,199.05	$ 8,417.03	$ 16,834.05	$ 8,746.97	$ 17,493.95	$ 9,089.85	$ 18,179.71	$ 9,446.18	$ 18,892.35	$ 59,093.56	$ 118,187.11
7B	Work with County, State, and academic experts to identify means of educating residents on ways they can protect their trees in the event of an outbreak of tree pests or disease.	$ 7,500.00	$ 15,000.00	$ 7,794.00	$ 15,588.00	$ 8,099.52	$ 16,199.05	$ 8,417.03	$ 16,834.05	$ 8,746.97	$ 17,493.95	$ 9,089.85	$ 18,179.71	$ 9,446.18	$ 18,892.35	$ 59,093.56	$ 118,187.11
7C	Expand current educational outreach to homeowners and distribute traps to residents and interested parties whose trees may be infested with the termites to slow the insects' spread.	$ 7,500.00	$ 15,000.00	$ 7,794.00	$ 15,588.00	$ 8,099.52	$ 16,199.05	$ 8,417.03	$ 16,834.05	$ 8,746.97	$ 17,493.95	$ 9,089.85	$ 18,179.71	$ 9,446.18	$ 18,892.35	$ 59,093.56	$ 118,187.11
7D	Train all relevant City staff who work on trees to identify and report signs of infestation on trees.	$ 7,500.00	$ 15,000.00	$ 7,794.00	$ 15,588.00	$ 8,099.52	$ 16,199.05	$ 8,417.03	$ 16,834.05	$ 8,746.97	$ 17,493.95	$ 9,089.85	$ 18,179.71	$ 9,446.18	$ 18,892.35	$ 59,093.56	$ 118,187.11
8A	Conduct a Citywide campaign to plant trees that will contribute significantly to the goal of 33% canopy by 2040 which incorporates the principles of "right tree, right place."	$ 33,334.00	$ 66,667.00	$ 34,640.69	$ 69,280.35	$ 35,998.61	$ 71,996.14	$ 37,409.75	$ 74,818.38	$ 38,876.22	$ 77,751.27	$ 40,400.16	$ 80,799.11	$ 41,983.85	$ 83,966.44	$ 262,643.28	$ 525,278.69
8B	Prioritize the neighborhoods listed as having low canopy cover and low Tree Equity Scores in the tree planting campaign to address inequity in the urban tree canopy.	$ 33,334.00	$ 66,667.00	$ 34,640.69	$ 69,280.35	$ 35,998.61	$ 71,996.14	$ 37,409.75	$ 74,818.38	$ 38,876.22	$ 77,751.27	$ 40,400.16	$ 80,799.11	$ 41,983.85	$ 83,966.44	$ 262,643.28	$ 525,278.69
8C	Collaborate with civic associations and other community groups located inside low canopy and low Tree Equity Score neighborhoods to select the locations of planting projects and outline maintenance agreements for newly planted trees.	$ 33,334.00	$ 66,667.00	$ 34,640.69	$ 69,280.35	$ 35,998.61	$ 71,996.14	$ 37,409.75	$ 74,818.38	$ 38,876.22	$ 77,751.27	$ 40,400.16	$ 80,799.11	$ 41,983.85	$ 83,966.44	$ 262,643.28	$ 525,278.69

Appendix F:
Cost Estimates for UFMP Recommendations 2026-2032

UFMP Reference	Recommendation	Cost/Year*														Potential Low and High Cost Per Recommendation (2026 - 2032)	
		2026		2027		2028		2029		2030		2031		2032			
8D	Take steps to ensure that current and future tree canopy is resilient to potential inundation events in the neighborhoods identified as vulnerable to flooding in Fortify Lauderdale.	$ 33,334.00	$ 66,667.00	$ 34,640.69	$ 69,280.35	$ 35,998.61	$ 71,996.14	$ 37,409.75	$ 74,818.38	$ 38,876.22	$ 77,751.27	$ 40,400.16	$ 80,799.11	$ 41,983.85	$ 83,966.44	$ 262,643.28	$ 525,278.69
8E	Plant species with high salt and flood tolerance in areas that are likely to be impacted by increases in coastal flooding and in green infrastructure designed to redirect, absorb, exclude, or otherwise mitigate stormwater and nuisance tidal floodwater.	$ 33,334.00	$ 66,667.00	$ 34,640.69	$ 69,280.35	$ 35,998.61	$ 71,996.14	$ 37,409.75	$ 74,818.38	$ 38,876.22	$ 77,751.27	$ 40,400.16	$ 80,799.11	$ 41,983.85	$ 83,966.44	$ 262,643.28	$ 525,278.69
8F	Require open spaces include a certain percentage of shade that comes from trees rather than other shade structures. Investigate allowing above-grade landscaping to count towards a maximum of 50% of required canopy for multistory developments.	$ 33,334.00	$ 66,667.00	$ 34,640.69	$ 69,280.35	$ 35,998.61	$ 71,996.14	$ 37,409.75	$ 74,818.38	$ 38,876.22	$ 77,751.27	$ 40,400.16	$ 80,799.11	$ 41,983.85	$ 83,966.44	$ 262,643.28	$ 525,278.69
9A	Plant mangroves in feasible locations on City-owned land to pilot a program for planting, maintaining, and monitoring new mangrove installations as a part of the City's tree planting campaign.	$ 8,334.00	$ 16,667.00	$ 8,660.69	$ 17,320.35	$ 9,000.19	$ 17,999.30	$ 9,353.00	$ 18,704.88	$ 9,719.64	$ 19,438.11	$ 10,100.65	$ 20,200.08	$ 10,496.59	$ 20,991.92	$ 65,664.76	$ 131,321.64
9B	Implement an initiative to encourage education on mangroves, increase the availability of mangroves for planting sites, and assist homeowners who want to plant mangroves along their waterfronts.	$ 8,334.00	$ 16,667.00	$ 8,660.69	$ 17,320.35	$ 9,000.19	$ 17,999.30	$ 9,353.00	$ 18,704.88	$ 9,719.64	$ 19,438.11	$ 10,100.65	$ 20,200.08	$ 10,496.59	$ 20,991.92	$ 65,664.76	$ 131,321.64
9C	Perform invasive vegetation removal in existing and potential mangrove habitats to facilitate natural or planted mangrove propagation, including on any of the City-owned properties listed in Recommendation 9A.	$ 8,334.00	$ 16,667.00	$ 8,660.69	$ 17,320.35	$ 9,000.19	$ 17,999.30	$ 9,353.00	$ 18,704.88	$ 9,719.64	$ 19,438.11	$ 10,100.65	$ 20,200.08	$ 10,496.59	$ 20,991.92	$ 65,664.76	$ 131,321.64
9D	Coordinate between relevant departments and agencies to ensure that any long-term maintenance and impacts to infrastructure from mangrove plantings is understood and protected from future development.	$ 8,334.00	$ 16,667.00	$ 8,660.69	$ 17,320.35	$ 9,000.19	$ 17,999.30	$ 9,353.00	$ 18,704.88	$ 9,719.64	$ 19,438.11	$ 10,100.65	$ 20,200.08	$ 10,496.59	$ 20,991.92	$ 65,664.76	$ 131,321.64
9E	Pursue mangrove planting opportunities that fall within the exempt activities as designated by the Florida Department of Environmental Protection (FDEP).	$ 8,334.00	$ 16,667.00	$ 8,660.69	$ 17,320.35	$ 9,000.19	$ 17,999.30	$ 9,353.00	$ 18,704.88	$ 9,719.64	$ 19,438.11	$ 10,100.65	$ 20,200.08	$ 10,496.59	$ 20,991.92	$ 65,664.76	$ 131,321.64
9F	Partner with relevant agencies to conduct enhancements and planting efforts in existing mangrove habitats in Fort Lauderdale.	$ 8,334.00	$ 16,667.00	$ 8,660.69	$ 17,320.35	$ 9,000.19	$ 17,999.30	$ 9,353.00	$ 18,704.88	$ 9,719.64	$ 19,438.11	$ 10,100.65	$ 20,200.08	$ 10,496.59	$ 20,991.92	$ 65,664.76	$ 131,321.64
10A	Create standard generic plans and specifications to address or avoid common tree-related infrastructure conflicts.	$ 2,106.00	$ 4,211.00	$ 2,188.56	$ 4,376.07	$ 2,274.35	$ 4,547.61	$ 2,363.50	$ 4,725.88	$ 2,456.15	$ 4,911.13	$ 2,552.43	$ 5,103.65	$ 2,652.49	$ 5,303.71	$ 16,593.47	$ 33,179.06
10B	Standardize the general location of utilities and common streetscape features to provide for street trees on at least one side of every street wherever possible.	$ 2,106.00	$ 4,211.00	$ 2,188.56	$ 4,376.07	$ 2,274.35	$ 4,547.61	$ 2,363.50	$ 4,725.88	$ 2,456.15	$ 4,911.13	$ 2,552.43	$ 5,103.65	$ 2,652.49	$ 5,303.71	$ 16,593.47	$ 33,179.06
10C	Draft standard generic plan details and specifications which demonstrate how to preserve existing trees or specify new tree plantings for road and building elevation projects.	$ 3,158.00	$ 6,316.00	$ 3,281.79	$ 6,563.59	$ 3,410.44	$ 6,820.88	$ 3,544.13	$ 7,088.26	$ 3,683.06	$ 7,366.12	$ 3,827.43	$ 7,654.87	$ 3,977.47	$ 7,954.94	$ 24,882.33	$ 49,764.65
10D	Increase the incorporation of low impact stormwater designs and green infrastructure, which include shade trees, into streetscapes adjacent to buildings and roadways, being elevated or hardened to protect against flooding and sea level rise.	$ 2,106.00	$ 4,211.00	$ 2,188.56	$ 4,376.07	$ 2,274.35	$ 4,547.61	$ 2,363.50	$ 4,725.88	$ 2,456.15	$ 4,911.13	$ 2,552.43	$ 5,103.65	$ 2,652.49	$ 5,303.71	$ 16,593.47	$ 33,179.06
10E	Revise ULDR to require submittal of landscape plans earlier in the process and to encourage preservation of specimen and desirable trees.	$ 3,158.00	$ 6,316.00	$ 3,281.79	$ 6,563.59	$ 3,410.44	$ 6,820.88	$ 3,544.13	$ 7,088.26	$ 3,683.06	$ 7,366.12	$ 3,827.43	$ 7,654.87	$ 3,977.47	$ 7,954.94	$ 24,882.33	$ 49,764.65
10F	Collaborate with County and State engineers to draft standard plans for roadways that include street and median trees, designated canopied areas in public rights-of-way, and/or open and green space components of mixed-use and Interdistrict Corridors.	$ 2,106.00	$ 4,211.00	$ 2,188.56	$ 4,376.07	$ 2,274.35	$ 4,547.61	$ 2,363.50	$ 4,725.88	$ 2,456.15	$ 4,911.13	$ 2,552.43	$ 5,103.65	$ 2,652.49	$ 5,303.71	$ 16,593.47	$ 33,179.06
10G	Conduct an inventory of trees within project areas for City maintenance and repair projects that are put out to bid, and include trees which must be protected in the bid package.	$ 2,106.00	$ 4,211.00	$ 2,188.56	$ 4,376.07	$ 2,274.35	$ 4,547.61	$ 2,363.50	$ 4,725.88	$ 2,456.15	$ 4,911.13	$ 2,552.43	$ 5,103.65	$ 2,652.49	$ 5,303.71	$ 16,593.47	$ 33,179.06

Appendix F:
Cost Estimates for UFMP Recommendations 2026-2032

UFMP Reference	Recommendation	Cost/Year*																Potential Low and High Cost Per Recommendation (2026 - 2032)	
		2026		2027		2028		2029		2030		2031		2032					
10H	Reduce spacing recommendations to encourage more street trees be planted along streets and change tree well sizes to reflect volumes of soil as appropriate for different sizes of trees.	$ 3,158.00	$ 6,316.00	$ 3,281.79	$ 6,563.59	$ 3,410.44	$ 6,820.88	$ 3,544.13	$ 7,088.26	$ 3,683.06	$ 7,366.12	$ 3,827.43	$ 7,654.87	$ 3,977.47	$ 7,954.94	$ 24,882.33	$ 49,764.65
11A	Conduct and maintain a Citywide tree inventory that utilizes the City's existing resources where possible.	$ 6,667.00	$ 16,667.00	$ 6,928.35	$ 17,320.35	$ 7,199.94	$ 17,999.30	$ 7,482.18	$ 18,704.88	$ 7,775.48	$ 19,438.11	$ 8,080.28	$ 20,200.08	$ 8,397.02	$ 20,991.92	$ 52,530.23	$ 131,321.64
11B	Closely track trees that are planted by City staff and, where possible, by private developers who must meet minimum landscaping standards and plant replacement trees to mitigate trees removed.	$ 6,667.00	$ 16,667.00	$ 6,928.35	$ 17,320.35	$ 7,199.94	$ 17,999.30	$ 7,482.18	$ 18,704.88	$ 7,775.48	$ 19,438.11	$ 8,080.28	$ 20,200.08	$ 8,397.02	$ 20,991.92	$ 52,530.23	$ 131,321.64
11C	Create an overlay zone of all specimen and Commision-protected trees which allows developers and property owners to avoid impacts to them, make necessary plans to build around them, or avoid conducting improper maintenance on them.	$ 4,445.00	$ 11,112.00	$ 4,619.24	$ 11,547.59	$ 4,800.32	$ 12,000.26	$ 4,988.49	$ 12,470.67	$ 5,184.04	$ 12,959.52	$ 5,387.25	$ 13,467.53	$ 5,598.43	$ 13,995.46	$ 35,022.78	$ 87,553.01
11D	Create an accessible, editable, centralized dataset of trees already in City Works.	$ 4,445.00	$ 11,112.00	$ 4,619.24	$ 11,547.59	$ 4,800.32	$ 12,000.26	$ 4,988.49	$ 12,470.67	$ 5,184.04	$ 12,959.52	$ 5,387.25	$ 13,467.53	$ 5,598.43	$ 13,995.46	$ 35,022.78	$ 87,553.01
12A	Hold frequent public tree events in order to promote a Citywide tree planting campaign and demonstrate the technical assistance that the City will offer to make tree planting feasible for community members.	$ 7,500.00	$ 15,000.00	$ 7,794.00	$ 15,588.00	$ 8,099.52	$ 16,199.05	$ 8,417.03	$ 16,834.05	$ 8,746.97	$ 17,493.95	$ 9,089.85	$ 18,179.71	$ 9,446.18	$ 18,892.35	$ 59,093.56	$ 118,187.11
12B	Track all new tree plantings conducted by third parties on City owned property in a digital database.	$ 7,500.00	$ 15,000.00	$ 7,794.00	$ 15,588.00	$ 8,099.52	$ 16,199.05	$ 8,417.03	$ 16,834.05	$ 8,746.97	$ 17,493.95	$ 9,089.85	$ 18,179.71	$ 9,446.18	$ 18,892.35	$ 59,093.56	$ 118,187.11
12C	Prioritize areas with the 10 lowest Tree Equity Scores and lowest canopy percentages in all of the above efforts.	$ 7,500.00	$ 15,000.00	$ 7,794.00	$ 15,588.00	$ 8,099.52	$ 16,199.05	$ 8,417.03	$ 16,834.05	$ 8,746.97	$ 17,493.95	$ 9,089.85	$ 18,179.71	$ 9,446.18	$ 18,892.35	$ 59,093.56	$ 118,187.11
12D	Continually engage in community-based tree planting projects and invest in urban forestry at the community level.	$ 7,500.00	$ 15,000.00	$ 7,794.00	$ 15,588.00	$ 8,099.52	$ 16,199.05	$ 8,417.03	$ 16,834.05	$ 8,746.97	$ 17,493.95	$ 9,089.85	$ 18,179.71	$ 9,446.18	$ 18,892.35	$ 59,093.56	$ 118,187.11
13A	Partner with the Broward County School District to forge interlocal agreements to authorize the City's tree planting program expand onto School District grounds located within Fort Lauderdale.	$ 6,000.00	$ 12,000.00	$ 6,235.20	$ 12,470.40	$ 6,479.62	$ 12,959.24	$ 6,733.62	$ 13,467.24	$ 6,997.58	$ 13,995.16	$ 7,271.88	$ 14,543.77	$ 7,556.94	$ 15,113.88	$ 47,274.85	$ 94,549.69
13B	Acquire land for conservation both on its own and in partnership with other agencies.	$ 4,000.00	$ 8,000.00	$ 4,156.80	$ 8,313.60	$ 4,319.75	$ 8,639.49	$ 4,489.08	$ 8,978.16	$ 4,665.05	$ 9,330.11	$ 4,847.92	$ 9,695.85	$ 5,037.96	$ 10,075.92	$ 31,516.56	$ 63,033.13
14A	Adopt the UFMP tree palette. Include all or some species in specific landscaping requirements for RACs and that their maintenance needs and characteristics be considered as they relate to landscaping requirements.	$ 2,941.18	$ 8,823.53	$ 3,056.47	$ 9,169.41	$ 3,176.28	$ 9,528.85	$ 3,300.79	$ 9,902.38	$ 3,430.19	$ 10,290.56	$ 3,564.65	$ 10,693.95	$ 3,704.38	$ 11,113.15	$ 23,173.94	$ 69,521.83
	Potential Cost Per Year	$ 1,067,569.70	$ 1,845,673.79	$ 974,322.43	$ 1,777,732.20	$ 1,014,916.57	$ 1,852,219.62	$ 1,052,206.49	$ 1,919,838.14	$ 1,093,452.98	$ 1,995,095.79	$ 1,136,316.34	$ 2,073,303.55	$ 1,180,859.94	$ 2,154,577.04		

Data Source: U.S. Bureau of Labor Statistics: All Items in U.S. city average, all urban consumers, not seasonally adjusted.

* - Inflation rate percentage based on the average of 2019-2024 annual inflation rates per year = 3.92%

** - 2026 = Base cost per recommendation.

Assumptions:

All potential costs are estimates and subject to variable market conditions over time.

A fixed inflation rate/percentage was used for this table, however, inflation rate precentage will vary over time thereby affecting costs.

Blue highlighted cells indicate the year in which the recommendations will be implemented. All other costs before and after the implementation dates are development and carrying costs that are assumed to be required to ensure the recommendations are developed, maintained, and continually implemented.

Blacked out cells indicate no annual costs associated with recommendation

Appendix F:
Cost Estimates for UFMP Recommendations 2033-2040

UFMP Reference	Recommendation	Cost/Year*																		Potential Low and High Cost Per Recommendation (2033-2040)	
		2033		2034		2035		2036		2037		2038		2039		2040					
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High			Low	High
1A	Adopt Code language which places a restriction on the maximum square footage of tree canopy that can be removed per development site.	$ 2,887.35	$ 8,662.05	$ 3,000.53	$ 9,001.60	$ 3,118.16	$ 9,354.47	$ 3,240.39	$ 9,721.16	$ 3,367.41	$ 10,102.23	$ 3,499.41	$ 10,498.24	$ 3,636.59	$ 10,909.77	$ 3,779.14	$ 11,337.43			$26,528.98	$79,586.95
1B	Expand preservation credits on development sites to apply to small specimen trees. Require development permit applicants to prioritize Desirable and specimen trees in their preserved canopy.	$ 2,887.35	$ 8,662.05	$ 3,000.53	$ 9,001.60	$ 3,118.16	$ 9,354.47	$ 3,240.39	$ 9,721.16	$ 3,367.41	$ 10,102.23	$ 3,499.41	$ 10,498.24	$ 3,636.59	$ 10,909.77	$ 3,779.14	$ 11,337.43			$26,528.98	$79,586.95
1C	Designate the land within the dripline or CRZ of all Commission-protected trees as a tree preservation zone (TPZ) that has the same protections as the CRZ and requires Commission approval before any appropriate maintenance is conducted.	$ 1,925.34	$ 5,774.70	$ 2,000.81	$ 6,001.07	$ 2,079.24	$ 6,236.31	$ 2,160.75	$ 6,480.77	$ 2,245.45	$ 6,734.82	$ 2,333.47	$ 6,998.83	$ 2,424.94	$ 7,273.18	$ 2,520.00	$ 7,558.29			$17,690.00	$53,057.97
1D	Develop procedures to minimize improper application of FS 163.045 and investigate the feasibility of allowing the Urban Forester to override the opinion of a person who do so.	$ 2,502.54	$ 7,507.63	$ 2,600.64	$ 7,801.93	$ 2,702.59	$ 8,107.77	$ 2,808.53	$ 8,425.59	$ 2,918.63	$ 8,755.88	$ 3,033.04	$ 9,099.11	$ 3,151.93	$ 9,455.79	$ 3,275.49	$ 9,826.46			$22,993.39	$68,980.17
1E	Expand allowable uses of the Tree Canopy Trust Fund and increase the percentage of the Fund which can be spent per year.	$ 2,887.35	$ 8,662.05	$ 3,000.53	$ 9,001.60	$ 3,118.16	$ 9,354.47	$ 3,240.39	$ 9,721.16	$ 3,367.41	$ 10,102.23	$ 3,499.41	$ 10,498.24	$ 3,636.59	$ 10,909.77	$ 3,779.14	$ 11,337.43			$26,528.98	$79,586.95
2A	Evaluate the tree removal permit rate and equivalent replacement value every three to five years to determine whether they should be increased.	$ 2,909.60	$ 5,817.89									$ 3,526.38	$ 7,051.17							$6,435.98	$12,869.07
2B	Issue penalties for tree abuse and non-permitted tree removals to both the tree's owner and the tree company responsible for the abuse and/or non-permitted removal.	$ 2,909.60	$ 5,817.89	$ 3,023.66	$ 6,045.95	$ 3,142.18	$ 6,282.96	$ 3,265.36	$ 6,529.25	$ 3,393.36	$ 6,785.19	$ 3,526.38	$ 7,051.17	$ 3,664.61	$ 7,327.58	$ 3,808.27	$ 7,614.82			$26,733.42	$53,454.82
2C	Conduct educational campaign to communicate relevant changes in UFMP to local arborists.	$ 2,424.01	$ 4,848.03	$ 2,519.03	$ 5,038.07	$ 2,617.78	$ 5,235.56	$ 2,720.40	$ 5,440.79	$ 2,827.04	$ 5,654.07	$ 2,937.86	$ 5,875.71	$ 3,053.02	$ 6,106.04	$ 3,172.70	$ 6,345.40			$22,271.84	$44,543.68
2D	Revise the penalties and requirements for the removal of specimen trees for which preservation credits have been issued to be the same as those for which no preservation credits were issued.	$ 2,424.01	$ 4,848.03	$ 2,519.03	$ 5,038.07	$ 2,617.78	$ 5,235.56	$ 2,720.40	$ 5,440.79	$ 2,827.04	$ 5,654.07	$ 2,937.86	$ 5,875.71	$ 3,053.02	$ 6,106.04	$ 3,172.70	$ 6,345.40			$22,271.84	$44,543.68
2E	Work with community organizations to promote PPQ for all arborists performing any tree pruning in Fort Lauderdale.	$ 2,424.01	$ 4,848.03	$ 2,519.03	$ 5,038.07	$ 2,617.78	$ 5,235.56	$ 2,720.40	$ 5,440.79	$ 2,827.04	$ 5,654.07	$ 2,937.86	$ 5,875.71	$ 3,053.02	$ 6,106.04	$ 3,172.70	$ 6,345.40			$22,271.84	$44,543.68
3A	Extend guarantees for replacement trees outside of City right-of-way for up to three years following the completion of construction and should be transferrable between owners.	$ 5,609.78	$ 11,219.57	$ 5,829.69	$ 11,659.37	$ 6,058.21	$ 12,116.42	$ 6,295.69	$ 12,591.39	$ 6,542.48	$ 13,084.97	$ 6,798.95	$ 13,597.90	$ 7,065.47	$ 14,130.94	$ 7,342.43	$ 14,684.87			$51,542.71	$103,085.43
3B	Revise mitigation criteria so that the replacement of trees removed to be based on canopy size, not diameter.	$ 8,414.68	$ 16,826.73	$ 8,744.53	$ 17,486.34	$ 9,087.32	$ 18,171.81	$ 9,443.54	$ 18,884.14	$ 9,813.73	$ 19,624.40	$ 10,198.42	$ 20,393.68	$ 10,598.20	$ 21,193.11	$ 11,013.65	$ 22,023.88			$77,314.07	$154,604.09
3C	Group replacement tree species into categories based on desirable characteristics.	$ 5,609.78	$ 11,219.57	$ 5,829.69	$ 11,659.37	$ 6,058.21	$ 12,116.42	$ 6,295.69	$ 12,591.39	$ 6,542.48	$ 13,084.97	$ 6,798.95	$ 13,597.90	$ 7,065.47	$ 14,130.94	$ 7,342.43	$ 14,684.87			$51,542.71	$103,085.43
4A	Adopt ULDR revisions that outline parameters for acceptable offsets and setback reductions to save desirable trees.	$ 5,235.45	$ 13,088.62	$ 5,440.68	$ 13,601.70	$ 5,653.95	$ 14,134.88	$ 5,875.59	$ 14,688.97	$ 6,105.91	$ 15,264.78	$ 6,345.26	$ 15,863.16	$ 6,594.00	$ 16,484.99	$ 6,852.48	$ 17,131.21			$48,103.33	$120,258.31
4B	Incentivize developers, where possible, to increase the building height on new developments in order to offset a smaller footprint to provide an unobstructed site area for tree planting and reduce impacts to existing trees.	$ 7,853.17	$ 19,632.93	$ 8,161.02	$ 20,402.55	$ 8,480.93	$ 21,202.33	$ 8,813.38	$ 22,033.46	$ 9,158.87	$ 22,897.17	$ 9,517.89	$ 23,794.74	$ 9,891.00	$ 24,727.49	$ 10,278.72	$ 25,696.81			$72,154.99	$180,387.47
4C	Create a structure for charging stormwater impact fees and then allowing developers who retain trees to minimize increases in runoff either reduce or avoid those fees.	$ 5,235.45	$ 13,088.62	$ 5,440.68	$ 13,601.70	$ 5,653.95	$ 14,134.88	$ 5,875.59	$ 14,688.97	$ 6,105.91	$ 15,264.78	$ 6,345.26	$ 15,863.16	$ 6,594.00	$ 16,484.99	$ 6,852.48	$ 17,131.21			$48,103.33	$120,258.31
4D	Grant canopy credits to developers who preserve below the maximum allowable square footage of canopy on one site that can be transferred to another site where no more than 50% of the canopy is comprised of high quality, desirable trees.	$ 7,853.17	$ 19,632.93	$ 8,161.02	$ 20,402.55	$ 8,480.93	$ 21,202.33	$ 8,813.38	$ 22,033.46	$ 9,158.87	$ 22,897.17	$ 9,517.89	$ 23,794.74	$ 9,891.00	$ 24,727.49	$ 10,278.72	$ 25,696.81			$72,154.99	$180,387.47

Appendix F:
Cost Estimates for UFMP Recommendations 2033-2040

UFMP Reference	Recommendation	Cost/Year*																Potential Low and High Cost Per Recommendation (2033-2040)	
		2033		2034		2035		2036		2037		2038		2039		2040			
5A	Coordinate outreach with Neighborhood Associations to explain the requirements for planting trees in rights-of-way. Allow the Association Board to apply for permits and coordinate assistance from the City for homeowners.	$ 6,200.08	$ 12,400.16	$ 6,443.12	$ 12,886.25	$ 6,695.69	$ 13,391.39	$ 6,958.17	$ 13,916.33	$ 7,230.93	$ 14,461.85	$ 7,514.38	$ 15,028.76	$ 7,808.94	$ 15,617.88	$ 8,115.05	$ 16,230.10	$56,966.36	$113,932.73
5B	Provide indirect maintenance cost sharing from the TCTF to homeowners in low canopy and low Tree Equity Score neighborhoods who want to plant trees on their properties or in their swales.	$ 6,200.08	$ 12,400.16	$ 6,443.12	$ 12,886.25	$ 6,695.69	$ 13,391.39	$ 6,958.17	$ 13,916.33	$ 7,230.93	$ 14,461.85	$ 7,514.38	$ 15,028.76	$ 7,808.94	$ 15,617.88	$ 8,115.05	$ 16,230.10	$56,966.36	$113,932.73
5C	Offer irrigation-related tree-related rebates, or "tree-bates" to homeowners who plant trees on their property(ies).	$ 4,133.39	$ 8,266.77	$ 4,295.42	$ 8,590.83	$ 4,463.80	$ 8,927.59	$ 4,638.78	$ 9,277.55	$ 4,820.62	$ 9,641.23	$ 5,009.59	$ 10,019.17	$ 5,205.96	$ 10,411.92	$ 5,410.03	$ 10,820.07	$37,977.58	$75,955.15
5D	Work with neighborhoods whose Mobility Master Plans identify tree planting and preservation as priorities to increase and enhance tree canopy.	$ 6,200.08	$ 12,400.16	$ 6,443.12	$ 12,886.25	$ 6,695.69	$ 13,391.39	$ 6,958.17	$ 13,916.33	$ 7,230.93	$ 14,461.85	$ 7,514.38	$ 15,028.76	$ 7,808.94	$ 15,617.88	$ 8,115.05	$ 16,230.10	$56,966.36	$113,932.73
5E	Help forge Tree Planting Plans with neighborhoods that do not have such a plan.	$ 6,200.08	$ 12,400.16	$ 6,443.12	$ 12,886.25	$ 6,695.69	$ 13,391.39	$ 6,958.17	$ 13,916.33	$ 7,230.93	$ 14,461.85	$ 7,514.38	$ 15,028.76	$ 7,808.94	$ 15,617.88	$ 8,115.05	$ 16,230.10	$56,966.36	$113,932.73
5F	Offer utility-based "tree-bates" to homeowners who strategically plant trees on their property which can provide sufficient shade resulting in lower energy consumption.	$ 6,200.08	$ 12,400.16	$ 6,443.12	$ 12,886.25	$ 6,695.69	$ 13,391.39	$ 6,958.17	$ 13,916.33	$ 7,230.93	$ 14,461.85	$ 7,514.38	$ 15,028.76	$ 7,808.94	$ 15,617.88	$ 8,115.05	$ 16,230.10	$56,966.36	$113,932.73
5G	Offer tree replacement programs to private homeowners in which participants can receive a free high quality native species in exchange for removing invasives or otherwise undesirable trees.	$ 4,133.39	$ 8,266.77	$ 4,295.42	$ 8,590.83	$ 4,463.80	$ 8,927.59	$ 4,638.78	$ 9,277.55	$ 4,820.62	$ 9,641.23	$ 5,009.59	$ 10,019.17	$ 5,205.96	$ 10,411.92	$ 5,410.03	$ 10,820.07	$37,977.58	$75,955.15
6A	Establish and fill Urban Forestry Administrator, City Horticulturist, Assistant Urban Forester, climbing arborist, ISA-Certified Arborist Landscape Inspector and Code officer positions.	$592,859.03	$925,915.72	$616,099.11	$962,211.62	$640,250.19	$999,930.31	$665,348.00	$1,039,127.58	$691,429.64	$1,079,861.38	$718,533.68	$1,122,191.95	$746,700.20	$1,166,181.87	$775,970.85	$1,211,896.20	$5,447,190.71	$8,507,316.63
6B	Establish a UFMP Work Group.	$ 25,063.40	$ 50,126.81	$ 26,045.89	$ 52,091.78	$ 27,066.89	$ 54,133.78	$ 28,127.91	$ 56,255.82	$ 29,230.53	$ 58,461.05	$ 30,376.36	$ 60,752.72	$ 31,567.12	$ 63,134.23	$ 32,804.55	$ 65,609.09	$230,282.64	$460,565.29
6C	Establish a Tree Advisory Board.	$ 6,200.08	$ 12,400.16	$ 6,443.12	$ 12,886.25	$ 6,695.69	$ 13,391.39	$ 6,958.17	$ 13,916.33	$ 7,230.93	$ 14,461.85	$ 7,514.38	$ 15,028.76	$ 7,808.94	$ 15,617.88	$ 8,115.05	$ 16,230.10	$56,966.36	$113,932.73
6D	Include the 33% canopy goal in all City projects.	$ 16,710.25	$ 33,417.87	$ 17,365.29	$ 34,727.85	$ 18,046.01	$ 36,089.19	$ 18,753.41	$ 37,503.88	$ 19,488.54	$ 38,974.03	$ 20,252.49	$ 40,501.82	$ 21,046.39	$ 42,089.49	$ 21,871.41	$ 43,739.39	$153,533.79	$307,043.52
7A	Launch an invasive species management program to support efforts to remove invasive tree species and replace them with native ones on both City- and privately-owned land.	$ 9,816.47	$ 19,632.93	$ 10,201.27	$ 20,402.55	$ 10,601.16	$ 21,202.33	$ 11,016.73	$ 22,033.46	$ 11,448.58	$ 22,897.17	$ 11,897.37	$ 23,794.74	$ 12,363.75	$ 24,727.49	$ 12,848.40	$ 25,696.81	$90,193.73	$180,387.47
7B	Work with County, State, and academic experts to identify means of educating residents on ways they can protect their trees in the event of an outbreak of tree pests or disease.	$ 9,816.47	$ 19,632.93	$ 10,201.27	$ 20,402.55	$ 10,601.16	$ 21,202.33	$ 11,016.73	$ 22,033.46	$ 11,448.58	$ 22,897.17	$ 11,897.37	$ 23,794.74	$ 12,363.75	$ 24,727.49	$ 12,848.40	$ 25,696.81	$90,193.73	$180,387.47
7C	Expand current educational outreach to homeowners and distribute traps to residents and interested parties whose trees may be infested with the termites to slow the insects' spread.	$ 9,816.47	$ 19,632.93	$ 10,201.27	$ 20,402.55	$ 10,601.16	$ 21,202.33	$ 11,016.73	$ 22,033.46	$ 11,448.58	$ 22,897.17	$ 11,897.37	$ 23,794.74	$ 12,363.75	$ 24,727.49	$ 12,848.40	$ 25,696.81	$90,193.73	$180,387.47
7D	Train all relevant City staff who work on trees to identify and report signs of infestation on trees.	$ 9,816.47	$ 19,632.93	$ 10,201.27	$ 20,402.55	$ 10,601.16	$ 21,202.33	$ 11,016.73	$ 22,033.46	$ 11,448.58	$ 22,897.17	$ 11,897.37	$ 23,794.74	$ 12,363.75	$ 24,727.49	$ 12,848.40	$ 25,696.81	$90,193.73	$180,387.47
8A	Conduct a Citywide campaign to plant trees that will contribute significantly to the goal of 33% canopy by 2040 which incorporates the principles of "right tree, right place."	$ 43,629.62	$ 87,257.92	$ 45,339.90	$ 90,678.44	$ 47,117.22	$ 94,233.03	$ 48,964.22	$ 97,926.96	$ 50,883.61	$ 101,765.70	$ 52,878.25	$ 105,754.92	$ 54,951.08	$ 109,900.51	$ 57,105.16	$ 114,208.61	$400,869.06	$801,726.09
8B	Prioritize the neighborhoods listed as having low canopy cover and low Tree Equity Scores in the tree planting campaign to address inequity in the urban tree canopy.	$ 43,629.62	$ 87,257.92	$ 45,339.90	$ 90,678.44	$ 47,117.22	$ 94,233.03	$ 48,964.22	$ 97,926.96	$ 50,883.61	$ 101,765.70	$ 52,878.25	$ 105,754.92	$ 54,951.08	$ 109,900.51	$ 57,105.16	$ 114,208.61	$400,869.06	$801,726.09
8C	Collaborate with civic associations and other community groups located inside low canopy and low Tree Equity Score neighborhoods to select the locations of planting projects and outline maintenance agreements for newly planted trees.	$ 43,629.62	$ 87,257.92	$ 45,339.90	$ 90,678.44	$ 47,117.22	$ 94,233.03	$ 48,964.22	$ 97,926.96	$ 50,883.61	$ 101,765.70	$ 52,878.25	$ 105,754.92	$ 54,951.08	$ 109,900.51	$ 57,105.16	$ 114,208.61	$400,869.06	$801,726.09

Appendix F:
Cost Estimates for UFMP Recommendations 2033-2040

UFMP Reference	Recommendation	Cost/Year*																		Potential Low and High Cost Per Recommendation (2033-2040)	
		2033		2034		2035		2036		2037		2038		2039		2040					
8D	Take steps to ensure that current and future tree canopy is resilient to potential inundation events in the neighborhoods identified as vulnerable to flooding in Fortify Lauderdale.	$ 43,629.62	$ 87,257.92	$ 45,339.90	$ 90,678.44	$ 47,117.22	$ 94,233.03	$ 48,964.22	$ 97,926.96	$ 50,883.61	$ 101,765.70	$ 52,878.25	$ 105,754.92	$ 54,951.08	$ 109,900.51	$ 57,105.16	$ 114,208.61			$400,869.06	$801,726.09
8E	Plant species with high salt and flood tolerance in areas that are likely to be impacted by increases in coastal flooding and in green infrastructure designed to redirect, absorb, exclude, or otherwise mitigate stormwater and nuisance tidal floodwater.	$ 43,629.62	$ 87,257.92	$ 45,339.90	$ 90,678.44	$ 47,117.22	$ 94,233.03	$ 48,964.22	$ 97,926.96	$ 50,883.61	$ 101,765.70	$ 52,878.25	$ 105,754.92	$ 54,951.08	$ 109,900.51	$ 57,105.16	$ 114,208.61			$400,869.06	$801,726.09
8F	Require open spaces include a certain percentage of shade that comes from trees rather than other shade structures. Investigate allowing above-grade landscaping to count towards a maximum of 50% of required canopy for multistory developments.	$ 43,629.62	$ 87,257.92	$ 45,339.90	$ 90,678.44	$ 47,117.22	$ 94,233.03	$ 48,964.22	$ 97,926.96	$ 50,883.61	$ 101,765.70	$ 52,878.25	$ 105,754.92	$ 54,951.08	$ 109,900.51	$ 57,105.16	$ 114,208.61			$400,869.06	$801,726.09
9A	Plant mangroves in feasible locations on City-owned land to pilot a program for planting, maintaining, and monitoring new mangrove installations as a part of the City's tree planting campaign.	$ 10,908.06	$ 21,814.81	$ 11,335.65	$ 22,669.95	$ 11,780.01	$ 23,558.61	$ 12,241.79	$ 24,482.11	$ 12,721.67	$ 25,441.81	$ 13,220.36	$ 26,439.13	$ 13,738.59	$ 27,475.54	$ 14,277.15	$ 28,552.58			$100,223.28	$200,434.53
9B	Implement an initiative to encourage education on mangroves, increase the availability of mangroves for planting sites, and assist homeowners who want to plant mangroves along their waterfronts.	$ 10,908.06	$ 21,814.81	$ 11,335.65	$ 22,669.95	$ 11,780.01	$ 23,558.61	$ 12,241.79	$ 24,482.11	$ 12,721.67	$ 25,441.81	$ 13,220.36	$ 26,439.13	$ 13,738.59	$ 27,475.54	$ 14,277.15	$ 28,552.58			$100,223.28	$200,434.53
9C	Perform invasive vegetation removal in existing and potential mangrove habitats to facilitate natural or planted mangrove propagation, including on any of the City-owned properties listed in Recommendation 9A.	$ 10,908.06	$ 21,814.81	$ 11,335.65	$ 22,669.95	$ 11,780.01	$ 23,558.61	$ 12,241.79	$ 24,482.11	$ 12,721.67	$ 25,441.81	$ 13,220.36	$ 26,439.13	$ 13,738.59	$ 27,475.54	$ 14,277.15	$ 28,552.58			$100,223.28	$200,434.53
9D	Coordinate between relevant departments and agencies to ensure that any long-term maintenance and impacts to infrastructure from mangrove plantings is understood and protected from future development.	$ 10,908.06	$ 21,814.81	$ 11,335.65	$ 22,669.95	$ 11,780.01	$ 23,558.61	$ 12,241.79	$ 24,482.11	$ 12,721.67	$ 25,441.81	$ 13,220.36	$ 26,439.13	$ 13,738.59	$ 27,475.54	$ 14,277.15	$ 28,552.58			$100,223.28	$200,434.53
9E	Pursue mangrove planting opportunities that fall within the exempt activities as designated by the Florida Department of Environmental Protection (FDEP).	$ 10,908.06	$ 21,814.81	$ 11,335.65	$ 22,669.95	$ 11,780.01	$ 23,558.61	$ 12,241.79	$ 24,482.11	$ 12,721.67	$ 25,441.81	$ 13,220.36	$ 26,439.13	$ 13,738.59	$ 27,475.54	$ 14,277.15	$ 28,552.58			$100,223.28	$200,434.53
9F	Partner with relevant agencies to conduct enhancements and planting efforts in existing mangrove habitats in Fort Lauderdale.	$ 10,908.06	$ 21,814.81	$ 11,335.65	$ 22,669.95	$ 11,780.01	$ 23,558.61	$ 12,241.79	$ 24,482.11	$ 12,721.67	$ 25,441.81	$ 13,220.36	$ 26,439.13	$ 13,738.59	$ 27,475.54	$ 14,277.15	$ 28,552.58			$100,223.28	$200,434.53
10A	Create standard generic plans and specifications to address or avoid common tree-related infrastructure conflicts.	$ 2,756.46	$ 5,511.62	$ 2,864.52	$ 5,727.67	$ 2,976.81	$ 5,952.20	$ 3,093.50	$ 6,185.53	$ 3,214.76	$ 6,428.00	$ 3,340.78	$ 6,679.98	$ 3,471.74	$ 6,941.83	$ 3,607.83	$ 7,213.95			$25,326.40	$50,640.78
10B	Standardize the general location of utilities and common streetscape features to provide for street trees on at least one side of every street wherever possible.	$ 2,756.46	$ 5,511.62	$ 2,864.52	$ 5,727.67	$ 2,976.81	$ 5,952.20	$ 3,093.50	$ 6,185.53	$ 3,214.76	$ 6,428.00	$ 3,340.78	$ 6,679.98	$ 3,471.74	$ 6,941.83	$ 3,607.83	$ 7,213.95			$25,326.40	$50,640.78
10C	Draft standard generic plan details and specifications which demonstrate how to preserve existing trees or specify new tree plantings for road and building elevation projects.	$ 4,133.39	$ 8,266.77	$ 4,295.42	$ 8,590.83	$ 4,463.80	$ 8,927.59	$ 4,638.78	$ 9,277.55	$ 4,820.62	$ 9,641.23	$ 5,009.59	$ 10,019.17	$ 5,205.96	$ 10,411.92	$ 5,410.03	$ 10,820.07			$37,977.58	$75,955.15
10D	Increase the incorporation of low impact stormwater designs and green infrastructure, which include shade trees, into streetscapes adjacent to buildings and roadways, being elevated or hardened to protect against flooding and sea level rise.	$ 2,756.46	$ 5,511.62	$ 2,864.52	$ 5,727.67	$ 2,976.81	$ 5,952.20	$ 3,093.50	$ 6,185.53	$ 3,214.76	$ 6,428.00	$ 3,340.78	$ 6,679.98	$ 3,471.74	$ 6,941.83	$ 3,607.83	$ 7,213.95			$25,326.40	$50,640.78
10E	Revise ULDR to require submittal of landscape plans earlier in the process and to encourage preservation of specimen and desirable trees	$ 4,133.39	$ 8,266.77	$ 4,295.42	$ 8,590.83	$ 4,463.80	$ 8,927.59	$ 4,638.78	$ 9,277.55	$ 4,820.62	$ 9,641.23	$ 5,009.59	$ 10,019.17	$ 5,205.96	$ 10,411.92	$ 5,410.03	$ 10,820.07			$37,977.58	$75,955.15
10F	Collaborate with County and State engineers to draft standard plans for roadways that include street and median trees, designated canopied areas in public rights-of-way, and/or open and green space components of mixed-use and Interdistrict Corridors.	$ 2,756.46	$ 5,511.62	$ 2,864.52	$ 5,727.67	$ 2,976.81	$ 5,952.20	$ 3,093.50	$ 6,185.53	$ 3,214.76	$ 6,428.00	$ 3,340.78	$ 6,679.98	$ 3,471.74	$ 6,941.83	$ 3,607.83	$ 7,213.95			$25,326.40	$50,640.78
10G	Conduct an inventory of trees within project areas for City maintenance and repair projects that are put out to bid, and include trees which must be protected in the bid package.	$ 2,756.46	$ 5,511.62	$ 2,864.52	$ 5,727.67	$ 2,976.81	$ 5,952.20	$ 3,093.50	$ 6,185.53	$ 3,214.76	$ 6,428.00	$ 3,340.78	$ 6,679.98	$ 3,471.74	$ 6,941.83	$ 3,607.83	$ 7,213.95			$25,326.40	$50,640.78

Appendix F:
Cost Estimates for UFMP Recommendations 2033-2040

UFMP Reference	Recommendation	Cost/Year*																Potential Low and High Cost Per Recommendation (2033-2040)	
		2033		2034		2035		2036		2037		2038		2039		2040			
10H	Reduce spacing recommendations to encourage more street trees be planted along streets and change tree well sizes to reflect volumes of soil as appropriate for different sizes of trees.	$ 4,133.39	$ 8,266.77	$ 4,295.42	$ 8,590.83	$ 4,463.80	$ 8,927.59	$ 4,638.78	$ 9,277.55	$ 4,820.62	$ 9,641.23	$ 5,009.59	$ 10,019.17	$ 5,205.96	$ 10,411.92	$ 5,410.03	$ 10,820.07	$37,977.58	$75,955.15
11A	Conduct and maintain a Citywide tree inventory that utilizes the City's existing resources where possible.	$ 8,726.19	$ 21,814.81	$ 9,068.25	$ 22,669.95	$ 9,423.73	$ 23,558.61	$ 9,793.14	$ 24,482.11	$ 10,177.03	$ 25,441.81	$ 10,575.97	$ 26,439.13	$ 10,990.55	$ 27,475.54	$ 11,421.37	$ 28,552.58	$80,176.22	$200,434.53
11B	Closely track trees that are planted by City staff and, where possible, by private developers who must meet minimum landscaping standards and plant replacement trees to mitigate trees removed.	$ 8,726.19	$ 21,814.81	$ 9,068.25	$ 22,669.95	$ 9,423.73	$ 23,558.61	$ 9,793.14	$ 24,482.11	$ 10,177.03	$ 25,441.81	$ 10,575.97	$ 26,439.13	$ 10,990.55	$ 27,475.54	$ 11,421.37	$ 28,552.58	$80,176.22	$200,434.53
11C	Create an overlay zone of all specimen and Commision-protected trees which allows developers and property owners to avoid impacts to them, make necessary plans to build around them, or avoid conducting improper maintenance on them.	$ 5,817.89	$ 14,544.08	$ 6,045.95	$ 15,114.21	$ 6,282.96	$ 15,706.68	$ 6,529.25	$ 16,322.38	$ 6,785.19	$ 16,962.22	$ 7,051.17	$ 17,627.14	$ 7,327.58	$ 18,318.13	$ 7,614.82	$ 19,036.20	$53,454.82	$133,631.04
11D	Create an accessible, editable, centralized dataset of trees already in City Works.	$ 5,817.89	$ 14,544.08	$ 6,045.95	$ 15,114.21	$ 6,282.96	$ 15,706.68	$ 6,529.25	$ 16,322.38	$ 6,785.19	$ 16,962.22	$ 7,051.17	$ 17,627.14	$ 7,327.58	$ 18,318.13	$ 7,614.82	$ 19,036.20	$53,454.82	$133,631.04
12A	Hold frequent public tree events in order to promote a Citywide tree planting campaign and demonstrate the technical assistance that the City will offer to make tree planting feasible for community members.	$ 9,816.47	$ 19,632.93	$ 10,201.27	$ 20,402.55	$ 10,601.16	$ 21,202.33	$ 11,016.73	$ 22,033.46	$ 11,448.58	$ 22,897.17	$ 11,897.37	$ 23,794.74	$ 12,363.75	$ 24,727.49	$ 12,848.40	$ 25,696.81	$90,193.73	$180,387.47
12B	Track all new tree plantings conducted by third parties on City owned property in a digital database.	$ 9,816.47	$ 19,632.93	$ 10,201.27	$ 20,402.55	$ 10,601.16	$ 21,202.33	$ 11,016.73	$ 22,033.46	$ 11,448.58	$ 22,897.17	$ 11,897.37	$ 23,794.74	$ 12,363.75	$ 24,727.49	$ 12,848.40	$ 25,696.81	$90,193.73	$180,387.47
12C	Prioritize areas with the 10 lowest Tree Equity Scores and lowest canopy percentages in all of the above efforts.	$ 9,816.47	$ 19,632.93	$ 10,201.27	$ 20,402.55	$ 10,601.16	$ 21,202.33	$ 11,016.73	$ 22,033.46	$ 11,448.58	$ 22,897.17	$ 11,897.37	$ 23,794.74	$ 12,363.75	$ 24,727.49	$ 12,848.40	$ 25,696.81	$90,193.73	$180,387.47
12D	Continually engage in community-based tree planting projects and invest in urban forestry at the community level.	$ 9,816.47	$ 19,632.93	$ 10,201.27	$ 20,402.55	$ 10,601.16	$ 21,202.33	$ 11,016.73	$ 22,033.46	$ 11,448.58	$ 22,897.17	$ 11,897.37	$ 23,794.74	$ 12,363.75	$ 24,727.49	$ 12,848.40	$ 25,696.81	$90,193.73	$180,387.47
13A	Partner with the Broward County School District to forge interlocal agreements to authorize the City's tree planting program expand onto School District grounds located within Fort Lauderdale.	$ 7,853.17	$ 15,706.35	$ 8,161.02	$ 16,322.04	$ 8,480.93	$ 16,961.86	$ 8,813.38	$ 17,626.77	$ 9,158.87	$ 18,317.73	$ 9,517.89	$ 19,035.79	$ 9,891.00	$ 19,781.99	$ 10,278.72	$ 20,557.45	$72,154.99	$144,309.98
13B	The City should acquire land for conservation both on its own and in partnership with other agencies.	$ 5,235.45	$ 10,470.90	$ 5,440.68	$ 10,881.36	$ 5,653.95	$ 11,307.91	$ 5,875.59	$ 11,751.18	$ 6,105.91	$ 12,211.82	$ 6,345.26	$ 12,690.53	$ 6,594.00	$ 13,188.00	$ 6,852.48	$ 13,704.96	$48,103.33	$96,206.65
14A	Adopt the UFMP tree palette. Include all or some species in specific landscaping requirements for RACs and that their maintenance needs and characteristics be considered as they relate to landscaping requirements.	$ 3,849.59	$ 11,548.78	$ 4,000.50	$ 12,001.50	$ 4,157.32	$ 12,471.96	$ 4,320.28	$ 12,960.86	$ 4,489.64	$ 13,468.92	$ 4,665.63	$ 13,996.90	$ 4,848.53	$ 14,545.58	$ 5,038.59	$ 15,115.77	$35,370.09	$106,110.27
	Potential Cost Per Year	$1,230,059.25	$2,244,854.36	$1,275,253.92	$2,326,806.69	$1,325,243.87	$2,418,017.52	$1,377,193.43	$2,512,803.80	$1,431,179.41	$2,611,305.71	$1,490,808.03	$2,720,720.07	$1,545,583.09	$2,820,044.72	$1,606,169.94	$2,930,590.47		

Data Source: U.S. Bureau of Labor Statistics: All Items in U.S. city average, all urban consumers, not seasonally adjusted.

* - Inflation rate percentage based on the average of 2019-2024 annual inflation rates per year = 3.92%

** - 2026 = Base cost per recommendation.

Assumptions:

All potential costs are estimates and subject to variable market conditions over time.

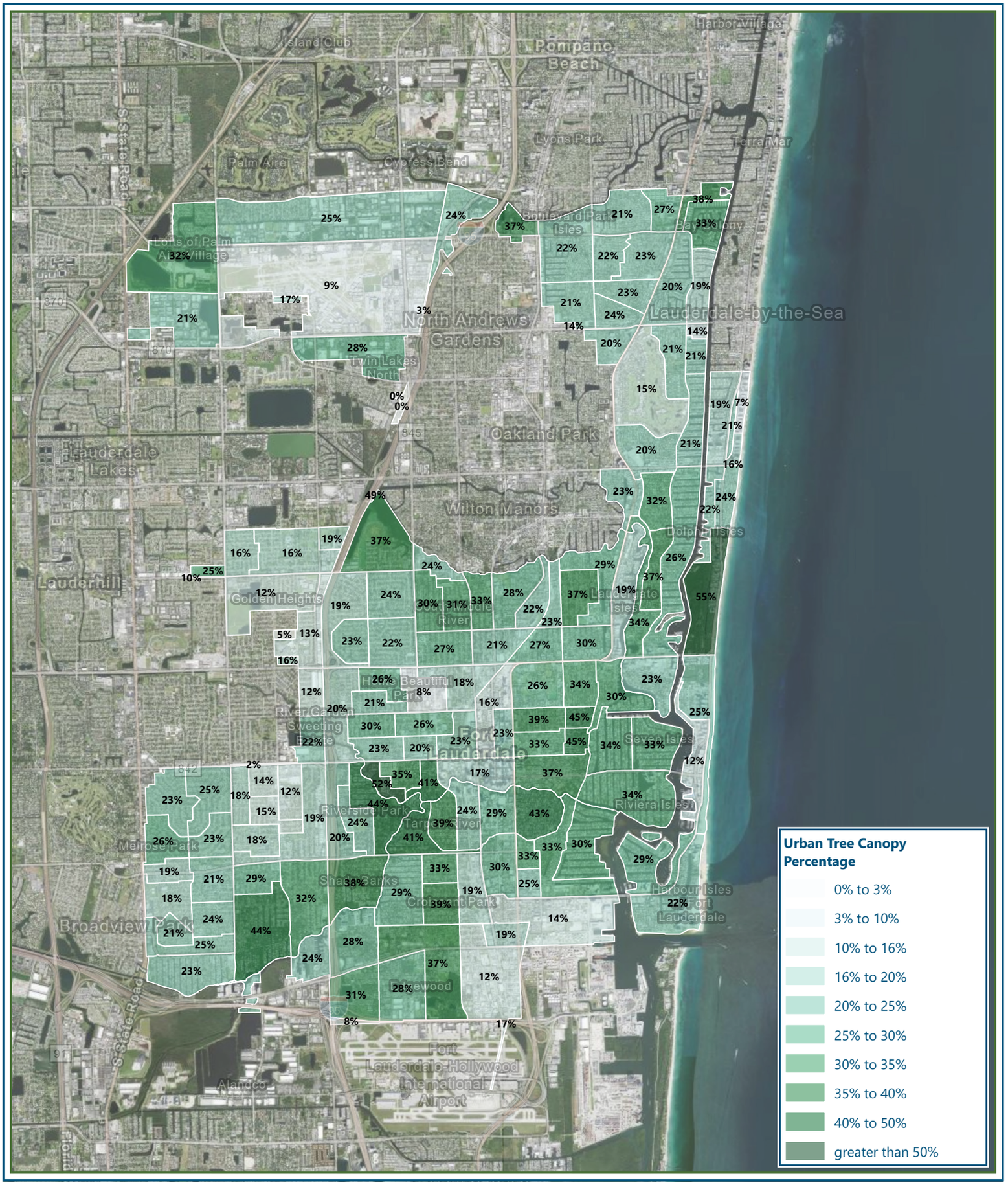
A fixed inflation rate/percentage was used for this table, however, inflation rate precentage will vary over time thereby affecting costs.

Blue highlighted cells indicate the year in which the recommendations will be implemented. All other costs before and after the implementation dates are development and carrying costs that are assumed to be required to ensure the recommendations are developed, maintained, and continually implemented.

Blacked out cells indicate no annual costs associated with recommendation

APPENDIX G: MAP FIGURES

Figure 1.1



Fort Lauderdale Tree Canopy

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 7,000 ft

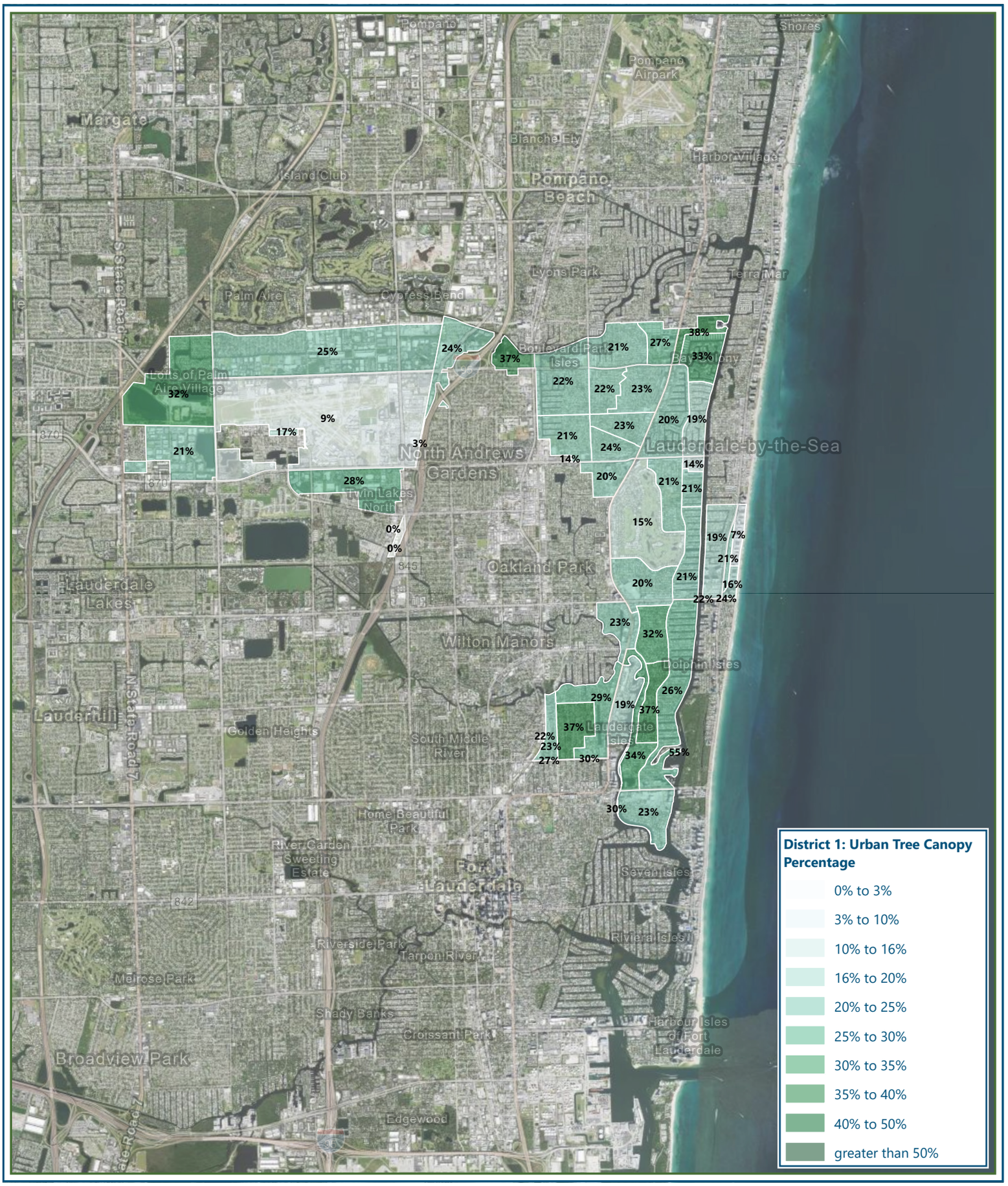
0 1,500 3,000 6,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
NAD 1983 2011 StatePlane Florida East FIPS 0901 Ft US
Date Exported: 9/11/2025

www.res.us

Figure 2.6



District 1 Tree Canopy

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 7,000 ft

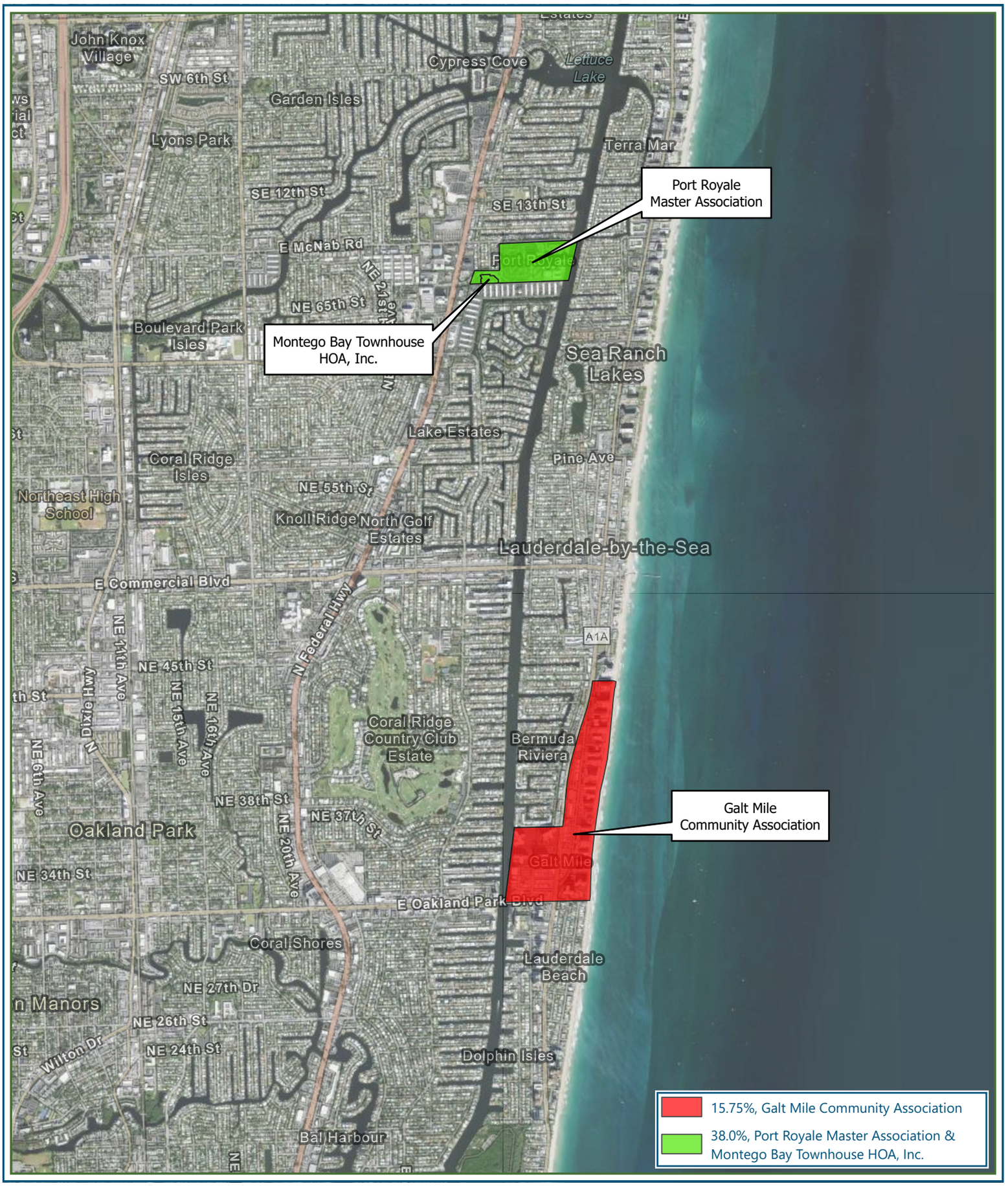
0 1,500 3,000 6,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
NAD 1983 2011 StatePlane Florida East FIPS 0901 Ft US
Date Exported: 9/11/2025

www.res.us

Figure 2.7



District 1 Tree Canopy

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 3,000 ft

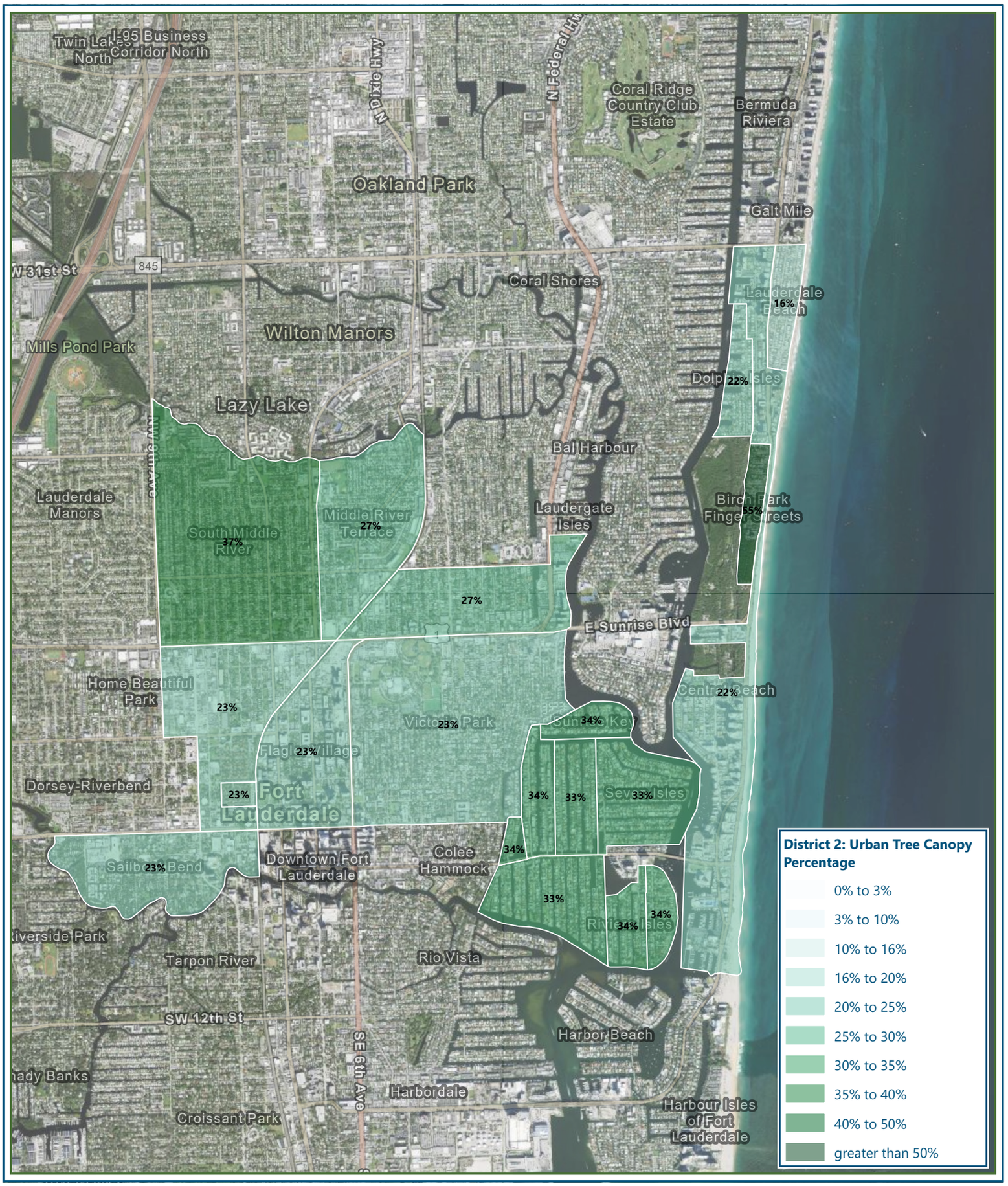
0 1,500 3,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
NAD 1983 2011 StatePlane Florida East FIPS 0901 Ft US
Date Exported: 9/11/2025

www.res.us

Figure 2.8



District 2 Tree Canopy

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 3,500 ft

0 1,750 3,500

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
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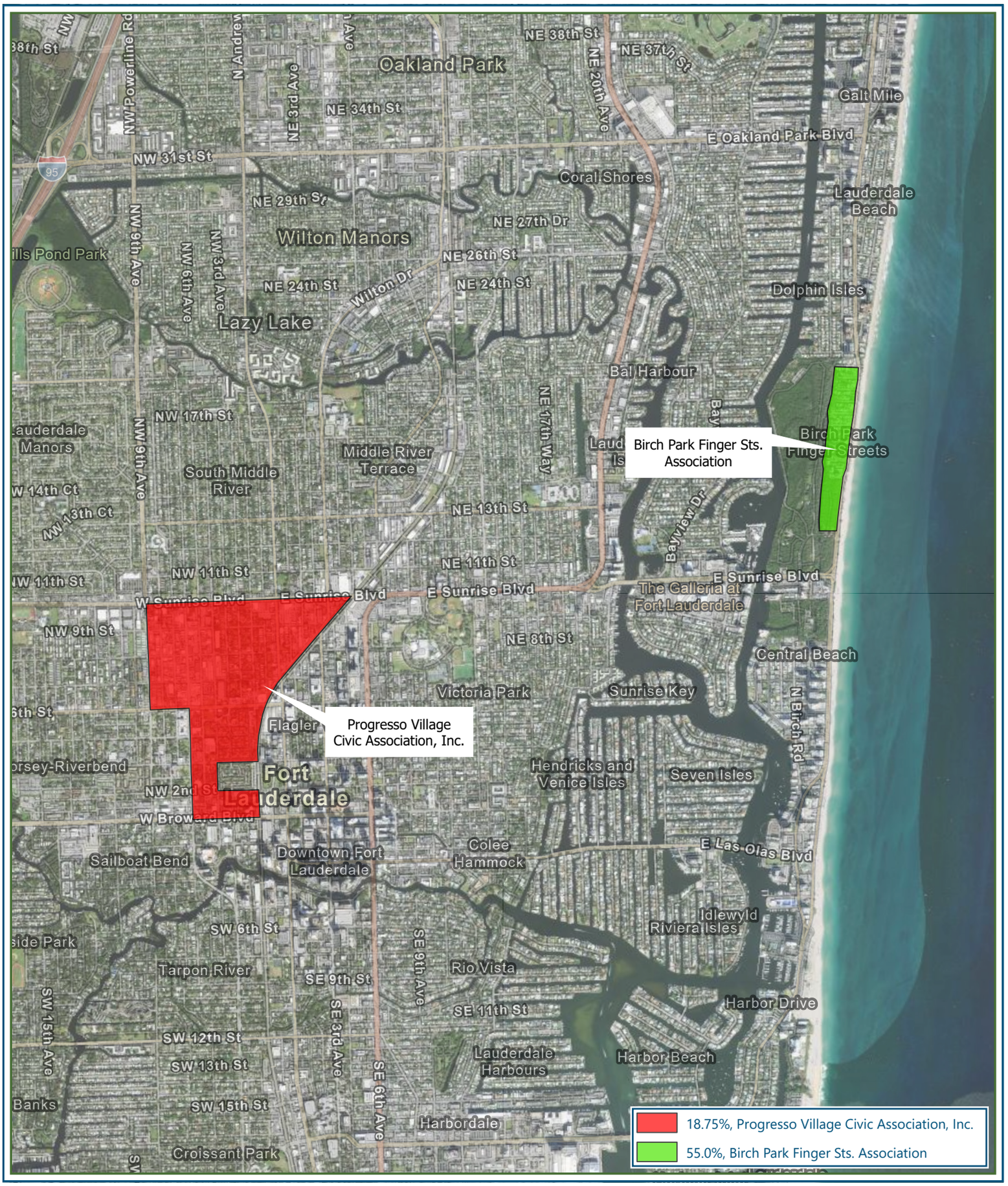
Date Exported: 9/11/2025

www.res.us

Figure 2.9



District 2 Tree Canopy

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 3,000 ft

0 1,500 3,000

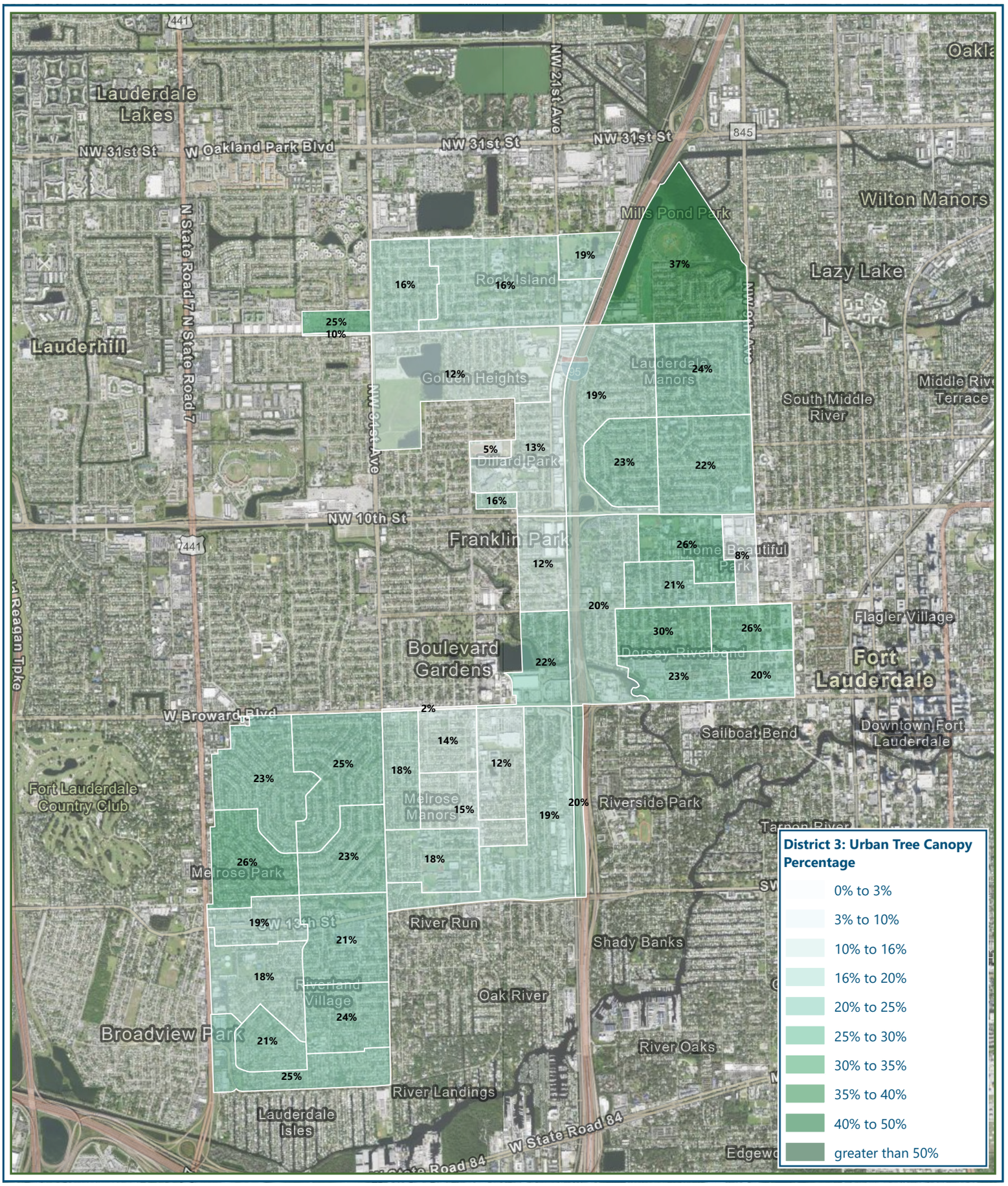
Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
NAD 1983 2011 StatePlane Florida East FIPS 0901 Ft US
Date Exported: 9/11/2025

www.res.us

CAM #25-1186
Exhibit 1
Page 190 of 213

Figure 2.10



District 3 Tree Canopy

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 3,500 ft

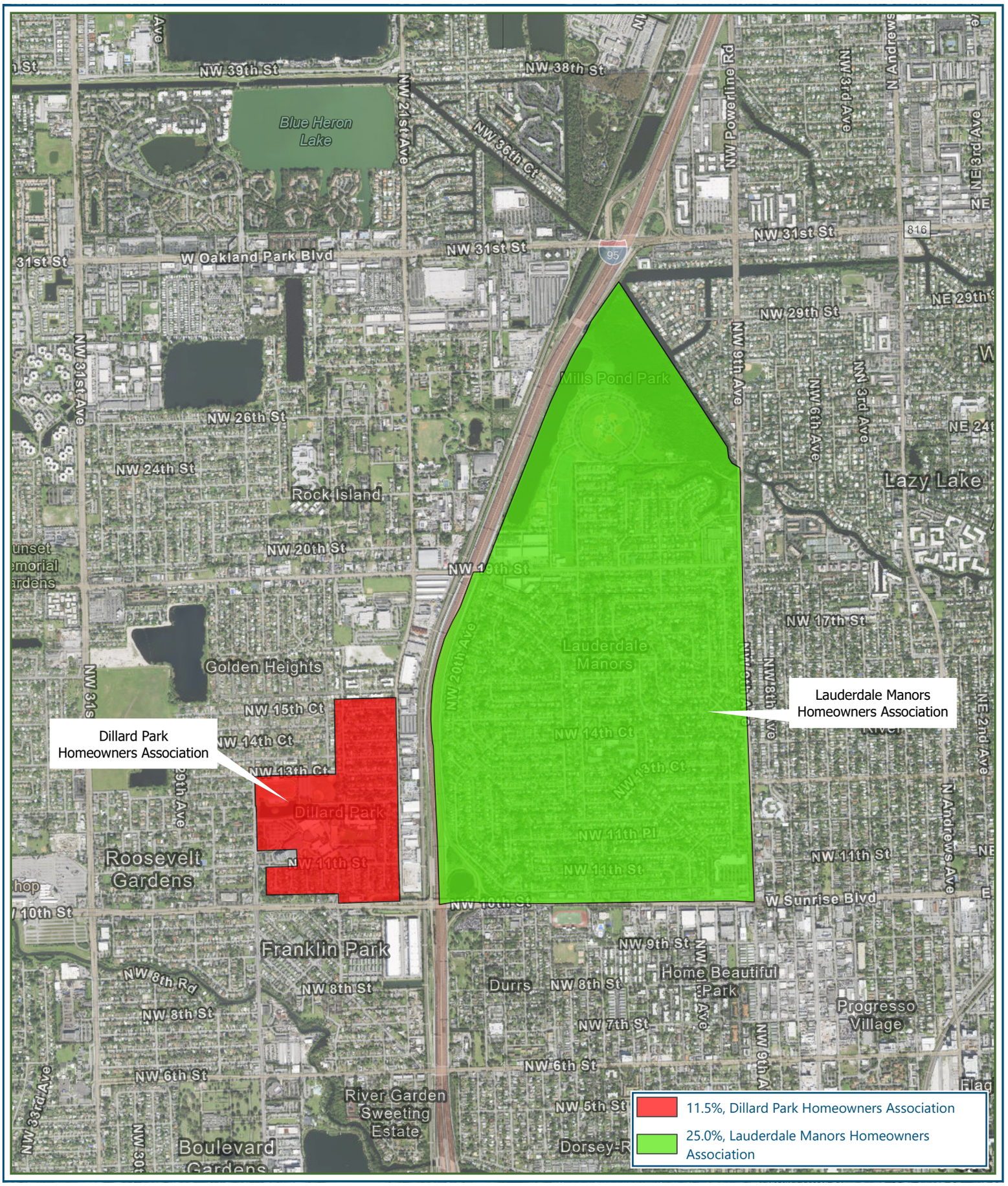
0 1,750 3,500

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
NAD 1983 2011 StatePlane Florida East FIPS 0901 Ft US
Date Exported: 9/11/2025

www.res.us

Figure 2.11



District 3 Tree Canopy

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 2,000 ft

0 1,500 3,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
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Date Exported: 9/11/2025

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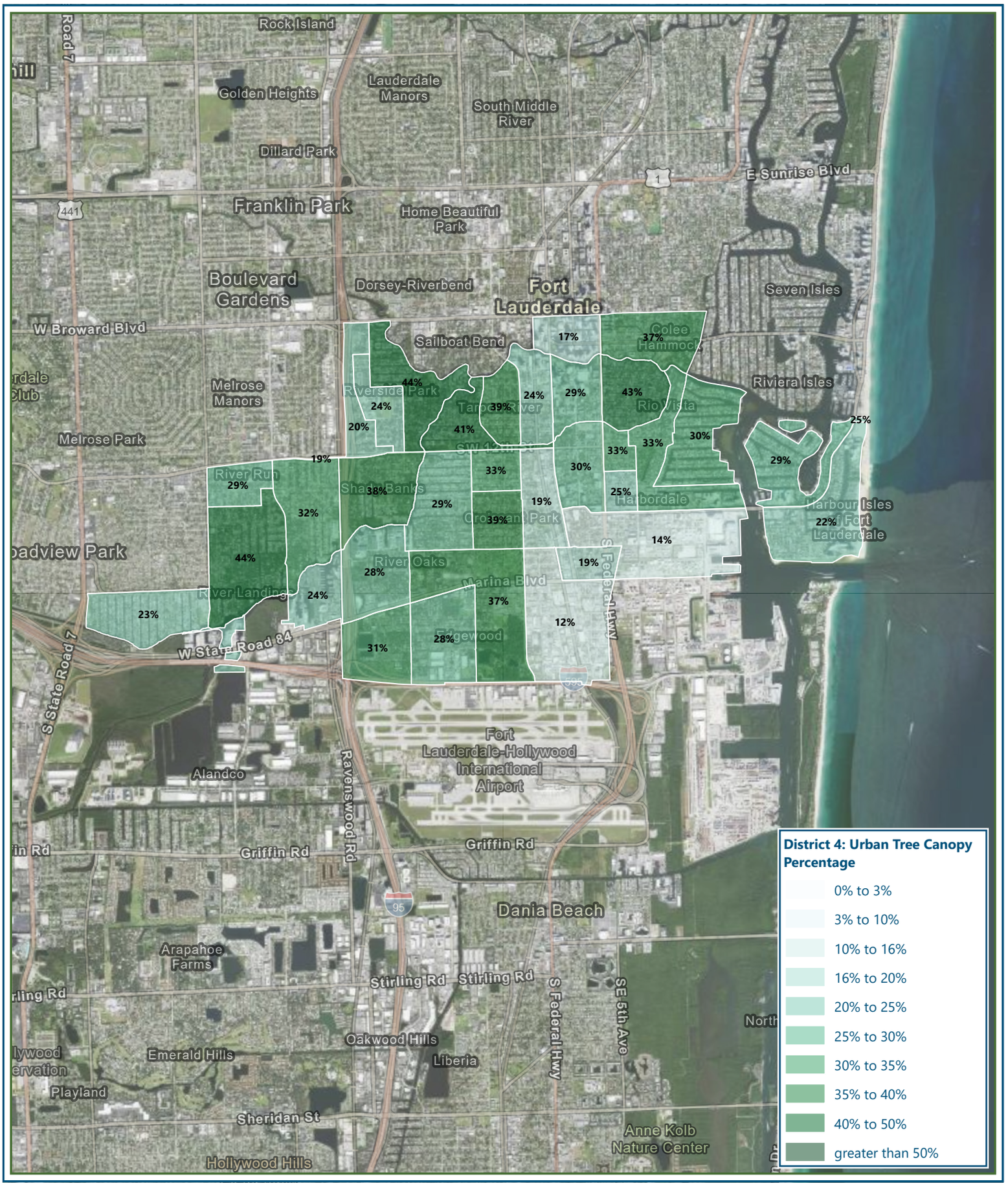
Figure 2.12



District 4 Tree Canopy

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 5,000 ft

0 2,500 5,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
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Date Exported: 9/11/2025

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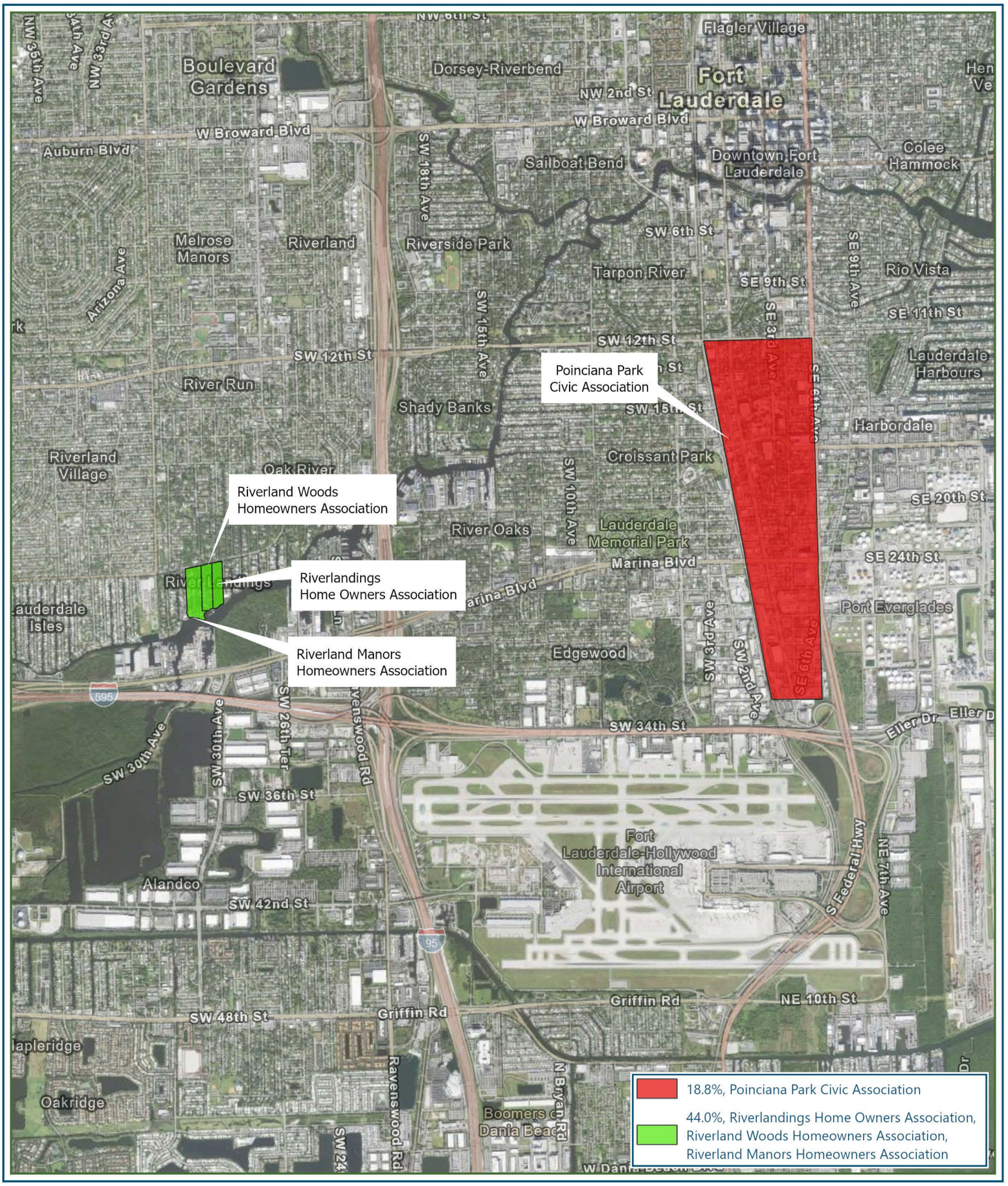
Figure 2.13



District 4 Tree Canopy

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 3,000 ft

0 1,500 3,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
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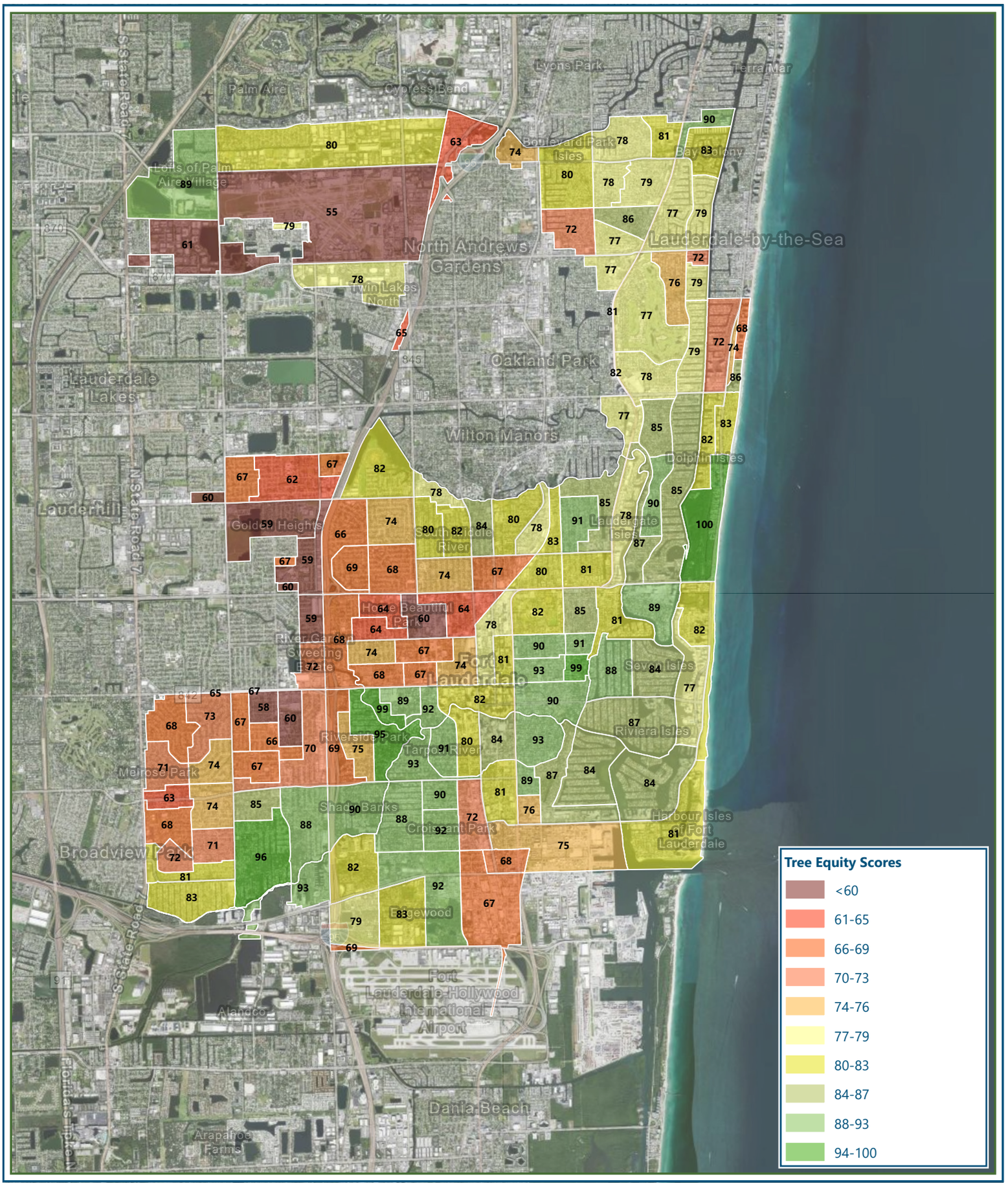
www.res.us

Figure 2.15



Fort Lauderdale Tree Equity Scores

Fort Lauderdale Urban Forestry Master Plan
Broward County, FL

N

1 in = 7,000 ft

0 3,500 7,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
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Date Exported: 9/11/2025

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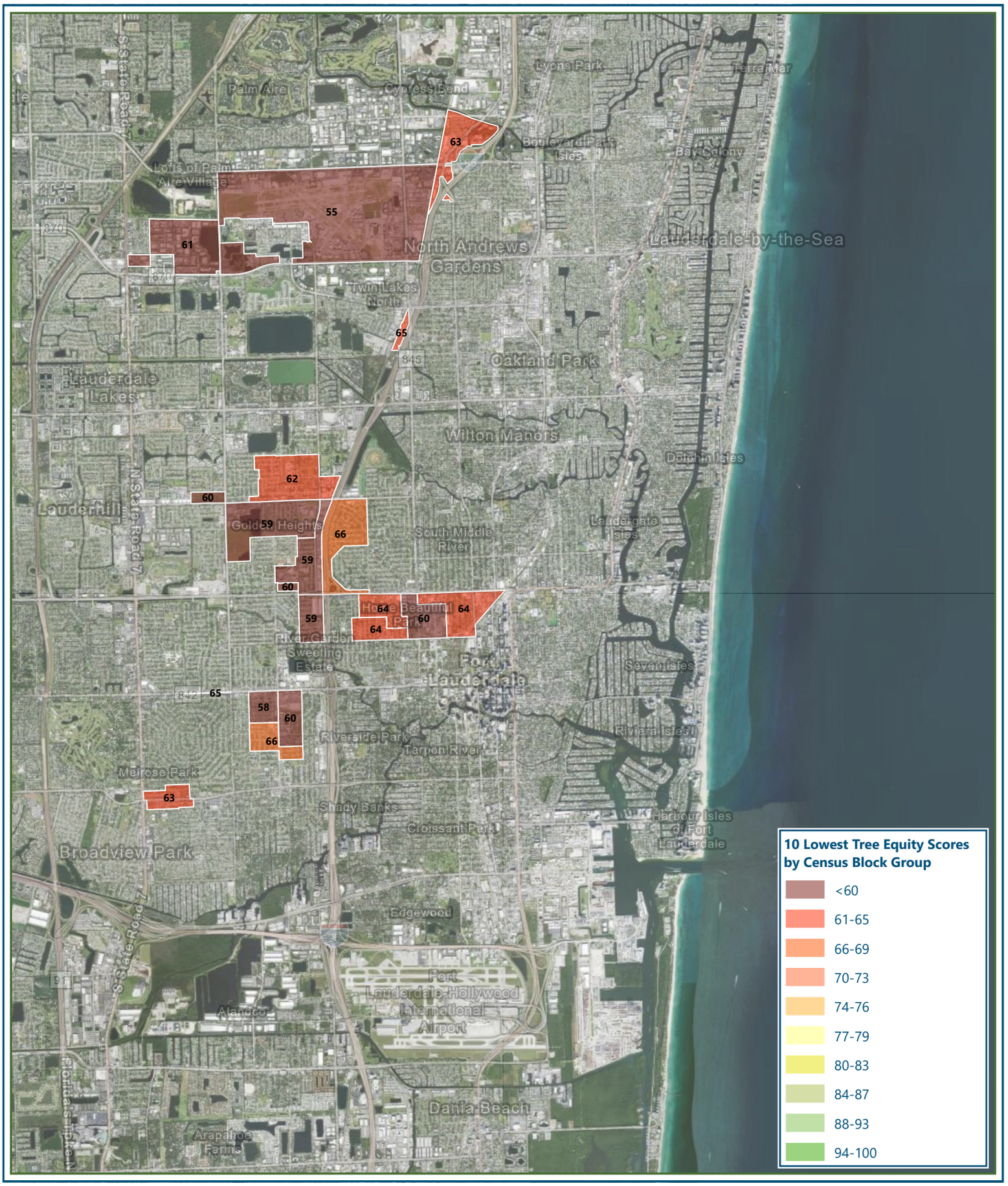
Figure 2.16



10 Lowest Tree Equity Scores by Census Block Group

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 7,000 ft

0 3,500 7,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
NAD 1983 2011 StatePlane Florida East FIPS 0901 Ft US
Date Exported: 9/11/2025

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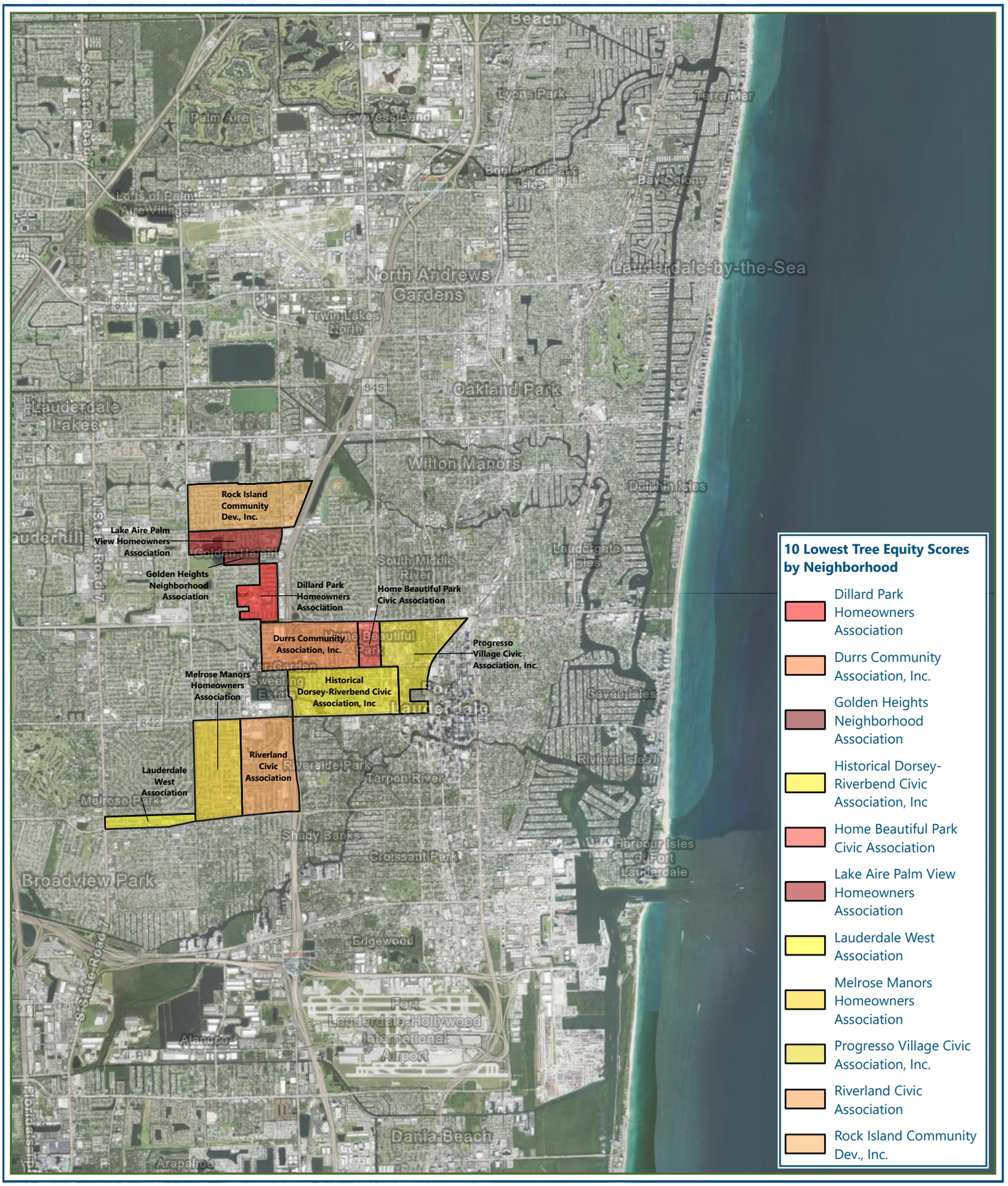
Figure 2.17



10 Lowest Tree Equity Scores by Neighborhood

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 7,000 ft

0 3,500 7,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
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Date Exported: 9/11/2025

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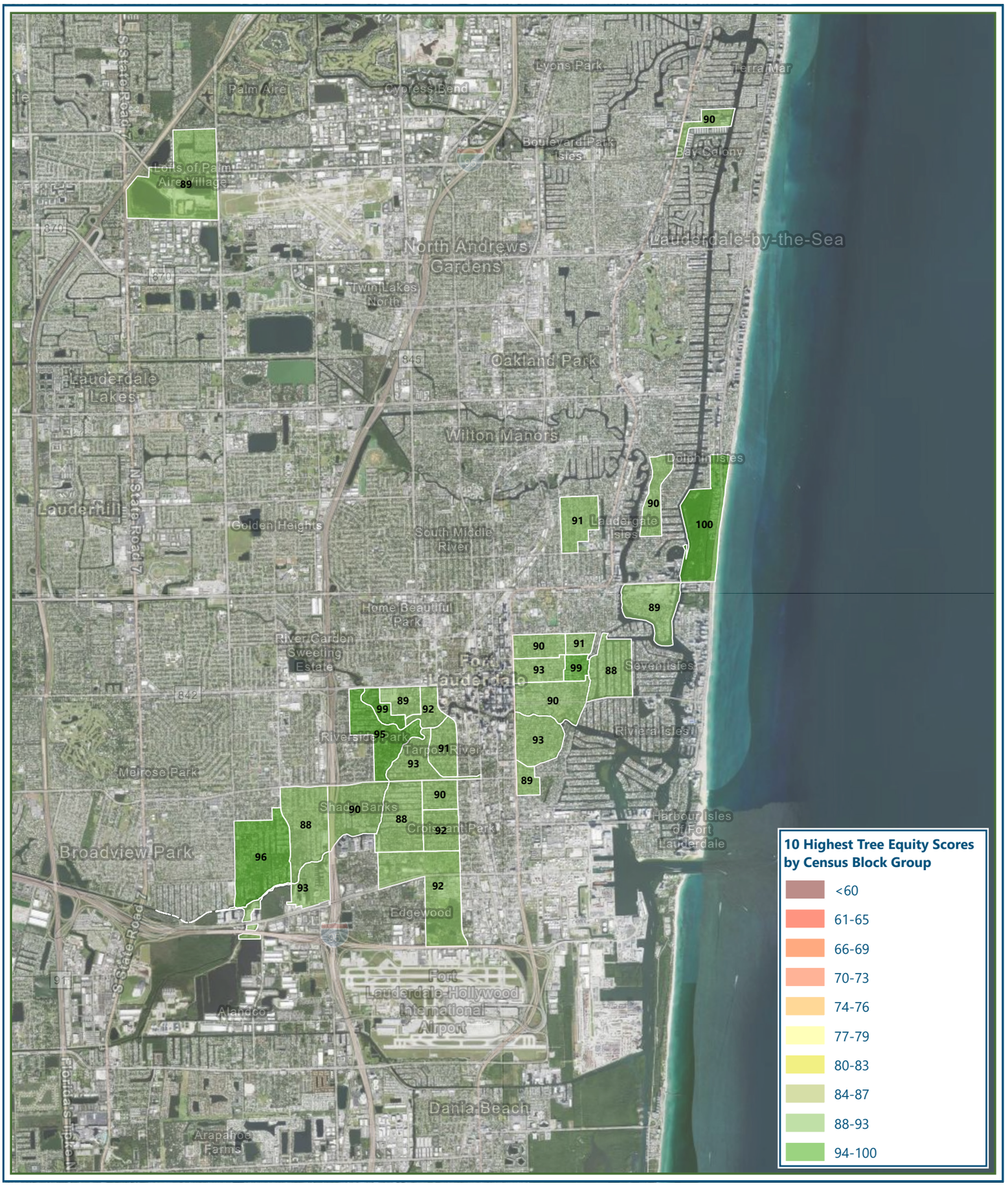
Figure 2.18



10 Highest Tree Equity Scores by Census Block Group

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 7,000 ft

0 3,500 7,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
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Date Exported: 9/11/2025

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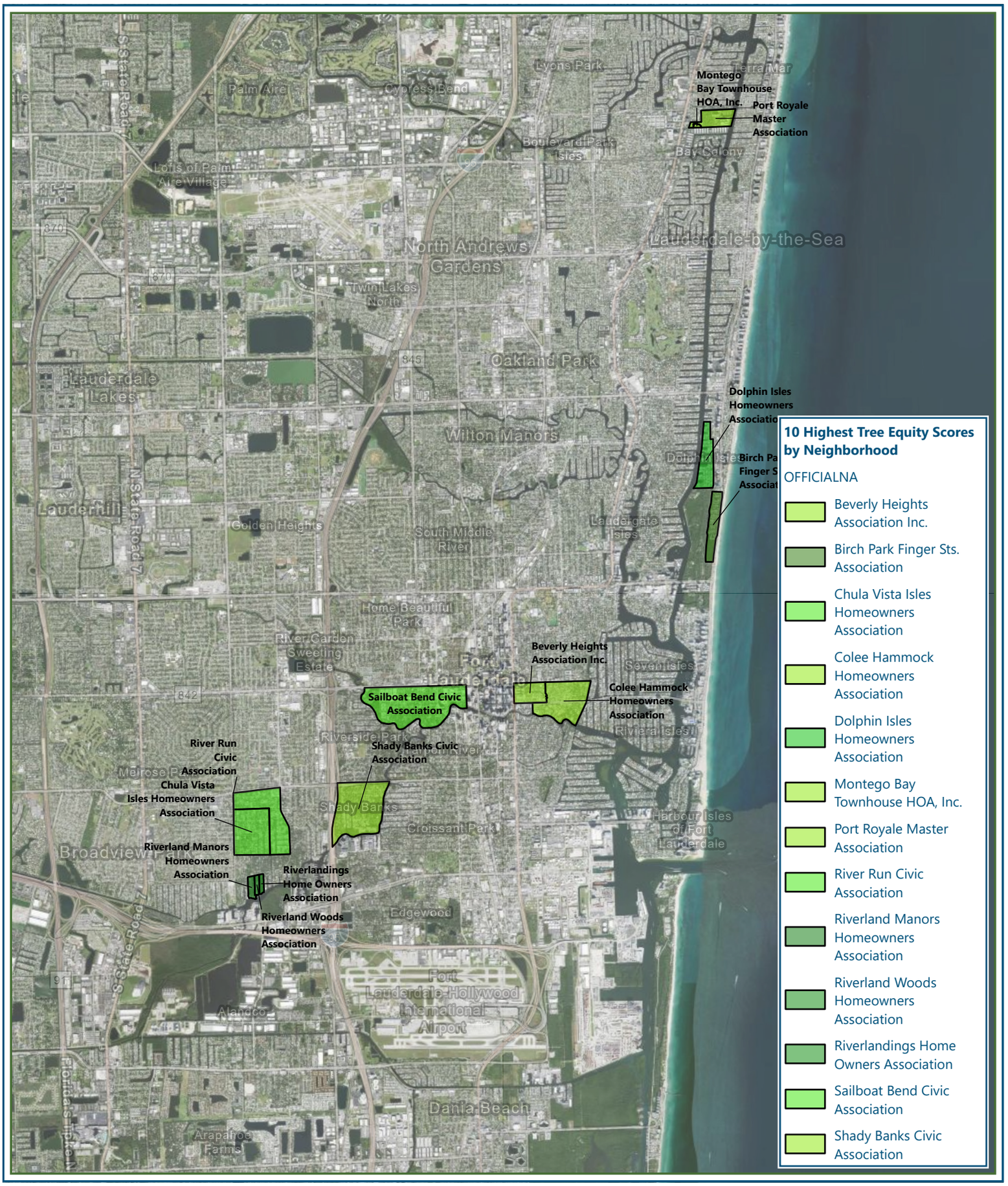
Figure 2.19



10 Highest Tree Equity Scores by Neighborhood

Fort Lauderdale
Urban Forestry Master Plan
Broward County, FL

N

1 in = 7,000 ft

0 3,500 7,000

Feet

Reference: Project limits are approximate. The project boundaries depicted on this map have not been surveyed and are for assessment purposes only. This information is not to be used as final legal boundaries.
Project Number: 110020 Data Source: World Imagery
Spatial Reference:
NAD 1983 2011 StatePlane Florida East FIPS 0901 Ft US
Date Exported: 9/11/2025

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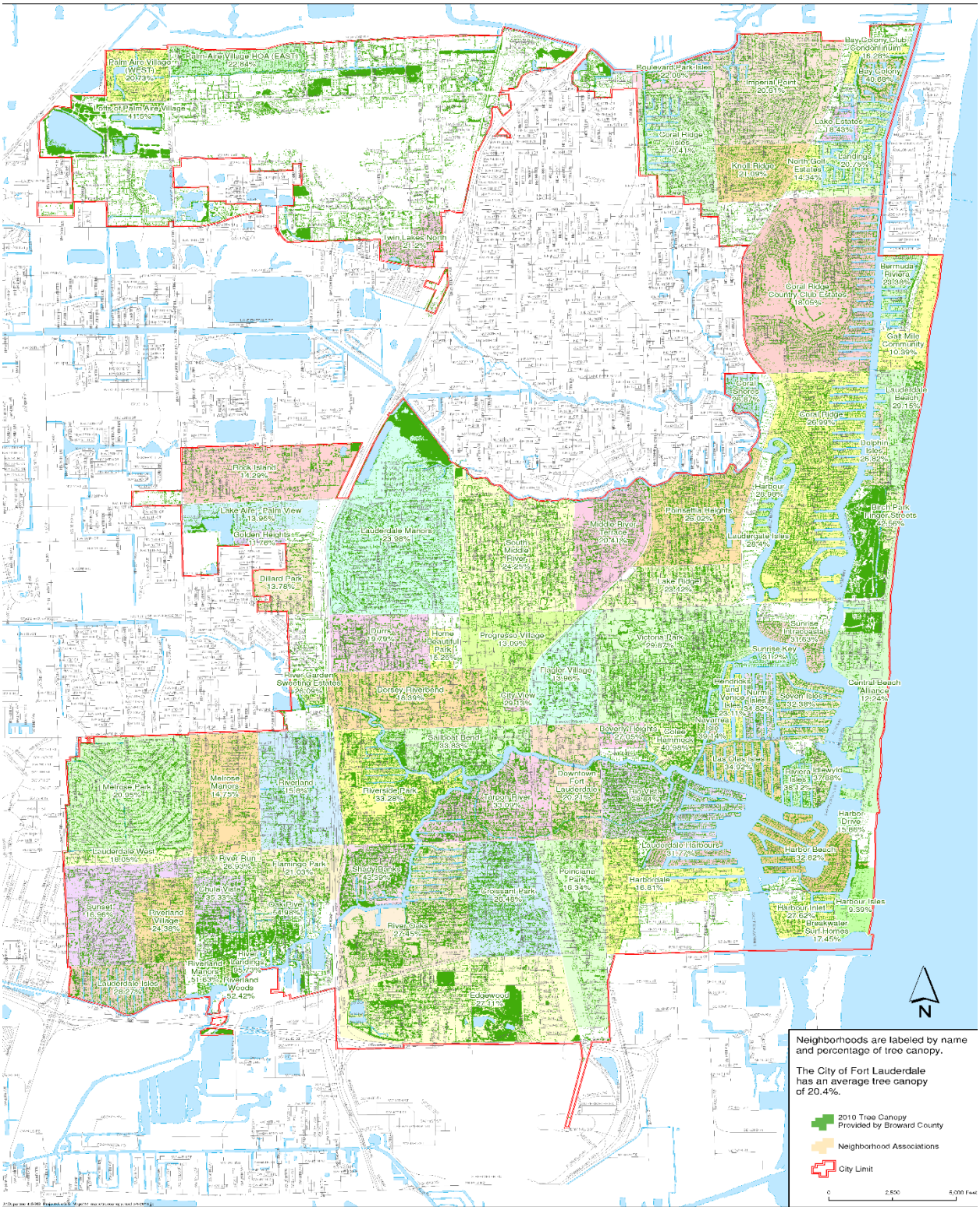
APPENDIX H: 2010 FORT LAUDERDALE CANOPY ASSESSMENT

City of Fort Lauderdale Tree Canopy



APPENDIX I: UFMP RECOMMENDATIONS

Recommendation Number	Recommendation
Action Area 1: Tree Preservation Measures	
1A	Establishment of maximum allowable canopy square footage removal.
1B	Prioritization and expansion of protections and credits for Desirable and specimen trees on development sites.
1C	Tree Preservation Zones for Commission-protected trees.
1D	Florida Statute 163.045.
1E	Expanding allowable uses of the Tree Canopy Trust Fund monies.
Action Area 2: Permit Fees and Penalties	
2A	Periodic review of tree removal permit fee and equivalent replacement value rates.
2B	Levying penalties for tree violations against companies responsible for them.
2C	Educational outreach to local arborists about new policies that affect them.
2D	Consistency in penalties for the damage or removal of specimen trees.
2E	Promotion of the ISA Prescription Pruning Qualification to prune trees in Fort Lauderdale.
Action Area 3: Replacement Standards	
3A	Extension of guarantee period for replacement trees.
3B	Implementation of canopy-based replacement standards.
3C	Categorization of eligible replacement tree species according to preferrable characteristics.
Action Area 4: Tree Preservation Incentives for Developers	
4A	Use of setback modifications to preserve mature trees.
4B	Density-related incentives for the preservation of mature trees.
4C	Use of stormwater impact fees to incentivize the preservation of mature trees.
4D	Transferable canopy credits.
Action Area 5: Homeowner Assistance	
5A	Technical assistance and oversight for homeowners who plant swale trees.
5B	Indirect cost-sharing and technical assistance for tree planting on private property.
5C	Irrigation-related rebates for trees (“Tree-bates”).
5D	Technical assistance to neighborhoods whose Mobility Master Plans prioritize tree planting.
5E	Technical assistance to neighborhoods to develop a Tree Plan.
5F	Technical assistance to homeowners who plant strategic energy-saving trees.
5G	Tree replacement programs for homeowners.
Action Area 6: Staffing	
6A	Proposed new positions.
6B	UFMP Work Group.
6C	Tree Advisory Board.
6D	Urban forestry principles in City projects.
Action Area 7: Invasive Species, Tree Pests, and Diseases	
7A	Voluntary invasive species management program on private land.
7B	Interagency partnership in tree disease outbreak response and prevention.

Recommendation Number	Recommendation
7C	Distribution of traps to participating homeowners with termite-infested trees.
7D	Systematic tracking of public trees infested with termites.
Action Area 8: Tree Planting	
8A	Right tree, right place.
8B	Prioritization of neighborhoods with low canopy and low Tree Equity Scores.
8C	Community tree planting partnerships.
8D	Technical assistance with tree planting and preservation in Fortify Lauderdale Phase I & II neighborhoods.
8E	Technical assistance with tree planting and preservation in neighborhoods impacted by projected sea level rise.
8F	Tree shading requirements in open spaces.
Action Area 9: Mangroves	
9A	Mangrove planting, enhancement, and restoration of eligible City-owned properties.
9B	Pilot mangrove planting program on private property.
9C	Replacement of invasive vegetation with mangroves.
9D	Interdepartmental coordination to ensure long-term mangrove maintenance.
9E	Pursuit of exempt activities related to mangrove planting, enhancement, and restoration.
9F	Enhancements and out-planting of existing mangrove habitats.
Action Area 10: City Design Practices	
10A	Standard generic plan details/specifications to address or avoid common tree-related infrastructure conflicts.
10B	Standardized streetscapes to reduce tree-related infrastructure conflicts.
10C	Standard generic plan details/specifications to preserve existing trees or specify trees in designs for road and building elevations.
10D	Low impact designs for stormwater management which include trees.
10E	Identification of alternate methods of development to preserve mature trees early in plan review process.
10F	Standard generic plan details/specifications for road improvements accepted by County and State transportation engineers which include street trees.
10G	Designation of desirable trees in areas of interest for all City bid packages.
10H	Reduction of spacing requirements and adjustment of planting space volume for street trees.
Action Area 11: Centralized Tree Databases	
11A	Implementation of a Citywide tree inventory.
11B	Tracking newly planted trees.
11C	Inventory of all specimen and Commission-protected trees.
11D	Use of City Works to track trees impacted by City infrastructure operations.
Action Area 12: Community Engagement	
12A	Increasing frequency of public tree events.
12B	Track trees planted in partnership with community organizations.
12C	Prioritization of neighborhoods with low canopy cover and Tree Equity Scores.

Recommendation Number	Recommendation
12D	Ongoing public engagement.
Action Area 13: Interagency Engagement	
13A	Interagency agreement with Broward County School District.
13B	Acquisition, re-zoning, and restoration of land for conservation.
Action Area 14: Revised Tree Palette	
14A	New species recommendations for Fort Lauderdale's tree palette.
14B	New category recommendations for Fort Lauderdale's tree palette.

ACKNOWLEDGEMENTS

ACKNOWLEDGEMENTS

Laura Tooley, Urban Forester, Sustainability and Special Projects Division, City of Fort Lauderdale

Glen Hadwen, Sustainability Manager, Sustainability and Special Projects Division, City of Fort Lauderdale

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Melissa Doyle, Division Manager, Public Works, City of Fort Lauderdale

Justin Freedman, General Manager, Resource Environmental Solutions

Megan Reising, Assistant Project Manager, Resource Environmental Solutions

Mark Clark, QA/QC Manager, Resource Environmental Solutions

Erin Santora, Senior Manager, Corporate Marketing, Resource Environmental Solutions

Larsen McBride, Consulting Arborist, Resource Environmental Solutions

Kyra Paris, Consulting Arborist, Resource Environmental Solutions

Sheryl Dickey, President & CEO, Dickey Consulting Services

Krishanna Marie Newton, Project Manager, Dickey Consulting Services

Joann Joseph, Project Coordinator, Dickey Consulting Services

Dana Gelman, Public Outreach Project Manager, Dickey Consulting Services

Michaela Conca, Dickey Consulting Services

City of Fort Lauderdale Department of Parks and Recreation, Stormwater Operations, Stormwater Engineering, Landscaping, Zoning, Development Services Engineering, Community Enhancement and Compliance, Urban Design and Planning, Transportation and Mobility, Information and Technology Services, Neighbor Support, See Click Fix, Accela support, and all other staff who participated in internal stakeholder meetings.

All public survey respondents

All public survey participants

The people of Fort Lauderdale

GLOSSARY

GLOSSARY

1. **Canopy** - see canopy cover.
2. **Canopy cover** - The layer of leaves, branches, and stems of a tree or groupings of trees that cover the ground when viewed from above.
3. **Census Block Group** - A statistical subdivision of the US Census, usually containing between 600 and 3,000 people, designed to present data at a neighborhood scale for analyzing demographics, housing, income, and environmental data. Each block group is identified by a unique code within its tract.
4. **Commission-protected tree** - A tree(s) or palm(s) which due to its size, shape, character, age, aesthetic value, species, historical value or any combination thereof declared by the Fort Lauderdale City Commission by resolution to be a locally unique example of a species.
5. **Condition rating** - The qualitative expression of plant health, structure, and form using a scale of numbers, percentages, or both used in analyzing plant condition.
6. **Conifer** - Cone-bearing seed plant, such as a pine tree or a bald cypress.
7. **Critical Root Zone (CRZ)** - The area of soil surrounding a tree's trunk extending in a radius measured from the center point of the tree's trunk deemed necessary for the protection of tree roots located therein and that are critical for the future health and survival of the tree.
8. **DBH** – Diameter at Breast Height. The diameter of the main trunk or trunks of a tree as measured at the standard height ("breast height") of 4.5 feet from the landscape grade.
9. **Desirable tree** - A tree which the City or property owner does not want to remove and for which measures should be taken to protect and retain it. Defined by the City as a tree or palm that does not meet the criteria for specimen trees but requires additional regulatory protection because it is adapted to the cultural and physical conditions at the planting site as determined by plant function and shape, aesthetics, form, longevity, ornamental traits, rarity, and other desirable attributes. Tree or palms determined to be 'heritage', 'champion', 'distinction', 'memorial', 'historic', 'old growth', 'ancient', 'veteran' and similar, as defined by the American Forests National Registry of Champion Trees, may also be considered desirable trees or desirable palm.
10. **Developer** - An individual, company, or organization that invests in, plans, and manages the creation or improvement of land and buildings, often coordinating financing, design, permitting, and construction, with the goal of delivering residential, commercial, industrial, or mixed-use projects.
11. **Equivalent replacement** - Tree(s) or palm(s) considered to be equal in species and size to the tree(s) or palm(s) removed.
12. **Equivalent value** - A monetary value that reflects the calculated cost of the equivalent replacement of a tree or palm, as provided in Sec. 47-21.15.G of the City's Code of Ordinances.
13. **Establish** - Watering mulching, fertilizing, and other activities required to make a newly planted tree self-sufficient in its ability to grow into a mature tree.
14. **Establishment** – The act of establishing a tree; or, the state at which a tree is established.
15. **External stakeholders** – Residents, community organizations, businesses, and other non-governmental entities of Fort Lauderdale.
16. **High quality tree** - Any species of tree which is native to South Florida and whose structural and biological characteristics make it uniquely suited to the urban environment, such as a low propensity for trunk or branch failure, drought tolerance, and long average lifespan.
17. **Internal stakeholder** – A person or group of people employed by the City of Fort Lauderdale whose duties and activities impact, overlap, or otherwise affect the urban forest.
18. **Invasive tree** - A tree species listed by the Florida Invasive Species Council (FISC) as being invasive in the State of Florida. Species are listed as invasive if they are not native to Florida and if they are altering native plant communities by displacing native species, changing community structures or ecological functions, hybridizing with natives, or if they have increased in abundance or frequency but have not yet altered Florida plant communities or ecological function.

19. **Landscaping** - Any combination of living plants (such as grass, groundcover, shrubs, vines, hedges, palms, or trees) and non-living landscape material (such as rocks, pebbles, sand, or mulch), walls, fences, or decorative paving materials installed for functional or aesthetic reasons at ground level and open to the sky.
20. **Large tree** - A tree whose trunk is 14 inches DBH or greater, whose canopy is at least 30 feet in diameter, and which is over 40 feet tall upon reaching maturity.
21. **Low Impact design** - Practices that minimize changes to the site's soil levels and composition by preserving existing landscape, shrubs, and/or trees, or both, and other natural features.
22. **Mature tree** - A tree which is capable of reproducing, has established such that it no longer requires routine inputs from humans to survive, and/or is able to deliver measurable benefits whose value exceeds the costs of maintaining it.
23. **Medium tree** - A tree whose trunk is 10-13 inches DBH, whose canopy is 15-30 feet in diameter, and which is 25-40 feet tall upon reaching maturity.
24. **Native tree** - Any tree species with a geographic distribution indigenous to all, or part, of the state of Florida as identified in the *Guide to the Vascular Plants of Florida,* 3rd edition, (Wunderlin & Hansen, 2011).
25. **Palm** - A plant belonging to the family Palmae, distinguished by having unbranched single or multi-trunks crowned by large, compound pinnate, or palmate leaves/fronds.
26. **Preservation** – The practice of retaining a tree, i.e., not removing it. This does not exclude performing maintenance on it that is necessary to maintain its health, stability, or ability to deliver benefits.
27. **Private tree** – A tree planted on privately owned property.
28. **Public lands** - Any land and interest in land, within the City of Fort Lauderdale, owned by the United States, any state of the United States, the State of Florida, a political subdivision, or agency of the State of Florida, Broward County, the Broward County School District, single and multipurpose special district, single and multipurpose public authority, the City Fort Lauderdale or a separate legal entity or administrative entity created under the Florida Interlocal Cooperation Act of 1969.
29. **Public tree** – A tree planted on property owned by a public entity, such as a city, county, state, or government agency.
30. **Replacement tree** – A tree or trees required to be planted per Fort Lauderdale Code and tree removal permit requirements to replace a regulated tree which is removed for any reason.
31. **Right-of-way** - Land provided by dedication, deed or easement which is devoted to, required for or intended for the use by the public as a means of public traverse.
32. **Shade tree** - A single-trunked dicot or conifer tree which by virtue of its natural shape provides at maturity a minimum shade canopy thirty (30) feet in diameter as listed in the table of tree evaluation.
33. **Small tree** - A tree whose trunk is 7-10 inches DBH, whose canopy is 10-15 feet in diameter, and which is less than 25 feet tall upon reaching maturity.
34. **Specimen tree** - Any tree which meets all of the following criteria:
    a. Specifically listed in the Fort Lauderdale's Tree Classification List as maintained by the Department.
    b. A condition rating of 60%, or greater, as calculated using the CTLA *Guide for Plant Appraisal*, 10th edition.
    c. A diameter at breast height (DBH) in accordance with the following:
        i. 18 inches or greater for Large Trees; or
        ii. 13 inches or greater for Medium Trees; or
        iii. Eight inches or greater for Small Trees.
    d. Trees within any of the following categories are not considered specimen trees for the purposes of this Section:
        i. Fruit trees grown for the commercial production of fruit;

ii. Trees and palms planted and grown in a state-certified plant nursery or botanical garden for sale to the general public;
iii. Trees and palms classified as invasive pursuant to the Department of Agriculture and Consumer Services, Chapter 5B-57, Florida Administrative Code (FAC), as amended, and the Florida Invasive Species Council (FISC) Invasive Plant Species List, Category 1, as amended;
iv. Trees which are Class D and lower, as listed in the City's Tree Classification List as maintained by the Department;
v. City Commission Protected Trees and Palms.

35. **Standard plans** – A set of development plans prepared by the City which can be commonly implemented by developers or by the City itself.
36. **Streetscapes** – the visual and functional character of a street as defined by the design and arrangement of its elements, such as sidewalks, street trees, lighting, signage, furniture, landscaping, and building frontages, that shape how people experience and use the street.
37. **Street tree** - A tree which is located within twelve (12) feet of the edge of pavement or curb of a street or such other distance as determined by the department in accordance with this section.
38. **Swale** – A shallow, vegetated area designed to slow, capture, and filter stormwater runoff, allowing it to infiltrate into the soil and reduce flooding, erosion, and water pollution. In Fort Lauderdale, this is often the vegetated area between a sidewalk and curb.
39. **Technical assistance** - Advice, resources, and recommendations provided by experts to assist with navigating the technical components of a project, goal, or objective.
40. **Tree** - A woody perennial plant, possibly shrubby shrub-like in form when young, with one main stem or trunk which naturally develops diameter and height characteristics of a particular species.
41. **Tree abuse** - Any action or inaction which does not follow acceptable trimming practices as established by the American National Standards Institute, A300 standards, or as prescribed in the regulations of the Fort Lauderdale Code of Ordinances.
42. **Tree inventory** – A collection of data for a given group of trees which may include but is not limited to location, species, DBH, height, canopy width, planting space size, maintenance recommendations, and infrastructure conflicts.
43. **Tree owner** – The entity who owns a tree, usually the owner of the land upon which the tree is growing, unless otherwise noted.
44. **Tree removal** – Any act to eliminate a palm or a tree.
45. **Urban forest** - The collection of trees that grow in a city.
46. **Urban forestry** - The sustained planning, planting, protection, maintenance, and care of trees, forests, greenspace and related resources in and around the city for economic, environmental, social, and public health benefits for people.
47. **Urban forest equity** – The principle and practice of ensuring that all communities—regardless of income, race, ethnicity, or neighborhood location—have fair and just access to the benefits of trees and green spaces, including shade, improved air quality, cooling, stormwater management, and recreational opportunities.

REFERENCES

REFERENCES

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