

## **State of the Forest End FY2023**

The Annual Internal Report on the  
City of Tampa Parks and Recreation – Forestry Division Program

11/09/2023

Prepared by:

**Eric Muecke, R.F.**

Urban Forestry Manager, Parks and Recreation Department

NC Registered Forester 1673, ISA Certified Arborist IL-0709, TRAQ qualified

City of Tampa / 3402 W. Columbus Drive / Tampa, Florida 33607

p: (813)274-5137 / e: [Eric.Muecke@tampagov.net](mailto:Eric.Muecke@tampagov.net)

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November 2023

Welcome to the FY2023 State of the Forest report!

The State of the Forest is an internal report on the accomplishments of the City of Tampa Parks and Recreation Forestry Division for Fiscal Year 2023.

The highlights include:

- The Tree-Mendous Tampa planting program – a free tree planting program for residents requesting trees in the right-of-way in front of their house.
- A review of the completed tree emergency, tree removal and tree pruning work orders.
- An overview of the interaction with other City Departments/Entities that also deal with trees in our urban canopy.
- A map of the current work orders awaiting completion as we head into FY2024.

After reviewing the materials, we compare Tampa to other communities our size and their Forestry Programs. We evaluate the Strengths, Weaknesses, Opportunities, and Threats to our Forestry Team and the urban forest. We wrap up the report with recommendations for improvement to the Forestry program.

As always, the City of Tampa Parks and Recreation Forestry Division looks forward to Transforming Tampa's Tomorrow!

Best,

*E.P. Muecke*

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## End FY2023 Urban Forestry Division Status

### Summary

The City of Tampa lacks a public tree ordinance assigning any one City Department or Division the responsibility to determine the planting, management, and removal of trees in the public right-of-way and parks. Instead, in Chapter 27 Zoning and Development, the Forestry Division receives an exemption from obtaining permits for:

- Pruning (limb/root) of any protected or grand tree on public land or public right-of-way,
- Removal of any protected tree or hazardous/dangerous grand tree, to mitigate any potential risk to the safety of the general public, on public lands or public rights-of-way. *(Sec. 27-284.1.3. - Other exemptions)*

The “urban forest”, for this report, means the street trees (or right-of-way trees) and the park trees.

### Services Provided by the Forestry Division

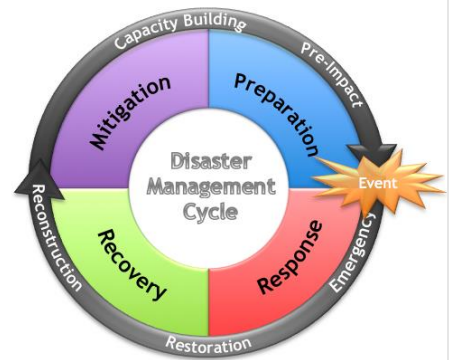
- Primary goal: maintain a resilient, healthy, and expanding urban forest canopy
- 24/7 response to emergency tree failures on streets and parks **(906 emergency responses in FY2023, 47% of work orders completed)**
- Plant, prune, maintain, and remove right-of-way trees (1,400 miles + medians)
- The Tree-Mendous Tampa Program is free and provides individuals and neighborhood associations with trees planted on City street rights-of-way (up to 5 per year, if adequate space exists).
- Pruning, management, and removal of park trees in 194 parks, greenways, green spaces, and cemeteries
- Seventeen (17) personnel
  - Manager (Certified Arborist, NC Registered Forester, TRAQ qualified)
    - One (1) Tree-Mendous Tampa Project Specialist
    - One (1) Contract Monitor (Certified Tree Care Specialist)
    - One (1) Site Supervisor (Certified Arborist)
      - Two (2) Service Crew Leader III (one Certified Arborist)
      - Three (3) Service Crew Leader II
      - Two (2) Automotive Equipment Operator II
      - Six (6) Tree Trimmer II
- Utilize contracted services for large projects, storm damage, special populations, area tree pruning, stump removal, and tree removals. Prior to FY2019, funded at \$100K annually. FY2019, \$450K; FY2020-21, \$465K; FY2022, \$545K; FY2023, \$695K.

Due to the inefficient results of responding to individual service requests, it is recommended that Tampa develop Area Management Teams to reduce the number of tree-related emergencies, address the management needs of street and park trees, and reduce the number of incoming requests. This is addressed in the Forestry Division Strategic Plan.

### Area Management Teams (Best Management Practices)

All street and park trees should be inspected and maintained on a cycle. **Without a street tree inventory, the cycle cannot be determined.** The Goals for management would be:

1. Healthy street and park trees:
  - a. Raise the canopy for eventual permanent 16-foot clearance over the road and a balanced canopy over the sidewalk
  - b. Remove all deadwood greater than four-inch diameter
  - c. Structural prune weak attachments and co-dominant stems
  - d. Directional and Crown reduction pruning for clearance (house, streetlight, street sign, line of sight, athletic field, etc.)
  - e. Training pruning of young trees
2. Identify dead and dying trees and schedule removal, stump removal and evaluate for replacement.
3. All this work would be considered Mitigation in the Disaster Management Cycle. **This would lead to greater Preparation, a more efficient Response, and a faster Recovery.**



The benefits include:

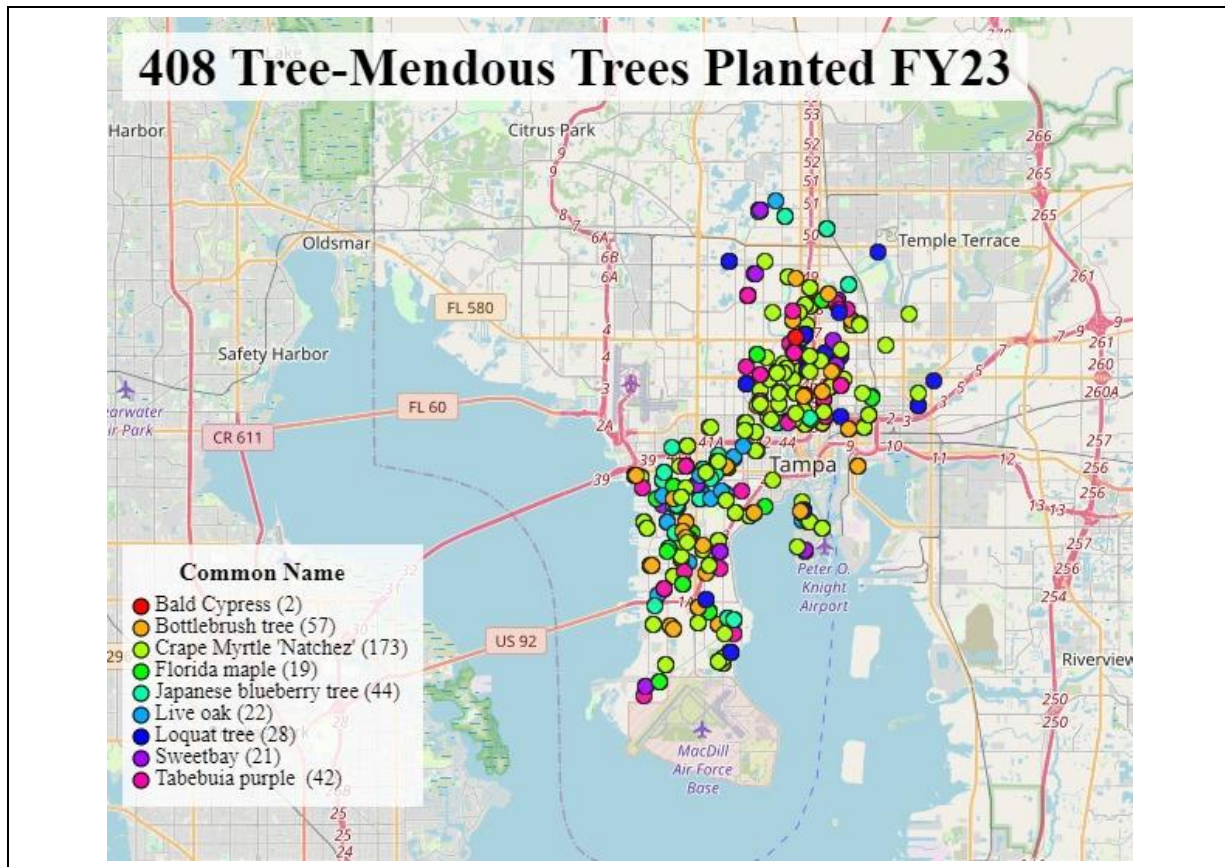
- The City's street and park trees would be pruned on a cycle, decreasing service requests
- A reduction in emergency responses
- More resiliency in the tree population to survive insect/disease outbreak, hurricanes, and storms
- A reduction in tree risk and liability

The Administration has reorganized Development & Growth Management, realigned the Neighborhood and Community Affairs Administration, and established a new Sustainability and Resilience Officer. The Urban Forest Canopy Assessment was last completed in 2021 indicating a 3% loss of overall canopy. The City should use this information to determine how it plans to improve the urban canopy and update the Urban Forest Management Plan with the Natural Resources Advisory Committee and Internal Technical Work Group.

The City has spent over 50 years focused on tree preservation and not urban forestry management. It will take many years to bring the tree management program up to date and proactively manage our natural resource.



## Tree-Mendous Tampa Program FY2023



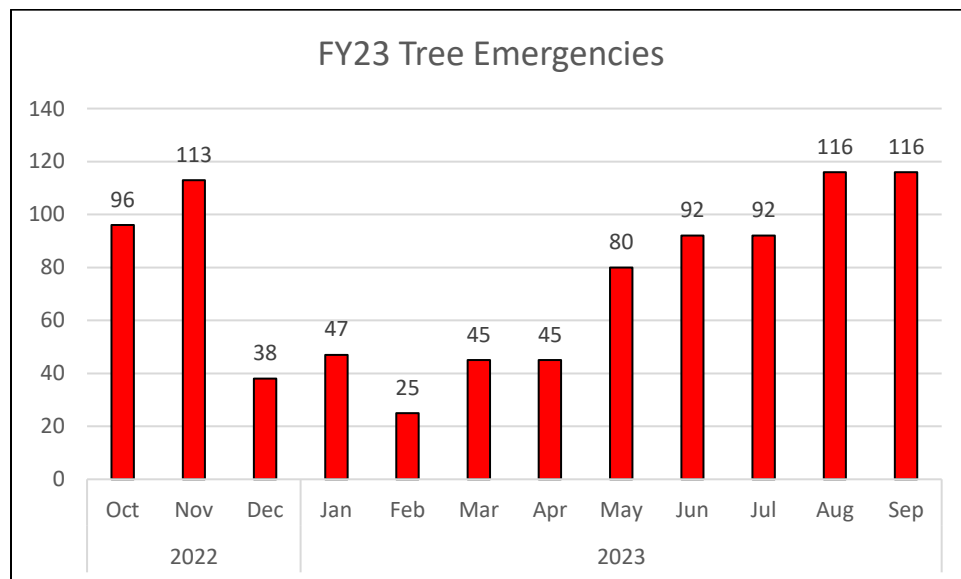
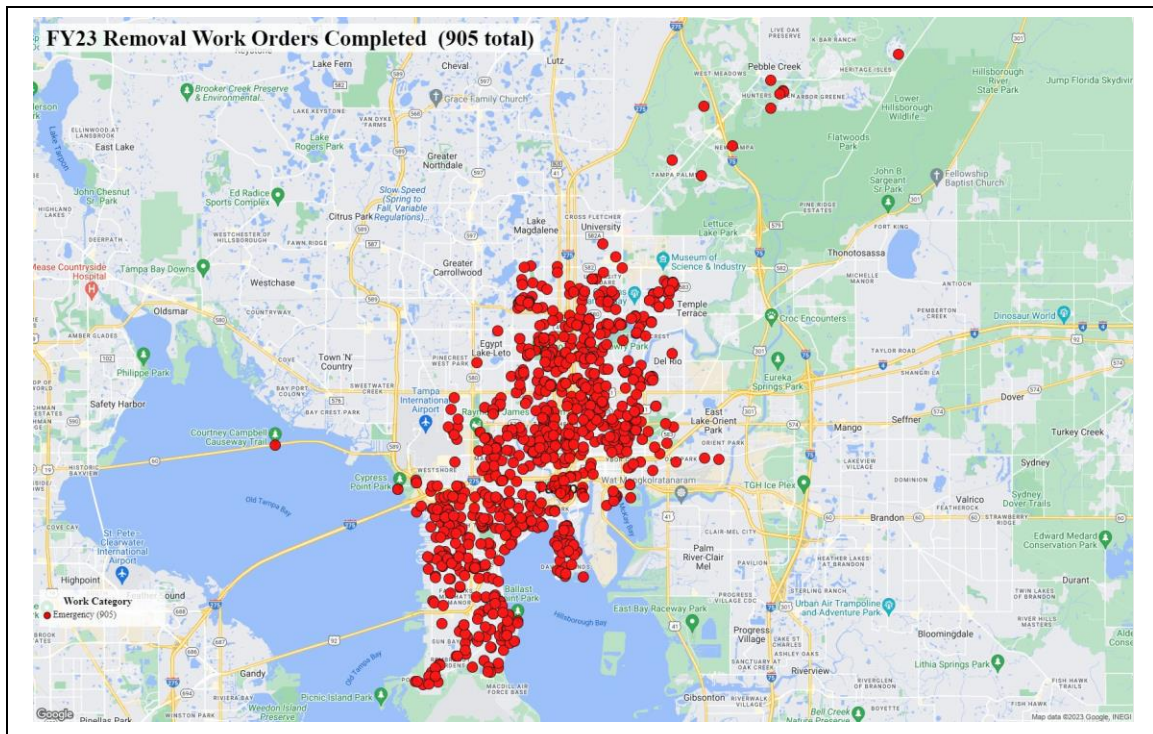
Common Name	%
Bald Cypress	0.49%
Bottlebrush tree	13.97%
Cape Myrtle 'Natchez'	42.40%
Florida maple	4.66%
Japanese blueberry tree	10.78%
Live oak	5.39%
Loquat tree	6.86%
Sweetbay Magnolia	5.15%
Tabebuia purple	10.29%

The Forestry Division Tree-Mendous Tampa tree planting program provided 408 trees to residents who were willing to provide watering for one (1) year. Residents are allowed to choose their species and are only required to choose utility appropriate species when overhead utilities are present. **Most residents choose trees based on smaller mature size and aesthetics rather than the economic, environmental, and social benefits. This leads to a decrease in Canopy.**

**There are 5 tools needed for successful Tree Canopy Resiliency, Preservation, and Expansion:**

1. **Preservation of the trees with the most potential** – Saving only the biggest means that you are at the maximum canopy for that tree. Saving mid-size trees means that the canopy will expand in future years. Choose wisely.
2. **Aggressive planting** in public spaces is required, but only goes so far. The majority of property in a city is privately owned by people, businesses, or corporations. Property owners and developers must be engaged and encouraged to establish large-canopy species on their private property. Right tree, right place must be the guideline.
  - a. The 2021 Canopy Assessment indicates that only 4.5% of planting sites that are adequate for large canopy trees are on Public Property. (2021 Canopy Assessment pages 70-71)
3. **A well-staffed and funded street/park tree management program** is required. The City should lead by example.
  - a. Street tree inventories are key to urban forest management and identifying potential planting sites.
  - b. Pruning cycles increase resiliency and extend the life of trees. This is the number one way to catch insects and diseases early.
  - c. Structural pruning every 3 years, over the first 12 years, after planting determines the future resilience and sustainability of the tree.
  - d. Residents that lose a large tree due to tree failure are averse to planting large-canopy species as replacements.
4. **Necessary space above and below ground** to plant, establish, and maintain large canopy species. The emphasis needs to be on locations for large canopy species.
  - a. Tree-Mendous Tampa planting guidelines
    - i. Avoid infrastructure conflict, utility conflict, prevent sight obstructions
5. **A Citywide Vision of a Healthy, Resilient and Managed Urban Forest**

## Completed Emergency Work Orders



In FY2023, Forestry responded to 905 emergencies, accounting for 47% of work orders completed.

### **What is an Emergency?**

- Trees in the right-of-way that experience large branch or tree failure. These failures may affect the public right-of-way or private property.
- Trees in the City parks that experience branch or tree failure. These failures may affect a City park or private property.
- Trees on private property that experience branch or tree failure affecting the public right-of-way or City parks.
- Trucks and/or City vehicles stuck under low leads or that have knocked down limbs.
- Vehicle accidents involving trees in the public right-of-way.

### **What is the Forestry Response?**

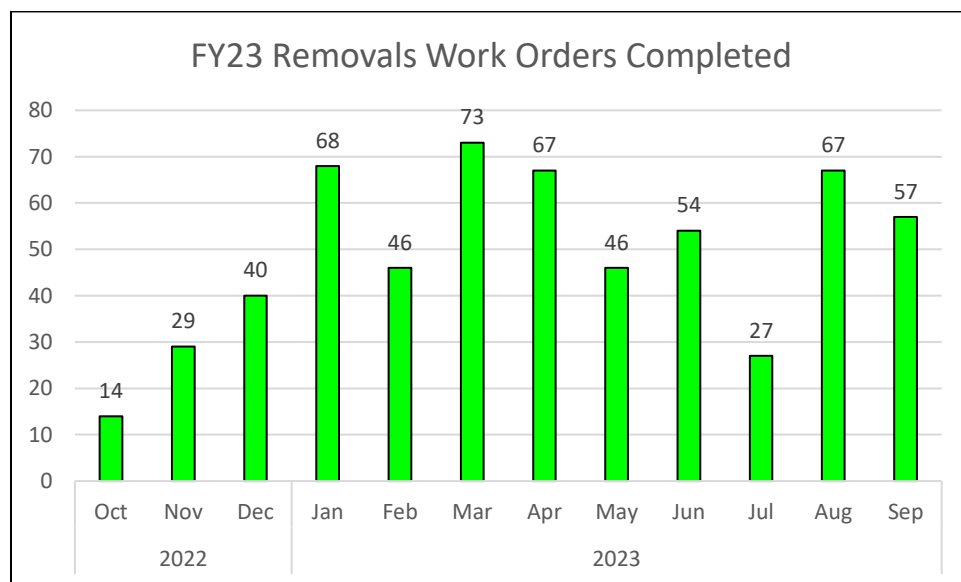
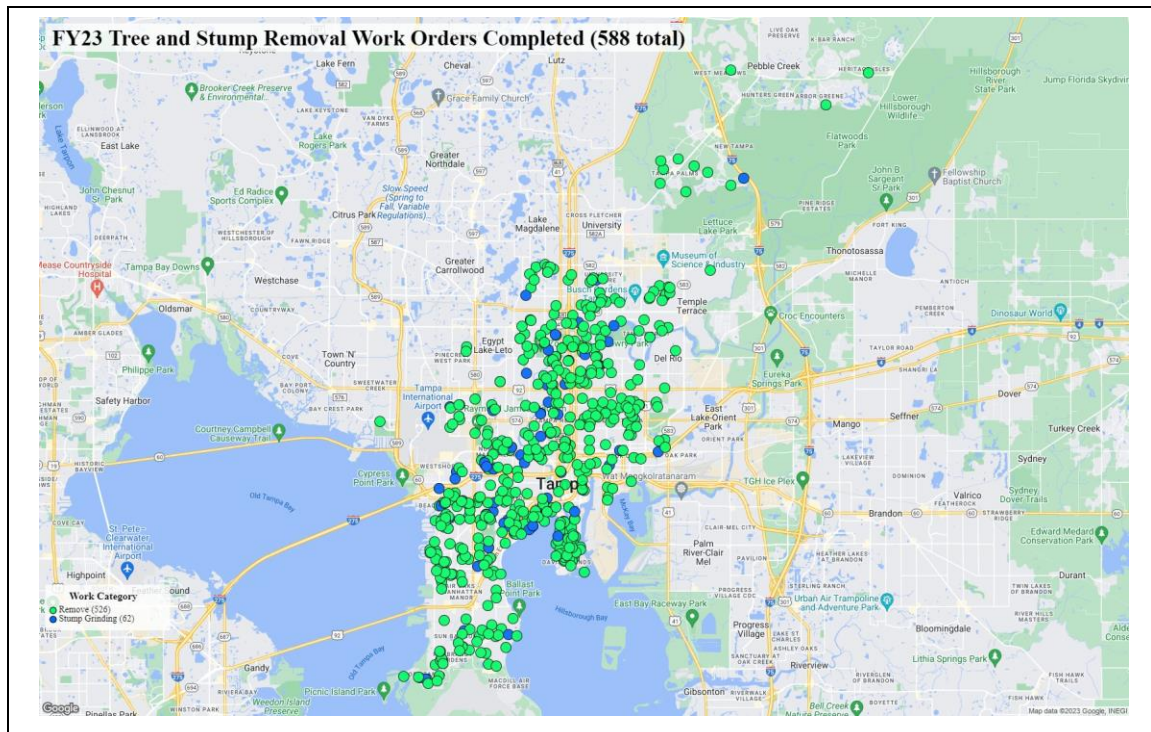
- Weekdays (7:00am – 3:30pm) – Forestry crews are re-directed from pruning and removal projects to provide response.
- Nights (M-F 3:30pm – 12:00am) and Weekends (8:00am – 12:00am) – A 2-person forestry crew is on call and responds to clear the road. The debris is stacked in the right-of-way to be picked up on the next scheduled workday.
- Use of Contractors – large-scale park cleanup projects are contracted out due to Forestry staffing. Technical removals involving a crane are contracted.
  - Park and Street storm damage in FY2023 - \$297,800
  - Cemetery storm cleanup FY2023 - \$32,340

### **What are the Implications?**

- **Staff is too busy responding to emergencies to address pruning and removal requests during storm season.**
- **Forestry had to rent two (2) lightning loaders for storm response due to equipment age and breakdowns.**
- Forestry inspections take 6-8 weeks during storm season due to staff responding to emergencies.
- Forestry does not provide an estimate for work completion during storm season.
- Risk Management deals with numerous claims annually due to public tree failure damage to private property (34 claims FY2023).
- Significant backlog of work orders starting FY 2024 (259 open work orders).



## Completed Tree Removal/Stump Removal Work Orders



In FY2023, Forestry completed 588 tree and stump removal work orders.

### **Why are trees removed?**

- Dead, dying, diseased trees
- Structurally compromised trees
- Trees with significant structural failures
- High risk of failure trees

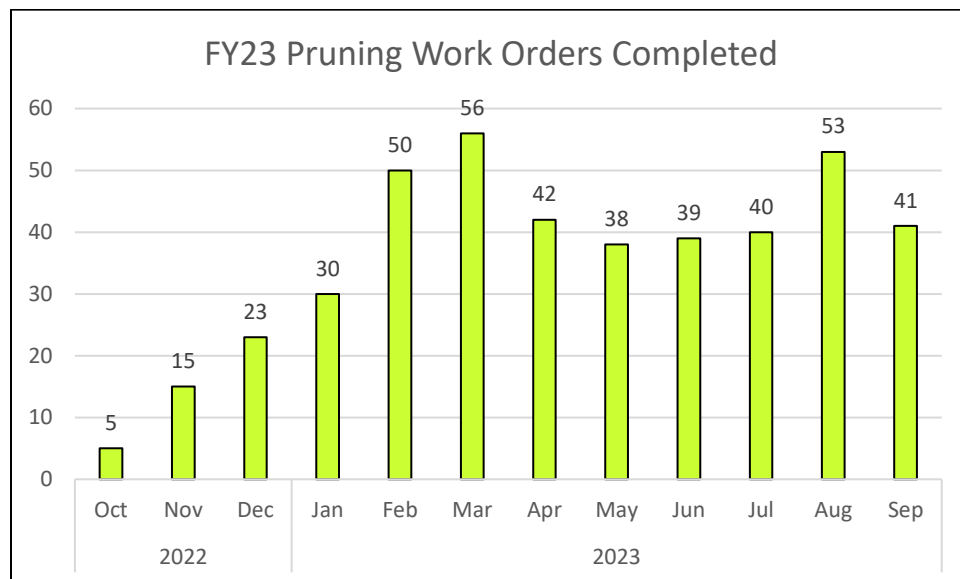
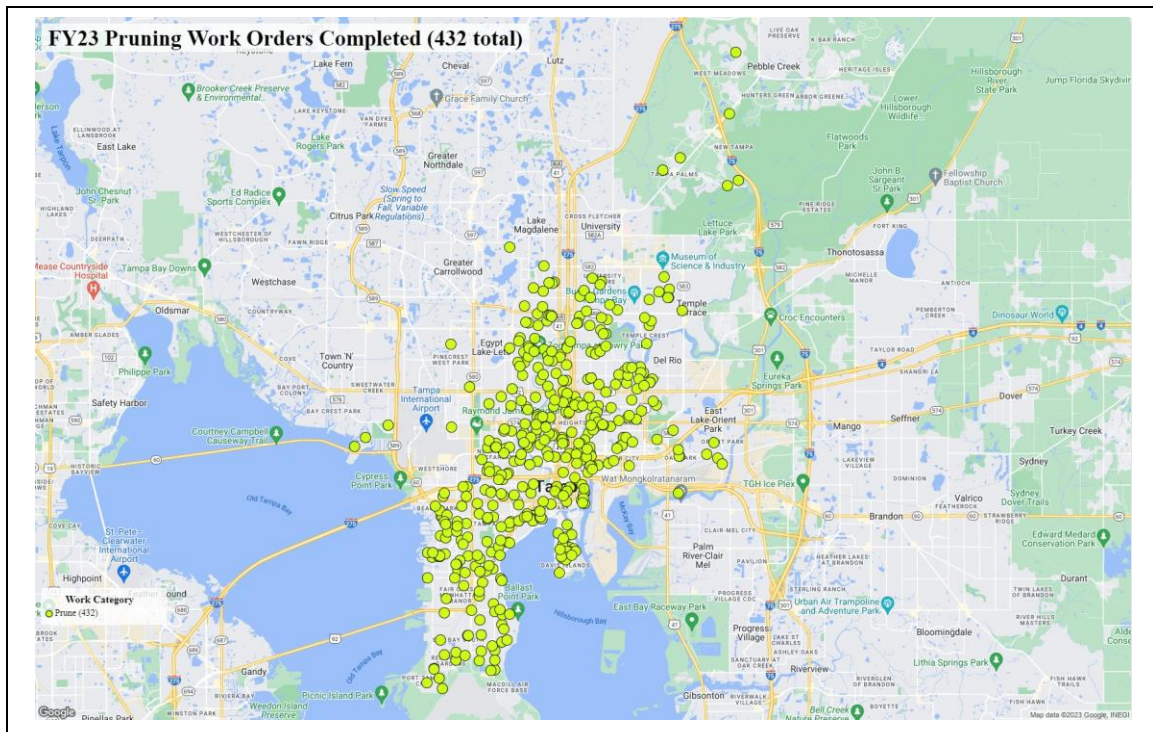
### **What is the Forestry Response?**

- One Forestry crew is available to perform tree removals outside of storm season
- The Forestry Division also utilizes contractors for tree removals:
  - Removals requiring a crane are contracted out
  - Three (3) contractors completed 207 work orders removing 309 trees FY2023
    - The cost of removals was \$294,249
    - This averages \$952 per tree

### **What are the Implications?**

- **Equipment age and staffing is affecting the ability to operate a removal crew and address necessary removals.**
- Strict tree preservation guidelines have increased the number of overmature/senescent trees in the public right-of-way and parks.
- **Trees often experience storm damage and significant failure prior to removal.** Thirty-four (34) incidents documented by Human Resources Claims for damage to personal property including fences, vehicles, and houses.
- Once scared by large tree failure, adjacent residents prefer no replacement planting or to replace old, large tree species with a smaller growing species as a way of reducing fear. **This has a negative impact on the overall tree canopy and the associated economic, environmental, and social benefits.**

## Completed Pruning Work Orders



In FY2023, Forestry completed 432 pruning work orders.

### **What are the reasons that pruning work orders are generated?**

- Trees in the right-of-way that obstruct vehicular/pedestrian traffic.
- Trees in the right-of-way that obstruct traffic control devices and vision.
- Trees in the right-of-way that have conflicts with houses, streetlights, and other infrastructure.
- Park trees that have branch conflicts with infrastructure including, but not limited to, buildings, lighting, playground structures, athletic facilities, trail, and path clearance, etc.
- Street or Park trees with significant dead branches (4-inch diameter or greater).
- Private vegetation causing sidewalk/pedestrian obstruction, street obstruction, or a sight obstruction.

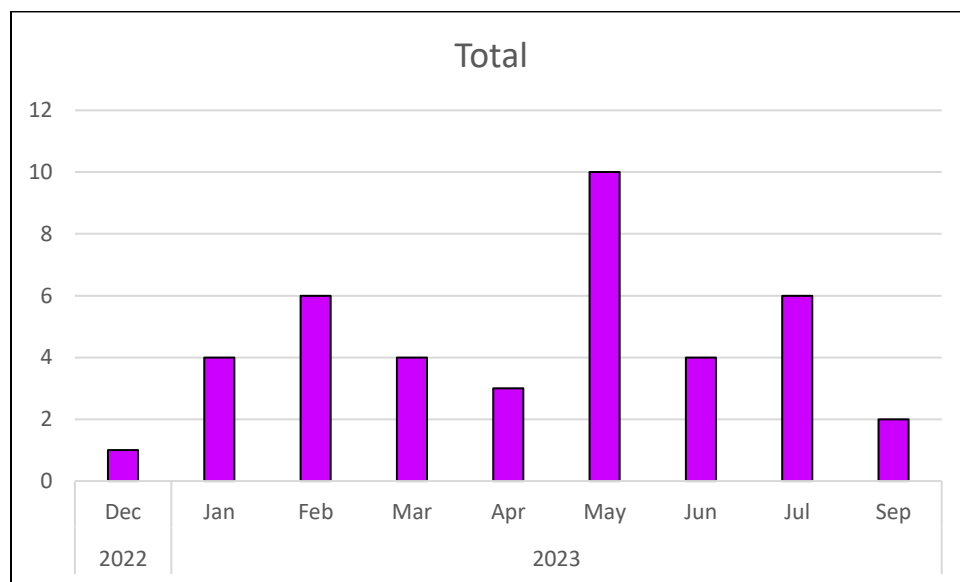
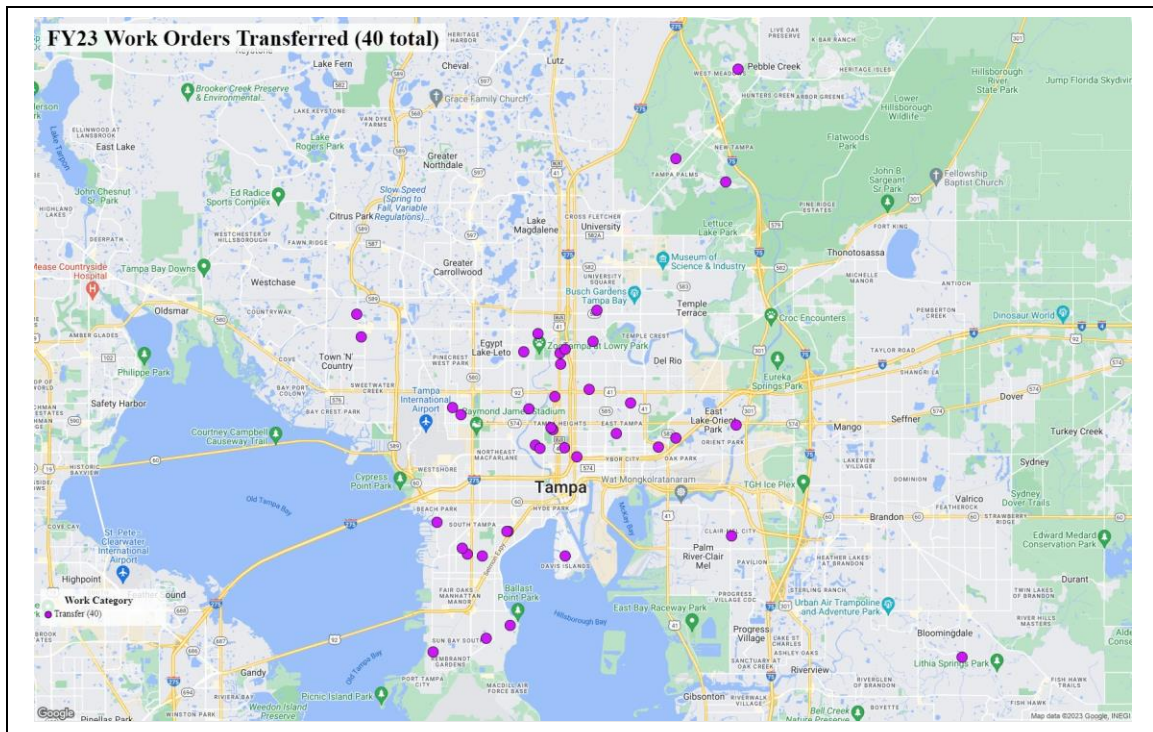
### **What is the Forestry Response?**

- Use of Contractors – large-scale pruning projects are contracted out due to Forestry staffing and equipment issues.
  - Parks: Gadsden Park - \$9,917; Bayshore Little League/Sandra Freedman - \$27,410; Bayshore Blvd - \$7,919
  - Streets: Palm Ave - \$10,135; Belmont Heights Estates - \$13,230
- TECO and their contractors are Line Clearance Certified. They are the only ones allowed to work within 10 feet of any overhead utility by ANSI standards.
- 2-Person forestry crew for 1-6 tree projects.
  - Crew size expands as the number of trees increases, or traffic safety concerns increase.
- Private property issues are the resident's responsibility by City Ordinance Chapters 19 and 22.

### **What are the Implications?**

- Equipment age and staffing is affecting the ability to operate a large pruning crew.
- Without a street tree inventory, the City is unable to determine how many trees need to be pruned annually to develop a tree pruning cycle.
- **The First Key to Urban Forest Resilience is diversity of species. Structural pruning is the second key to sustainability and resilience. Proactive cyclical pruning reduces risk, mitigates failure, improves right-of-way clearance, and allows for quicker identification of disease and insect outbreaks.**

## Work Orders Transferred to Other Entities





In FY2023, Forestry transferred 40 work orders.

### **Why are Work Orders Transferred?**

The City of Tampa lacks a public tree ordinance authorizing the Parks and Recreation Forestry Division to determine the planting, management, and removal of trees in the public right-of-way and parks. Instead, in Chapter 27 Zoning and Development, the Forestry Division receives an exemption from *“obtaining permits for pruning (limb/root) of any protected or grand tree on public land or public right-of-way; and removal of any protected tree or hazardous/dangerous grand tree, to mitigate any potential risk to the safety of the general public, on public lands or public rights-of-way.” (Sec. 27-284.1.3. - Other exemptions)*

Common reasons for transfer include, but are not limited to:

- Neighborhood Enhancement – Alleyways, stop sign clearance, street light clearance, and City owned vacant lots.
- County – County Road trees.
- TECO – utility line clearance – TECO only does pole to pole electric service. They do not clear other communication lines or the service line from the pole to a structure.
- Solid Waste – private property storm debris.
- Stormwater – trees in designated drainage facilities.
- Mobility – healthy street trees with roots heaving sidewalks, driveways, or curb and gutter.
- Water Department – healthy street tree roots conflicting with the water meter.
- Areas where the Community Development District (CDD) or Homeowner’s Association (HOA) has been designated the responsibility for street trees.
- Calls from residents outside the City Limits.
- Maintenance Agreements – Select downtown trees that are to be maintained by the adjoining property.

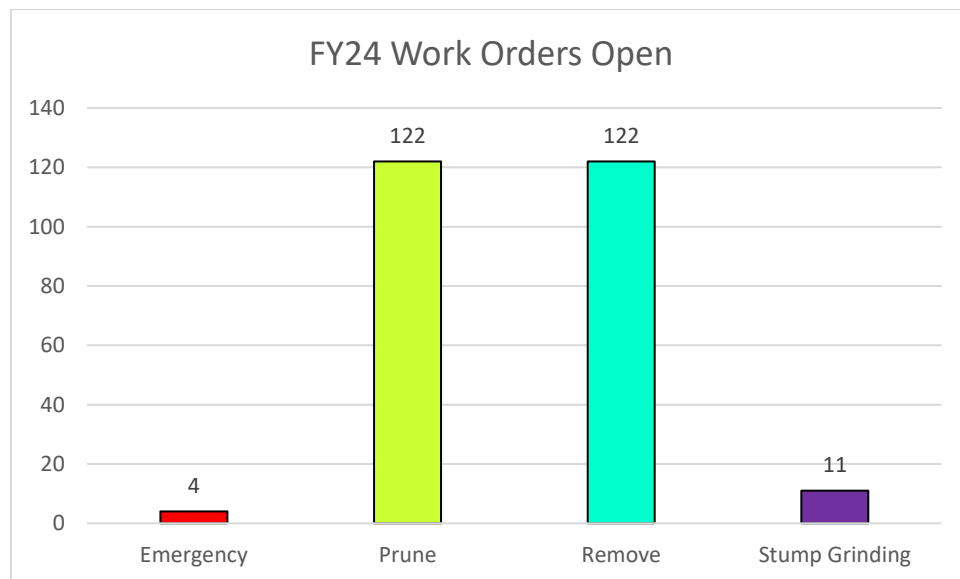
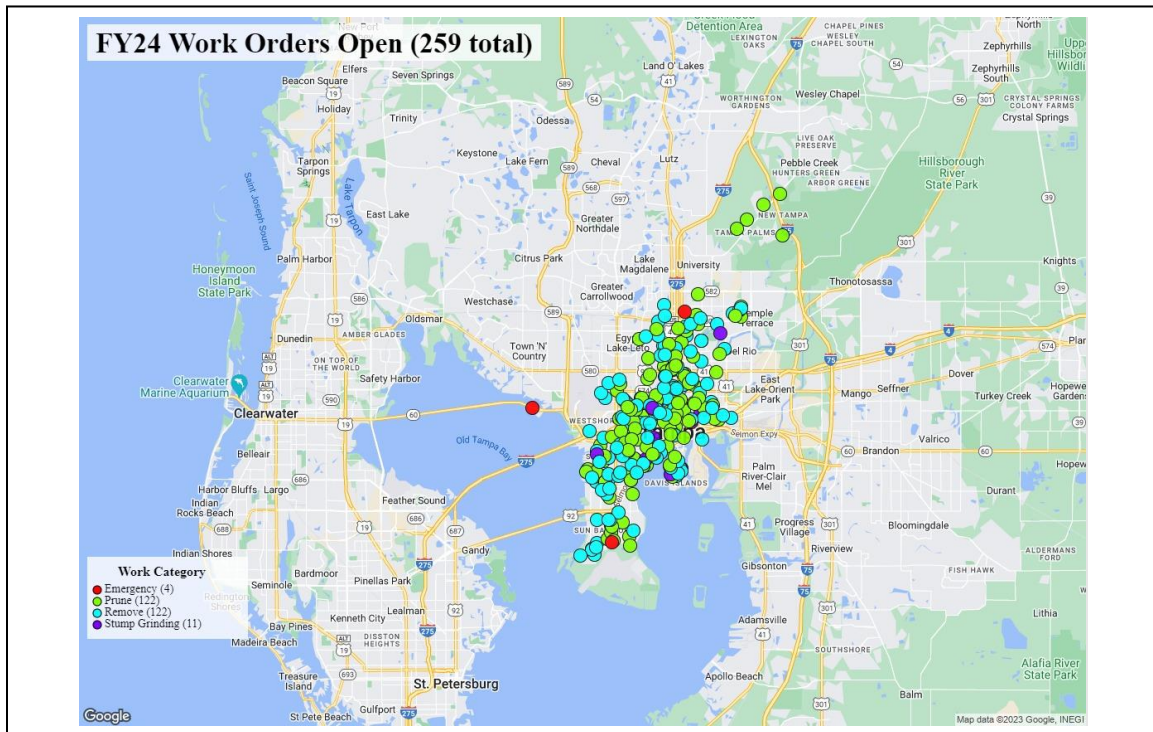
### **What is the Forestry Response?**

- The Forestry Division tries to facilitate communication between the requestor and the proper authority.

### **What are the Implications?**

- **The overwhelming distribution of tree authority, both public and private, has created confusion for residents and City Departments alike.**

## FY24 Open Work Orders



At the start of FY2024, Forestry began with a backlog of 259 work orders.

### **What is the Main Cause of the Backlog?**

**The main cause of the backlog is the number of tree failures that occur during storm season (June through November).** Forestry Crews are called off projects to tend to tree emergencies affecting City streets and Parks.

**Equipment age and condition is affecting the ability to operate efficiently.**

### **What is the Forestry Response?**

- **During storm season (June – November) Forestry staff is too busy responding to emergencies to address pruning and removal requests.**
- Forestry inspections take 6-8 weeks during storm season due to staff responding to emergencies.
- Forestry does not provide an estimate for work completion during storm season.
- Most non-emergency work completed by Forestry staff is limited to December through May.
- Large projects are contracted out including neighborhoods, long stretches of roads, area pruning, and Park pruning projects.
- Mobility, Stormwater, Logistics and Asset Management, and Solid Waste are utilizing the Citywide Tree contract to prune street trees to meet the clearance needs of their individual departments. This includes, but is not limited to:
  - Traffic control clearance
  - Drainage ditch and stormwater pond tree maintenance
  - Vehicle clearance
  - Parking lot and City Facility clearance

### **What are the Implications?**

**Until the Forestry Division is staffed and funded to proactively manage the street and park tree populations, the amount of tree failures will continue to affect the number of backlogged requests.** The Urban Forestry Strategic Plan was developed to identify and resolve the program's issues.

## **What do other communities do?** (*census.gov*)

Tampa is the 49<sup>th</sup> largest city in the United States with a population of 398k people (2022). An online review of 39<sup>th</sup> ranked Colorado Springs, Colorado (486k) to 59<sup>th</sup> ranked Riverside City, California (321k) urban forestry programs reveals a diverse urban forestry management spectrum. The management classifications are best described as:

1. Proactive – **Wichita, Kansas and Honolulu, Hawaii**
  - a. Up-to-date street tree inventory
  - b. Systematic (Cycle/Area) pruning and planting
  - c. Annual City-wide Inspections for poor category trees
  - d. Risk management program
  - e. Post planting tree care (watering, staking, mulching, training pruning)
2. Systematic Reactive – **Aurora, Colorado**
  - a. Street tree inventory may be old or out of date
  - b. Systematic pruning cycle exceeding 10 years
  - c. No Annual City-wide Inspections for poor category trees
  - d. Risk management program must prioritize based on severity
3. Reactive – **Cleveland, Ohio**
  - a. No street tree inventory
  - b. No systematic pruning cycles
  - c. Back logs are occurring
4. Reactive Deferred – **City of Tampa and New Orleans, Louisiana**
  - a. No street tree inventory
  - b. No systematic pruning cycles
  - c. Resident/Department requests drive 100% of the workload
  - d. Residents request to hire their own tree service for street tree work
5. Deferred - **Arlington, Texas and Bakersfield, California**
  - a. Responsibility for neighborhood street trees is assigned to the adjacent landowner

How does FY24 Tampa compare to other communities? A 2014 study\* reports:

- 667 US communities had a mean annual budget of \$42.59 per street tree or 0.52% of the total municipal budget. (Tampa is \$2.3m in FY24 and should be \$4.5m - \$9.9m)
- US community street trees were pruned on average every 6.6 years, the desired pruning cycle was 4.8 years. (Tampa is not staffed or budgeted to maintain a pruning cycle)
- US communities have a mean of 0.55 trees per capita or 76.1 trees per street mile. (Tampa does not have an inventory, estimates are 106,000 – 222,000 street trees)

\*Hauer R. J. and Peterson W. D. 2016. Municipal Tree Care and Management in the United States: A 2014 Urban & Community Forestry Census of Tree Activities. Special Publication 16-1, College of Natural Resources, University of Wisconsin – Stevens Point. 71 pp.

## **Forestry SWOT Analysis**

### ***Strengths***

- The Forestry Division has obtained a computerized work order management system and tree inventory program.
- The current Administration is looking to make significant improvements in reporting and accountability.
- The Forestry Crew is comprised of smart, courteous, and safety-conscious staff.
- Forestry works as a team.

### ***Weaknesses***

- The number of emergency responses restricts our ability to address the growing backlog of service requests (47% of work completed is an emergency response, FY2023).
- Aging vehicles and equipment affect production (Average Vehicle and Large Equipment age is 13-14 years).
- Permit process may be hindering private tree care.
- Staff size and budget are not meeting the management needs of the street and park tree populations.
- One staff member is not enough for an appropriate street tree planting program.

### ***Opportunities***

- Create a public tree ordinance authorizing the Forestry Division to determine the planting, management, and removal of trees in the public right-of-way and parks.
- City-wide street tree inventory.
- City staff should pursue roles on the Florida Urban Forestry Council and the Florida Chapter of the International Society of Arboriculture to establish Tampa's role in the leadership in Florida Urban Forestry.

### ***Threats***

- Hurricanes and storms always present a risk.
- Aging/Senescent public tree population.
- Tampa is an international port community and is susceptible to the potential invasion of non-native invasive tree pests/diseases that could dramatically affect the urban forest.
- The limited maintenance of trees has resulted in numerous claims against the City and significant damage to City vehicles.
- Tree/branch failure is a regular occurrence (over 2.5 failures per day).

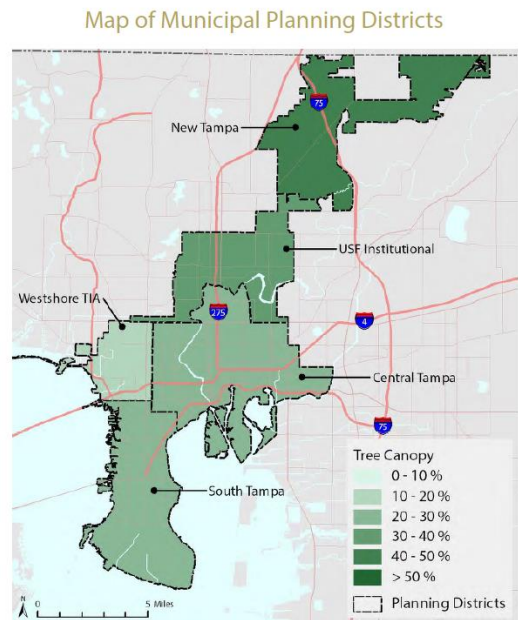


## Recommendations

The current Forestry Operating Procedure is:

- Receive a Service Request
- Call the requestor within 2 days to notify them that we will inspect within 2-3 weeks (6-8 weeks in storm season, June through November).
- Upon inspection, priority work is scheduled at 3-6 months, all other work is scheduled up to 24 months or longer. Notify the requestor of the schedule.
- If we maintain status quo, **we will continue to fall behind.**

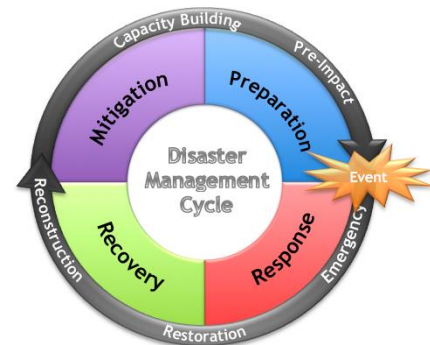
It is recommended that the City incorporate an Area Management Cycle to address the management needs of the street and park trees and reduce the number of incoming requests. **The Urban Forestry Program should be equally active in all five (5) Planning Districts.**



### Area Management Cycle (Best Management Practices)

The Goals for management would be:

- Healthy street and park trees:
  - Raise the canopy for eventual permanent 16-foot clearance over the road and a balanced canopy over the sidewalk
  - Remove all deadwood greater than four-inch diameter
  - Structural prune weak attachments and co-dominant stems
  - Directional and Crown reduction pruning for clearance (house, streetlight, street sign, line of sight, traffic control, etc.)
  - Training pruning for young trees
- Identify dead and dying trees and schedule removal, stump removal, and evaluate for replacement
- Management Cycles would address Mitigation in the Disaster Management Cycle. This would lead to greater Preparation, a more efficient Response, and a faster Recovery



**Please note that utility line pruning is done by TECO or their contractor on a 3–5-year cycle. City staff must maintain a distance of 10 feet from utility lines as they are not line clearance certified.**

This work would require:

- A Street tree inventory that identifies trees in the right-of-way, assigns a condition class, identifies high-risk trees, locates available planting sites, and promotes proactive Urban Forestry management
- **A commitment to grow, equip, and fund a larger in-house workforce capable of meeting the management needs of the Urban Forest**
- An appropriate budget for the Forestry Program
- An outreach program to improve communication with residents
- Work should begin in the USF Institutional and Central Tampa Planning Districts

This would provide:

- Equitable Urban Forestry Management across the five (5) Planning Districts
- A reduction in service requests
- A reduction in emergency responses
- A reduction in vehicle/tree conflict
- Reduction in municipal vehicle damage and expense
- More resiliency in the tree population to survive storms and insect/disease outbreaks
- A monitoring program that would potentially detect new invasive species early
- A reduction in risk and liability as the City begins to manage the tree population proactively, instead of reactively

The **Parks and Recreation Forestry Division Strategic Plan** is directly tied to the City of Tampa Urban Forest Management Plan, Vision Zero, and the Resilient Tampa Roadmap and was developed to address the shortcomings of the current program including, but not limited to:

- Develop a street tree inventory
- Reduce tree failures
- Increase the Urban Tree Canopy through an aggressive planting program
- Reduce tree/vehicle conflicts in the right-of-way
- Proactively manage the Urban Forest Canopy

*“It’s imperative we do everything we can to safeguard Tampa’s tree canopy, which is one of the most celebrated in the nation,” Mayor Castor said. “We expect people to protect trees whenever possible, and our trees are too important for us to sit back and fail to take action.”*

Tampa.gov Posted 09/12/2022