

## State of the Forest FY2020

The Annual Internal Report on the

City of Tampa Parks and Recreation – Forestry Division Program

11/3/2020

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## FY2020 Urban Forestry Division Status

### Summary

The City of Tampa lacks a public tree ordinance authorizing the Forestry Division to determine the planting, maintenance, 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 evaluation, means the street trees (or right-of-way trees) and the park trees.

### Services Provided by the Forestry Division

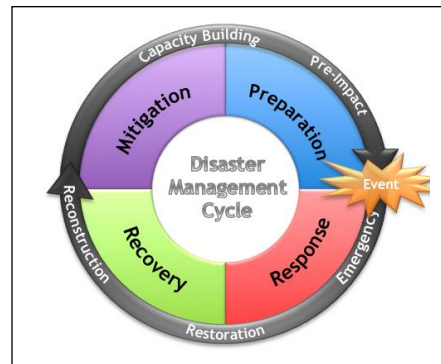
- Primary goal: maintain a safe, healthy, and expanding urban forest canopy
- 24/7 response to emergency tree failures on streets and parks (62% of in-house workload, 887 emergency responses in FY2020)
- Plant, prune, maintain, and remove right-of-way trees (1,200 miles + medians)
- The Tree-mendous Tampa Program is free and provides individuals and neighborhood associations with trees planted on City street rights-of-way (2 per year if adequate space). Contracted at approximately \$87.5K annually from the Tree Trust Fund
- Pruning, maintenance, and removal of park trees in 194 parks
- Insect and Disease monitoring and management
- 17 personnel, including 4 certified arborists (CA)
  - Manager (CA)
    - TreeMendous Tampa Project Specialist
    - Contract Monitor (CA)
    - Site Supervisor (CA)
      - 2 Service Crew Leader III (CA) – site inspectors
      - 3 Service Crew Leader II
      - 2 Automotive Equipment Operator II
      - 6 Tree Trimmer II
- Utilize contracted services for large projects, storm damage, special populations, area tree maintenance, stump removal, and tree removals. Prior to FY2019 funded at \$100k annually. FY2019, \$450K. FY2020, \$465k.

Due to the inefficient results of responding to individual service requests, it is recommended that the City incorporate an Area Management Cycle to address the number of tree-related emergencies, the maintenance needs of street and park trees, and reduce the amount of incoming requests.

### Area Management Cycle (Best Management Practices)

All street and park trees should be inspected and maintained once every 6 years. The Goals for maintenance 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 two inch diameter
  - c. Structural prune weak attachments and co-dominant stems
  - d. Directional and Crown reduction pruning for clearance (house, street light, street sign, line of sight, athletic field, etc.)
2. Identify dead and dying trees and schedule removal, stump removal and evaluate for replacement.
3. All of 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.



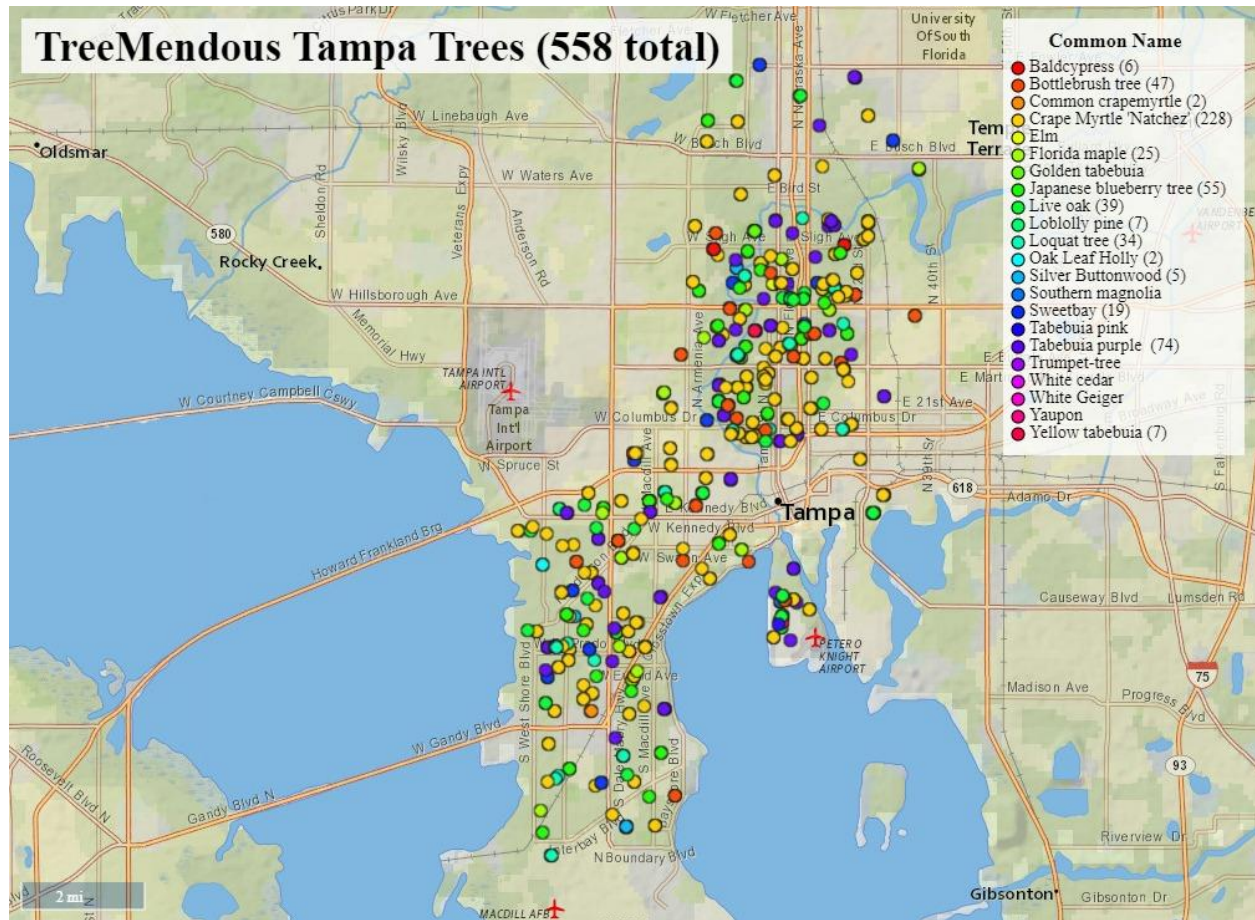
This would provide:

- 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 analysis is scheduled for 2021. The City should use this time to gather information, determine how it plans to improve the street and park tree populations, and update the Urban Forest Management Plan with the Natural Resources Advisory Committee and Internal Technical Work Group.

The City has spent well over 40 years focused on tree preservation and not tree maintenance. It will take many years to bring the tree maintenance program up to date and proactive in the management of our natural resource.

## TreeMendous Tampa Program FY2020



Most Common Species - Top 10

| COMMON NAME             | COUNT | PERCENTAGE |
|-------------------------|-------|------------|
| Crape Myrtle 'Natchez'  | 224   | 42.6%      |
| Tabebuia purple         | 74    | 14.1%      |
| Japanese blueberry tree | 52    | 9.9%       |
| Bottlebrush tree        | 47    | 8.9%       |
| Live oak                | 39    | 7.4%       |
| Loquat tree             | 32    | 6.1%       |
| Florida maple           | 25    | 4.8%       |
| Sweetbay                | 19    | 3.6%       |
| Loblolly pine           | 7     | 1.3%       |
| Yellow tabebuia         | 7     | 1.3%       |

### The Forestry Division

TreeMendous Tampa tree planting program provided 420 trees (\$104k) to residents that were willing to provide watering for 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 aesthetics rather than the economic, environmental and social benefits.



## Monthly Service Requests

### October 2019 Service Requests

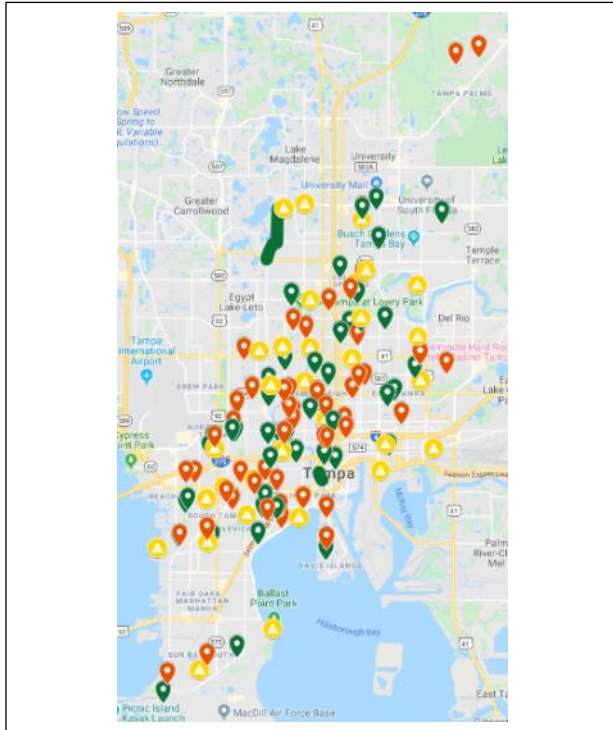
#### Incoming

October 2019 generated 179 total service requests. Routine pruning and misc. requests (51) are indicated in green. Removal requests (53) are orange. There were 32 emergency requests (yellow triangle) representing branch or tree failure.

There were an additional 43 after hours/weekend emergencies.

#### Completed

75 emergencies; 60 non-emergencies



### November 2019 Service Requests

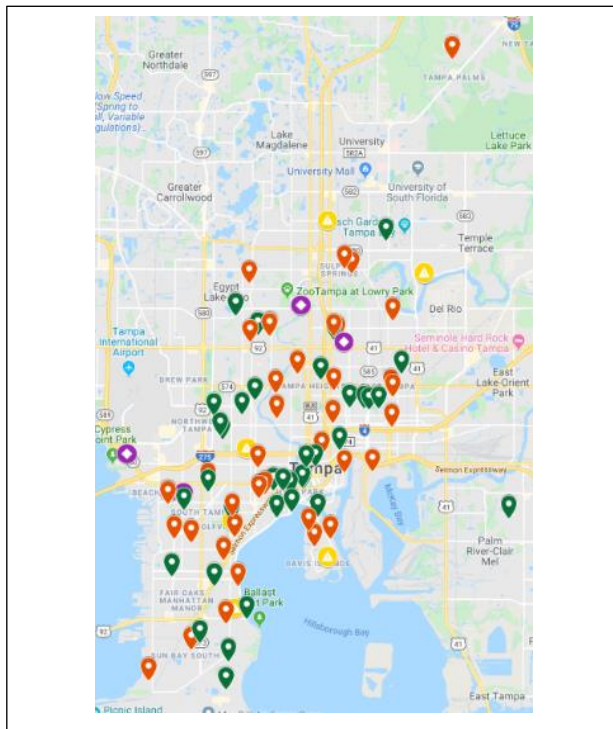
#### Incoming

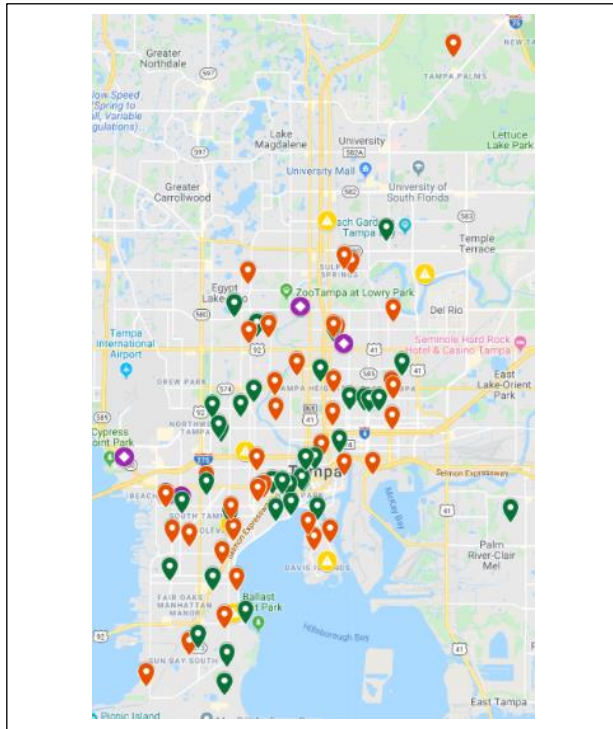
November 2019 generated 114 total service requests. Routine pruning and misc. requests (41) are indicated in green and purple. Removal requests (41) are orange. There were 6 emergency requests (yellow triangle) representing branch or tree failure.

There were an additional 26 after hours/weekend emergencies.

#### Completed

32 emergencies; 51 non-emergencies





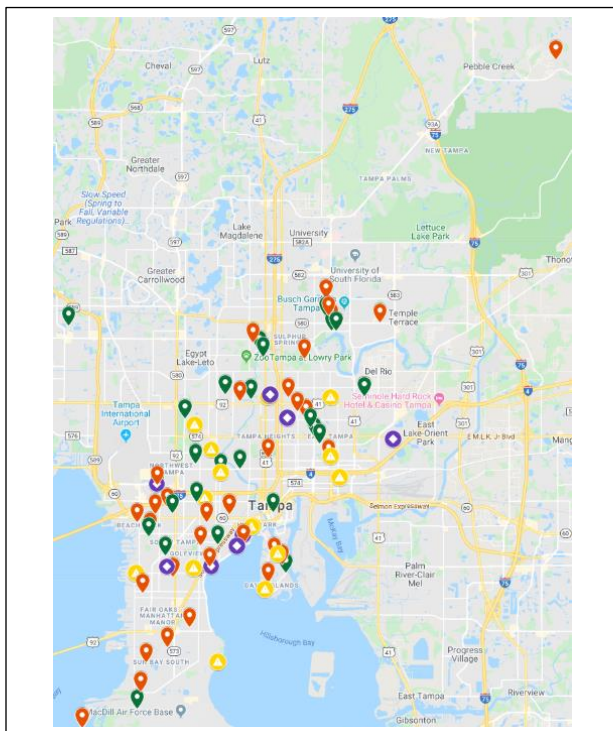
## December 2019 Service Requests

### Incoming

December 2019 generated 86 total service requests. Routine pruning and misc. requests (28) are indicated in green and purple. Removal requests (23) are orange. There were 26 emergency requests (yellow triangle) representing branch or tree failure. There were an additional 10 after hours/weekend emergencies.

### Completed

36 emergencies; 25 non-emergencies



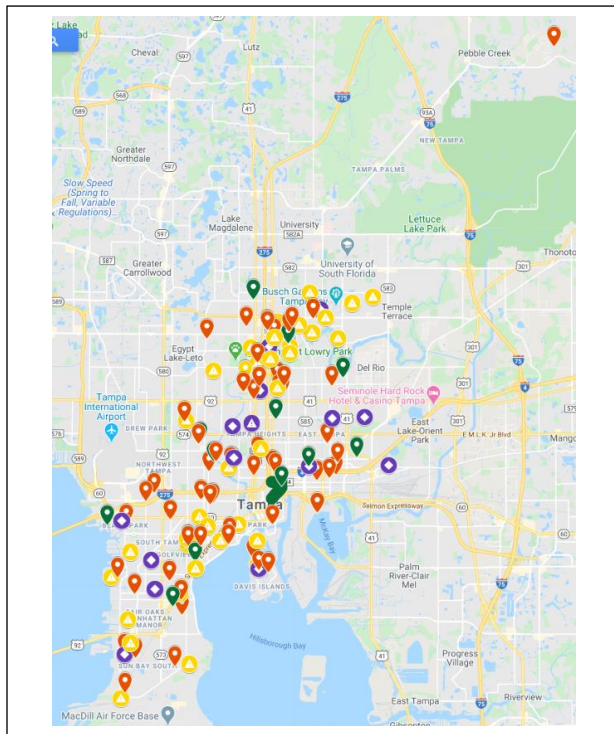
## January 2020 Service Requests

### Incoming

January 2020 generated 101 total service requests. Routine pruning and misc. requests (33) are indicated in green and purple. Removal requests (33) are orange. There were 16 emergency requests (yellow triangle) representing branch or tree failure. There were an additional 19 after hours/weekend emergencies.

### Completed

35 emergencies; 51 non-emergencies



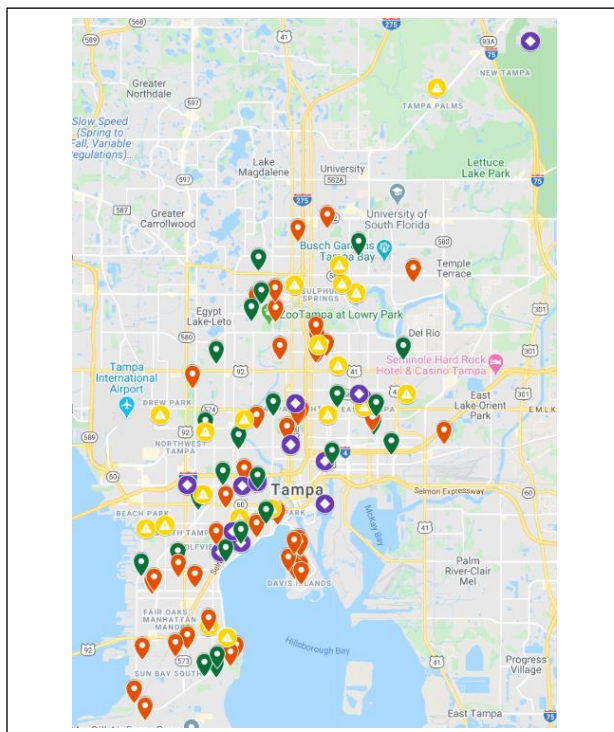
## February 2020 Service Requests

### Incoming

February 2020 generated 155 total service requests. Routine pruning and misc. requests (33) are indicated in green and purple. Removal requests (61) are orange. There were 38 emergency requests (yellow triangle) representing branch or tree failure. There were an additional 23 after hours/weekend emergencies.

### Completed

61 emergencies; 32 non-emergencies



## March 2020 Service Requests

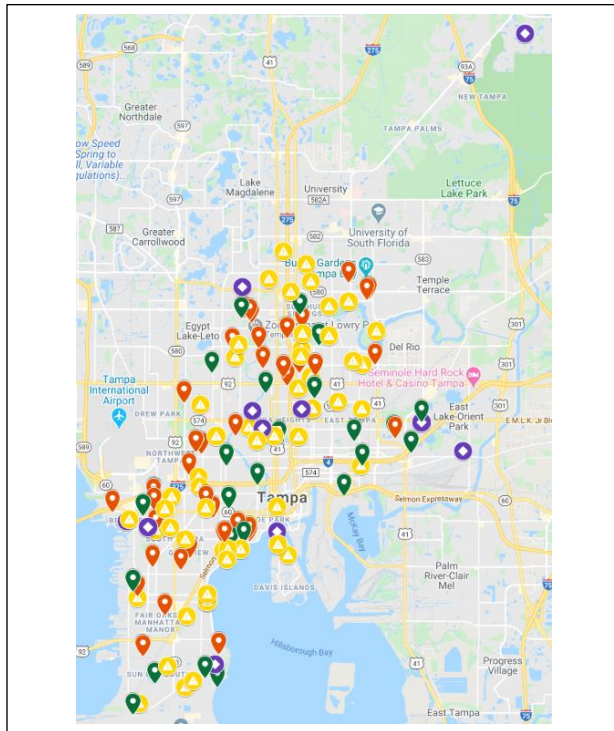
### Incoming

March 2020 generated 129 total service requests. Routine pruning and misc. requests (40) are indicated in green and purple. Removal requests (44) are orange. There were 20 emergency requests (yellow triangle) representing branch or tree failure. There were an additional 25 after hours/weekend emergencies.

### Completed

45 emergencies; 65 non-emergencies





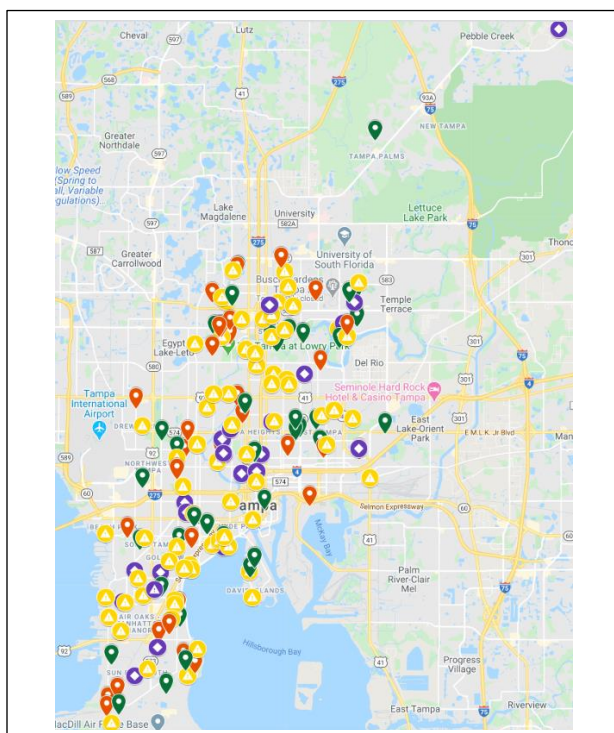
## April 2020 Service Requests

### Incoming

April 2020 generated 160 total service requests. Routine pruning and misc. requests (38) are indicated in green and purple. Removal requests (42) are orange. There were 55 emergency requests (yellow triangle) representing branch or tree failure. There were an additional 25 after hours/weekend emergencies.

### Completed

80 emergencies; 50 non-emergencies



## May 2020 Service Requests

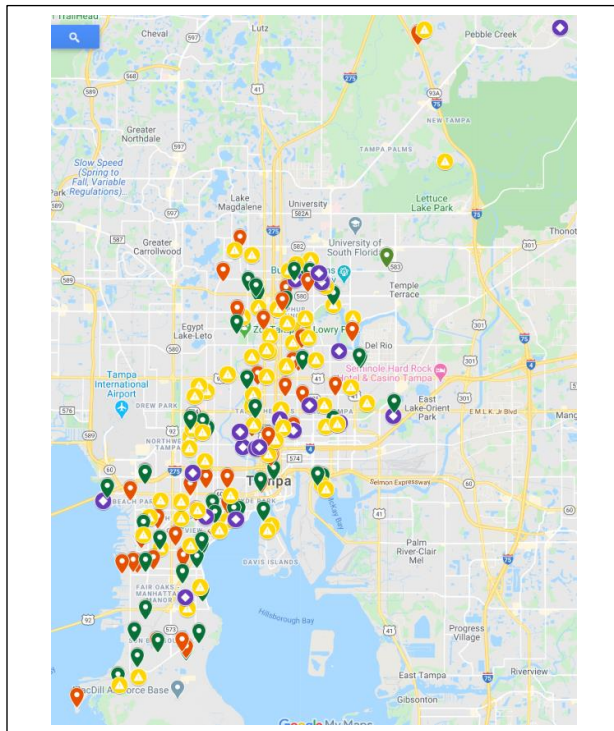
### Incoming

May 2020 generated 181 total service requests. Routine pruning and misc. requests (62) are indicated in green and purple. Removal requests (33) are orange. There were 72 emergency requests (yellow triangle) representing branch or tree failure. There were an additional 14 after hours/weekend emergencies.

### Completed

86 emergencies; 42 non-emergencies





## June 2020 Service Requests

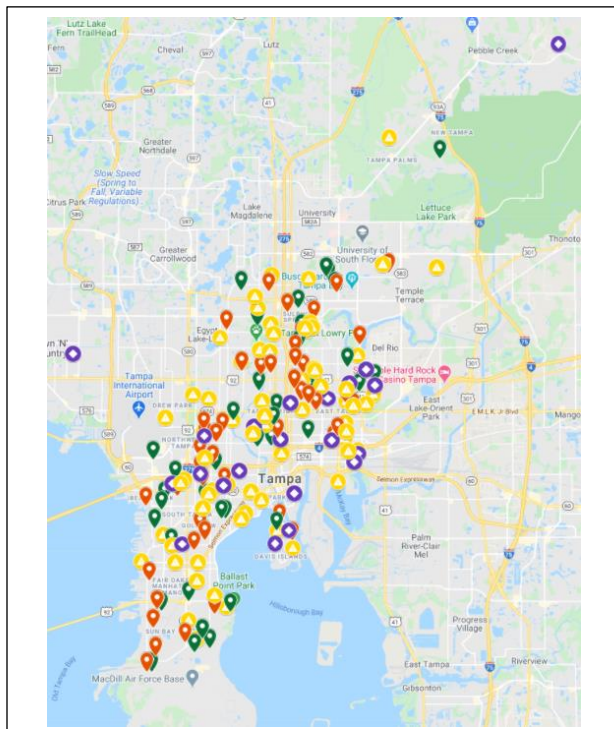
### Incoming

June 2020 generated 229 total service requests. Routine pruning and misc. requests (68) are indicated in green. Removal requests (42) are orange.

There were 67 emergency requests (yellow triangle) representing branch or tree failure. There were an additional 52 after hours/weekend emergencies.

### Completed

119 emergencies; 48 non-emergencies



## July 2020 Service Requests

### Incoming

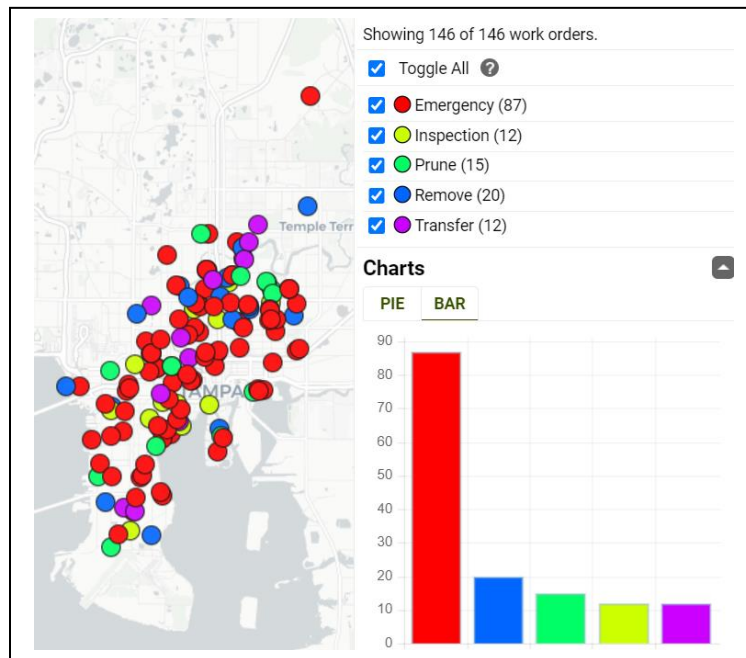
July 2020 generated 194 total service requests. Routine pruning and misc. requests (60) are indicated in green and purple. Removal requests (42) are orange. There were 71 emergency requests (yellow triangle) representing branch or tree failure. There were an additional 21 after hours/weekend emergencies.

### Completed

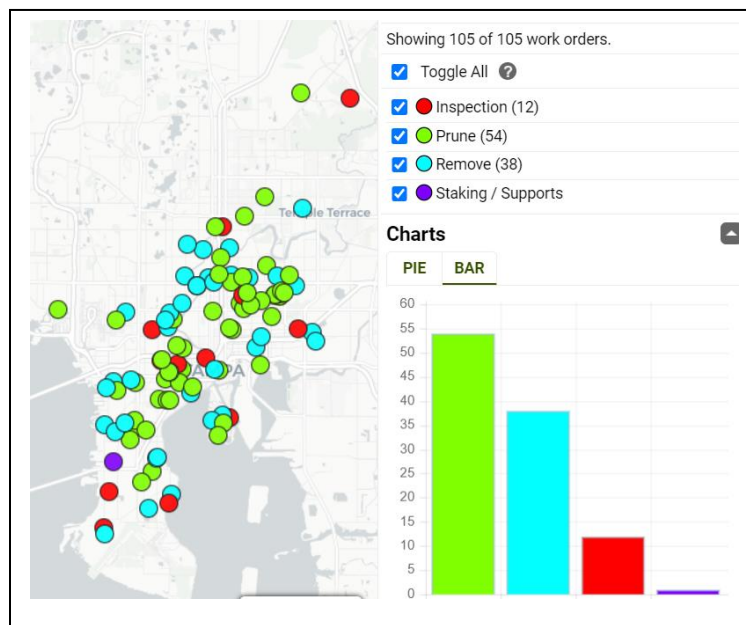
92 emergencies; 19 non-emergencies

## **August 2020 – TreePlotter software goes online for Work Order Management**

Beginning in August 2020, the Forestry Division began utilizing a cloud-based work order management system called TreePlotter. With the new capabilities for monitoring the creation and completion of work orders, the reporting will also change.

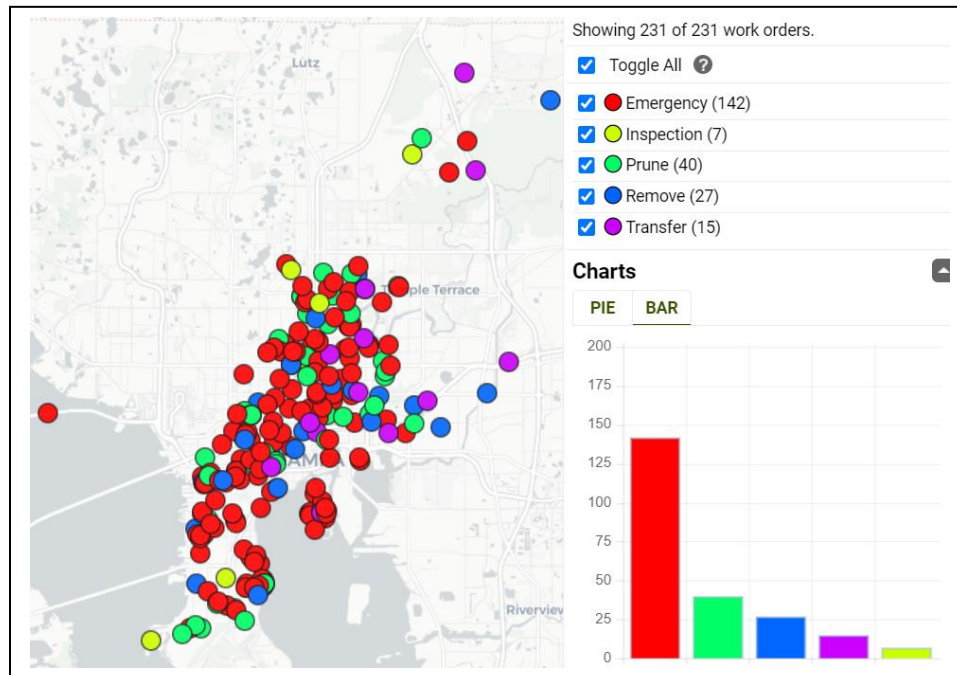


Work Orders Completed in August 2020

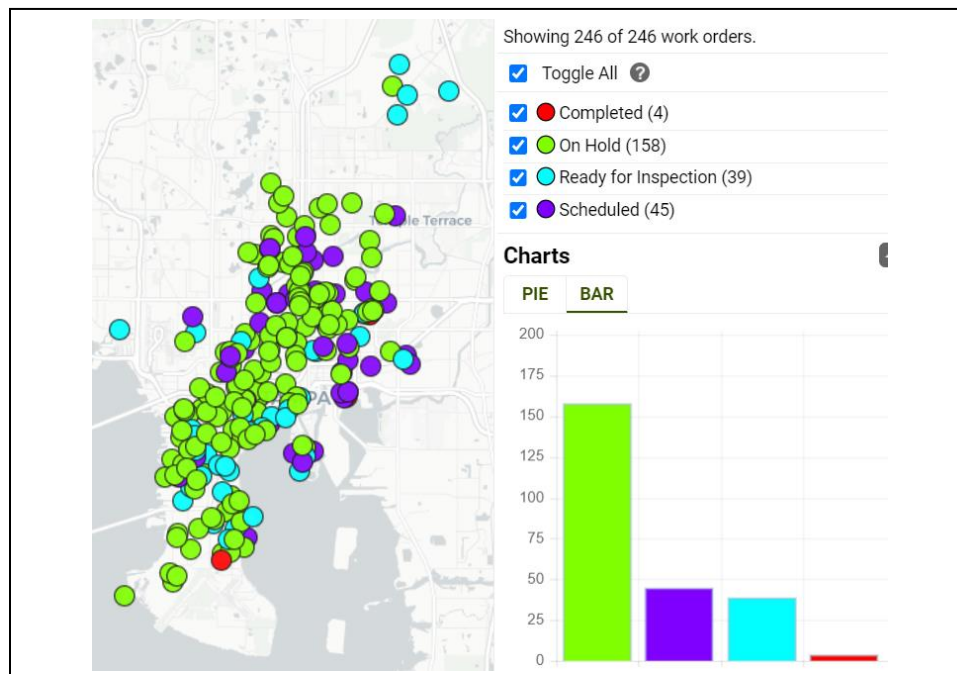


Total Work Orders Remaining

## September 2020



Work Orders Completed in September 2020



Total Work Orders Remaining



## **Considerations**

### **What do other communities do?** (<https://worldpopulationreview.com/us-cities>)

Tampa is the 47th largest city in the United States with a population of 413k people (2020). A review of 37<sup>th</sup> ranked Sacramento, California (522k) to 57<sup>th</sup> ranked Riverside, California (336k) urban forestry programs reveals a diverse urban forestry management spectrum. The management classifications are best described as:

1. Proactive
2. Systematic Reactive
3. Reactive
4. Reactive Deferred – City of Tampa
5. Deferred

### **Proactive Management – Wichita, Kansas (pop. 389k) and Honolulu, Hawaii (pop. 343k)**

From the Wichita Parks and Recreation website:

*The Forestry section is responsible for the maintenance of all public trees within 4,900 acres of parks, along 2,500 miles of right-of-ways, and along many sections of the rivers, streams, and drainage ways within the City.*

*Forestry activities include: tree planting; establishment care; pruning; and removal Citywide within parks and along street right-of-ways.*

*A healthy forest canopy within public areas is maintained through tree pruning, removal of dead and declining trees, and planting of new trees including establishment care for three years. Forestry service is provided on a request basis and through systematic operations of pruning and planting. An annual city-wide inspection is scheduled to identify, then remove dead and declining trees as part of the tree risk management program. Emergency tree work is provided to clear and remove storm damaged trees and tree debris. New tree planting and establishment care is provided through a reforestation program for neighborhood and parks and through contractor tree plantings as part of capital roadway projects.*

From the Honolulu Parks and Recreation website:

*The Division of Urban Forestry consists of an Administrative function, the Horticulture Services Branch, and the Honolulu Botanical Gardens. The division's Administrative Section and the Horticulture Services Branch employ 1 American Society of Consulting Arborists (ASCA) Registered Consulting Arborist; 20 International Society of Arboriculture (ISA) Certified Arborists, three of whom have attained Municipal Specialist certification; 24 ISA Certified Tree Workers; 4*

*ISA Certified Tree Risk Assessors, and 1 Professional Landcare Network (PLANET) Certified Landscape Technician. The Honolulu Botanical Gardens employ an additional 10 ISA Certified Arborists, 1 ISA Certified Tree Risk Assessor, and 1 PLANET Certified Landscape Technician.*

*It propagates, plants, trims, waters, and maintains shade trees, concrete planters and other ornamental plants cultivated along public roadways, and in City parks and malls.*

*It clears tree branches obstructing street lights, utility lines, traffic devices, and from rights-of-way of dangerous branches, and clears fallen trees or branches from streets and other City properties.*

*It supervises contractual tree work and grows and maintains plants for beautification projects, public gardens and for use as ornamentals in government buildings, and at City functions.*

#### Key Signs of a Proactive Program:

- Highly educated/certified professional staff
- Up to date street tree inventory
- Systematic (Cycle/Area) pruning and planting
- Annual City-wide Inspections for poor category trees
- Risk management program
- Post planting tree care (watering, staking, mulching, replacement)
- Resident requests are less than 20% of the workload

#### **Systematic/Reactive Management – Aurora, Colorado (pop. 383k)**

From the Aurora Parks, Open Spaces and Trails website:

*The city of Aurora has about 40,000 city street trees. City trees are maintained by the city of Aurora as a free service to our residents. Property owners are not allowed to plant their own private trees in the public right of way easement, and such trees are not considered city trees. The Forestry Division keeps an inventory of our city trees.*

*The Forestry Division operates on a grid pruning cycle, where a contracted crew is scheduled to complete maintenance on all city trees area by area (46 areas, approx. 20 year cycle). In addition to our ongoing contractor grid pruning responsibilities, we receive thousands of requests every year for tree maintenance ahead of schedule. We try our best to complete our work as soon as we can, but often we face a very high volume of tree maintenance needs. Unfortunately, this can sometimes result in long wait times. We apologize for the wait and we appreciate your patience. With the exception of emergencies, tree maintenance will only be provided ahead of schedule if a tree poses a risk to public safety. In order of severity, this includes:*

- 1. large broken and hanging limbs*
- 2. trees with hazardous defects*

3. *dead or dying trees*
4. *large dead limbs, and, lastly...*
5. *low limbs impeding traffic*

*You may perform some limited tree work on a city tree yourself, but it is still illegal to damage, kill or remove a city-owned tree. Residents can prune low hanging limbs from the ground up to 15 feet. You may also hire a private licensed arborist to perform the work at your own expense, but you will not be reimbursed. Arborists must call the Forestry Division for a permit to trim a city tree prior to performing the work.*

#### Key Signs of a Systematic/Reactive Program:

- Street tree inventory may be old or out of date
- Systematic pruning cycle exceeding 10 years
- No Annual City-wide Inspections for poor category trees
- Risk management program has to prioritize severity, can't address them all
- Resident requests drive over 40% of the workload

#### **Reactive Management – Cleveland, Ohio (pop. 379k)**

From the Cleveland DPW - Division of Park Maintenance and Properties website:

*This office's activities include the maintenance of all public street and park trees, including the removal of dead and hazardous street trees and overgrown roots which raise sidewalks, planting of replacement trees (based on availability of funding), trimming, and providing public information.*

*The City of Cleveland Urban Forestry Section is removing all 4,118 ash trees in the right-of-way. The ash trees are infested with a non-native beetle: the Emerald Ash Borer. Once ash trees are removed, homeowners can call the Urban Forestry Section for a replacement tree. The intake department will record all requests in a database. Trees are planted when a funding source is identified.*

*After a pruning request is received, a City employee will come out and inspect the tree. If the tree requires trimming, it will be placed on a list for service. If you would like to trim it yourself, call Urban Forestry at the above number to request a permit.*

#### Key Signs of a Reactive Program:

- No street tree inventory
- No systematic pruning cycle
- Management by crisis – emerald ash borer infestation
- No risk management program



- Resident requests drive over 60% of the workload
- Making lists for service indicates that back logs are occurring – not everything will be addressed
- Limited funding for meeting reforestation needs

### **Reactive/Deferred Management – New Orleans, Louisiana (pop. 390k) and Tampa (pop. 413k)**

From the New Orleans Parks and Parkways website:

*The Department of Parks and Parkway maintains all City trees. These include trees on public property such as neutral grounds (medians) and in parks, and trees between the sidewalk and street. The Department responds to requests for City tree removal, tree trimming and stump removal. The Department places primary importance on the issues of public safety and prioritizes its work accordingly.*

*Citizens may hire an arborist and pay to have work done to a City tree in front of their property if approved the City's Urban Forester. This work must be done by a Louisiana licensed and insured arborist and requires a free Tree Work Permit from Parks and Parkway. Stumps may be removed without a permit, but should be done only by a licensed contractor with insurance to protect the homeowner in case of accidents.*

*The Department of Parks and Parkway encourages pre-approved tree planting by citizens, but requires citizens to get a free Tree Planting Permit to plant a tree between the sidewalk and curb.*

Key Signs of a Reactive/Deferred Program:

- No street tree inventory
- No systematic pruning cycle
- All work is prioritized by public safety – “management by crisis” - not all requests will be completed
- No risk management program
- Resident requests drive over 80% of the workload
- Residents may get a permit and hire their own tree service

**The City of Tampa's Urban Forestry Program qualifies as a Reactive/Deferred Management program.**

**100% of the work we do is generated by service requests from residents, staff and other Departments.**

**62% of all work orders completed are emergencies (FY2020).**

**There is no street tree inventory and planning is based on a month-to-month basis with no pro-active plan beyond 3 months. Residents are requesting permission to contract out street tree work at their expense as the City's timeframe of 18 months (or longer) does not meet their expectations. City Parks receive the least service as Forestry is too busy reacting to emergencies and service requests from the public.**

### **Deferred Management – Arlington, Texas (pop. 403k) and Bakersfield, California (pop. 390k)**

From the Arlington Parks and Recreation website:

*In residential areas the City of Arlington does not maintain the area between the curb and sidewalk. However, on some larger roads the right-of-way along one or both sides may be mowed and maintained by the City. According to the Code of Ordinances, limbs must be 7 feet above sidewalks and 14 feet above roads, the owner of the land where the tree is located is responsible for pruning to maintain that safety clearance.*

From the Bakersfield Recreation and Parks website:

*The City is responsible for trees and other landscaping located in parks, on medians, and in "streetscapes". A road right-of-way is a specific type of easement. The City maintains roads within these easements. However, the City does not become the owner of the land on which the road is built. Street trees belong to the actual or adjacent property owner, even if they are located within a dedicated road "right of way". As a property owner, you are responsible for ensuring the safety of the street trees on property adjacent to the roadway in the same way you are responsible for trees which are located in your front, side or backyard areas.*

Key Signs of a Deferred Program – street trees are assigned to adjacent landowner leaving the Forestry Division with parks, medians and special streetscapes.

## **Forestry SWOT Analysis**

### ***Strengths***

- We have 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, professional, 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 (62% of work completed is an emergency response, FY2020)
- Aging vehicles and equipment affects 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 maintenance needs of the street and park tree populations
- One staff member is not enough for an appropriate planting program

### ***Threats***

- Hurricanes and storms always present a risk
- Aging/Senescent public tree population
- Tampa is a port community and is susceptible to the potential invasion of non-native invasive tree pests 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)

### ***Opportunities***

The increased funding (FY2020) for use on the Citywide Tree Contract are already making a difference in the services that we can provide. Some examples include:

- Monthly contracted tree and stump removal lists
- Area Pruning Belmont Heights, the Tampa Palms bike trail, St. Patrick street
- Pruning nearly 500 palms in Ybor City
- Storm Related Cleanup in Parks
  - Takomah Park, Rowlett Park, Copeland Park, Cypress Point Park, Temple Crest Park, Spring Hill Park, Woodlawn Cemetery, and Greco Sports Complex



## 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
- Upon inspection, priority work is scheduled at 3 months, all other work is scheduled up to 18 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 maintenance needs of the street and park trees and reduce the amount of incoming requests.

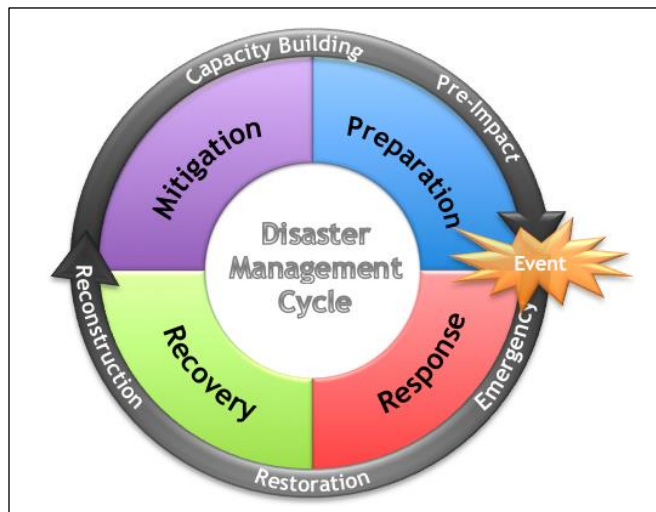
The City should be divided into a total of 6 zones:

- 2 zones North (north of MLK, divided East and West)
- 2 zones Central (south of MLK, north of Kennedy, divided East and West)
- 2 zones South (south of Kennedy, divided North and South, perhaps at El Prado)

### Area Management Cycle (Best Management Practices)

This means that all the street and park trees would be maintained once every 6 years. The Goals for maintenance 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 two inch diameter
  - Structural prune weak attachments and co-dominant stems
  - Directional and Crown reduction pruning for clearance (house, street light, street sign, line of sight, etc.)
- Identify dead and dying trees and schedule removal, stump removal, and evaluate for replacement
- All of 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



**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 commitment to grow, equip, and fund a larger in-house work force capable of meeting the maintenance needs of the Urban Forest
- An appropriate budget for the job
- An outreach program to let the residents know what is happening
- Work should begin in the North or Central areas

This would provide:

- One third of the City's street and park trees would be pruned every 2 years resulting in decreases 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 hurricanes and storms
- 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 City has spent well over 40 years focused on tree preservation and not tree maintenance. It will take many years to bring the tree maintenance program up to date and proactive in the management of our natural resource.