TREE PLANTING AND MANAGEMENT PLAN - FY2020

Executive Summary

The fundamental points to move forward are**:**

- There was $492,603 unencumbered in the Tree Planting Trust Fund as of Q3 FY 2019.
- There are no encumbered funds or planned projects in the FY 2020 Budget.
- Per ordinance, the first priority for the expenditure of funds deposited in the tree fund is for restoration of the tree canopy on the area where trees generating the funds were removed.
- There is no definition of “area”.
- There is no plan for use of the funds, no moratorium or restrictions, aside from the ordinance.

Recommendations

1. Short Term Plan for FY 2020 budget and allocate $100,000 of the funds for various projects:
    - $10,000 for each District ($70,000) to follow 2013 Recommendations
    - $20,000 additional for District 2 due to it being the source of most fund contributions
    - $10,000 for neighborhood grants
2. Apply for grants to leverage the Tree Trust Fund and Long Term Pensacola Tree Planting and Management Plan such as:
    - Florida Urban and Community Forestry Grant
    - 2020 Managing Community Forests Grant Program
        - Year One – Tree Inventory
        - Year Two - Management Plan
        - Year Three - Tree Planting
3. If unsuccessful with the above grants, fund implementation of the same process: an inventory, management plan and tree planting program from the Tree Trust Fund.
4. Certify an existing employee or hire a City Arborist
5. Update the current Tree Ordinance

I. Introduction

A. 2013 Study and Recommendations

1. Optimizing Tree Canopy through Planting

a) **Establish measurement of success and set planting priorities**. All plantings should follow American National Standard-ANSI A300 Standard Practices for Tree Care Operations.

b) **Planting the easy areas first**. The easy areas are public owned spaces needing no or limited modifications to the site including adequate soil type and volume for minimum inputs after establishment. The easier locations have the greater chance of successful trees at a lower price. (Urban, J. 2008).

c) **Expand street tree planting by designing space for trees**. Incorporate tree species, soil properties, soil volume and drainage in initial design. Tree size is directly related to planting space, no matter the tree species. Share rooting space in continuous planting strips like in a road median. Connect tree pits to lawn area to share planting space in commercial landscape.

d) **Encourage planting on residential property** through education and street tree planting programs placing priority on neighborhoods willing to provide supplemental early tree care. Target and encourage “right tree right place” plantings in areas with lower canopy densities.

e) **Maintain natural areas with appropriate native species** though restoration plantings and removal of exotic invasive plants.

2. Optimizing Canopy through Maintenance and Species Diversity

a) **Conduct rotational tree assessments** addressing maintenance, planting and removal. All tree care maintenance should follow American National Standard ANSI A300 for tree care. Improving tree structure will increase wind resistance (Duryea et al. 2000) and reduce tree risk.

b) **Maintain a tree database** with tree inventory to promote tree structure improvements, mitigate risk and report maintenance concerns.

c) **Tree maintenance personnel** should have a reasonable understanding of indicators that determine risk factors affecting the health and structure of the trees.

d) **Selecting the right tree for space** and making the space right for the tree. Species should be selected by their ability to perform the desired functions and aesthetic contributions to the design. Long-term maintenance and resources for establishment period should be factored into design.

e) **Increase species diversity**, plant species that have longer average life spans and medium to high wind resistance. If possible, work with local and regional nurseries to grow unique and desirable tree species not commercially available.

f) **Foster a tree education program** providing city residents with information about tree preservation policies, the benefits trees provide, and the importance of tree canopy.

3. **Site Recommendations**

a) **Plant public owned spaces** needing no or limited modifications first. The easier locations have the greater chance of successful tree establishment at a lower price. (Urban, J 2008). Listed parks have a low percent canopy with adequate space to support canopy trees with minimum maintenance after establishment. Recently planted parks including Maritime Park and Plaza De Luna have been excluded from the list. When scheduling planting projects consider removing and replacing over-mature and diseased trees (i.e. Mallory Height and Woodland Heights). Table 8 in the 2013 Report lists specific park recommendations.

b) Expand Street Tree Planting

(1) Incorporate tree species, soil volume and drainage in the initial street design. Tree size is directly related to planting space, no matter the tree species.

(2) Target street tree planting projects in residential areas where residents agree to aide in establishing the tree. For easier establishment, plan planting project during winter months.

(3) Street Tree Planting Design

(a) Design should include plant quality, species, size, installation procedures, water requirements, any soil amendments, placement and type of mulch. Warranty period and maintenance (if applicable) should be clearly stated with specific criteria on tree replacement. There is direct ratio between mature tree size and available soil space.

(b) Planting distance from hardscape depends on species. Allow room for stabilizing trunk expansion. Use root barriers if necessary to protect hardscape.

(c) Provide adequate soil volume while matching species to the site. Tree size is directly related to planting space, no matter the tree species.

(d) When space is available, plant larger species. Larger species provide a significantly greater value to the community. (Appendix D)

c) Planting Gateway Corridors

(1) Incorporate space for trees into initial design in new construction, redevelopment and retrofit projects.

(2) Project construction plans should show specific and enforceable requirements for vegetative plantings.

(3) Table 9 in the 2013 Report lists Gateway Corridors by percent tree canopy

d) **Incorporate Tree Design to Aide in Mitigating Stormwater Runoff**.

(1) Use structural soil and pavement structural support systems. Structural soils are highly porous and engineered aggregate mixes designed to support tree growth and serve as sub-base for pavement. Structural soils are typically composed of 70% to 80% angular gravel and 20% to 30% clay loam soil and a small amount of hydrogel (~3%) to prevent separation during mixing. Structural soils have 20% to 25% void space, which supports root growth and accommodates stormwater runoff. These soils can be compacted to meet load-bearing requirements for sidewalks or roadways while preserving porosity and permeability.

(2) Interconnecting stormwater storage systems can reduce peak flows and reduce overall volume of runoff. Consult engineers and landscape architects for design of connecting these contiguous areas with other green and grey infrastructure. Consult and municipal arborist for choosing tree species and other plantings that will perform well for the given system design.

(3) Bios wales can be used to retain stormwater over multiple sites rather than collecting runoff at one centralized location.

(4) Trees and structural soils combined can create a zero runoff site. (Day, S. D., and Dickinson (eds.) 2008). A stormwater engineer can determine the quantity of water that the system will need and whether to link systems and use overflow piping. Municipal Arborists, Urban Foresters and other qualified plant professionals should be consulted during the design process for choosing tree species and other plantings that will perform well for the given system design.

B. Current Approach

1. On February 23, 2016, a tornado ravaged many trees throughout the north end of Pensacola. Dunmire Woods, Camelot and Eau Clair subdivisions among other areas were heavily damaged by the storm. In response City Council adopted a supplemental budget resolution returning approximately 207,530 of previously allocated but unencumbered funds to

the Tree Fund in order to assess tree damage in these areas, take public input and the Environmental Advisory Board develop a reforestation plan for the impacted areas.

2. At the March 14, 2016 Agenda Conference an item was considered to place a moratorium on all expenditures from the Tree Trust Fund by Councilperson Myers. However, that recommendation was substituted at the March 17, 2016 City Council meeting to encumber $181,000 for reforestation. These funds were not expended in FY 2016 or 2017.

3. There have been not expenditures or encumbrances from the Tree Planting Trust Fund. During the Public Hearing to approve the FY 2018 Budget, City Council voted to move $300,000 within the Tree Planting Trust Funds from various projects to a reserved account in order to allow for a full review of Tree Planting Fund expenditures. **The unencumbered balance in the Tree Planting Trust Fund at the end of the third quarter FY 2019 was $492,603.**

4. At present, there has been no review until this document of the Tree Planting Fund expenditures and planning.

5. Annual revenue to the account is highly variable as follows:

a)	2012	$11,487
b)	2013	$19,590
c)	2014	$13,481
d)	2015	$73,236
e)	2016	$83,944
f)	2017	$49,386
g)	2018	$5,773
h)	2019	$101,189

C. Tree Planting Trust Fund Ordinance

1. Expenditures from the tree planting trust fund are authorized and may be made by the Mayor for projects up to $25,000 to replant trees, or to plant new trees and other appropriate landscape vegetation, purchase irrigation supplies and purchase equipment dedicated to the planting and maintaining of the city's trees.

2. **The first priority for the expenditure of funds deposited in the tree planting trust fund is for restoration of the tree canopy on the area where trees generating the funds were removed.**

3. Any expenditure in excess of $25,000 must be approved by the City Council following review by the environmental advisory board.

II. Tree Planting Plan Alternatives

A. Develop a short-term plan to implement in FY 2020 and a **long-term plan** based on scientific and Council approved criteria.

B. Short Term Plan

1. Determine fund allocation amount for FY2020.

2. Seek grant programs to leverage implementation of the Tree Planting and Management Plan

3. Short Term Fund Allocation
   - a) District Allocation
     - (1) Percent Contribution by District
     - (2) Even Distribution
   - b) Watershed Allocation by Contribution
   - c) One/Multiple Large Projects
     - (1) One Gateway
     - (2) Carpenters Creek
   - d) Public and Private Properties

4. See Recommendations cited in Executive Summary

C. Long Term Plan

1. Utilize the format recommended in Department of Agriculture and Consumer Services Managing Community Forests Program to:
   - a) Year 1 – Conduct a Community Tree Inventory
   - b) Year 2 - Develop a Long Term Management Plan
   - c) Year 3 - Implement a Tree and Landscape Planting Program in accordance with the Long Term Management Plan

2. Funding Allocation

   a) Per ordinance, the priority is to replace trees in the “area” from which they were removed. The term “area” is not defined. Does Council wish to define “area”?

     - (1) Watershed
     - (2) District
     - (3) Council Project Selection

b) Seek grant program opportunities

3. Orient the Long Term Plan on urban forest resiliency based on storm survival, species diversity, native species, canopy, understory and landscape vegetation and recommendations of the Long Term Management Plan

4. Update the 2013 Study

5. Certify an existing employee or hire a City Arborist

6. Staff and EAB Review and update the current Tree Ordinance