

Tampa Open Tree Map Program: Lessons Learned and Future Plans

January 28, 2014

2014 SGSF Urban Forestry Committee Winter Meeting
Tampa, Florida

Source: Hampton Dunn Postcards Collection, USF Library



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School of Architecture and Community Design

Project Partners

▶ City of Tampa

- ▶ Kathy Beck
- ▶ Rob Irving
- ▶ Cathy Coyle

▶ University of Florida

- ▶ Michael Andreu
- ▶ Andrew Koeser
- ▶ Rob Northrop

▶ University of South Florida

- ▶ Shawn Landry
- ▶ Christian Wells
- ▶ Barbara Donerly
- ▶ students

▶ Florida Forest Service

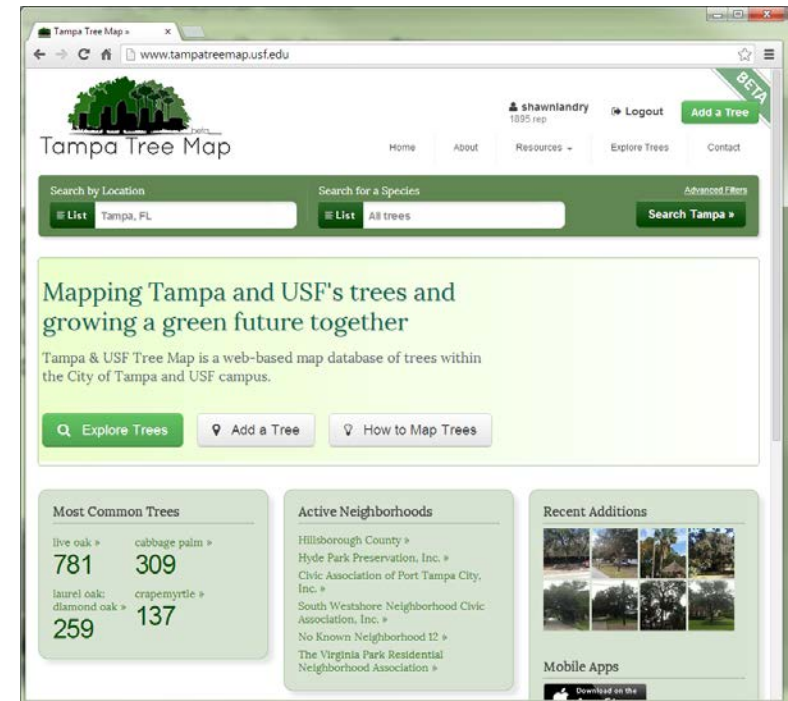
- ▶ Charlie Marcus

▶ The “crowd”



Outline

- ▶ Introduction
- ▶ Choice of Open Tree Map
- ▶ Implementation strategy and challenges
- ▶ System overview
- ▶ User experiences
 - ▶ Neighborhood Street Tree Mapping
 - ▶ Push-Route Sampling
 - ▶ Risk Assessment
 - ▶ Some lessons learned
- ▶ Future Plans
- ▶ Demonstration



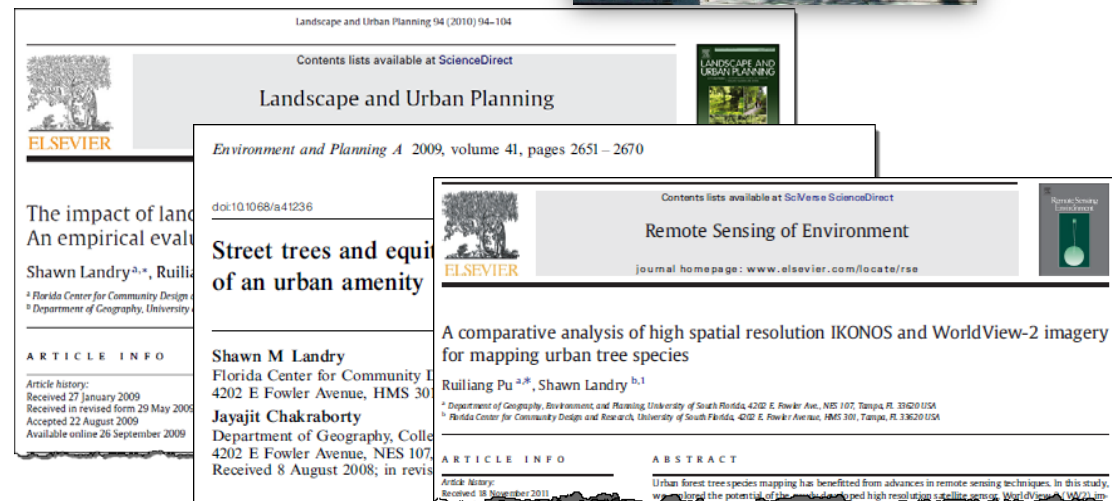
Introduction: Urban Forest Partnership in Tampa

Tree Ordinance:

- ▶ ...conduct a tree canopy study every five (5) years... (Ord. No. 2006-74, § 9, 3-23-06)

Comprehensive Plan:

- ▶ Policy 32.3.2. ...implement the recommendations from the Tree Canopy Analysis to serve as a valuable management tool...

































































Introduction: Matching the Need with the Resources

- ▶ Tampa needed a tree inventory system
- ▶ Wanted to encourage neighborhood stewardship
- ▶ Lacked support to manage urban forest website and mapping
- ▶ USF and UF had experience to develop an inventory system
- ▶ Florida Forest Service, Tampa, UF / HC Extension and USF provided funding

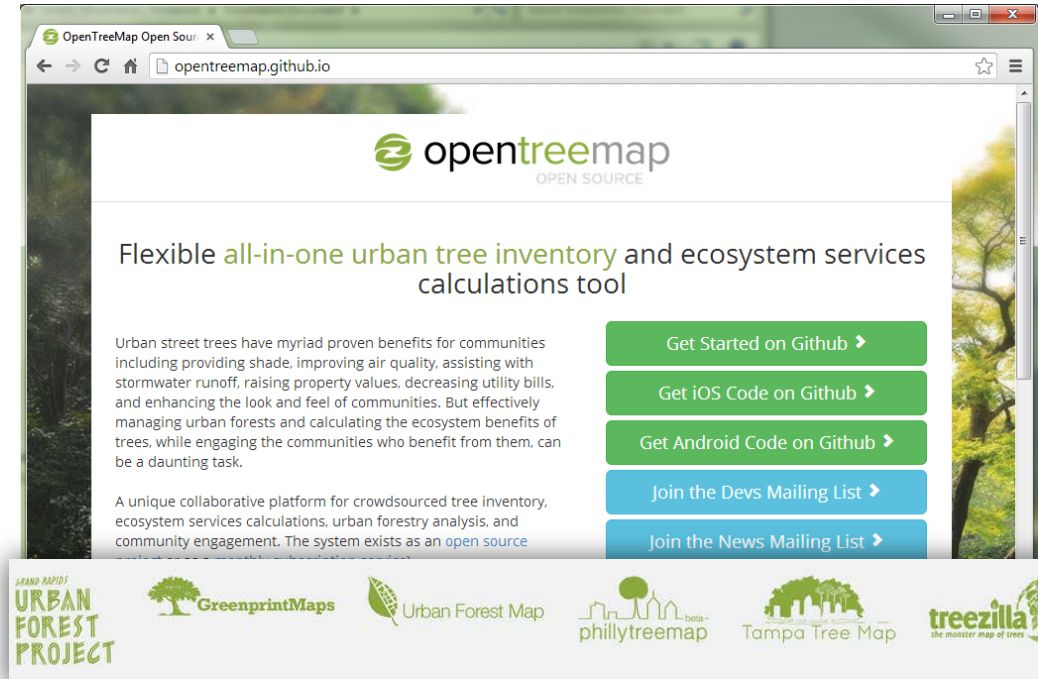
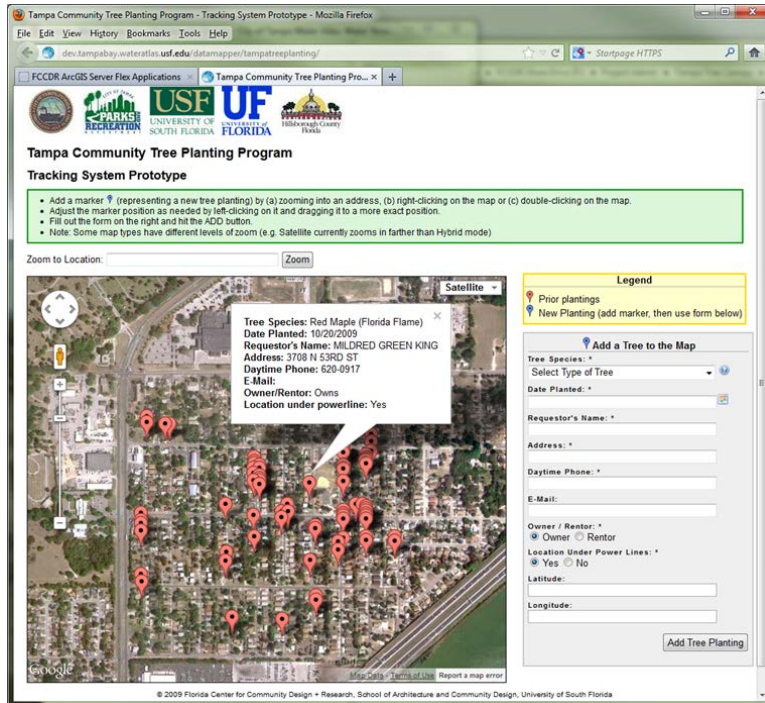


Implementation

- ▶ Total cost: @ \$20k
- ▶ Implement Open Tree Map code
- ▶ Develop master tree list and tree key
- ▶ Test with students (3-rounds)
- ▶ Test with foresters
- ▶ Modify, customize, troubleshoot
- ▶ Develop training materials (ongoing)
- ▶ Challenges
 - ▶ Unique development platform
 - ▶ Undocumented open-source code
 - ▶ Someone else's design
 - ▶ Modifications are very difficult

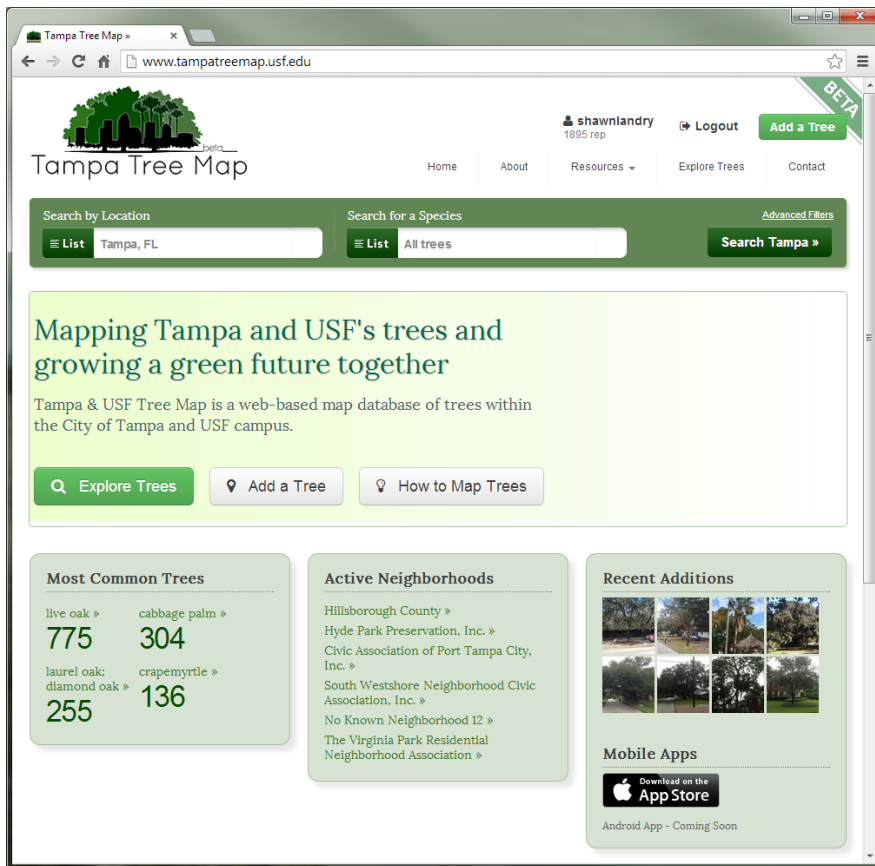
Treemap		
Aggregate neighborhoods		
Aggregate search results		
Aggregate summary models		
Aggregate supervisor districts		
Aggregate zip codes		
Benefit values		
Comment flags		
Exclusion masks		
Geocode caches		
Import events		
Neighborhoods		
Pendings		
Plot pendings		
Plot stewardships		
Plots		
Resource summary models		
Resources		
Species		
Stewardships		
Supervisor districts		
Tree actions		
Tree alerts		
Tree favorites		
Tree flags		
Tree pendings		
Tree photos		
Tree resources		
Tree stewardships		
Tree watches		
Trees		
Zip codes		

The Choice: Develop New or Adopt Existing



- ▶ Choice of development platform
- ▶ Licensing opportunity
- ▶ Control functionality and design
- ▶ Less development time
- ▶ Share the cost of upgrades
- ▶ Part of a larger community

System Overview



The screenshot shows the Tampa Tree Map website. The header includes the site logo, a user profile for 'shawnlndry' with 1895 reputation, and navigation links for Home, About, Resources, Explore Trees, and Contact. A search bar allows users to search by location (currently 'Tampa, FL') or by species (currently 'All trees'). A green 'BETA' badge is visible in the top right corner. Below the search bar, a large green banner reads 'Mapping Tampa and USF's trees and growing a green future together', followed by a description of the map database and three buttons: 'Explore Trees', 'Add a Tree', and 'How to Map Trees'. The main content area is divided into three sections: 'Most Common Trees' (listing live oak with 775 and cabbage palm with 304), 'Active Neighborhoods' (listing Hillsborough County, Hyde Park Preservation, Inc., Civic Association of Port Tampa City, Inc., South Westshore Neighborhood Civic Association, Inc., No Known Neighborhood 12, and The Virginia Park Residential Neighborhood Association), and 'Recent Additions' (a grid of tree photos). A 'Mobile Apps' section at the bottom right features a 'Download on the App Store' button and a note that the Android app is coming soon.

Tampa Tree Map

shawnlndry
1895 rep

Logout Add a Tree

Home About Resources Explore Trees Contact

Search by Location Search for a Species

List Tampa, FL List All trees Search Tampa

Advanced Filters

Mapping Tampa and USF's trees and growing a green future together

Tampa & USF Tree Map is a web-based map database of trees within the City of Tampa and USF campus.

Explore Trees Add a Tree How to Map Trees

Most Common Trees

live oak »	cabbage palm »
775	304
laurel oak; diamond oak »	crapemyrtle »
255	136

Active Neighborhoods

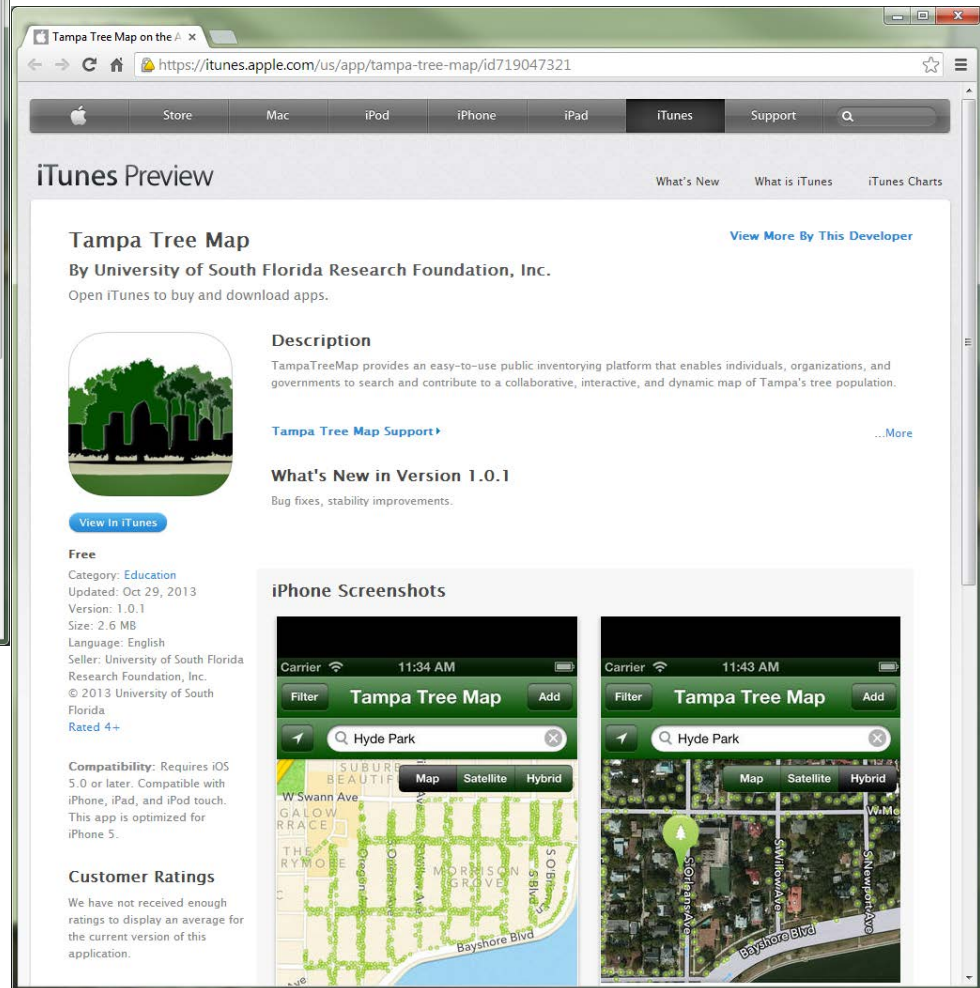
- Hillsborough County »
- Hyde Park Preservation, Inc. »
- Civic Association of Port Tampa City, Inc. »
- South Westshore Neighborhood Civic Association, Inc. »
- No Known Neighborhood 12 »
- The Virginia Park Residential Neighborhood Association »

Recent Additions

Mobile Apps

Download on the App Store

Android App - Coming Soon



The screenshot shows the Tampa Tree Map app page on the iTunes Preview website. The header includes the site logo, navigation links for Store, Mac, iPod, iPhone, iPad, iTunes, and Support, and a search bar. The main content area is titled 'iTunes Preview' and features a 'View More By This Developer' link. The app is listed as 'Tampa Tree Map' by 'University of South Florida Research Foundation, Inc.'. The description states that the app provides an easy-to-use public inventorying platform for individuals, organizations, and governments to search and contribute to a collaborative, interactive, and dynamic map of Tampa's tree population. The 'What's New in Version 1.0.1' section lists bug fixes and stability improvements. The 'iPhone Screenshots' section shows two screenshots of the app interface, displaying a map of Tampa with a search bar and a list of trees. The app is free, categorized as Education, and has a rating of 4+.

Tampa Tree Map on the App Store

https://itunes.apple.com/us/app/tampa-tree-map/id719047321

Store Mac iPod iPhone iPad iTunes Support

What's New What is iTunes iTunes Charts

Tampa Tree Map

By University of South Florida Research Foundation, Inc.

Open iTunes to buy and download apps.

Description

TampaTreeMap provides an easy-to-use public inventorying platform that enables individuals, organizations, and governments to search and contribute to a collaborative, interactive, and dynamic map of Tampa's tree population.

Tampa Tree Map Support

View More By This Developer

What's New in Version 1.0.1

Bug fixes, stability improvements.

iPhone Screenshots

Carrier 11:34 AM

Filter Tampa Tree Map Add

Hyde Park

Map Satellite Hybrid

W Swann Ave GALOW RACE THE RYMORE MORRISON GRAVE SOBBING Bayshore Blvd

Carrier 11:43 AM

Filter Tampa Tree Map Add

Hyde Park

Map Satellite Hybrid

W Swann Ave GALOW RACE THE RYMORE MORRISON GRAVE SOBBING Bayshore Blvd

Free

Category: Education

Updated: Oct 29, 2013

Version: 1.0.1

Size: 2.6 MB

Language: English

Seller: University of South Florida Research Foundation, Inc.

© 2013 University of South Florida

Rated 4+

Compatibility: Requires iOS 5.0 or later. Compatible with iPhone, iPad, and iPod touch. This app is optimized for iPhone 5.


Customer Ratings

We have not received enough ratings to display an average for the current version of this application.

System Overview: Viewing the details

Tampa Tree Map > Search

www.tampatreemap.usf.edu/map/



shawnlia
1895 rep

HomeAboutResources

Search by Location

Search for a Species

List

Hyde Park Preservation, Inc.

List

All trees

1,116 trees selected

Yearly Eco Impact

Selected trees in Hyde Park Preservation, Inc.

Total Benefits

\$95,192 saved

Greenhouse Gas Benefits

619,262 lbs CO2 reduced

\$24,770 saved

Water Benefits

5,952,340 gallons conserved

\$59,523 saved

Energy Benefits

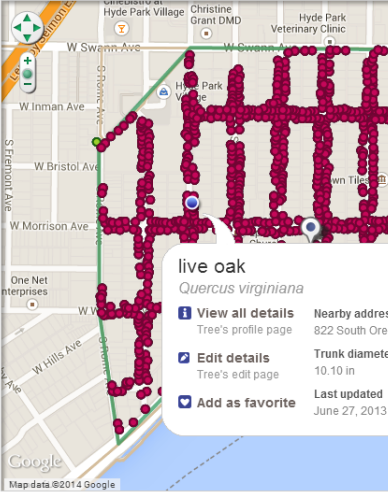
75,711 kWh conserved

\$9,085 saved

Air Quality Benefits

40 lbs pollutants reduced

\$1,813 saved



live oak

Quercus virginiana

View all details

Tree's profile page

Edit details

Tree's edit page

Add as favorite

Nearby address

822 South Oregon Avenue

Trunk diameter

10.10 in


Last updated

June 27, 2013

Locate Me

Tampa Tree Map

www.tampatreemap.usf.edu/plots/557/



2 photos. Add photos

live oak

822 South Oregon Avenue, Tampa FL

None

Plot number: 557

Edit Info

Common Attributes

General Tree Information

Scientific name	Quercus virginiana
Common name	live oak
Tree number	611
Trunk diameter	10.10 inches
Tree height	18.00 feet
Canopy height	Missing

Yearly Ecosystem Services

Value

Stormwater intercepted	3237 gal	\$32.37
Energy conserved	50 kWh	\$5.96
Air pollutants removed	-0.144 lbs	\$0.95
Carbon dioxide reduced	401 lbs	\$16.05
Total CO2 stored to date	1663 lbs	\$66.54

Environment & Plot Information

Nearby address	822 South Oregon Avenue Tampa FL 33606
Plot size	8.00 ft x 30.00 ft
Plot type	Tree Lawn
Powerlines overhead	Missing
Sidewalk damage	Minor or No Damage
Additional Info	None

Status

Tree status	Missing
Canopy condition	Missing
Local projects	0 known

Tools

Add as favorite

Like 0

Tweet

+1

Latest Update

Username medliph0

Date Jan. 10, 2014

50% complete

Edit this tree

Your Turn

Our database of trees comes from public records and citizen foresters like you. Update the information for this tree and help us grow!

Recent Contributors

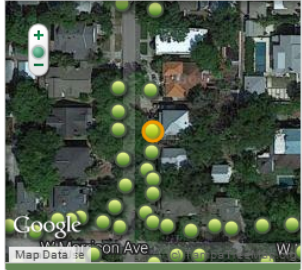
today - medliph0

06/27/2013 - medliph0

06/27/2013 - medliph0

06/27/2013 - medliph0

06/27/2013 - medliph0



822 South Oregon Avenue, Tampa, Florida

Address is approximate

Comments

No comments yet!

Post

The comment system does not serve as a way to report problems with a tree.

System Overview: Adding Trees

Tampa Tree Map

shawnlandry
1895 rep

Logout

Add a Tree

Home

About

Resources

Explore Trees

Contact

Search by Location

Tampa, FL

Search for a Species

All trees

Search

Add a New Tree

Step 1


2801 san rafael st

Tampa

Update Map

Step 2 Specify Placement

Click-and-drag the orange circle to move it to the correct location.



Address Found:
1905-1923 South Habana Avenue, Tampa, FL 33629, USA

Nearby Trees

Found 2 planting site(s) that are too close to the tree you want. Please double-check that you are adding a tree that is already on the map:

cabbage palm (#2194)
Sabal palmetto

goldenrain tree (#2192)
Koelreuteria paniculata

Locate Me

Step 3 Enter Tree & Plot Information

Tree Information

Species name

Enter a Species Name

Not sure what kind of tree it is? Find out in the Tree Key.

Trunk size (inches)

Trunk diameter or circumference (at 4.5 ft. above ground) in inches.
Note: Circumference measurements will automatically be converted into diameter values

☒ Diameter ☐ Circumference

Tree height (feet)

Plot Information (Also Known as Planting Site)

Plot type

Select One...

Plot length (feet)

Measure and enter the length of the plot. Leave blank if you are unsure or cannot measure.

Plot width (feet)

Measure and enter the width of the plot. Leave blank if you are unsure or cannot measure.

Power lines

Select One...

Is a power line above the tree (within 10 ft. of trunk)?

Sidewalk damage

Select One...

Additional Management Info

Add any additional comments you think may help us understand more about your tree (e.g. insect damage, storm damage, pruned for power lines, etc.)

Tampa Tree Map

www.tampatreemap.usf.edu/trees/add/

Step 3 Enter Tree & Plot Information

Tree Information

Species name

Enter a Species Name

Not sure what kind of tree it is? Find out in the Tree Key.

Trunk size (inches)

Trunk diameter or circumference (at 4.5 ft. above ground) in inches.
Note: Circumference measurements will automatically be converted into diameter values

☒ Diameter ☐ Circumference

Tree height (feet)

Plot Information (Also Known as Planting Site)

Plot type

Select One...

Plot length (feet)

Measure and enter the length of the plot. Leave blank if you are unsure or cannot measure.

Plot width (feet)

Measure and enter the width of the plot. Leave blank if you are unsure or cannot measure.

Power lines

Select One...

Is a power line above the tree (within 10 ft. of trunk)?

Sidewalk damage

Select One...

Additional Management Info

Add any additional comments you think may help us understand more about your tree (e.g. insect damage, storm damage, pruned for power lines, etc.)

Step 4 After I add this tree...

☐ Add another tree using the same details

☐ Add another tree with new details

☒ Continue editing this tree

☐ I'm finished

Add this Tree!

System Overview: Interactive Key

www.tampatreemap.usf.edu/treekey/start/

What kind of leaves does this tree have?

Scales

Leaves

- Simple
 - Opposite
 - Lobed
 - Not lobed
 - Total
 - Alternate
 - Lobed
 - Not lobed
 - Smooth
 - Leaves fragrant when crushed
 - Leaves not fragrant when crushed
- Compound
 - Twice compound
 - Once compound
 - Palmately compound

Needles

Fronds

- Single
- Bundles (fascicles)
 - 2 per bundle (fascicle)
 - 3 per bundle (fascicle)
 - 2 or 3 per bundle (fascicle)

Fronds

- Feather shaped
 - Unarmed petioles (no teeth or spines on leaf stem)
 - Armed petioles (with teeth or spines on leaf stem)
- Fan shaped
 - Armed petioles (with teeth or spines on leaf stem)
 - Unarmed petioles (no teeth or spines on leaf stem)

www.tampatreemap.usf.edu/treekey/node/15/

Scales

Leaves

- Simple
 - Opposite
 - Lobed
 - Not lobed
 - Total
 - Alternate
 - Lobed
 - Not lobed
 - Smooth
 - Leaves fragrant when crushed
 - Leaves not fragrant when crushed
- Compound
 - Twice compound
 - Once compound
 - Palmately compound

Needles

- Single
- Bundles (fascicles)
 - 2 per bundle (fascicle)
 - 3 per bundle (fascicle)
 - 2 or 3 per bundle (fascicle)

Fronds

- Feather shaped
 - Unarmed petioles (no teeth or spines on leaf stem)
 - Armed petioles (with teeth or spines on leaf stem)
- Fan shaped
 - Armed petioles (with teeth or spines on leaf stem)
 - Unarmed petioles (no teeth or spines on leaf stem)

Acorns (oak trees)

sand live oak

Distinguishing Features: Similar to live oak (*Quercus virginiana*) though typically smaller in stature. Sand live oak can be distinguished from live oak by its heavily cupped leaves with deeply pressed veins on surface and pale pubescence (hairs) underneath.

Darlington oak

Distinguishing Feature: from *Quercus laurifolia* (d. hemisphaerica typically to sites

water oak

Distinguishing Feature: (30-50 years) tree, semi-

live oak

Distinguishing Feature: One of the broadest spread

laurel oak

Distinguishing Feature: indistinguishable from *Q. laurifolia* found on wet sites

www.tampatreemap.usf.edu/treekey/species/106/

Scales

Leaves

- Simple
 - Opposite
 - Lobed
 - Not lobed
 - Total
 - Alternate
 - Lobed
 - Not lobed
 - Smooth
 - Leaves fragrant when crushed
 - Leaves not fragrant when crushed
- Compound
 - Twice compound
 - Once compound
 - Palmately compound

Needles

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 - 2 per bundle (fascicle)
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 - 2 or 3 per bundle (fascicle)

Fronds

- Feather shaped
 - Unarmed petioles (no teeth or spines on leaf stem)
 - Armed petioles (with teeth or spines on leaf stem)
- Fan shaped
 - Armed petioles (with teeth or spines on leaf stem)
 - Unarmed petioles (no teeth or spines on leaf stem)

water oak

Quercus nigra

Distinguishing Features: Medium sized, fast growing but short lived tree (30-50 years) tree, semi-evergreen with brief showy color in the fall.

Type:	Deciduous
Form at maturity:	Medium sized tree, height 60-80 ft, spread 50-70 ft, slender bole and rounded crown with ascending branches.
Leaf:	Alternate, simple, 2 to 4 inches long and extremely variable in shape (from spatulate to lanceolate), may be 0 to 5 lobed, margins may be entire or bristle-tipped, both surfaces are glabrous, but axillary tufts may be present below.
Flower:	Staminate flowers borne on catkins. Pistillate flowers borne on spikes, appearing with the leaves.
Bark:	Bark dark and quite tight, smooth when young and later with irregular rough patches; much later developing wide, scaly ridges. Twigs slender, red-brown; buds short, sharp-pointed, angular, red-brown, multiple at the tip.
Fruit or Seed:	Acorns are 1/2 inch long, very dark in color, and 1/3 covered by a flattened cap with appressed scales, maturing in fall of the second year.
Other:	Source: http://dendro.cnr.vt.edu/dendrology/syllabus/factsheet.cfm?ID=73 http://edis.ifas.ufl.edu/st553

View additional tree information >>

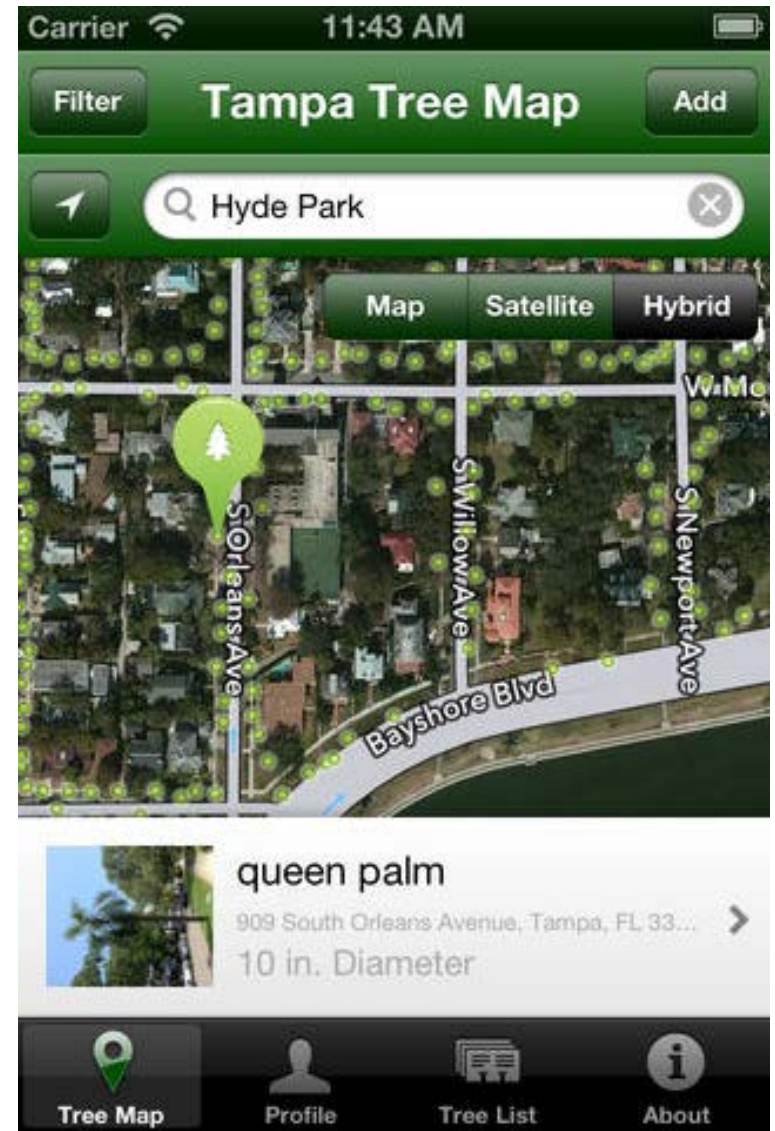
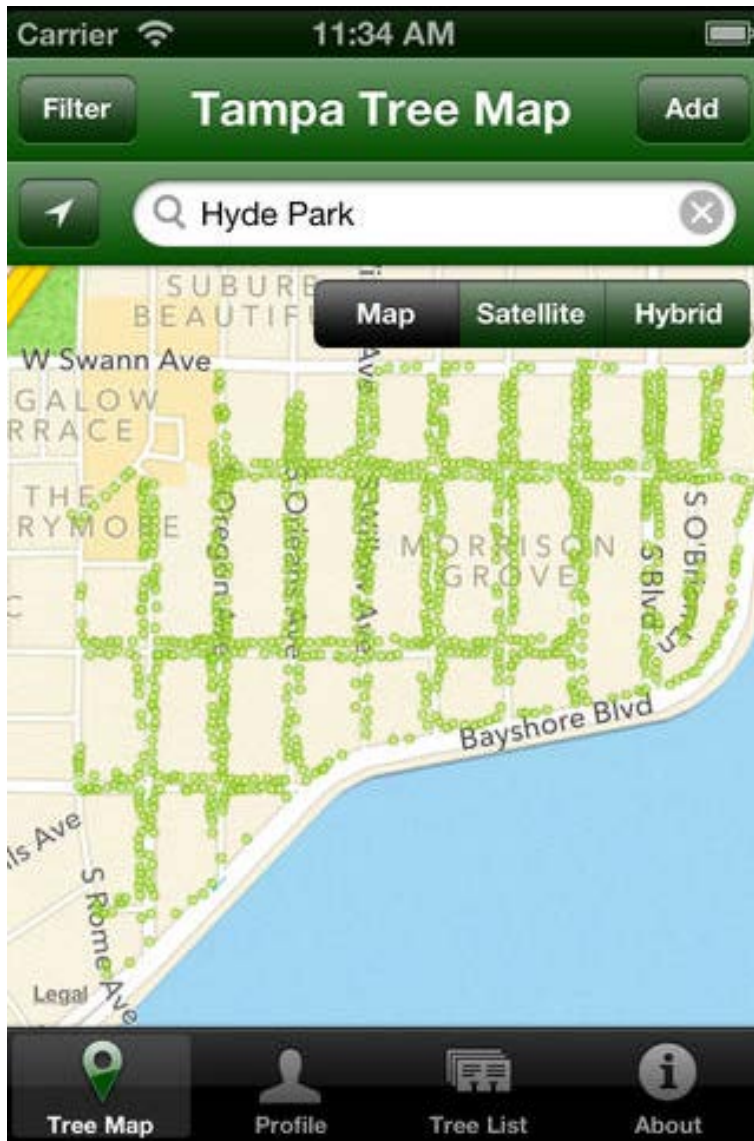
Helpful Identification Photos
Click an image to see the original/larger version in a new window.

Quercus nigra leaf
Atlas of Florida Vascular Plants

Quercus nigra male catkin
Atlas of Florida Vascular Plants

Quercus nigra acorn
Atlas of Florida Vascular Plants

System Overview: iOS App



System Overview: Users and Reputation Points

Tampa Tree Map

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Logout

Add a Tree

BETA

HomeAboutResourcesExplore Trees


Search by Location

Tampa, FL

Search for a Species

All trees

Search



Change photo »

shawnlandry

Joined on Mar 14, 2013

Profile

Not publicly displayed

Shawn

Landry

landry@usf.edu

33620

Password

Edit

Edit

Edit

Reset

Keep Me Updated with Occasional Emails

Not publicly displayed

No

Change

Account Active?

Keep this as "yes" unless you want to delete your account

Yes













Change

Feedback

Profile

You have not favorited any trees yet!

20 Most Recently Added/Edited Trees

	Tree Species	Date Planted	Last Updated
	cabbage palm	Unknown	12/26/13 11:55
	cabbage palm	Unknown	12/26/13 11:55
	cabbage palm	Unknown	12/26/13 11:55
	cabbage palm	Unknown	12/26/13 11:55
	laurel oak; diamond oak	Unknown	12/12/13 06:18
	Unknown	Unknown	10/12/13 03:15
	common bamboo	Unknown	08/16/13 07:13
	common bamboo	Unknown	08/16/13 07:13
	goldenrain tree	Unknown	08/15/13 02:34
	goldenrain tree	Unknown	08/15/13 02:34
	goldenrain tree	Unknown	08/15/13 02:34
	goldenrain tree	Unknown	08/15/13 02:34

Recent Photos Added



Tree #: 2542
Added on: Dec 26, 2013



Tree #: 2239
Added on: Aug 15, 2013



Tree #: 2231
Added on: Aug 15, 2013



Tree #: 2233
Added on: Aug 15, 2013



Tree #: 2232
Added on: Aug 15, 2013



Tree #: 2230
Added on: Aug 15, 2013

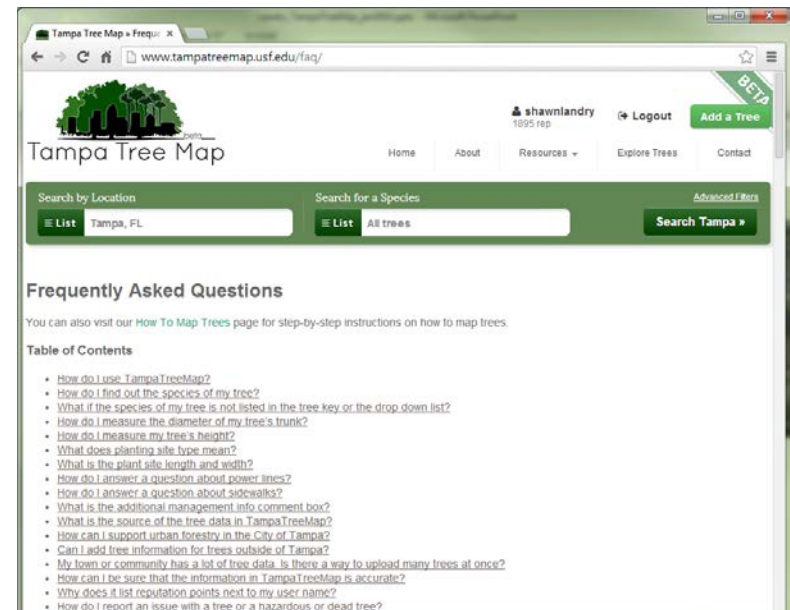
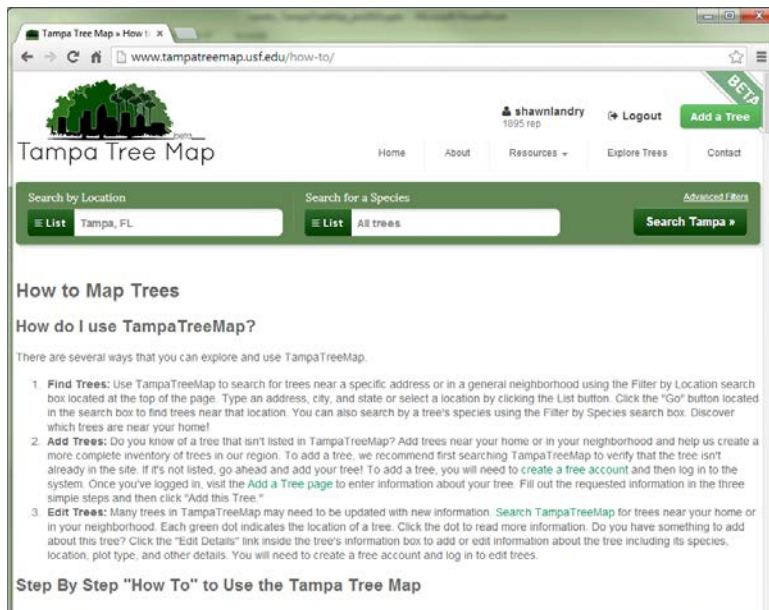
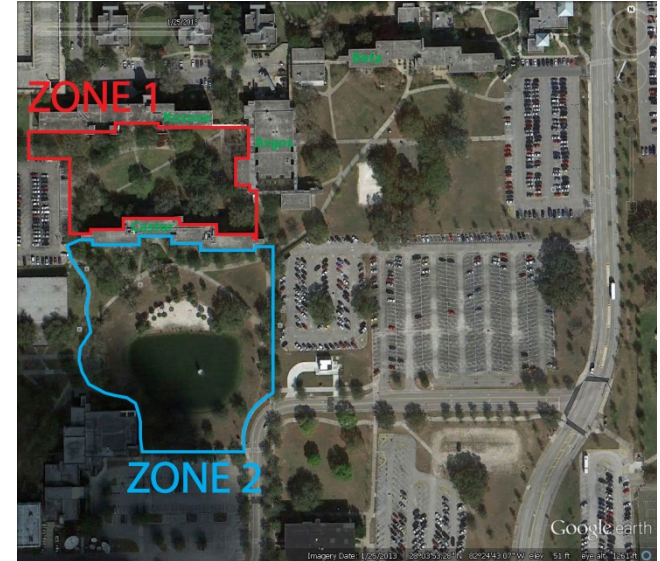
Total Reputation: **+1895**

Recent Reputation Changes

Action	Date	Value
add tree	12/26/13 11:55 AM	+25
add tree	12/12/13 06:18 AM	+25
add tree	10/12/13 03:15 PM	+25
edit plot	10/12/13 03:15 PM	+5
edit tree	10/12/13 03:14 PM	+5
edit plot	10/12/13 03:14 PM	+5
edit plot	09/19/13 03:15 PM	+5

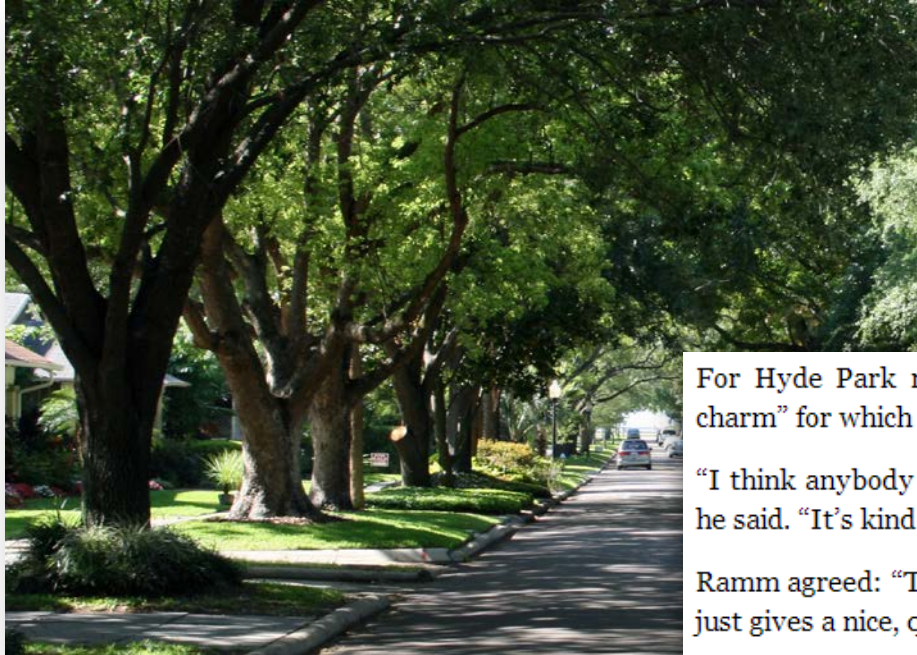
User Experience: Student Testing

- ▶ Students untrained in forestry tested the system and field approach
 - ▶ Feedback about “bugs” in the system
 - ▶ Suggestions about training materials
- ▶ Three phase approach
 - ▶ Cycle of mapping, focus groups, and website modifications
- ▶ Very useful approach



User Experience: Neighborhood Street Tree Mapping

- ▶ Wealthy, historic, treed neighborhood
- ▶ Trees in decline (laurel oaks)
 - ▶ 62 trees removed since 2012
 - ▶ 20 more tree removals pending
- ▶ Residents want replanting plan
 - ▶ And, willing to pay @ \$22k to plant 62 larger trees
- ▶ City wants to inventory what exists



Hyde Park's dying laurel oaks replaced

Photos



The city is removing between 100 dead and dying laurel oak trees from the Hyde Park area. The neighborhood association's board recently allocated \$15,000 to buy more mature oak trees to replace the ones that have to come down. CLIFF MCBRIDE/STAFF

◀ 1 of 2 ▶

By ELIZABETH BEHRMAN
Tribune staff

Published: October 28, 2013

TAMPA — In Old Hyde Park, as in many of Tampa's older neighborhoods, the canopy of mature trees is a point of pride for residents.

For Hyde Park residents, the trees help give the historic neighborhood the “southern charm” for which it is known, Walker said.

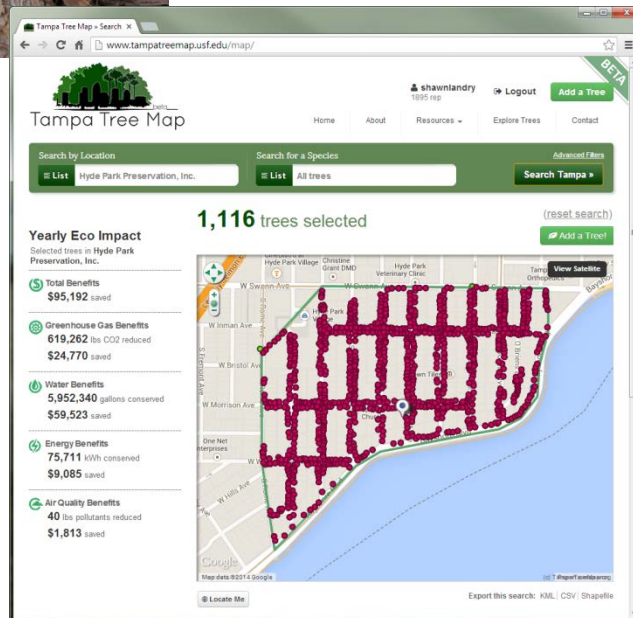
“I think anybody from Tampa knows that this is Tampa when they come to Hyde Park,” he said. “It’s kind of a unique neighborhood.”

Ramm agreed: “The trees are important because it’s the character of the neighborhood. It just gives a nice, quiet feeling in a very urban area.”

Neighborhood Street Tree Mapping



- ▶ Neighborhood is test location for Tree Map
- ▶ Forestry intern works with City Forester
- ▶ A moderately painful experience
- ▶ iPad was used with still evolving website
 - ▶ Initial bugs in the system
 - ▶ Adding photos in the field was costly for the data plan
 - ▶ Screen can be difficult to see in bright sun
- ▶ 1,116 trees surveyed



User Experience: Push-Route Sampling

- ▶ First routes to be opened up after a storm – to critical facilities
- ▶ Inventory the routes to mitigate risk from unhealthy trees

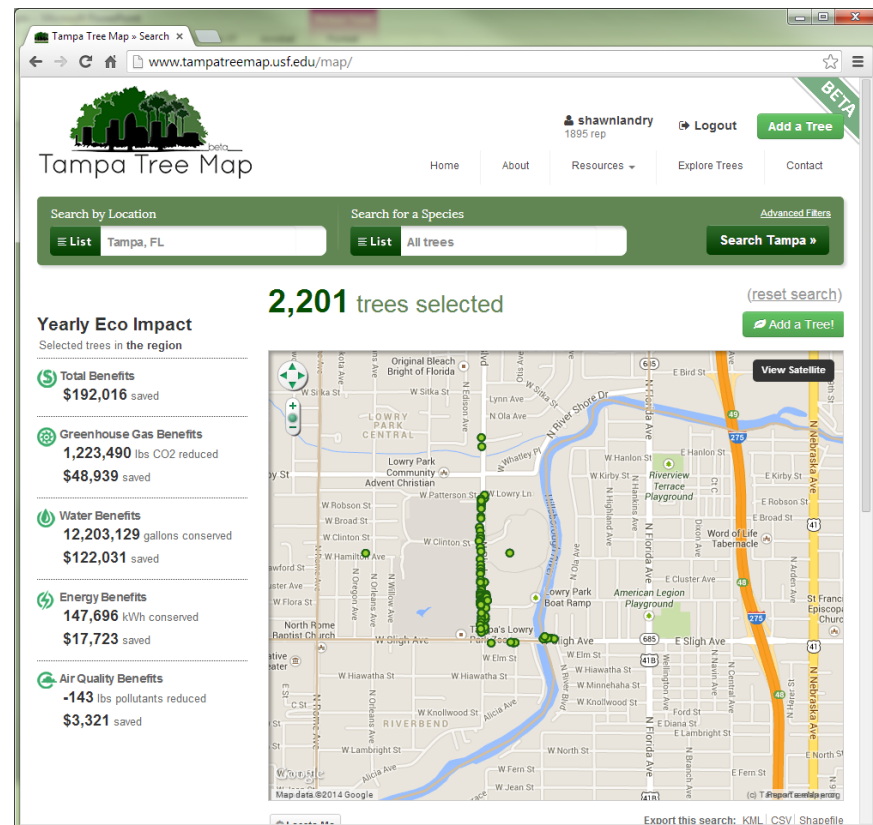
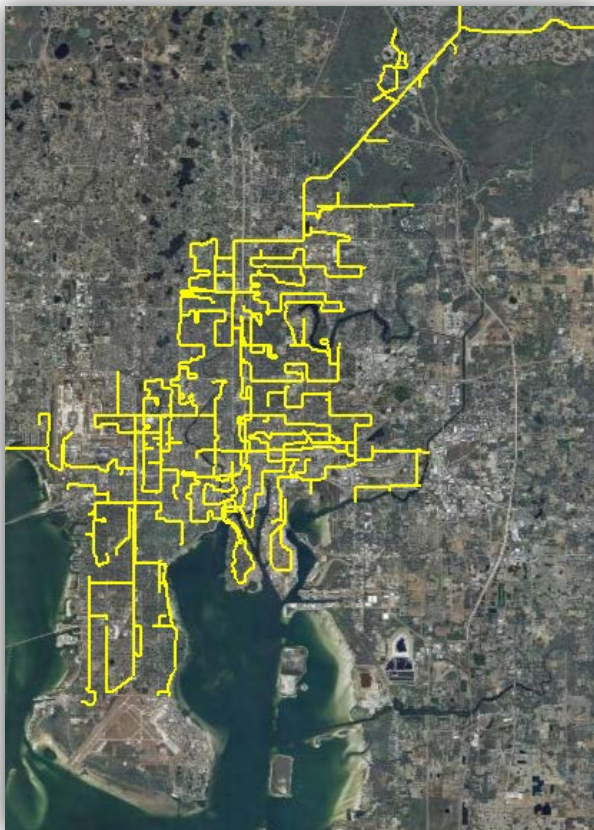


User Experience: Push-Route Sampling



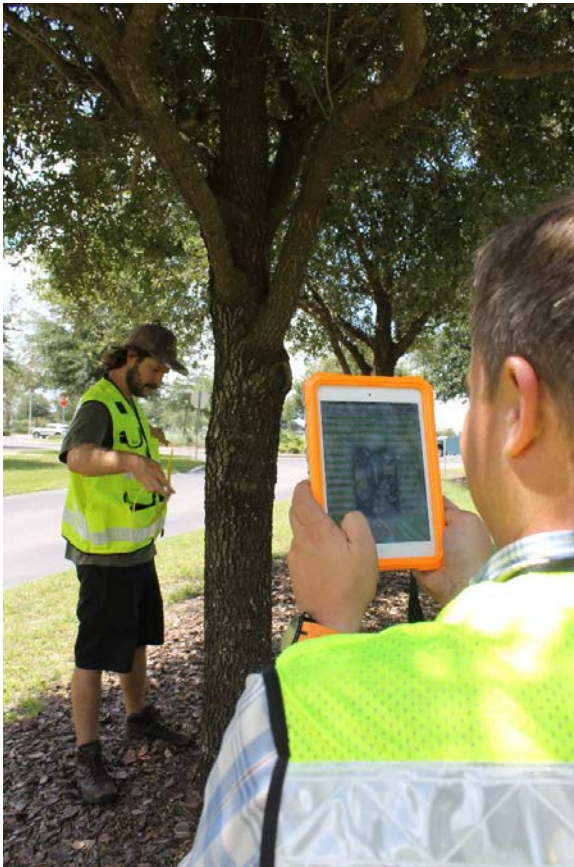
Push-Route Sampling (led by Andrew Koeser at UF)

- ▶ Estimate of tree condition on push routes (sample of the total 321 miles)
- ▶ Quantify storm debris potential in order to validate debris models after a storm
- ▶ Sampling follows the i-tree storm protocol
- ▶ Estimating tree risk using the USDA Community Tree Risk Evaluation Form
- ▶ Estimating tree health using an FOA assessment criteria modified for urban tree



Push-Route Sampling

- ▶ Tampa Tree Map and custom tree risk and health field data collection forms
- ▶ Data will be used to model factors that impact risk and health ratings
- ▶ Baseline for growth and longevity related research (e.g., pruning cycle optimization)
- ▶ Storm damage and debris prediction modeling (after Tampa is hit by a future storm)



Additional Lessons Learned and Concerns

▶ Usage

- ▶ GPS accuracy (depending on system)
- ▶ Aerial images usually 2-3 years old
- ▶ Small screen is always difficult to use
- ▶ Data plan limitations

▶ Challenges/Concerns for use by City Staff

- ▶ Quality of user-submitted data
- ▶ Cannot “lock-down” tree data entered by staff
- ▶ Does marking a tree as “poor condition” make the City liable?

- ▶ Future plans to implement newer version of Open Tree Map
- ▶ Develop customized entry forms for City usage
- ▶ Continued financial support

Future Plans: Neighborhood Sampling

- ▶ Highlights neighborhood and single tree benefits
- ▶ Can be used to “sell” urban forest program / stewardship
- ▶ Identify tree health / risks in Tampa’s neighborhoods
- ▶ Tracking tool for new planting

Yearly Eco Impact

Selected trees in Hyde Park
Preservation, Inc.

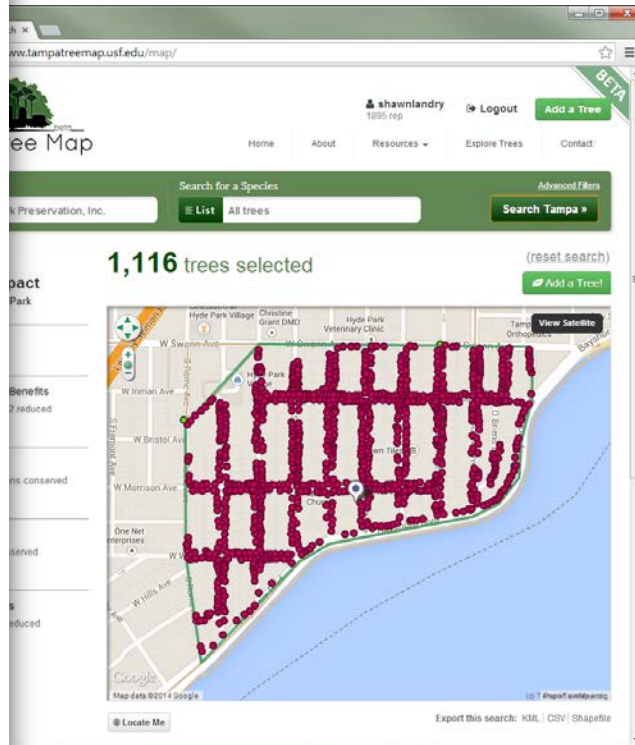
Total Benefits
\$95,192 saved

Greenhouse Gas Benefits
619,262 lbs CO2 reduced
\$24,770 saved

Water Benefits
5,952,340 gallons conserved
\$59,523 saved

Energy Benefits
75,711 kWh conserved
\$9,085 saved

Air Quality Benefits
40 lbs pollutants reduced
\$1,813 saved



live oak

820 South Orleans Avenue, Tampa FL
None

Plot number: 850

Common Attributes

General Tree Information

Scientific name	<i>Quercus virginiana</i>
Common name	live oak
Tree number	903
Trunk diameter	22.80 inches
Tree height	25.00 feet
Canopy height	Missing

Yearly Ecosystem Services

		Value
Stormwater intercepted	13040 gal	\$130.40
Energy conserved	151 kWh	\$18.17
Air pollutants removed	-1.379 lbs	\$2.21
Carbon dioxide reduced	1301 lbs	\$52.06
Total CO ₂ stored to date	12366 lbs	\$494.64

Environment & Plot Information

Nearby address	820 South Orleans Avenue Tampa FL 33606
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Comments

Neighborhood Sampling

- ▶ Training for residents and groups
- ▶ Inventory and Stewardship

1st Five-Year Urban Forest Management Plan (2014-2019)

The first 5-year management plan represents the initial alternatives for action needed to lay the foundation for a comprehensive urban forest management. Alternatives for action chosen for implementation in the first 5-year Urban Forest Management Plan had to lead to no net increases in operational or capital costs. These actions have to do with the processes, procedures, ordinances and education to support the institutional, community and technical capacities needed to move the management of the urban forest forward. (see Appendix for the complete list of Alternatives for Action)

Preferred Alternatives of Action for the 1st Five-Year Urban Forest Management Plan are arranged by category. Each action is preceded by the year in which it is intended to be initiated or completed. The specific criteria addressed by each action are then listed (see next section). Finally, the responsible or lead City department is indicated.

Education

Year 1—Prepare and implement the Neighborhood Tree Stewardship program to educate residents on tree care and the urban forest.

Criteria: Vegetation (Veg) – 1, 3, 4, 5, 6, 7

Resource Manage. (RM) – 6, 11, 12, 13, 14

Community Framework (CF) – 1, 2, 4

Responsible Department: Dept. of Planning and Development and Parks and Recreation Dept.

Year 1—Prepare and maintain an interactive urban forest website for City of Tampa's residents.

Criteria: CF – 1

Responsible Department: Dept. of Planning and Development and Parks and Recreation Dept.

The image shows a screenshot of a web browser displaying the UF/IFAS Extension Hillsborough County website. The website has a blue header with the text "UF/IFAS Extension Hillsborough County Solutions for Your Life" and a navigation menu with links: Home, About Us, Contact Us, Events. A search bar is located on the right. The main content area features a section titled "Urban Forestry for Homeowners" with a description of the benefits of trees and a link to "Contact Agents". Below this, there is a section for "TampaTreeMap.org" with a "Tree Inventory Field Data Sheet" form. The form includes fields for "Mark and number the tree on a printed aerial image", "Nearby Street Address", "Species Name (if known)", "Trunk Size (inches)", "Plot Type" (Well, Plant), "Plot Length (feet)", "Is there a power line", "Sidewalk Damage", "Tree Condition" (Tree condition has been complete, Dead, For training), "Canopy Condition" (Estimate estimate, Full: n, Large). Below the form, there is a section titled "How to print an aerial photograph" with instructions on how to use Google Maps to print an aerial image. At the bottom, there is a section titled "How to measure Tree & Plot Information" with instructions on how to measure a tree and plot.

Urban Forestry for Homeowners

UF/IFAS Extension
Hillsborough County
Solutions for Your Life

Home About Us Contact Us Events

Search GO

4-H Youth Development
Agriculture
Family & Consumer Sciences
Forestry
Professionals
Homeowners
Tree & Landscape Short Course
Tampa Bay Watershed Forest Working Group

Urban Forestry for Homeowners

Trees and forests affect nearly every aspect of our lives. The Tampa Bay watershed's urban and rural forests protect our supply of fresh water, remove airborne pollutants to purify the air, protect soils from erosion, and provide for nature-based experiences. Our trees and forests provide habitat for wildlife, and serve as preserves of biological diversity and as sources of raw materials and fuel. They shape the recreational landscape, help stabilize our farms, and enhance the economic vitality of our cities.

We hope that you find our website interesting and informative. Our goal is to provide you with science you can use. Let us know how we are doing.

Contact Agents
Urban Forestry: Rob Northrup

Calendar

TampaTreeMap.org

Tree Inventory Field Data Sheet

Mark and number the tree on a printed aerial image. Enter the identifying number: _____

Nearby Street Address: _____

Species Name (if known): _____

Trunk Size (inches): _____

Plot Type: ☐ Well ☐ Plant

Plot Length (feet): _____

Is there a power line: ☐ Yes ☐ No

Sidewalk Damage: ☐ None ☐ Minor ☐ Major

Tree Condition: ☐ Tree condition has been complete ☐ Dead ☐ For training

Canopy Condition: ☐ Estimate estimate ☐ Full: n ☐ Large

TampaTreeMap.org

Field Inventory Methods

How to print an aerial photograph

Use Google Maps or another mapping website to print an aerial image of approximately one block at a time. For example: 1) use a web browser to visit maps.google.com; 2) enter an address in the area you plan to inventory; 3) turn on the aerial images – select "earth" in Google maps; 4) use the zoom tool to zoom-in so that you can see one block – in Google maps, the scale bar on the lower-right corner of the screen should say 10m (i.e., 10 meters = @1 inch); and 5) select print from the web browser to print the map of the block. You may need to reposition the map in order to print the block of interest. Below is a sample image showing the view of a block from Google maps.

How to measure Tree & Plot Information

Species name: Enter either the scientific or common name of the tree. Pick your tree from the drop down list of trees that appear. Still not sure... follow the link to the right which will take you to the illustrated tree key to help you identify your tree. The tree key will walk you through the process of determining a tree species based on leaf structure. If you cannot definitively determine your tree species, you can still add your tree to TampaTreeMap. If

Demonstration

- ▶ First...Questions?
 - ▶ Email: Landry@usf.edu
- ▶ Demonstration
 - ▶ App Store: search for “Tampa Tree Map”
 - ▶ User: SGSF Password: temp

