INVENTORIES AND ASSESSMENTS

In order to effectively manage any resource you need to know what you have. Tree inventories and canopy cover assessments will provide management information to complete work, develop short and long-range management plans and budgets. There are different types of inventories and each has a different objectives, limitations and cost to complete and maintain. Therefore, it is critical to select an inventory that matches your management capacity and budget. The objective of this publication is to provide introductory information to municipalities about canopy cover assessments and the types of public tree inventories and their uses.

Canopy Cover Assessments

A tree canopy cover assessment uses aerial photographs and other types of imagery to quantify the area of a community covered by tree canopy, vegetation and other land features and the ecosystem service benefits the existing tree canopy provides.

These analyses are used for planning purposes to set tree canopy cover goals and monitor change over time. The maps generated also visually identify areas of opportunity to add canopy cover.
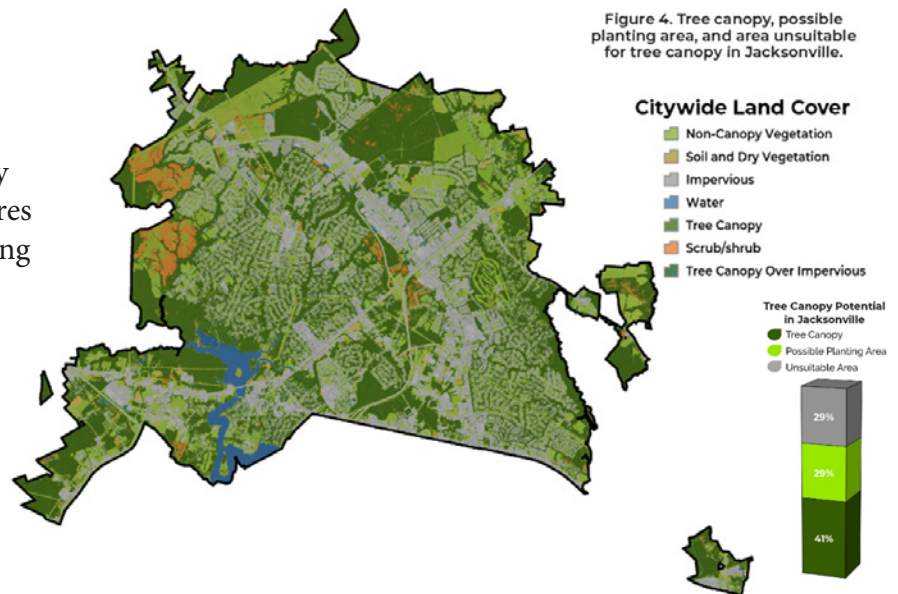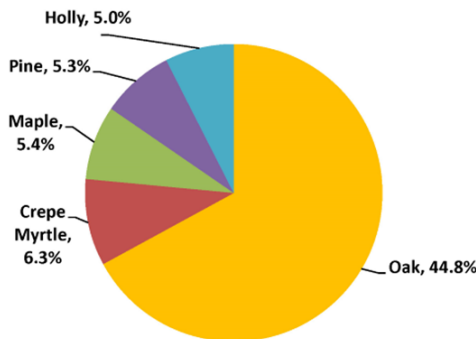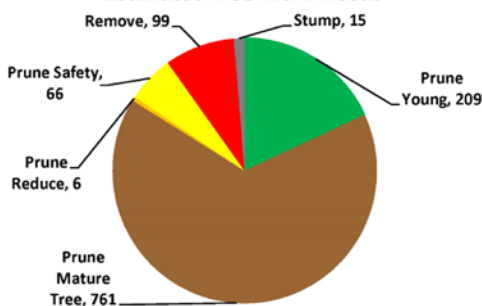

Figure 4. Tree canopy, possible planting area, and area unsuitable for tree canopy in Jacksonville.

Citywide Land Cover
- Non-Canopy Vegetation
- Soil and Dry Vegetation
- Impervious
- Water
- Tree Canopy
- Scrub/shrub
- Tree Canopy Over Impervious

Tree Canopy Potential in Jacksonville
- Tree Canopy
- Possible Planting Area
- Unsuitable Area

29%
29%
41%

Estimated Top 5 Tree Genus
- Holly, 5.0%
- Pine, 5.3%
- Maple, 5.4%
- Crepe Myrtle, 6.3%
- Oak, 44.8%

Sample Tree Inventory

A sample tree inventory is a statistically valid sample of the urban forest. The results provide good estimates of the numbers of trees in the population, health, management needs and other management information. This information can be used for planning purposes and budgeting. It is a good tool for beginning to develop a plan and/or for communities that do not have the capacity to complete and maintain a complete tree inventory.

A sample inventory can also be used as a storm damage assessment tool. The sample plots are reinventoried after a community-wide event, and the data can be used to estimate the amount of damage and needs to mitigate the damage.

Estimated Tree Work Needs
- Remove, 99
- Stump, 15
- Prune Safety, 66
- Prune Young, 209
- Prune Reduce, 6
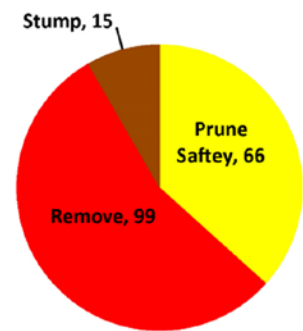- Prune Mature Tree, 761

Partial Tree Inventory

A partial tree inventory inventories specific trees or sites that meet a specific management objective. Management and location information are collected so a crew can return to the site/tree to perform work. Trees that do not meet these management criteria are not inventoried. The result is a list of trees meeting the management objective. This information can be used to develop work plans and budget to address the needs identified in the inventory. Armed with the location information, a work crew can also return to the tree to perform the work, and the list can be used to track completion of the work. Once the work is completed, use of the inventory is complete.

Utilizing partial tree inventories on a regular basis is a good management practice to prioritize work needs for both small and large communities.
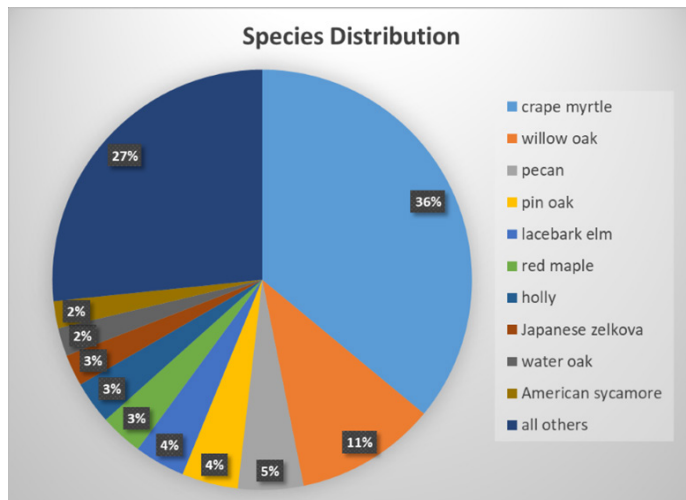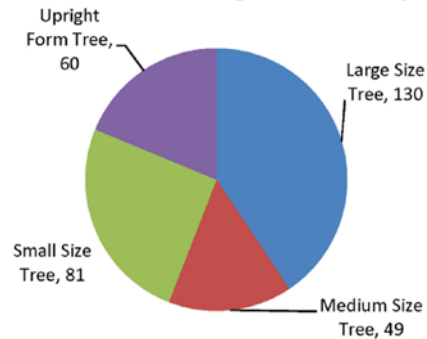
Project/Site Complete Tree Inventory

Inventory all the trees on a site for a project, for example a site development project such as a street reconstruction. The tree management and location information are used to determine which trees are worth preserving and then protecting the trees during construction.

Risk Tree Inventory Work Needs

Stump, 15
Prune Saftey, 66
Remove, 99

Street Tree Planting Site Inventory

Upright Form Tree, 60
Large Size Tree, 130
Small Size Tree, 81
Medium Size Tree, 49

Species Distribution

- crape myrtle — 36%
- willow oak — 11%
- pecan — 5%
- pin oak — 4%
- lacebark elm — 4%
- red maple — 3%
- holly — 3%
- Japanese zelkova — 3%
- water oak — 2%
- American sycamore — 2%
- all others — 27%

Complete Tree Inventory

The objectives of a complete inventory are to provide short and long-term planning information and operational work management and accounting. Inventory software is required to protect and maintain the data, and generate reports.

All trees are inventoried along streets and on maintained park lands and public properties. As a result, this is the most expensive type of inventory. The inventory data must be maintained on a daily or regular basis so you must have the staff and expertise available to perform this task. The entire inventory must also be completely updated on a regular basis.

A complete inventory is reserved for communities that are advanced on the management scale and have the budget, expertise and capacity to maintain the inventory.