

**Helping SC Communities Self-Assess which type of Urban and Community Forestry  
Project to Apply for Grant Funding Based on Capacity and Community Needs**

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**Problem Statement:**

The Urban and Community Forestry (UCF) Assistance Program was authorized by the Cooperative Forestry Assistance Act of 1978 (PL 95-313), Section 9, and amended by PL 113-79, effective February 7, 2014. This federal program provides funding to state forestry agencies to deliver technical and financial assistance to local governments and other entities to plan and implement urban forestry programs.

The UCF Program was established to improve the care of community trees/forests and “to promote and expand the social, economic, and ecological benefits they provide in cities, suburbs and towns, nationwide. It accomplishes this by providing technical, financial, and science-based educational assistance to communities so they can implement urban forestry programs and plant, protect, maintain, and utilize community trees and forests.” (Koehn, UCF Program Guidance, p.2). One of the ways success is determined for the federal funding is by determining if communities are managing or developing, based on UCF program capacity. A managed community is one that has established all of the following components: a full-time professional staff position, a management plan, tree policy, and an advocacy group. A developing community is one that has established one to three of the above listed components. A non-participating community is one that has not yet established any above listed components.

The UCF Program in South Carolina carries out this federal mandate by assisting local governments and other entities to build local capacity to actively manage urban forests to maximize the benefits, which include their ability to clean air and water, conserve energy, reduce the impacts of urbanization, and mitigate climate change and the impacts of certain types of catastrophic events.

Urbanization is the number one threat, not only to forestry, but to the characteristics and the quality of life in SC communities. Thus, it is important for the UCF Program to work with communities of all sizes and needs to address UCF planning and implementation in urban and urban-adjacent environments. This includes tree planting strategies and goals, standards of selection and planting, maintenance and management, emergency planning and risk mitigation. A sobering statistic is that 50% of the nation’s urban trees die by age 13-20, due to being planted in areas with inadequate root space (Roman, Laura A., How Many Trees Are Enough? Tree Death and the Urban Canopy, p. 4). And, due to site conflicts and poor maintenance, many trees that survive are removed before the end of their natural life span, before they can provide the full extent of their benefits. Lack of planning and poor practices are expensive and unsuccessful.

The UCF program is important to the overall program delivery of the SC Forestry Commission for three primary reasons:

- 1) Although much of SC is still considered rural, certain areas of the state have experienced an accelerated amount of urbanization over the last several years, expanding into working lands and affecting landscape functionality, by increasing forest loss and fragmentation, and increasing stormwater runoff and water quality impacts, and habitat loss.
- 2) Most communities do not have the technical expertise to fully and effectively manage their urban tree canopy, public trees, and community forests. Nor do they have the budgets to hire consultants to help with the planning process or, in many cases, the staff to implement the plans for expanding or managing forests and urban trees.
- 3) Even for larger scale planning and zoning efforts, which are more necessary as populations grow, localities are not employing effective land planning strategies to deal with the impacts of urbanization on natural resources.

The UCF program is important to the overall program delivery of the SC Forestry Commission's goals within the 2020 SCFC Forest Action Plan (FAP). According to the SCFC FAP, the goal of the UCF program is to create, enhance and support long-term local, regional and statewide community forestry programs by helping to foster "essential components of a well-managed and fully integrated program including full-time staff, tree management and zoning policies, tree mapping (canopy coverage and tree inventories), management plans, a sustained budget and local political and community support (p.61)."

The SC Forestry Commission's Urban and Community Forestry Program utilizes grant funds to support efforts to meet its state action plan goals. The program provides direct technical assistance to communities having varying levels of expertise, to build local capacity, and deliver local and regional educational activities.

Currently, SCFC's notice of funding opportunity states the types of projects eligible for grant funding and provides instructions on the application process. However, communities need a method to self-assess their needs and thus identify what type of grant project would be the most beneficial. This self-assessment will aid communities in progressing to a developing community or moving from a developing community to a managing community. Increases in the number of managing and developing communities in SC will not only improve the social, economic and environmental benefits provided from urban forests but also will increase the SCFC's eligibility for federal funds to support and advance its UCF goals while continuing to build capacity for managing SC urban forests.

**Data Collection:**

Data collected from the states regarding community assists are reported to the USDA Forest Service through the Community Accomplishments Reporting System (CARS) to tally the number of communities with no designation, developing communities, and managing communities, and CARS then tracks changes in these numbers over time. The CARS allocation formula for distributing federal funding incorporates this information which directly affects the percentage of funds allocated to SC, so it is important for the UCF program to guide communities to the most suitable grant project to advance their municipal program development.

The USDA Forest Service also collects other reporting metrics: provision of technical and financial assistance, education, deliverables, etc. The USDA Forest Service defines the terms and parameters for developing community, managing community, professional staff, advisory or advocacy group, ordinance, and management plan.

Other data resources consulted for tracking progress include:

- 1) The Florida Urban and Community Forestry Program "Managing Community Forest Grants Program" designed to assist communities over a 3 year period to start and/or develop UCF programs by establishing an effective forest management strategy.

- 2) The Arbor Day Foundation (ADF) has a Tree City USA (TCUSA) growth award (see Appendix A), that challenges TSCUA municipalities to “go beyond” the basic qualifications of being a TCUSA by doing extra projects and be recognized for their efforts.
- 3) SCFC UCF program staff partnered with Green Infrastructure Center, to create a table for best policies and programs for communities to effectively manage their urban forest in the SCFC Planner’s Forest Toolkit (April 2021). This table provides a useful framework for discerning the needs and best practices for communities who request funding assistance from SCFC, and helps communities plan projects that will build more management capacity over time (see Appendix B).

**Data Analysis:**

Data were analyzed for the purpose of determining ways to convey to communities how to move up the ladder to “developing,” “developing” to “managing,” and how to maintain a “managing” urban and community forestry program.

Program:	Definition:
Developing Program	Have between 1 and 3 of the following: <b>1.</b> Active urban and community tree and <b>forest management plans</b> developed from professionally-based resource assessments/inventories <b>2.</b> Employ or retain through written agreement on the services of <b>professional forestry staff</b> <b>3.</b> Local/statewide <b>ordinances or policies</b> that focus on planting, protecting, and maintaining their urban and community trees and forests. <b>4.</b> local <b>advisory organizations</b> , such as active tree boards, commissions, or non-profit organizations that are formalized or chartered to advise and/or advocate for the planting , protection, and maintenance of urban and community trees and forests.
Managing	Have 1-4 of the above requirements: forest management plan, professional forestry staff, ordinances or policies, and local advisory organizations.

(USDA Forest Service, Community Accomplishments Reporting System Users Guide, July 2017, p. 33, 35).

The UCF grant program in Florida helps communities strategize how to improve their municipal UCF program over a three year grant period by providing stable and guaranteed funding for the efforts to become “managing” (Florida Forest Service, Florida Urban and Community Forestry Grants website, p. 1). To qualify for the program, the community is encouraged to have staff and tree ordinance in place, which is essentially a TCUSA community. The project builds on the previous year’s efforts to establish a managing community by the completion of the grant. To be eligible to apply for TCUSA status, a community must have urban forestry staff, a tree ordinance for public trees, celebrate Arbor Day with a ceremony and proclamation, and spend at least \$2/capita on urban forestry (Arbor Day Foundation website). These standards provide a framework for action and initial direction for a community forestry program (SCFC Forest Action Plan, December 2020, p. 62).

Year 1: A tree inventory is completed. The tree inventory can be a local tree inventory or a tree risk inventory on municipal property.

Year 2: An urban forest management plan is developed utilizing the information in the Year 1 Tree Inventory and includes priority planting areas, canopy goals and a metric on how to measure progress. A tree-care ordinance review or suggested language for a new ordinance is also required.

Year 3: A tree planting project must be completed for a planting project related to the goals from the Year 2 urban forest management plan. Local groups such as the Tree Board/Advocacy group or other groups (i.e. non-profits, volunteers) should be engaged in the planting project.

However, many communities are not eligible for this specific grant, because they lack two of the program elements needed to be in place: staff and an ordinance. Therefore, communities which are not developing are less likely to apply, because they do not have the capacity.

SCFC staff and partner Green Infrastructure Center developed a continuum titled “Urban Tree Care Program Elements” to help communities gauge where they exist in their UCF program:

starting out, developing, or managing. To make it easier for communities to visualize where they are on the capacity - the continuum uses the terms “seeds,” “roots,” “sapling” and “tree” as descriptors of the stages of an UCF program. (Planners Forest Toolkit, April 2021).

### **Implementation Plan:**

This chart communicates at a quick glance the road forward for communities with their UCF program. These tables help communities understand how to progress efficiently, building that capacity in their local urban and community forestry programs. And most importantly, which projects to undertake first as building blocks to reach their goals.

### **Seed communities (pre-developing or developing program):**

- >Staff member/contractor tree care
- >Removal of tree risk/hazard
- >Code designates who cares for trees, plants
- >Funded program for tree care and maintenance

Projects for seed communities:

Urban Forest (UF) management plans: Develop map of canopy and plantable areas map, tree inventory for priority area (park or downtown area) including DBH and species for each tree  
Professional UF staff: train staff to get International Society of Arboriculture (ISA) certified arborist credential, continuing education ISA or Tree Care Industry Association (TCIA) sanctioned educational opportunities  
Ordinances/policies: public tree care ordinance, addressing clear guidance for planting, maintain and removing trees from streets, parks and other public places  
Advisory organizations: advocacy group development, training to address roles of tree board members (i.e. how to be effective, creating planning strategies, getting work done, celebrating arbor day)

### **Roots communities (meets Tree City USA requirements & developing program):**

- >All of the requirements of “seed communities” and:
- >Municipal tree maintenance records
- >Staff arborist
- >Tree care ordinance for public trees
- >Arbor Day Celebration
- >Tree Board/Advisory Group
- >Spend at least \$2/capita on UCF program

Projects for roots communities:

Urban Forest (UF) management plans: Map tree canopy with plantable areas map, tree inventory for priority areas with tree maintenance plan  
Professional UF staff: hire professional urban forester with education (degree in forestry urban forestry) with seed money to start position, train staff to get ISA certified arborist



credential, continuing education ISA or TCIA sanctioned educational opportunities, take ISA Certified Arborist test

Ordinances/policies: write a tree ordinance (i.e. public tree care and maintenance ordinance, tree preservation and landscaping ordinance), add clauses to public tree care ordinance (i.e. establishing tree care standards), create tree removal process for private property, urban forest management plan, community tree planting plan

Advisory organizations: advocacy group development by providing training for non-profit to provide continued UF program support

### **Sapling communities (managing program):**

>All of the requirements of “seed and root communities” and:

- >Tree Canopy mapped
- >City Arborist (certified by ISA)
- >Urban tree planting standards
- >Tree removal for private property
- >Urban Forest Management Plan
- >Community Tree Planting Program/Volunteers/Partnership

Projects for sapling communities:

Urban Forest (UF) management plans: spatially-based tree canopy data and map with open spaces & goals to retain or grow canopy cover & calculate ecosystem benefits, tree inventory with tree maintenance plan, emergency management plan, tree recycling and re-use plan, tree risk reduction and replanting plan based on inventory of community trees

Professional UF staff: continue staff training with continuing education ISA or TCIA sanctioned educational opportunities (consider arboriculture and Tree Risk Assessment Qualification (TRAQ))

Ordinances/policies: develop or update ordinances involving landscape planning, urban forest standards, site planning and design, tree protection, trees and utilities, urban tree care and maintenance

Advisory organizations: advocacy group development by providing training for non-profit to provide continued UF program support

### **Tree communities (managing program):**

>All the requirements of “seed, root, and sapling communities” and:

- >Spatially-based Tree Canopy Data and Map (including both existing canopy)
- >Tree Inventory (citywide, downtown, parks or other planning geography)
- >Staff training on arboriculture (internal or external trainings)
- >Tree Risk Assessment Qualified Staff
- >Standards for street, parking lots (including applications of ANSI standards for tree installation and maintenance)
- >Including trees as green infrastructure for stormwater, drinking water protection
- >Emergency management plan/storm plan
- >Tree recycling and re-use plan (urban wood utilization plan)
- >Tree-focused advocacy group that helps to support program and educate public
- >Tree donation program

Projects for tree communities:

Urban Forest (UF) management plans: Update tree canopy maps, update tree inventories, update storm plans, update emergency management/storm mitigation plan, update tree recycling and re-use plan, resiliency plans, greenway/open space plans, or green infrastructure plans

<p><u>Professional UF staff:</u> Continue staff training/continuing education with ISA or TCIA sanctioned educational opportunities</p> <p><u>Ordinances/policies:</u> develop or update ordinances involving landscape planning, urban forest standards, site planning and design, tree protection, trees and utilities, urban tree care and maintenance</p> <p><u>Advisory organizations:</u> advocacy group development by providing training for non-profit to provide continued UF program support</p>
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## **Evaluation Method:**

SCFC UCF Program is in the process of developing internal metrics to measure the success of the program, and looking at composite measures that help quantify the the agency's effort to engage communities and sustain and grow healthy forests. Current key performance indicators being discussed are:

- 1) The number of people served as defined by the population of the communities assisted;
- 2) Number of annual Tree City USA designations;
- 3) Seat hours delivered on urban forestry topics;
- 4) Seat hours delivered specific to community planning.

Another potential measurement is the number of communities that progress through the categories from non-participating, to developing, to managing over several years. The gradual progress of building capacity requires a long view to assess and should be considered in a 3-5 year period.

No matter where a community is on the continuum, a record of the technical assistance will be maintained by the SCFC staff providing the assistance. Each year the data will be reviewed, the results published, and the program delivery critiqued and improved upon.

## **Summary and Recommendations:**

It can be challenging to measure success when using technical assistance to move a community from non-participating, to developing and finally managing in a yearly timeframe. Because there is a lot of staff turnover in many SC communities, SCFC UCF program has

concentrated on the importance of strategic planning with communities, which provides the plan and methods to continue building capacity through staff changes. Since government moves so slowly, it can be difficult to report on the public policy changes that have happened as an outcome of a one-year grant. Also, much of the technical material produced from grants will be utilized for years to come, such as the Planners' Forest Toolkit, which can be used to inform a community's Comprehensive Planning process in the natural resources section and the many other sections where trees are relevant, (such as, in the economic or transportation sections).

With the limitations of our key performance indicators, it is important to survey communities to verify data accuracy when assistance is provided to keep the data up to date. Also, the SCFC will continue to utilize TCUSA data from Arbor Day Foundation, which requires yearly metrics reporting as part of the recognition program and application/renewal process.

It is also important to identify additional gaps or needs that interfere with community engagement, such as, developing ordinances, accessing tree canopy assessment expertise, and access to a tree inventory program. While initial SCFC UCF efforts are focused on communities that have made some progress in urban tree management, we also need to foster progress in predeveloping communities or non-participating communities, as these communities deserve future consideration and assistance to overcome their limited capacity. In addition, the SCFC UCF program can look at how to continue to support managing communities in maintaining their capacity and performing at a higher level. Examples of this type of assistance includes periodic tree ordinance reviews and updates or revision and updates to urban forest management plans. These are further steps that can be taken as the program develops and assessments are made in program delivery.

The initial performance indicators will continue to be assessed and refined as the SCFC UCF grant program develops, to ensure the relevance of its technical and financial assistance for communities served. Changes to the program and expansion of its support to serve all levels of

local capacity are expected in a relatively new program. Ongoing reviews, planning and improvement are anticipated in order to meet the agency's needs and successfully achieve the goals and objectives described in the 2020 SCFC Forest Action Plan.

## References:

1. Koehn, Steven, Urban and Community Forestry Program Guidance, September 2017.
2. Roman, Laura A., How Many Trees Are Enough? Tree Death and the Urban Canopy, Spring 2014. [https://www.fs.fed.us/nrs/pubs/jrnl/2014/nrs\\_2014\\_roman\\_001.pdf](https://www.fs.fed.us/nrs/pubs/jrnl/2014/nrs_2014_roman_001.pdf)
3. South Carolina Forestry Commission's Forest Action Plan. March 2021.
4. USDA Forest Service. Community Accomplishments Reporting System for the Urban and Community Forestry Program Users Guide, July 2017, <https://apps.fs.usda.gov/nicportal/cars/help/CARSUsersGuide.pdf>
5. Florida Forestry Commission, Florida Urban and Community Forestry Grants website, <https://www.fdacs.gov/Business-Services/Grant-Opportunities/Florida-Urban-and-Community-Forestry-Grants>
6. South Carolina Forestry Commission's Planners' Forest Toolkit, April 2021.
7. Arbor Day Foundation, Tree City USA website, <https://www.arborday.org/programs/treecityusa/>

**Appendix:**

Appendix A: Arbor Day Foundation, Tree City USA Growth Award Activities, 2020

Appendix B: SC Forestry Commission Planner's Forest Toolkit, April 2021

Appendix C: Arbor Day Foundation, Tree City USA requirements

Appendix D: Glossary

## Appendix A

### Growth Award Update – Activities List

(From Arbor Day Foundation)

# Tree City USA Growth Award Activities



## Category A: Building the Team

### Budgets

A1. Budget Increase (4 points) eligible each year

At the start of the upcoming fiscal year, the municipal forestry budget has been approved for an increase over the trailing three-year average, as reported on Tree City USA applications.

A2. Donation Account Created (4 points) one time only

A new special account is established during the year to accept public donations for tree planting and care, arboretum improvements, memorial tree groves, or other community forestry activities, to augment General Fund expenditures.

A3. Grant Applications (3 points) eligible each year

Two or more applications for grant funding were submitted (not necessarily awarded) during the year to accomplish specific community forestry projects or programs.

A4. New Funding Source (5 points) one time, per source

A new, permanent source of municipal or private funding is enacted or awarded during the year (such as tree mitigation funds generated by commercial development), resulting in a 5% or greater increase for the current municipal forestry program budget.

A5. Emergency Appropriation (2 points) eligible each year

A supplemental budget process was used during the year to prioritize forestry activities during insect/disease outbreaks, storms, drought, wildfire, or other city emergencies.

### Staff

A6. City Forester (10 points) one time only

For the first time and during the year, the city hires a professional urban forester with the education (degree in forestry, urban forestry, or closely related field) and expertise (such as ISA credentials, or state certification) to provide leadership for the community forestry program.

**A7. Supervising Arborist (10 points) one time only**

For the first time and during the year, the city employs a staff position for an ISA or state-certified arborist or adds this credential to an existing job description. The position is responsible for overseeing safety and performance standards for all tree workers in the department.

**A8. Allied Professionals (5 points) one time only, per position**

One or more individuals with urban forestry or allied professional credentials (e.g. Landscape Architect, Urban Planning, Horticulture) is added to the community forestry team during the year (could be municipal staff or consultant).

**A9. Additional Credentials (5 points) one time per individual, per credential**

Additional Certified Arborists or Certified Tree Workers are credentialed or added to the community forestry team during the year. Includes additional state board, TCIA, or ISA credentials (Municipal Specialist, Utility Specialist, Board Certified Master Arborist, Certified Treecare Safety Professional, Tree Risk Assessment Qualification, etc.) for existing staff members.

**A10. Green Jobs (4 points) eligible each year**

One or more individuals without formal experience in urban forestry—particularly youth, women, minorities, or other underserved segments of society—are provided internships, apprenticeships, job corps or other training and work opportunities within the urban forestry program. Include programs run by the community non-profit partner. Work status includes temporary, part-time, and full-time positions.

## Training

**A11. Tree Worker Safety Program (4 points) eligible each year**

A safety program for city tree workers is conducted during the year, with documented meetings, topics, and training agendas. Program must conform to ANSI Z133 Safety Standard (such as the Tree Care Industry Association's Tailgate Safety Program).

**A12. Continuing Education (3 points) eligible each year**

During the year, the city supports, sponsors, or sends tree workers, professional staff, tree board members, or non-profit partner employees to state-, ISA-, or TCIA-sanctioned educational opportunities, with at least 10 hours of continuing education credits documented.

**A13. Arborist Exchange (3 points) eligible each year**

During the year, a member of the city forestry team or the community non-profit group participates in an exchange program sponsored by either the Society of Municipal Arborists or the Alliance for Community Trees. Both 'sending' and 'receiving' communities are eligible for this activity.

**A14. Department Accreditation (10 points) one time only**

During the year and for the first time, the forestry department receives official accreditation from the Society of Municipal Arborists.



A15. Leadership Training (5 points) one time per course, per individual

During the year, a community forestry team member (city or non-profit partner) graduates from Society of Municipal Arborist's Municipal Forestry Institute program or the ISA Leadership Academy.

## Category B: Measuring Trees & Forests

### Tree Canopy

B1. Urban Tree Canopy Assessment (10 points) eligible every 5 years

During the year, the city conducted a high-resolution (1-meter resolution, or better) assessment of tree canopy across the entire community (public & private lands) using professional imaging software, LIDAR, multi-spectral and/or other specialized imagery. Includes updates to an earlier assessment to calculate canopy change.

B2. Canopy Sampling Estimate (5 points) eligible every 5 years

During the year, the city conducted a 'snapshot' assessment of city-wide tree canopy using sampling technique or online tools (*i-Tree Canopy*: minimum 1,000 sample points). The summary report delivers the area of 'tree canopy' and 'plantable space,' used to calculate 'potential canopy.'

B3. Land Cover Analysis (5 points) eligible every 5 years

During the year, the city performed an analysis of tree canopy, land use and/or Census data to prioritize tree planting and canopy retention programs. Analysis consistent with *i-Tree Landscape* assessments using NLCD datasets (30-meter resolution).

### Tree Inventory

B4. Management Inventory (10 points) eligible every 5 years

During the year, the city completed a detailed, spatial (i.e. GPS locations) inventory of street trees (or managed park trees, or both), including planting spaces, for updating the inventory for planting, maintenance and removals.

B5. Management Inventory System (7 points) one time only, per system

During the year, the city (or partner group) purchased and installed a computerized system for tracking the municipal tree inventory and management activities for public trees. It must incorporate planting spaces, location data (i.e. GIS), and allow for maintenance updates following treatments.

B6. Tree Inventory Portion (3 points) eligible each year

During the year, a portion of the public tree-by-tree inventory was completed or updated and entered in the management system.

B7. Street Tree Survey (6 points) eligible every 5 years

During the year, the city completed a sample-based survey of street trees to guide planning efforts for public right-of-way property. Collected data must include DBH and species for each tree (conforming to *i-Tree* protocols) and include potential planting sites.

## Urban Forests

**B8. Natural Areas Sampling (5 points)** eligible every 5 years

During the year, all the natural areas within the city (or a significant portion) were sampled (min. one sample plot/acre), including evaluations of ecological value or condition.

**B9. Ecosystem Services Assessment (10 points)** eligible every 10 years

During the year, the city (or partner groups) completed a sample-based survey of trees on private and public property that conforms to *i-Tree Eco* protocols. Projects include 'intensified' Urban Forest Inventory & Analysis (UFIA) sampling by state forestry personnel and must include a report on the structure, function and value of the urban forest.

**B10. Periodic Update (5 points)** only eligible after B9

During the year, staff, volunteers, or state agency personnel updated plot-based data for an ecosystem services assessment on a portion of sample plots and issued a report for the community.

**B11. Forest Health Threat Assessment (5 points)** eligible every 5 years

During the year, staff, volunteers, and/or state agency personnel conduct a tree health threat assessment in preparation for an insect or disease outbreak for a significant segment of the urban forest (managed trees or natural areas) and issue a report to the community.

## Category C: Planning the Work

### Policies

**C1. Ordinance Clauses (5 points)** eligible each year, for new clauses

During the year, one or more of the following clauses were added to the public tree care ordinance:

- a) care of street trees by adjacent owners
- b) duties of tree board
- c) nuisance trees on private property
- d) protection of public trees
- e) arborist licensing or registration
- f) interference with city officers/tree board
- g) utility practices and notification
- h) permits required to plant/remove trees
- i) prohibition against tree topping
- j) establishing tree care standards

**C2. Species List (3 points)** eligible each year

During the year, the city established as policy a list of tree species that are eligible (recommended) or ineligible (prohibited) for planting on public property. List should be published as a stand-alone document, appended to the tree management plan, or included in the standards & care manual (E11).

**C3. Risk Management Policy (8 points) one time only**

During the year and for the first time, the city adopted a written tree risk management policy for inspecting and mitigating reported tree problems, including a timetable for mitigating potential hazards.

**C4. Private Tree Protection Ordinance (9 points) one time only**

During the year and for the first time, the city adopted a new ordinance section within city development code that details requirements for tree protection, mitigation, and non-compliance penalties for trees on private property during the land development process. Includes standards for tree protection, trenching/boring in critical root zones (CRZs), pre-construction mulching, root or limb pruning, and watering.

**C5. Canopy Cover Goal (8 points) one time only**

During the year and for the first time, the city adopted a city-wide canopy goal as official policy. Goal is based on an analysis of current and potential canopy and should be scaled to the neighborhood, land use, or district level, to direct tree planting or retention programs toward areas with the lowest tree cover.

**C6. Policy or Plan Update (5 points) eligible every 5 years, per title**

Any of the city's policies or plans for community trees were updated during the year to reflect goals and objectives for the upcoming five-to-ten-year period.

## Plans

**C7. Annual Work Plan (3 points) eligible each year**

City staff and/or tree board assigned appropriate targets and budget for tree planting, maintenance, and removals on public property for the upcoming fiscal year. Targets can be reported from current Management Plan (C9) if one exists.

**C8. Single-Issue Plans (5 points) one time only, per title**

During the year, the city adopted a written plan to address tree care issues such as:

- a) tree planting
- b) emergency/storm response
- c) insect/disease response
- d) natural areas management
- e) wildfire preparedness
- f) tree risk management
- g) species adaptability to climate change

**C9. Management Plan (10 points) one time only**

During the year and for the first time, the city completed a detailed, multi-year (5-10 years) scope of work, with budget targets, for the planting, care and removal of trees on public property (parks, streets, public buildings, etc.), based on data from an existing public tree inventory (meets requirements of B4).

C10. Section Plan (5 points) one time only, per section

During the year, a management plan (see C9) was established for a significant subset of public trees: a neighborhood (such as downtown), a major park, all streets, etc.

C11. Urban Forest Master Plan (10 points) one time only

During the year and for the first time, a general assessment and policy summary for the community's entire urban forest was adopted, with guidance from external partners and from city departments that impact urban trees. The Master Plan provides consistency between policies and plans of different city departments, and partner groups.

C12. Green Infrastructure Plan (10 points) one time only

A community, county, or regional plan for connected openspace corridors and existing natural areas was completed during the year. Plan must include description of ecological features and functions, along with some level of parcel prioritization and a discussion of funding mechanisms for protection.

## Category D: Performing the Work

### Planting Trees

D1. Tree Planting Program (8 points) one time only, per program

During the year, a new program (with funding source) was established for installing trees on public or private property (such as 'Utility Friendly Trees,' 'Trees For Anytown,' 'NeighborWoods,' etc.). Program should integrate with the city tree planting plan (C8), but may be organized, funded, and managed by a community non-profit or utility partner.

D2. Tree Planting Projects (2 points) eligible each year

During the year, the city, local utility, or non-profit partner continued to install new trees as part of an existing program (see D1) to plant trees on public or private property.

D3. Survival Monitoring (4 points) eligible each year

During the year, sponsors of community tree planting programs (see D1) conducted field inspections and reported survival data on trees planted over the past year or years.

D4. Community Tree Nursery (5 points) one time only, per facility

During the year and for the first time, the city or partner organization established a tree nursery to supply appropriate trees for local tree planting programs (see D1). Facility is not required to be within city limits to qualify.

D5. Planting Site Evaluation (3 points) eligible each year

During the year, sponsors of community tree planting programs evaluated all proposed planting sites and either:

- 1) matched tree species to planting sites based on those parameters (such as the Urban Site Index protocol), or;
- 2) mitigated space or soil conditions (removed concrete, added organic matter, etc.).

D6. Planting-to-Removals Ratio (3 points) eligible each year

During the year, the number of trees planted on public property by the city or partner organizations was greater than the number of public trees removed, for all reasons, as reported on the Tree City USA application.

## Maintaining Trees

D7. Tree Reporting Process (5 points) one time only

During the year, the city established a new system or process for citizens and city staff to report tree safety issues (or other complaints) to the forestry department or manager (e.g. 3-1-1 system, online form, etc.). System (or staff) records the time between report and mitigation action.

D8. Young Tree Training (4 points) eligible each year (not with D9)

A program of care for newly planted (<5 years old) trees was performed during the year. As needed, each tree was: pruned to improve structure and eliminate root defects; mulched; watered; and/or treated for pests/disease.

D9. Systematic Maintenance (5 points) eligible each year (not with D8)

During the year, city forestry staff performed systematic preventive and restorative maintenance (as necessary) on 10% or more of public trees. Work includes insect and disease control that follows Integrated Pest Management (IPM) principles but does not include tree risk evaluations or mitigation (see D11, D12).

D10. Utility Tree Care (1 point) eligible each year

The utility responsible for maintaining trees within utility ROWs was a Tree Line USA company for the year, or the utility contractor performing work in the community qualifies as a TCIA Accredited Utility Contractor.

## Tree Risk Management

D11. Annual Risk Survey (4 points) eligible each year

During the year, city staff performed a 'limited visual' survey of public trees in (at least) high priority zones, as mapped in Tree Risk Management plan (see C8-f), in order to identify potential hazards (follows ANSI A300 Part 9 & ISA BMP for Tree Risk Assessment).

D12. Tree Risk Mitigation (5 points) eligible each year

During the year, city staff prioritized and performed or directed mitigation work for 100% of tree problems identified by staff (see D11) or reported by the public (see D7).

D13. Mock Exercise (4 points) eligible each year

During the year, city staff performed a mock emergency drill for all departments to simulate response to natural or manmade disasters. Scenario must include potential impacts by trees on transportation and power systems.

D14. Urban Forest Strike Team (5 points) eligible each year

During the year, city received assistance from—or sent qualified staff to—a state or national Urban Forest Strike Team to assist with public tree evaluations following a natural disaster or forest pest infestation.

## Recycling & Reuse

D15. Tree Debris Recycling (4 points) eligible each year

During the year, 100% of the leaf and woody debris generated by municipal tree care activities (incl. contractors) is delivered to recycling or wood processing facilities and not sent to municipal or regional landfills.

D16. Public Installations (2 points) eligible each year

Recycled wood products from municipal operations (e.g. logs, mulch or compost) are used in landscape settings during the year. Also include using solid wood for benches, supports or other rudimentary structures, as well as public art installations.

D17. Urban Wood Utilization (4 points) eligible each year

A portion of the woody material generated from tree care operations during the year is converted to high-quality end products (e.g. furniture, cabinets, flooring, lumber, etc.) or another higher value product (e.g. fuel pellets, pallets, or pulpwood), either through city contract, public auction, or donation.

D18. Processing Facility (5 points) one time only, per facility

During the year, the city or a business partner began operating a processing plant that utilizes municipal wood residue (such as biofuel, wood pellets, lumber, etc.).

## Protecting Trees

D19. Tree Protection (4 points) eligible each year

During the year, trees on public property and/or private commercial development sites were inspected and monitored by qualified staff. Required tree protection measures during the construction period conform to ANSI A300 standards and ISA BMPs, as prescribed in city code (see C1 or C4).

D20. Enforcement Proceedings (3 points) one time only, per project

During the year, violations of the tree protection code were enforced through administrative action (such as stop work orders, citations, withholding of occupancy permit, performance bond, etc.) or criminal penalties.

D21. Tree Rescue (2 points) eligible each year

One or more trees from public or private construction sites were relocated during the year to suitable sites on public property, either as part of capital improvement or commercial development project through special agreement.

## Natural Areas

D22. Land Stewardship (2 points) eligible each year

One or more city-owned natural areas were inspected and maintained to facilitate recreation, other public uses, ecological health, watershed value, or carbon sequestration. Public safety measures such as waste removal, hazard tree abatement, and trail maintenance are considered primary actions for the year.

D23. Restoration Work (3 points) eligible each year

During the year, city staff or non-profit partners and volunteers conducted restoration practices (such as prescribed fire, invasive species removal, native species planting/seeding, etc.) on city-owned natural areas to improve the ecological value of the land, as prescribed in the city's natural areas plan (see C8).

D24. Forest Health Management (4 points) eligible each year

During the year, city staff or contractors performed forest stand manipulations (such as thinning, timber stand improvement, overstory removal, regeneration harvest, wildlife fencing, etc.) on city-owned natural areas to facilitate natural forest succession processes or to improve forest health, as prescribed in the city's natural areas plan (see C8). Include practices to address forest insect/disease outbreaks that follow Integrated Pest Management principles (trunk injection, pheromone inhibitors, buffer cuts, etc.).

D25. Openspace Acquisition (5 points) eligible each year

Openspace land (such as forest, woodland, prairie, riparian corridors, etc.) was acquired during the year, either through purchase, donation, or long-term agreement (such as a conservation easement) and will be made available for public use.

## Category E: The Community Framework

### Collaboration

E1. Citizen Tree Board (10 points) one time only

During the year, the city established by ordinance (see C1-b) an active citizen tree board, with clear duties to provide input into the city's tree management program and to contribute to policy, planning, and celebration efforts.

E2. Departmental Communication (3 points) eligible each year

During the year, the city held one or more meetings among city departments (such as city manager, engineering, planning, forestry, parks, public works, water, streets, transportation, etc.) to coordinate urban forestry policy or project activities, such as planting, moving, or protecting trees, on public or private property.

E3. Non-Profit Tree Group (10 points) one time only, per organization

During the year, an independent non-profit organization dedicated to trees was chartered in the community and began delivering programs in the community, including tree planting, tree care, and education. Efforts may be focused on public or private property.



**E4. Cooperative Partnership (4 points) eligible each year**

During the year, a new cooperative agreement or contract was established between two or more entities\*, resulting in any of the following:

- 1) additional tree planting/establishment
- 2) improved tree care practices (cycle pruning, tree monitoring, consulting services, wood residue recycling, etc.)
- 3) shared staff position
- 4) enhanced tree procurement (grow-out

contracts). Possible entities\*:

- a) city government,
- b) electric service utility,
- c) neighboring municipality,
- d) non-profit tree group,
- e) private nursery, wood processor, or arboriculture firm.

**E5. Alliance for Community Trees Membership (1 point) eligible each year**

During the year, the city or the community non-profit group delivering urban forestry services in the community was a member of the Alliance for Community Trees (ACT).

## Volunteers

**E6. New Tree Board Member (2 points) eligible each year**

During the year, the Tree Board added one or more new members, due to expansion, retirement, or term limits.

**E7. Service Organizations (2 points) eligible each year (not with E8)**

During the year, community service organizations conducted one or more community forestry projects, such as tree planting, pruning, mulching, or education. Include projects led by organized neighborhood associations and Tree Campus K-12, Tree Campus Higher Education, or Tree Campus Healthcare campuses.

**E8. Volunteer Tree Care (4 points) eligible each year (not with E7)**

During the year, a program (i.e. TreeKeepers, Citizen Foresters, etc.) was in place to deliver training and to utilize citizen volunteers for basic tree planting and care activities (such as mulching, pruning, watering). Program is managed by either city staff or non-profit partner organization (see E3), and volunteer opportunities are regular and ongoing.

**E9. Volunteer Coordinator (5 points) one time only**

During the year, the city or its non-profit partner organization hired a volunteer coordinator (min. 50% of job duties) to develop and coordinate volunteer resources for tree planting and care projects on city property.

**E10. Citizen Science (3 points) eligible each year**

During the year, the city or its non-profit partner organized a 'citizen science' project for the community to collect data that supports an urban forestry initiative. Projects include tree inventory, phenology, species monitoring, etc., and include a data report.



## Outreach

### E11. Public Tree Care Guide (6 points) one time only

During the year and for the first time, the city published (online or print) a guide for staff and the public on city laws, policies, and best practices for tree planting and care, as a companion to the tree care ordinance. The guide recommends practices that conform to ANSI Standards for arboricultural practices (A300), safety (Z133), and nursery stock (Z60.1), as well as applicable ISA BMPs.

### E12. Community Forestry Report (3 points) eligible each year

During the year, tree board, tree commission, and/or city staff members delivered to council and the public an accomplishment report for community forestry activities during the most recently completed fiscal year. Include "State of the Urban Forest" reports that describe the current status of the community forest resource.

### E13. Publications (3 points) eligible each year

During the year, the city or non-profit partner published and distributed new or updated materials for the public about tree planting and care (such as the list of recommended street trees, pruning instructions, etc.).

### E14. Publicity Campaign (5 points) one time only, per campaign

During the year, the city or non-profit partner launched a media campaign to inform citizens about the importance of tree planting, care, or other important tree issues in the community.

### E15. Environmental Equity (4 points) eligible each year

During the year, the city or non-profit partner conducted a series of community outreach efforts (such as surveys, meetings, social media, trainings, etc.) to residents and other community service groups in targeted areas to address environmental equity. Outreach should address tree planting, care, or removal; improved access to natural resources; or social factors in the neighborhood that lead to increasing canopy.

## Awareness

### E16. Tree Festival (4 points) eligible each year

During the year, the city or non-profit partner held a tree-themed, community-wide event or festival (such as Arborfest, Dogwood Festival, Oak Festival, etc.) to build public awareness of trees.

### E17. Interpretive Program (2 points) eligible each year

During the year, the city or a non-profit partner delivered one or more ongoing, interpretive programs for the public focused on trees, woodlands, or forests (such as tours of outstanding trees, an arboretum, nature center, heritage trees (largest, historic), forest bathing, etc.).

### E18. Awards Program (2 points) eligible each year

During the year, community awards or other formal recognition were issued to individuals and supporting organizations for tree planting and care projects.

E19. External Recognition (2 points) eligible  
each year

During the year, the community received an award from a regional, state, or national organization (such as an ISA Chapter, state urban forestry council, America In Bloom, Arbor Day Foundation, etc.) for its community forestry program or projects.

E20. Arbor Day Events (2 points) eligible  
each year

During the year, the city or non-profit partner conducted additional Arbor Day events—beyond the official city observance—at local primary or secondary schools.

## Education

E21. Tree Care Workshops (3 points) eligible  
each year

During the year, the city or non-profit partner delivered a series of workshops (two or more) on various aspects of tree care for homeowners, businesses, members of the public, commercial arborists, or the green industry.

E22. Education Facility (5 points) one time only,  
per facility

During the year, the city or non-profit partner opened a new education facility to the public (such as a nature center). Educational programming at the facility must include the ecological features of trees, forests, or woodland ecosystems in that location.

E23. Youth Education (2 points) eligible  
each year

During the year, the city or non-profit partner delivered formal youth education programming about trees and forests (such as 4-H, Project Learning Tree, Tree Campus K-12, etc.) to help create the next generation of environmental stewards.

E24. Outdoor Classroom (2 points) eligible  
each year

During the year, the city or non-profit partner supported the installation of one or more new outdoor classrooms at a school, library, park, daycare, or other facility dedicated to the care and education of children.

**Appendix B**  
**Seeds to Tree Chart**  
 (From SC Forestry Commission's Planners Forest)

Urban Tree Care Program Elements	Seeds	Roots*	Sapling	Tree
<b>Data Needed to Track and Manage Trees</b>				
Map of public places where trees planted/managed				
City/town tree maintenance records/expense reports				
Tree Canopy (mapped for city/town)/Tree Canopy estimated by i-tree canopy)				
Spatially-based Tree Canopy Data and Map (includes both existing canopy and open space locations for planting)				
Tree Inventory (citywide, downtown, parks or other planning geography)				
<b>Staffing -Designate city/town department or consultant responsible for tree work</b>				
Named staff member/contractor tree care				
Identify process/parties to remove hazard trees				
Staff landscape architect, horticulturalist, forester, arborist*				
City Arborist (certified by ISA)				
Continuing Education Credits/Staff Attending Trainings				
Tree Risk Assessment Certified (TRAC) Staff				
<b>Codes Governing Tree Care, Planting or Removal</b>				
Code designates responsible party for tree care/planting				
Tree care ordinance (for removal or care of public trees)				
Protect trees during/after construction (fencing, signage, retention, after care for newly planted trees)				
Urban planting and landscaping standards				
Tree removal permit for private property				
Standards for street and RoW plantings, parking lots and plazas (including application of ANSI Standards for tree installation and maintenance)				
Incentives for structural support such as Silva Cells				
Including trees as green infrastructure for stormwater, drinking water protection				
<b>Plans</b>				
Trees' importance mentioned in Comprehensive Plans				
Urban forest maintenance and planting plan				
Urban Forest Management Plan				
Emergency Management Plan				
Tree Recycling and Re-use Plan (Urban Wood Utilization Plan)				
<b>Engagement</b>				
Information on city website or town newsletter about city tree benefits and city contacts regarding tree care/planting.				
Annual public education event for tree care/planting				
Website about city trees, who to contact, basic benefits				
Regular engagement events/education for new residents				
Arbor Day Celebration*				
Advisory Group/Tree Board*				
Community Tree Planting Program/Volunteers/Partnership				
Tree-focused Advocacy Group				
<b>Funding</b>				
Funded program for tree care and maintenance*				
Spend at least \$2 per capital on urban forestry/landscaping*				
Tree donation program				
*Meets TreeCityUSA requirement				

# Appendix C

## Arbor Day Foundation, Tree City USA requirements

1/30/2021

Tree City USA Standards - The Arbor Day Foundation



## Tree City USA Standards

To qualify as a Tree City USA community, you must meet four standards established by the Arbor Day Foundation and the National Association of State Foresters. These standards were established to ensure that every qualifying [community\\*](#) would have a viable tree management program and that no community would be excluded because of size.

## Four Standards for Tree City USA Recognition

■ Standard 1 | ■ Standard 2 | ■ Standard 3 | ■ Standard 4

### Standard 1

#### A Tree Board or Department

Someone must be legally responsible for the care of all trees on city- or town-owned property. By delegating tree care decisions to a professional forester, arborist, city department, citizen-led tree board or some combination, city leaders determine who will perform necessary tree work. The public will also know who is accountable for decisions that impact community trees. Often, both professional staff and an advisory tree board are established, which is a good goal for most communities.

The formation of a tree board often stems from a group of citizens. In some cases a mayor or city officials have started the process. Either way, the benefits are immense. Involving residents and business owners creates wide awareness of what trees do for the community and provides broad support for better tree care.

### Standard 2

#### A Tree Care Ordinance



A key section of a qualifying ordinance is one that establishes the tree board or forestry department—or both—and gives one of them the responsibility for public tree care (as reflected in Standard 1). It should also assign the task of crafting and implementing a plan of work or for documenting annual tree care activities.

Qualifying ordinances will also provide clear guidance for planting, maintaining and/or removing trees from streets, parks and other public spaces as well as activities that are required or prohibited. Beyond that, the ordinance should be flexible enough to fit the needs and circumstances of the particular community.

For tips and a checklist of important items to consider in writing or improving a tree ordinance, see [Tree City USA Bulletin #9](#).

## Standard 3

### **A Community Forestry Program With an Annual Budget of at Least \$2 Per Capita**

City trees provide many benefits—clean air, clean water, shade and beauty to name a few—but they also require an investment to remain healthy and sustainable. By providing support at or above the \$2 per capita minimum, a community demonstrates its commitment to grow and tend these valuable public assets. Budgets and expenditures require planning and accountability, which are fundamental to the long-term health of the tree canopy and the Tree City USA program.

To meet this standard each year, the community must document at least \$2 per capita toward the planting, care and removal of city trees—and the planning efforts to make those things happen. At first this may seem like an impossible barrier to some communities. However, a little investigation usually reveals that more than this amount is already being spent on tree care. If not, this may signal serious neglect that will cost far more in the long run. In such a case, working toward Tree City USA recognition can be used to reexamine the community's budget priorities and redirect funds to properly care for its tree resources before it is too late.



## An Arbor Day Observance and Proclamation

An effective program for community trees would not be complete without an annual Arbor Day ceremony. Citizens join together to celebrate the benefits of community trees and the work accomplished to plant and maintain them. By passing and reciting an official Arbor Day proclamation, public officials demonstrate their support for the community tree program and complete the requirements for becoming a Tree City USA!

This is the least challenging—and probably most enjoyable—standard to meet. An Arbor Day celebration can be simple and brief or an all-day or all-week observation. It can include a tree planting event, tree care activities or an award ceremony that honors leading tree planters. For children, Arbor Day may be their only exposure to the green world or a springboard to discussions about the complex issue of environmental quality.

The benefits of Arbor Day go far beyond the shade and beauty of new trees for the next generation. Arbor Day is a golden opportunity for publicity and to educate homeowners about proper tree care. Utility companies can join in to promote planting small trees beneath power lines or being careful when digging. Fire prevention messaging can also be worked into the event, as can conservation education about soil erosion or the need to protect wildlife habitat.

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Tree City USA is an Arbor Day Foundation program in cooperation with:



## **Appendix D**

### Glossary

**ANSI A330 Standards** – voluntary industry consensus standards for managing trees, shrubs and woody plants. ANSI (American National Standards Institute) requires that approved standards be developed according to accepted principles and be reviewed. If necessary, the standards can be revised every five years.

**Arbor Day Foundation (ADF)** – a 501©3 nonprofit organization dedicated to planting trees. This organization is responsible for overseeing Tree City USA program in cities and towns since 1976.

**Community forest management plan** – a written plan that is developed and maintained by a staff or contracted forester and tree commission, which prescribes a program of systematic management for the city’s public trees.

**Community forestry program** – all of those city resources, time and efforts directed toward the development and maintenance of a safe, healthy, aesthetically pleasing and fully stocked population of public trees.

**Green infrastructure** – the interconnected natural systems and ecological processes that provide clean water, air quality and wildlife habitat. Green infrastructure sustains a community’s social, economic, and environmental healthy.

**Greenway** – a long, narrow piece of land, often used for recreating and pedestrian and bicycle traffic. Greenways are vegetated, linear, and multi-purpose.

**International Society of Arboriculture (ISA)** – 501(c)5 nonprofit organization that provides professionals, allied professionals, public officials, and consumers information about economic,

environmental, and societal benefits and values of tree and tree care. Organization provides continuing education, training, conferences and publications to promote safe and appropriate practice of tree care.

**ISA certified arborist** – An individual that has passed the International Society of Arboriculture’s Certified Arborist examination and is designated as a certified arborist by ISA. The certification can be maintained by attending at least thirty hours of qualifying continuing education each three-year certification period.

**Open space** – land that is not intensively developed for residential, commercial, or industrial use. It can be an area of protected or conserved land on which development is indefinitely set aside.

**Tree Care Industry Association (TCIA)** – a trade association of 2,300 tree care firms and affiliated companies worldwide created to advance the tree care business through safety and education programs, standards of tree care practice, and management information for tree and landscape firms around the world. Organization provides continuing education, training, conferences and publications to promote safe and appropriate practice of tree care.

**Tree City USA** – an Arbor Day Foundation program that provides the framework necessary for communities to manage and expand their public trees. Cities must meet four core standards of urban forestry management: maintain a tree board or department, having a community tree ordinance, spending at least \$2 per capita on urban forestry and celebrating Arbor Day.

**Tree inventory** – A tally of the number, species, approximate size and approximate location of existing trees on a site, obtained through photos, including aerials. To be verified by on-site viewing of city staff authorized to perform the verification.



**Tree risk assessment** – standardized, systematic process for assessing tree risk and providing information to tree owners and risk managers for making informed decisions that will promote the safety of people and property and enhance tree benefits, health and longevity.

**Tree Risk Assessment Qualification (TRAQ)** – ISA offers TRAQ as an instructor-led credential that demonstrates professional knowledge in tree risk assessment.

**Urban forest emergency management plan** – a plan to mitigate, respond and recover from an emergency or natural disaster by addressing significant or extreme tree and urban forest damage.

**Urban forest management plan** – a document that gives municipalities detailed information, recommendations, and resources needed to effectively and proactively manage public trees.

**Urban wood utilization plan** – a plan to reduce urban wood waste addressing a city's wood resource, capacity, existing markets. The purpose of the plan is to prevent urban wood waste to benefit communities, businesses and the environment.