



## Tree Planting Programs

10 Points

**Pre-Requisite:** Community Forestry Management Plan and NJUCF Accreditation

Tree Planting Programs are an important component of maintaining and expanding the municipal tree canopy. Tree Planting Programs can focus on expanding street tree coverage, creating new canopy cover around municipal buildings and schools, enhancing parks and recreation sites, establishing forest cover on municipal open space, and reducing heat island impacts in urban settings.

Once a community has completed the Community Forestry Plan and NJUCF Accreditation action, instituting a **Tree Planting Program** can earn a municipality 10 points under the Sustainable Jersey program.

### Why is it important?

More and more communities are beginning to recognize the very tangible benefits that trees provide in the urban environment. Healthy trees reduce air and noise pollution, provide energy-saving shade and cooling, furnish habitat for wildlife, enhance aesthetics and property values, and are important contributors to community image, pride, and quality of life. Furthermore, many communities have realized that in order to protect and enhance their valuable tree resources, it is useful to view and manage their trees as a cohesive unit, the *community* or *urban forest*. Tree planting programs help maintain or expand the municipal tree canopy.

### Who should lead and be involved with this action?

Municipal Shade Tree Commissions and Committees, Environmental Commissions or Municipal Sustainability Committee members, the Public Works Department, and Parks and Recreation Commission members and community volunteers can be involved with and lead this action.

### Timeframe

Organizing, designing, and executing tree planting programs can be accomplished in 3-12 months depending on access to funding, planting season considerations, land access issues, and site conditions. If communities are seeking grant funding from NJDEP's Community Forestry program, the time from grant development to planting the first tree in the ground can take up to 18 months.

### Project costs and resource needs

Municipal staff or volunteer time is needed to design the planting program, secure funding, and supervise the tree planting. On average, it costs \$250 to \$300 to plant a 2 ½ inch caliper tree by a private company. This average cost excludes any costs associated with unusual tree planting conditions, such as removal of sidewalk concrete to create a tree planting area.

### What to do, and how to do it ("How to")

Below we have listed the requirements for earning points for this action. Following the requirements, we have provided guidance and recommendations for implementing the action. You do not need to follow this guidance exactly as long as your final product meets the requirements.

This action has a **pre-requisite** - you will need to have completed the Community Forestry Plan and NJUCF

Accreditation action (see separate action in Sustainable Jersey Program).

Once you have completed the Community Forestry Plan and NJUCF Accreditation action, you will need to develop a Tree Planting Program for your municipality. Tree Planting Projects that have taken place **from within 3.5 years of the submission deadline**.

To get points for this action you will need to submit a Tree Planting Project Report that includes a description of the tree planting program, including a tree species and size list; planting locations or map; project budget showing the project funding sources and in-kind contributions of materials and volunteer labor, if utilized. "After" pictures of the planting project also need to be submitted as part of the project documentation.

New Jersey Community Forestry Program's Tree Planting program recommends that the following items be considered when organizing a tree planting program. While these guidelines are intended for use when municipalities receive grant funding from the State, they should be viewed as a comprehensive list of issues the community should consider when organizing a tree planting program that will be implemented by an outside contractor. If communities are organizing tree planting programs that will be organized and implemented with volunteers, please see the following links for guidance on organizing these programs:

<https://www.americanforests.org/what-we-do/what-we-do-plant-trees/>

or

<https://dlnr.hawaii.gov/forestry/lap/kaulunani/grants/tree-planting/>

## **Tree Planting Program Guidelines**

### **1. GENERAL**

The contractor shall be liable for any damages to property caused by their operations and in the event of damages, they shall, at their own expense, restore all disturbed or damaged areas to their original condition. All materials, equipment, and personnel shall be limited to the work area defined by the project supervisor. Trees shall be free of damage as the result of handling or transportation. All work shall conform to accepted horticultural practices.

If the tree planting program is funded through the NJ DEP Community Forestry program, please be aware of specific contract and grant provisions .

### **2. SCOPE OF WORK**

Work shall consist of:

- 1) Preparation of areas for planting.
- 2) Furnishing and planting of specified trees.
- 3) Maintenance of plantings until acceptance by the municipal contracting agent, or the New Jersey Forest Service's Grants Administrator/Assistant Regional Forester (if funded through NJDEP Community Forestry grant programs).
- 4) Clean up and restoration of any disturbed areas to the condition prior to the contractor's operations.

### **3. SCHEDULING OF WORK**

The tree planting contractor shall submit a proposed work schedule to the municipal contracting agent or New Jersey Forest Service's Grants Administrator/Assistant Regional Forester( if state funds are being utilized), for approval at least seven (7) days prior to beginning operations. After the schedule is accepted, no modifications will be permitted without written authorization. The contractor shall arrange to confine operations to normal working hours for the industry and no work will be permitted on Sundays or holidays without written authorization from the municipal or county Project Supervisor.

### **4. PERSONNEL**

All personnel will be properly supervised by the municipal or county Project Supervisor in a manner that assures that the property is protected from damage; that the safety of all personnel and the public is protected, and that all contract work is done in a professional manner.

## **5. PROTECTION OF UTILITIES**

Prior to any excavation or the driving of stakes into the ground, the contractor shall ascertain and have marked out the location of all underground utilities. The contractor shall take proper precautions not to disturb or damage any sub-surface utilities.

In the event that any sub-surface utilities are uncovered or damaged, the contractor shall immediately notify the municipal or county Project Supervisor so that the contract work may be relocated or stopped until the damage can be repaired. The contractor shall be financially responsible for any damage to utilities or structures and shall properly maintain the protection of same.

## **6. LAYOUT**

All trees shall be located by the contractor as shown on plans supplied by the municipal or county Project Supervisor. Should the contractor encounter obstructions of any nature, the contractor shall notify the municipal or county Project Supervisor who will arrange adjustments. If funded with State grant funds, all adjustments to the plan must be authorized by the New Jersey Forest Service's Grants Administrator/Assistant Regional Forester. The municipal or county Project Supervisor or designee shall mark the exact planting location of each tree in accordance with the plans. The marking and layout work shall be done sufficiently in advance of planting to avoid delays to the contractor.

No planting holes shall be excavated in advance of planting operations. The planting holes must be approved by the municipal or county Project Supervisor prior to the start of the planting operation. Each tree shall be planted in an individual hole as specified. All trees shall be planted so the root flare is level to the surrounding grade. See the accompanying planting diagram for details (See Appendix A).

## **7. WATER**

Trees shall be thoroughly watered after planting. The municipal or county Project Supervisor will notify the contractor if water suitable for irrigation is available on the site. If water is unavailable on the site, it is the responsibility of the contractor to furnish it at the time of planting.

## **8. NURSERY STOCK**

Tree species shall conform to those indicated on the drawings, tree list, and the publication, Hortus Third.

All landscape nursery stock shall conform to the standard specifications of The American Standard for Nursery Stock sponsored by the American Association of Nurserymen, Inc. All trees shall be grown under climatic conditions similar to the job site for a period of not less than two (2) years immediately prior to the project and have a caliper ranging from two to three and one half inches (2-3 ½"). Trees shall be purchased within a 300 mile radius from the designated planting site.

No substitutions shall be permitted in either kind or grade without written authorization from the municipal or county Project Supervisor.

Any material and/or work may be rejected, if, in the opinion of the municipal or county Project Supervisor, it does not meet the requirements of the specifications. All rejected material shall be promptly removed from the site by the contractor at his/her own expense.

## **9. QUALITY**

Trees shall have the habit of growth that is normal for the species or cultivar and shall be sound, healthy, vigorous, free from insects, tree diseases, and injuries or damage of any nature. All trees shall be of the grades specified, neither larger nor smaller without written authorization. No trees shall be pruned, clipped, or trimmed prior to delivery without written authorization from the municipal or county Project Supervisor. All landscape stock must be nursery grown.

All trees shall have been root pruned at the nursery at least once during the three year period immediately preceding transplanting and at least one year prior to transplanting.

## **10. SHIPMENT, DELIVERY, INSPECTION, AND ACCEPTANCE**

The municipal or county Project Supervisor reserves the right to inspect and select all trees at its point of origin. Acceptance at the nursery where the tree is growing, prior to transplanting, does not preclude rejection at the site for just cause.

Trees are to be delivered to the site in the quantities and on the dates agreed upon by the municipal or county Project Supervisor and the contractor. The contractor shall advise the municipal or county Project Supervisor of all deliveries at least 48 hours prior to their arrival at the site(s), so that all trees can be inspected upon delivery. All trees shall be covered with a tarp, protected from weather, and be adequately packed to avoid breakage, sun scald, windburn, desiccation, and other damage during loading and shipment. All measures customary in good trade practices shall be taken to keep the trees in good condition. No trees shall be planted until they have been inspected and approved on the site by the municipal or county Project Supervisor.

Legible tags shall be attached to each tree. Trees that fail to meet the specifications set forth in Sections 9 and 10 will be rejected. Rejected trees shall be removed from the site immediately. Approved replacement stock that meets the specifications set forth in sections 9 and 10 will be planted in the prescribed manner by the contractor at his/her expense. Final written acceptance of the trees will be given only after they have been planted, and after the requirements prescribed herein are met.

### **11. TIME OF PLANTING**

Prior to commencement of planting, the contractor shall contact the municipal or county Project Supervisor to establish a schedule of planting trees. Trees will be planted from March 1st through June 30th or September 1st through November 30th.

### **12. PLANTING**

Unless otherwise specified within these specifications, all work shall conform to accepted horticultural practices. Trees shall be protected upon arrival at the site by being thoroughly watered and properly maintained until properly planted. Unplanted stock shall be "healed-in" a bed of material approved by the municipal or county Project Supervisor upon delivery to the site unless they will be planted within eight (8) hours after delivery. At all times, workmanlike methods customary in good horticultural practices shall be exercised.

The contractor shall protect all existing features on the site including underground utilities, structures, and existing trees.

All trees shall be planted in pits that are a minimum of two (2') feet larger than the diameter of the rootball. The depth of the tree pit shall be equal to the height of the rootball. The tree shall be centered in the hole and then back filled half the depth of the rootball with topsoil. The backfill shall be lightly but thoroughly tamped and well watered. The remainder of the hole is then to be backfilled with approved topsoil to a depth that after settling, will assure the root flare will be at the same grade as the surrounding soil. The tree will be well watered again before mulch is placed over the surface of the rootball.

### **13. GUYING, STAKING AND WRAPPING**

The installation of tree stakes and supporting materials will be provided by the contractor to trees that the municipal or county Project Supervisor deems necessary. Stakes shall be made of wood with the appropriate length and size necessary to restrict excessive movement of the tree, as determined by the municipal or county Project Supervisor. Tie materials shall be plastic chain lock or flat woven webbing designed specifically for securing stakes to trees. For details on proper staking, see the planting detail. Tree trunks shall not be wrapped.

### **14. PLANTING PREPARATIONS**

Wire baskets shall be removed from the rootball by cutting with any tool that does not destroy the integrity of the rootball or injure the tree roots, prior to backfilling the tree pit with soil.

Prior to backfilling, balled and burlapped trees shall have burlap and twine removed from around the trunks, stems, and rootballs. The burlap shall be removed or folded down to the base of the rootball. No burlap shall be pulled out from underneath the rootball.

Backfilling shall be lightly but thoroughly tamped and well watered as described under planting. Only topsoil may be used to backfill the tree pits during planting operations. Unsuitable excavated material, as designated by the municipal or county Project Supervisor, shall be removed from the site by the contractor at their expense.

### **15. MULCHING**

Uniformly shredded hardwood mulch supplied by the contractor shall be free of debris and shall be placed by the contractor around all plantings at the time of planting to a depth of three (3") inches as shown in the planting diagram. Care shall be exercised to keep mulch three (3") inches away from the bases of all trees. After the mulching operation has been approved by the municipal or county Project Supervisor, the mulch shall be thoroughly watered.

## **16. PRUNING**

The contractor shall not prune any plant.

## **17. CLEAN-UP**

During the course of operations, the contractor shall remove from the property at his/her expense all excess and waste materials.

Any damaged lawn areas or planting areas will be restored to their original condition by the contractor at his/her expense, if such damage is the result of the contractor's operations.

## **18. INSPECTION FOR ACCEPTANCE**

The contractor shall notify the municipal or county Project Supervisor prior to the date of planting and shall request an inspection in order to determine whether or not the project meets the specifications contained herein. The inspection will be scheduled prior to final payment.

For State funded plantings, an inspection by the NJDEP grants program is required. If the work is acceptable, the municipality will receive a copy of the passing tree planting inspection form. If deficiencies are found in the work, a list of items requiring attention shall be furnished to the municipal or county Project Supervisor by the State Forest Service's Grants Administrator/Assistant Regional Forester. The deficiencies shall be corrected and re-inspected within the specified work period. This procedure will continue until the work is found acceptable.

## **What to submit to earn points for this action**

Below we have listed the requirements for earning points for this action. Following the requirements, we have provided guidance and recommendations for implementing the action. You do not need to follow this guidance exactly as long as your final product meets the requirements.

This action has a **pre-requisite** - you will need to have completed the Community Forestry Plan and NJUCF Accreditation action (see separate action in Sustainable Jersey Program).

Once you have completed the Community Forestry Plan and NJUCF Accreditation action, you will need to develop a Tree Planting Program for your municipality. Tree Planting Projects that have taken place **from within 3.5 years of the submission deadline**.

Upload the following documentation to the website (log in to the password protected webpage where you submit your online application for certification to upload documents).

In the text box, please provide a short narrative (300 word max) to summarize what was accomplished and the general steps taken to accomplish it.

- Upload: Tree Planting Project Report that includes a description of the tree planting program including: a tree species and size list; planting locations or map; a budget showing the project funding sources and in-kind contributions of materials and volunteer labor, if utilized.
- Upload (OPTIONAL): "After" pictures of the tree planting project. Before and after pictures are desirable but before pictures are not required.

## **IMPORTANT NOTES:**

There is a limit of six uploaded documents per action and individual files must not exceed 50 MB. Excerpts of relevant information from large documents are recommended.

All action documentation is available for public viewing after an action is approved. Action submissions should not include any information or documents that are not intended to be viewed by the public.

## **Spotlight: What NJ municipalities are doing**

## **\*\*Camden "Urban Airshed Reforestation Program" Urban Airshed Reforestation Program**

The Urban Airshed Reforestation Program is designed to mitigate air and water pollution in the ozone non-attainment area of South Jersey, currently focused entirely on the City of Camden, through the planting of one thousand trees and the recruitment of numerous organizations as partners to support these greening efforts. This program links tree planting in an urban environment to better air and water quality by providing a safer, healthier environment for residents most affected by industrial pollutants. Since October 2002, the Tree Foundation has worked with 104 community-based groups to plant 3,241 trees with over 6,100 volunteers. For more information about this program:

<http://njtreefoundation.org/about/camdens-urban-airshed-reforestation-program/>

### **City of Clifton Building a Cleaner - Greener - Cooler New Jersey**

In May, 2008, the City of Clifton was awarded \$25,000 to implement a program that has planted 80 trees at 8 strategic locations throughout the City. The tree planting program supports the Reforestation and Sustainability goal of Clifton's Community Forestry Management Plan (CFMP) which aspires to reforest the entire City of Clifton from Botany Village to Delawanna up to Valley Road and Garret Mountain with grants, donations, appropriations, the Tree Farm, and through any new construction work done either public or private. The Plan calls for a reforestation of the urban, suburban, and open spaces of Clifton with a diversity of trees for livability and sustainability. Urbanization has had a major impact on Clifton's trees and forest ecosystems. Clifton is committed to restoring a diverse plant community (trees, shrubs, flower gardens, etc), in the community's open spaces, parks, schools, wetlands, and city streets, thereby rebuilding the city's ecosystem to create several habitats for wildlife to survive. Sustainability is achieved when the biodiversity of the city's ecosystems are restored and native habitats and wildlife begin to flourish, providing residents, visitors and tourists with opportunities to enjoy nature locally.

[<https://www.cliftonnj.org/DocumentCenter/View/230/City-of-Clifton-Tree-City-USA-PDF>]

### **Newark Renaissance Trees Program**

The NJ Tree Foundation has initiated a special reforestation program for the City of Newark, titled the **Newark Renaissance Trees Program (N RTP)**. Through the assistance of the City of Newark, the Tree Foundation is working with residents to organize community tree plantings. Residents agree to adopt a tree, assist in maintaining (watering, weeding, and mulching) the tree for the first year, and attend a community meeting to select their trees. The Newark Renaissance Trees Program emphasizes community-based tree plantings. Neighborhood tree plantings create a sense of community pride, and respect for nature.

<https://www.tapinto.net/towns/newark/sections/green/articles/this-tree-planting-initiative-is-promoting-sustainability-togetherness-in-newark>

## **Resources**

### **American Forests' "Create A Community Tree Planting Project."**

You know and understand the importance of trees. What exactly do you want to accomplish by planting them in a particular place? Do you want to conserve energy? Slow down stormwater? Beautify your community? Produce local economic benefits? These 8 steps will guide you in the right direction.

<https://www.vibrantcitieslab.com/>

### **Arbor Day Foundation**

The Arbor Day Foundation provides many great resources including Tree Guides, benefits of trees, information on tree care and planting, as well as videos about how to plant trees.

<https://www.arborday.org/>

### **Guidelines for the New Jersey Shade Tree and Community Forestry Assistance Act**

are available at: [www.communityforestry.nj.gov](http://www.communityforestry.nj.gov). The Guidelines cover: Approved Status; Community Forestry Management Plan Submission and Approval Procedures; Initial Community Forestry Management Plan; Subsequent Community Forestry Management Plan; Training Skills and Accreditation Program Requirements; Annual Accomplishment Report; The New Jersey Shade Tree and Community Forestry Assistance Act.

## **i-Tree Management Tools**

The [U.S. Forest Service](#) has developed a set of free and easy-to-use software programs and protocols (together called i-Tree) that help urban foresters measure and understand their forest resources. Used separately or together, the programs and tools in i-Tree can aid urban forest planning, management and budgeting, and allow comparisons between the urban forest resources in different communities or cities.

<http://www.itreetools.org/applications.php>

## **i-Tree Eco**

Formerly called UFORE (Urban Forest Effects model), [i-Tree Eco](#) is one of the main programs in the i-Tree suite. Eco uses field data to estimate the economic and ecosystem service impacts of trees in a neighborhood, city, county, or state. The Eco modeling program estimates tree species counts and composition, diameter size class distribution, diversity, and canopy cover. Eco also estimates the urban forest's net impacts on energy use, carbon storage, and air pollution using scientifically derived and tested equations.

[http://www.itreetools.org/urban\\_ecosystem/introduction\\_step1.shtm](http://www.itreetools.org/urban_ecosystem/introduction_step1.shtm)

## **i-Tree Storm**

Formerly called SDAP (Storm Damage Assessment Protocol), [i-Tree Storm](#) offers simple and efficient methods for collecting tree damage information after a severe weather event.

<http://www.itreetools.org/utilities/sdap.shtm>

## **i-Tree Streets**

Formerly called STRATUM (Street Tree Management Tool for Urban Forest Managers), [i-tree Streets](#) focuses on street trees and tree management issues. Streets can use existing or newly sampled data to describe the structure and composition of the street tree population. Streets also analyzes tree environmental benefits and contrasts these benefits with maintenance costs.

[http://www.itreetools.org/street\\_trees/introduction\\_step1.shtm](http://www.itreetools.org/street_trees/introduction_step1.shtm)

## **Northeast Forest Service's "A Technical Guide to Urban and Community Forestry"**

provides information about the value of urban trees, basic horticultural principles, maintenance of established trees, preserving trees affected by development, and urban forest planning.

[https://www.fs.usda.gov/psw/publications/documents/psw\\_gtr202/psw\\_gtr202.pdf](https://www.fs.usda.gov/psw/publications/documents/psw_gtr202/psw_gtr202.pdf)

## **Northern Tree Selector Guide**

This web site is designed to help guide people through the process of tree selection and to provide a list of possible trees for projects in the northeast United States, hardiness zones 2-7. It is also designed to provide extensive cultural and maintenance information and contains many photographs. This information was assembled through a grant from the U.S. Department of Agriculture (USDA) Forest Service Northeast Region in cooperation with Rutgers University and the University of Florida. The principal authors of this system include Drs. Ed Gilman and Howard Beck, professors at University of Florida, and Dr. Jason Grabosky at Rutgers. Robin Morgan at the USDA Forest Service was instrumental in executing the agreements that led to completion of this project.

<https://lyra.ifas.ufl.edu/NorthernTrees/>

## **Planting Trees in Designed and Built Community Landscapes: Checklists for Success.**

Reynolds, M. K. and H. S. Ossenbruggen. 1991. This publication helps citizens create community green spaces. It encourages both experts and amateurs to plant and grow trees correctly, and to properly maintain new and older plantings. It is designed to be used in contract planting specifications for all public and private tree planting projects. Available online:

[https://www.arboday.org/programs/alliance-for-community-trees/planting-partners/documents/community-trees\\_plantingtoolkit.pdf](https://www.arboday.org/programs/alliance-for-community-trees/planting-partners/documents/community-trees_plantingtoolkit.pdf)

### ***Trees for New Jersey Streets***

has lists of shade trees divided into categories based on mature size so that small trees can be chosen for under power lines and large trees can be planted only where there is adequate room for them to reach their full size. Several species also come with brief descriptions. Available from the NJ Shade Tree Federation at Cook College 732-246-3210 for \$5 each.

### **US Environmental Protection Agency's "Urban Heat Island Resources"**

Trees and other plants help cool the environment, making vegetation a simple and effective way to reduce urban heat islands. This site discusses the costs and benefits of urban forestry, and includes links to other sites which document how trees and vegetation can reduce urban heat island effects, as well as examples of urban forestry initiatives and web based plant selection guides.

[https://www.epa.gov/sites/default/files/2017-05/documents/reducing\\_urban\\_heat\\_islands\\_ch\\_1.pdf](https://www.epa.gov/sites/default/files/2017-05/documents/reducing_urban_heat_islands_ch_1.pdf)

### **Funding Resources for Tree Planting Programs**

**Community Stewardship Incentive Program (CSIP) Grants** enable municipalities to implement their Community Forestry Management Plan(s). Only municipalities with Approved Status under the New Jersey Shade Tree and Community Forestry Assistance Act are eligible to apply for a CSIP grant. The cost-share ratio is seventy-five percent grant to twenty-five percent match of cash or in-kind services. Typically, NJDEP's Division of Parks and Forestry, NJ Forest Service, Community Forestry Program offers grants of up to \$25,000 per municipality. Copies of the grant application and supporting documents can be found at:

[www.communityforestry.nj.gov](http://www.communityforestry.nj.gov)