Guidance for Preparing Project Proposals for Landscape Tree Planting in the USDA Forest Service - Eastern Region

Introduction and Purpose

This document is intended to inform the development of proposals for community tree planting projects funded by the USDA Forest Service - Eastern Region, State and Private Forestry. Guidance is primarily for large (¾- to 2-½ inch caliper) nursery stock. Seedling/sapling planting may also be appropriate, but other specifications will apply and will be referenced in the Seedling/Sapling section of this document.

The Forest Service Urban and Community Forestry Program provides financial, technical, and educational assistance to support urban forestry programs and to plant, protect, maintain, and use wood from community trees and forests. The program aims to maximize the social, environmental, and economic benefits that community trees and forests provide.

Tree planting, establishment, and long-term care are an important part of urban forest management, either as part of urban forest expansion, reforestation, or recovery from an infestation or other natural disaster. This includes making sure the correct species are selected for the site and that trees are watered as needed; mulched correctly; weeded; protected from deer, rodents, and equipment; inspected for pest and disease problems; and structurally pruned while young.

When funding is awarded for projects primarily focused on landscape tree planting, the following guidance will apply (unless otherwise specified in the terms of the grant). Trees planted on public property must also meet guidelines set by local ordinances and policies where applicable. Where appropriate, State and local agencies may substitute their own guidelines if pre-approved by the Forest Service.

Allowable Costs

In general, funds can be spent on purchasing, planting, maintaining, and protecting trees during establishment. Associated administrative and outreach costs are also eligible. Construction costs (installing permanent structures) are not allowable, but some costs, such as protective fencing and watering systems for new trees, may be approved if proven necessary to ensure the survival of the planted trees.

Efforts should be made to be cost effective by using local resources; keeping administrative costs down; using low-cost tree replacement methods (e.g., cost-share programs, volunteer labor, vouchers, contracts, and planting smaller or bare root stock); and getting competing bids on contracts.

Other participating agencies may have specific policies in addition to those of the Forest Service. If funding comes from multiple sources, those funding requirements and policies should also be followed.

Administration

The Forest Service will work closely with the grantee and/or State Forestry Agency to assist with planning and monitoring the project.

On complex projects, a broad-based advisory committee or team should be formed. Examples of these types of projects include tree plantings with large numbers of trees, installation over the course of three or more planting seasons, or plantings with more than three funding partners. The purpose of a broad-based team is to ensure that diverse goals and objectives are considered and technical expertise is available to the project. A long-term management plan should be developed to ensure that proper maintenance and continuing project goals are addressed.

There must be a single point of contact at the project level to coordinate, administer, and document tree planting and establishment, including maintenance. If the primary contact leaves his or her position, the Forest Service must be made aware of this change immediately.

Reporting

Information about all trees planted as part of the project must be documented. The grantee will provide a periodic report as required in the grant agreement using a standard format. The report should document the number of trees planted; location (street address, map, or GPS); species; size; date planted; and other outcomes as required in the grant agreement. If problems arise that require changes to the scope of work and budget, these must be discussed with the Forest Service and addressed in the project reporting.

Planning

Tree planting must follow a planting plan developed by, or in consultation with, a qualified person (e.g., Certified Arborist, Tree Warden, Forester, Landscape Architect, etc.). The plan should describe the process for site and species selection, procurement, planting, maintenance, and owner outreach. If there is a specific purpose for the planting (energy conservation, etc.), this should also be documented. Drawings or maps should be included for areas involving large numbers of trees planted in groups (such as a park tree planting). Planting plans, planting lists, and drawings must be made available to the Forest Service grant monitor or included as part of interim reports prior to planting.

Appropriate Planting Locations

Public Property

Most tree planting should occur on public property or rights-of-way (ROWs), such as in parks, along street ROWs, and in other public areas. Tree planting on public land must complement existing community plans and policies for tree planting and maintenance.

Private Property

Where there is a clear public benefit, planting on private property may be allowed. In this case, the approach to identifying sites and ensuring long-term maintenance on private property should be described in the grant narrative.

Examples of acceptable private property plantings are as follows:

- Trees in front yards but near the street (setback plantings);
- Trees on private property that is open to the public; and
- Trees visible to the public and providing significant community benefits, such as trees planted in front or side yards bordering streets that provide energy conservation for homes.

When trees are planted on private property, the property owner must sign an agreement to confirm that they will maintain and protect the tree, and provide access to the organization responsible for planting and maintenance.

Spacing

Trees must be located appropriately on the site, allowing adequate rooting space and distance from utilities, other trees, buildings, roads, sidewalks, and other infrastructure.

Species Selection

A recommended species list should be developed for planting projects. Tree species must be appropriate for the site, non-invasive, and not a host for a high-risk insect or disease already confirmed in the area. Species diversity should be emphasized.

For maximum environmental benefits, trees with larger canopy size at maturity are preferred. Exceptions are for trees planted under power lines, trees producing edible fruit and nuts, or in situations where there are planting site constraints.

For most Forest Service urban forestry grants, plantings should only consist of trees. However, some grant programs may allow for native shrub planting as part of a habitat/riparian restoration plan. Consult with a Forest Service specialist for recommendations.

Tree Quality, Size, and Handling

Tree planting stock must, at a minimum, meet the current American Standard for Nursery Stock (ANSI Z60.1; see Helpful Resources section for link). If a container size is specified for container-grown trees, the specification is incomplete if it does not provide a corresponding minimum plant size (see Section 13, American Standard for Nursery Stock (ANSI Z60.1)).

Tree size must be appropriate to ensure survival at the site. Large-caliper trees (2 inches or greater) are prone to greater transplant shock and require more maintenance. To reduce costs and increase the likelihood of establishment and long-term viability, the following is recommended as **maximum** size at the time of planting:

- 2½-inch caliper for deciduous trees on public property
- 7 feet in height for conifers on public property
- 2-inch caliper for deciduous trees on private property
- 5 feet in height for conifers on private property

Purchased trees must be protected during transportation and storage (including adequate irrigation) and be in good condition on delivery and prior to planting.

Installation

Tree planting, timing of installation, and protection must meet the most recent ANSI A300 Tree Care Standards and should follow the guidelines outlined in the latest edition of the International Society of Arboriculture's Best Management Practices for Tree Planting (see Helpful Resources section for links to where to purchase). Written specifications for planting should be developed and provided to contractors, staff, or volunteers who are doing the planting. Their work should be supervised and inspected during and after planting.

Where trees are planted and/or maintained by volunteers or property owners, the grantee must provide appropriate training and supervision. It is also suggested that each property owner receive a written guide for tree care (such as the Forest Service document "Tree Owner's Manual").

Trees planted under contract should include a warranty for replacement (due to poor condition or mortality), unless otherwise stated in the grant agreement. The grantee should be prepared to fully replace all trees that are in poor condition or die prior to the end of the project grant agreement, unless loss was due to natural disaster beyond the control of the project manager.

Maintenance

The project must have written specifications and a tree maintenance plan that addresses watering, mulching, removal of guy wires/stakes if used, pruning, and protection according to the International Society of Arboriculture "Best Management Practices for Tree Planting."

The property owner must sign an agreement that they will maintain, water, and protect newly planted trees and/or provide access to the organization responsible for planting and maintenance.

Inspection and Monitoring

A project manager or qualified designee must inspect every tree planted to be sure that tree selection, planting, maintenance methods, and planting locations are correct. On large projects, Forest Service staff or a qualified designee will also inspect the plantings prior to the grant end date for the same purpose.

Between 1 and 3 years after planting, a sample survey evaluating survival rate and condition of planted trees should be completed to assess survival rates and inform future projects.

Guidance for Seedlings/Saplings

Some aspects of planning, implementation, and maintenance may vary for projects that utilize smaller stock such as bare-root seedlings, saplings, or live stakes. In an urban and community setting, this may occur on restoration projects in parks or natural areas, or in establishing forested buffers. Unique considerations for smaller stock include the following:

- Bare-root trees, seedlings, and saplings must be planted as soon as possible. Bare-root trees must be kept damp and stored in a cool location until planting occurs. Under no circumstance should bare-root tree roots be allowed to dry out. If planting is to occur more than 7 days after arrival, trees should be unpacked, inspected, watered if necessary,

and resealed. The longer the planting is delayed and the higher the storage temperature, the greater the mortality rate.

- Projects should include a description of how new trees will be protected from competing vegetation, animals, mowing, other human impacts, or other anticipated mortality.

- Seedlings and saplings may incur higher mortality rates than larger stock. Therefore, grant narratives and planting plans should document the target survival rate at the end of the grant. Replanting should occur if this target is not met, unless otherwise approved by the Forest Service.

References for additional information and specifications can be found in USDA Forest Service and State Forestry Agency publications, Natural Resources Conservation Service (NRCS) technical specifications, and County Cooperative Extension Services. The Helpful Resources section of this document includes links to some documents.

Technical Assistance and Examples

Please contact the Forest Service if technical assistance or examples regarding these guidelines are needed.

Definitions

Caliper: Diameter of a tree trunk taken at a standard height, used in specifying the size of nursery stock. Caliper is measured at 6 inches above the ground, soil level, or root collar if the trunk diameter is 4 inches or less.

Landscape tree: A tree that is growing in a yard, park, boulevard, median, or other maintained or mowed area—not in a natural or wooded area.

Reforestation: In a community or city context, reforestation refers to a large-scale planting of native trees and shrubs throughout a site to replace loss of canopy due to insect infestations, disease incidence, invasive species removal, land development, past use, or extreme weather events.

Tree: A plant having a permanent woody main stem or trunk, ordinarily growing to a height of at least 15 feet.

Helpful Resources

American Standards for Nursery Stock – ANSI Z60.1
https://www.americanhort.org/nursery-standards/

American National Tree Care Standards – ANSI A300 https://wwv.isa-arbor.com/store/product/4645

International Society of Arboriculture Best Management Practices for Tree Planting
https://wwv.isa-arbor.com/store/category/117/

Resources and Assistance Available for Planting Hardwood Seedlings – Lenny D. Farlee, Purdue Extension FNR-226
https://www.extension.purdue.edu/extmedia/FNR/FNR-226.pdf

Bentrup, G. 2008. Conservation Buffers—Design guidelines for buffers, corridors, and greenways. Gen. Tech. Rep. SRS–109. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 110 p.
https://www.srs.fs.usda.gov/pubs/33522

Link to Natural Resources Conservation Service Field Office Technical Guides with conservation practices for each State
http://www.nrcs.usda.gov/technical/efotg

Tree Owner's Manual

Relevant Authorities

Authorizing Legislation for Urban and Community Forestry Assistance
U.S. Code Title 16, Chapter 41, Section 2105
http://www.law.cornell.edu/uscode/text/16/2105