

URBAN FORESTRY

A Manual for the State Forestry Agencies in the Southern Region

Site and Tree Selection

The Urban Forestry Manual is being developed by the USDA Forest Service, Region and Southern Research Station, and the Southern Group of State Foresters as an educational tool for State forestry agency employees and others who work with communities on urban forestry. It can be used for self-guided learning, finding specific information on a topic and developing workshops and presentations.

Using this Manual

The Urban Forestry Manual provides the scientific, technical, and practical information needed to work with communities on urban forestry. There are 16 units (listed below) that address specific topics in the practice of urban forestry. These units have been developed as a series, each building upon the information in previous ones. The units may also be used individually to gain information about a specific topic.

- 1- Benefits and Costs of the Urban Forest** is the first unit in the Urban Forestry Manual. This is an introduction to urban forestry and it explains why your work with communities and individuals in urban forestry is important. This unit also includes information about how to maximize the benefits and minimize the costs related to the urban forest.
- 2- The Role of the State Forestry Agency in Urban Forestry** is an introduction to State forestry agencies' responsibilities and activities in urban forestry. It explains why partnerships are important to State forestry agencies activities in urban forestry. This unit also discusses the importance of working with communities and individuals.

- 3- Tree Biology** is an introduction to how trees grow and live. It describes how trees are structured, how they function, and how they grow and develop. It also explains how the urban environment influences tree growth and development.
- 4- Dendrology** is an introduction to identifying and understanding trees in the urban environment. It explains the classification of trees, naming trees and tree identification. This unit also includes information on how characteristics of the urban environment influence tree identification.
- 5- Urban Soils** is an introduction to the role that soils play in the health of the urban forest. It explains what soil characteristics are important for healthy tree growth. This unit also includes information about common soil problems in urban areas.
- 6- Site and Tree Selection** provides information on how to select a site and species to maximize the benefits and minimize the costs related to urban forestry. It explains what factors you need to consider when selecting a planting site, tree species, and tree stock. This unit also discusses how to match these factors to ensure healthy tree growth and development.
- 7- Tree Planting** is a unit that will introduces factors to consider and techniques to implement when planting trees. It includes recommended guidelines for planting and post-planting. It also explains how to work with communities and individuals to successfully plant trees.
- 8- Tree Maintenance** is an introduction to the importance of providing regular maintenance to the urban forest. The basic steps to preventative maintenance are discussed, such as fertilization, mulching, pruning and tree protection.
- 9- Tree Diagnosis and Treatment** provides an introduction on how to diagnosis and treat tree health problems. This unit explains how your knowledge and application of diagnosis and treatment can improve the health of the urban forest. It also includes information on why it is important to prevent tree health problems.

- 10- Trees and Construction** is an introduction to the relationship between construction activities and trees. It explains the importance of communication during the construction process. The focus is on the impact of construction activities on trees, the protection of trees during construction, and care for the tree before and after construction.
- 11- Hazard Trees** is an introduction to the importance of recognizing a hazard tree. It gives a general overview on evaluating a target, site conditions and the tree. This unit also includes information on how to prevent and manage hazard trees.
- 12- Urban Wildlife** is an introduction to the relationship between wildlife and the urban environment. It first defines urban wildlife and describes the needs of wildlife, such as food, water, cover and living space. Then it discusses wildlife habitat in urban areas and how wildlife adapts to urban habitat. It also includes information on how to encourage and discourage wildlife.
- 13- Urban Ecosystems** is an introduction to the role that trees play within an urban ecosystem. It first defines an ecosystem and why it is important to understand ecosystems. Then it discusses ecological concepts, such as structure and function, that are important to understanding ecosystems. This unit also includes information on understanding challenges in the urban forest ecosystem.
- 14- Urban Forestry Planning and Management** is an introduction to the importance of planning and managing the urban forest. It starts with a definition of an urban forest management plan and why they are important. Then it discusses the steps involved in developing a management plan. It also includes information on the different components in a management plan.
- 15- Urban Forestry and Public Policy** is an introduction to understanding public policy and how it relates to urban forestry. It first describes the role that each level of government has in setting public policy related to urban forestry. Next it provides information on local government in more detail because this is where

most urban forestry policy is created and implemented. The role that Tree Boards have with local government is also discussed. The final section reviews public policy tools that can be used to address urban forestry issues in a community.

16- Working with the Public is an introduction on how to effectively work with the public. It starts with tips on how to work together as a team and how to work with volunteers. Then it discusses the role of communication and education in working with the public. The unit also includes information on the importance of leadership in urban forestry.

Guidelines for selecting the right planting site and tree:

First, the reasons for planting a tree are discussed.

Second, important factors to consider when selecting a planting site and some common types of urban planting sites are covered.

Third, information is provided that will help in selecting the right tree for the site, which includes factors to consider when selecting a species and tree stock.

This unit emphasizes the importance of planning when selecting a site and tree to avoid mistakes and future costs. It will also help you communicate more effectively with people in your community about selecting planting sites and finding the best types of trees for those sites.

There are three important questions to ask before planting a tree.

- What is the purpose of the tree?
- What are the characteristics of the planting site?
- What are the characteristics of the tree?

Asking these questions before planting a tree can help insure the tree has the best chance for healthy growth, development, and survival. Planning ahead will also help to maximize the benefits while minimizing the costs associated with the tree. Some of the costs that can be

minimized by proper site and tree selection include maintenance, removal, infrastructure repair, and liability.

Helping people to answer these three questions will help insure the growth of a healthy urban forest, prevent tree health problems, and minimize costs. There are a number of ways to assist communities in selecting the right tree and the right site (table 1).

Table 1. Examples of ways to provide site and tree selection assistance and potential recipients.

Technical/Educational	Technical/Educational	Technical/Educational
<ul style="list-style-type: none"> • Site selection • Tree selection • Unique planting sites • Planting requirements • Identification of healthy tree stock • Construction site evaluations • Tree inventories • Benefits and costs • Workshops and presentations 	<ul style="list-style-type: none"> • Construction site planning • Soil management • Land-use management plans • Urban forestry management and planning • Urban wildlife management • Urban habitat management • Urban landscape programs 	<ul style="list-style-type: none"> • Tree Boards • Individual homeowners • Business owners • Related professionals • Utility companies • Policy makers and elected officials