URBAN FORESTRY

A Manual for the State Forestry Agencies in the Southern Region

Unit: Urban Forestry and Public Policy

The Urban Forestry Manual is being developed by the USDA Forest Service, Southern 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. There are 16 units (chapters) in the Manual - at this time 9 units are on the web site (www.urbanforestrysouth.usda.gov). The other units will be added as they become available.

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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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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 is 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.

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.

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.

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.

Using Each Unit

Each unit in the Urban Forestry Manual is organized as follows:

Table of Contents
Lists major topics that are included in the unit.

Unit Overview
Presents goals and objectives for the unit.

Before You Begin
Consider how your current activities and experiences relate to this topic.

Content
Presents specific material about this subject under several headings.

Next?
Think about how you can use the information in your daily responsibilities and in developing your career in forestry.

For More Information
Lists other sources of information about this subject, as well as the literature cited in the unit.

Appendix
Some units have an appendix that may include checklists or other information.

In addition, each unit has two sections that will help you assess your learning of the information.

Checking Your Understanding
At the end of major sections in the unit, there are short-answer questions about the information you have read. After you have written the answers, you may compare your responses to the answers provided at the end of each unit.

Case Study
These are stories based on the real experiences. The questions at the end of the case study challenge you to use the information you learned to solve a problem similar to what you will be facing when working. You will be asked to analyze an actual urban forestry problem and prepare your solutions. There are no right or wrong answers -- only what you decide is the best course of action after considering all of the information.

URBAN FORESTRY AND PUBLIC POLICY

Table of Contents

Overview

This unit is an introduction to understanding public policy and how it relates to urban forestry. First, it describes why public policy is important and the role each level of government has in setting public policy that affects urban forestry. The second section focuses on local government and the role of Tree Boards because here is where most urban forestry policy is created and implemented. The next section reviews public policy tools with an emphasis on tree ordinances, which can used to address urban forestry issues in a community. Finally, trees in civil matters are briefly discussed.

The Ordinance Vacuum

The Good, the Bad and the Ugly

Back in 1990, a group of citizens in a university town decided it was time to have a tree ordinance. The group was comprised mainly of university faculty and staff. They worked hard to develop an ordinance that addressed tree protection on public property. They debated whether they should include private property and decided to go for the whole thing. When they presented the ordinance to the city commission, the homebuilders and business council came out in force to oppose it. The homebuilders were furious – they had just found out about the ordinance and they had had no input into its development. Tempers were hot and it was not a good night for the citizens group or the ordinance. The city commission forwarded the ordinance to the natural resource committee for further study, where the ordinance died. Even though the citizen group meant well, creating the ordinance in a vacuum created so much ill will that it was 8 years before the community could even talk about drafting another ordinance.

Law is merely the expression of the will of the strongest for the time being, and therefore laws have no fixity, but shift from generation to generation. Henry Brooks Adams, 1838-1918, American Historian

Before You Begin

Many activities related to urban forestry are influenced by public policies that have been decided at some level of government. Take a few minutes to consider how policies may affect the urban forest. Think about a recent rezoning request for an apartment complex, planned development, or shopping center that may have required clearing a large area of land.

- What effects do such policy decisions have on the urban forest?

- What groups and organizations are involved with local government issues related to urban forestry?

- What governmental policies impact efforts to maintain trees and the urban forest?

Why is Public Policy Important?

The urban forest is influenced and managed by public policies set at many levels of government. Public policy is a broad term and difficult to define. However, it can generally be defined as some action taken by government to resolve issues of public concern. Many of these policies may not mention urban forestry specifically but they can still affect trees in a community. Managing the urban forest involves knowing about these public policies and how they work. It also requires working with groups and making decisions about issues that cross-governmental, community, and ownership boundaries. There is public policy at all levels of government (Federal, State and local) in the United States that can impact the urban forest. Examples of different forms of public policy include legislation, regulations, resolutions, programs, appropriations, administrative practices and court decisions.

Public policies are solutions to public issues and they are often controversial.

Federal Government

The Federal government can directly influence urban forestry by means of financial support and technical assistance, such as the 1990 Farm Bill that authorized funding for the Urban and Community Forestry Assistance Program. The Federal government indirectly impacts State and local government through decisions made by Federal courts and by Federal regulations. For example, local governments must follow safe drinking water and air quality standards established by the Federal government. The Federal government becomes directly involved with local governments when they   are out of compliance with a Federal mandate, accept Federal funding, or when assistance is requested.

State Government

State government also influences urban forestry by means of financial support, technical assistance, and legislation. Examples of financial support include allocated funds for urban forestry staff or projects within a specific State agency. Technical assistance refers to a State agency's ability to help local governments, communities, organizations, or citizens in their efforts to improve and maintain the urban forest. A legislative example is enabling legislation that gives local governments the authority to pass local laws and ordinances. Within the State government there are departments, agencies, divisions, or commissions that may have policies related to urban forestry.

Environmental protection

The environmental protection or related department has regulatory authority to protect water and air quality. This may include policies that address erosion control, non-point-source pollution, buffers, rivers, and tree protection. Sometimes the environmental protection responsibilities will be under a natural resources department.

Natural resources

This department usually oversees issues related to natural resources in the State. It may also deal with natural resource planning on regional scales and oversee public open space. In some States, environmental protection, State forestry agencies, and mining and reclamation are within the natural resources department.
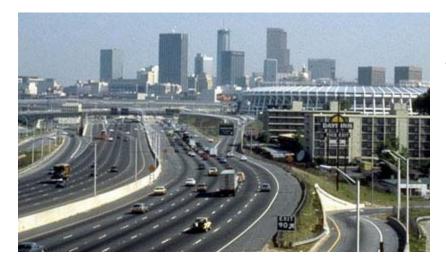
Fish and wildlife

Fish and wildlife departments typically are responsible for managing, protecting, and improving habitat for fish and wildlife in the State. They may also be involved in managing urban wildlife.

Forestry

State forestry agencies protect and manage the State's forest resources and provide assistance related to forestry, forest health, fire protection, urban forestry, and conservation education; they also may encourage voluntary implementation of forestry "best management" practices. They often formulate policy on forest-related issues.

Transportation

Transportation departments plan and oversee road building and maintenance. They may also establish regulations related to tree plantings and maintenance along highways and near billboards on State and Federal roads.

The State transportation department may have policy that impacts trees in a community.

Community development

The community development departments oversee a variety of issues that may include community planning and development, tourism, emergency management and historical sites. Urban forestry is often involved in many activities related to community development.

Licensing

The State may require foresters, urban foresters, or arborists to be licensed to legally practice. Licensing may be the responsibility of the Secretary of State's office or a licensing department.

Find out what state agencies or departments oversee activities that may impact urban forestry issues.

Local Government

Local government generally refers to cities, towns, counties, or parishes. Local governments enact laws to protect the health, safety, and general welfare of the community. While the local government may not have the broad influence that the Federal and State governments have, it does significantly affect policy related to urban forestry. Local governments traditionally have principal responsibility for managing and conserving urban forests and public open spaces. This responsibility may include planning, generation of revenue, staffing, implementation and enforcement of ordinances, and responding to the needs of the public.

Sometimes local units of government, such as city and county, are combined or consolidated.

Special districts

Special districts are another unit of local government that may influence the urban forest. While most special district governments are created as school districts, some are established for other purposes, such as soil and water conservation, fire protection, parks and recreation, sports, tourism, downtown revitalization, health, historic preservation, and transportation. Managing the urban forest will usually involve working with special districts.

Quasi-governmental agencies

Sometimes an urban forestry issue may involve not just one but several communities in a region. There may be region-wide commissions or authorities, such as regional planning commissions or councils of governments, that serve as quasi-governmental agencies to address issues that cross local government boundaries. These quasi-governmental agencies facilitate coordination among local governments on issues that affect all the communities in the area, such as land use, transportation, utilities, and the environment.

Find out it there are any region-wide commissions or authorities that address natural resource issues.

How Local Government Works

Most urban forestry policy is created and enforced at the local government level.   Each local government has its own structure and processes for conducting business. Therefore, to work effectively with local government, it is important to become familiar with its particular structure and processes.

- Identify local government officials and staff
- Understand how local government is managed and administrated.
- Understand the roles commissions, boards, and authorities play.
- Understand the budget process and how resources are allocated.
- Determine how local policy is created and implemented.

It is especially important to understand the local level of government because that is where most urban forestry policy is created.

Officials and Staff

To work successfully with a local government, the key officials and staff need to be identified. Knowing their individual responsibilities, as well as their relation to other officials and staff, will facilitate your working with them.

Find out who the key government officials and staff are in the communities where you work and what responsibilities they have.

Mayor

Most communities have a mayor. The mayor is an elected official whose responsibilities and duties vary tremendously from community to community. In some communities, the mayor manages the daily operation of the government, and is sometimes referred to as a "strong mayor." In other communities, the mayor is merely the ceremonial head of the city and may preside over council meetings, and thus is referred to as a "weak mayor."

City council, city commissioners, or county commissioners

Council members and commissioners are residents of the community who are elected into office to represent specific wards, districts, parishes, or citywide areas. Members of these groups are usually political leaders and decide on city policies and legislation. Some city councils, city commissions, or county commissions work by committee, assigning members to various committees, such as transportation, planning, or parks and recreation, to address issues related to those topics. They usually meet weekly or monthly to discuss and vote on management and public policy issues, such as staffing, budget, ordinances, or resolutions. Ordinances are laws passed by local government, such as speed limits. Resolutions are usually used for special or temporary events, such as recognition of Arbor Day.

City manager

In addition to the mayor, there can be a city manager, especially where there is a "weak"

mayor. The city manager often oversees the daily operations of the local government and supervises the department or division heads.

Department heads
Department or division heads oversee the daily operations within their specific departments, such as planning and zoning, parks and recreation and public works.

Department staff
Each department has a staff that reports to the department head. For example, the planning department may have a land-use or transportation planner and the public works department normally has a road-building crew. The landscaping staff may be in the public works department. Nearly every local government has someone responsible for tree care. The responsibilities of this person depend upon the community's size, available funding, and commitment to urban forestry. For example, one community may have someone who merely removes tree limbs from the streets, while another community might have a comprehensive urban forestry program and department. The person responsible for trees in the community may be called a tree care or landscape manager or city/county urban forester or arborist. They may also be a department head. This person can oversee a wide range of activities such as conducting tree inventories, implementing and updating the urban forestry management plan, maintaining the trees on public property, serving as primary resource on tree-related issues, providing training and educational information to staff, citizens and others, and responding to inquiries related to trees in the community.

The local government urban forester oversees the management of trees located on public property.

Management and Administration

Most local governments have several departments or divisions that are responsible for the daily operations and services in the community. Any one of these departments may have tasks that influence urban forestry in a community. So it is important to identify what departments have responsibilities for issues related to urban forestry and to understand how these departments operate as well as their concerns and problems. Look for opportunities to encourage cooperation among the different departments and ways to involve them in urban forestry. For example, the economic development department might be working on a main street program featuring downtown street tree plantings

while at the same time the public works department plans to widen the same downtown streets to improve the infrastructure. Every local government is different, but here are examples of municipal departments or divisions whose responsibilities and activities impact urban forestry:

Local governments can contract with private companies for services, such as road building and tree maintenance.

Public works
The public works department usually oversees water and sewers, roads, transportation, traffic engineering, physical plant maintenance, and trees on public rights-of-way. If this department is responsible for landscaping, it may enforce the tree ordinance. This department's activities, such as building and maintaining roads and sidewalks, can also damage trees.

Parks and recreation
This department manages local parks, recreation programs, open spaces, greenways, and possibly landscaping. The tree ordinance may be the responsibility of this department.

Planning and zoning
The planning and zoning department oversees several activities that relate to urban forestry, such as land-use planning, zoning, and issuing permits for land disturbance and development. This department may also be responsible for the administration and enforcement of the tree ordinance, particularly if the ordinance addresses tree conservation on development properties.

Economic development
This department looks for opportunities to improve and promote the economic development of the community. It may be involved with activities related to urban forestry, such as revitalizing the downtown area and tourism. Sometimes economic development may be part of the planning and zoning department.

Arts and cultural affairs
The arts and cultural affairs department encourages arts and sponsors cultural affairs activities, such as Arbor Day ceremonies. These duties may be handled by the parks and recreation department.

Sanitation
The sanitation department usually oversees garbage disposal, public landfills, sewage, and water. Urban-tree residue recycling or disposal often requires communication and interaction with this department. These responsibilities may be part of the public works department.

Emergency management
The emergency management department plans for and responds to natural disaster emergencies, such as hurricanes and ice storms.

The emergency management department often has policy related to responding to natural disasters.

Meet with department heads and staff to learn more about their responsibilities and procedures.

Commissions, Boards, and Authorities

Local citizens may be appointed or elected to advise or assist the local government in developing policy on particular issues. Citizen-appointed groups are often referred to as commissions, boards, or authorities. They often serve as a direct line of communication between the citizens and elected officials. Most of these groups work as volunteers; however, sometimes they are compensated for their time. These groups afford citizens the opportunity to become involved in public policy. Some communities have several commissions, boards, and authorities while others have few or none. Here are several examples of commissions, boards, or authorities that often deal with issues related to urban forestry:

Tree Boards
One of the main responsibilities of a Tree Board is to advise the local government on issues related to urban forestry. The board may also oversee the local urban forestry program. Refer to the "Tree Board" section later in the unit for more information.

Planning commissions
The planning commission typically makes recommendations on land-use issues to the elected officials. Commissioners often base their recommendations on information received from the local government planning department.

Local governments often have franchises with companies to provide gas, electric, telephone and cable services – the activities of these companies can damage trees.

Zoning boards
The zoning board's role is similar to that of the planning commission, but it establishes zoning districts and hears appeals on rezoning issues.

Parks and recreation commissions or boards
These boards often advise and oversee the local government's involvement in issues related to parks and recreation, particularly on planning, management, and budget.

Clean and beautiful commissions
These commissions coordinate public education efforts related to the cleanliness and beautification of the community, such as tree plantings, gateway beautification, and recycling programs. They may exist as non-profit organizations and not actually be part of the local government.

Transit boards
The transit board usually has jurisdiction across multiple units of government to oversee transportation–related issues. Building and maintaining roads can kill or damage trees.

Utility boards
Some communities have boards for city-owned utilities, such as sewer and water. The installation and maintenance of these utilities can impact trees.

Airport boards
A concern of airport boards is to ensure there is no conflict between tree heights and airplane glide patterns.

> *Find out what commissions, boards, and authorities oversee activities that related to urban forestry in the communities where you work.*

Budget

Every community has a different process for developing the government budget. The local government typically develops a budget based on projected income and recommendations from department heads. Usually, the city manager or mayor presents the annual budget to the city council or county commission. Often public hearings are held during the budget process to solicit feedback from citizens. Before the city council or commission casts the final vote, various community groups communicate with the council/commission on issues important to them.

> *Find out who makes the budget decisions and when citizens have an opportunity for input into these decisions.*

Sources of revenue
Local governments generate income from several different sources:

- Real estate or property taxes
- Bond revenue
- Sales Taxes
- User fees, such as sewer, water, and sanitation
- Special benefit assessments, such as parking meter fees, toll roads, and transit fares
- Special taxes, such as taxes on hotels, motels, and entertainment

- Transfers from other governments, such as Federal and State government grants
- Impact fees, such as a fee charged for a proposed development's impact on public infrastructure
- Donations

Some local governments are very creative in finding sources of revenue for the urban forestry program. For example, some communities allocate a portion of the hotel and motel tax allocated for tree-maintenance activities.

Raleigh, North Carolina uses impact fees on residential development to pay for parks and greenways.

Expenditures

There are two general categories of expenditures in a local government budget. Funds for urban forestry can come out of either one of these categories.

- Operating budget
  Operating expenses typically include staff salaries, overhead, equipment, and maintenance. Usually, the revenue available for operating expenses is constant and secure.

- Capital budget
  Capital expenditures are for improving the city's infrastructure, such as buildings, roads, and sewers. Usually, the revenue available for capital expenses is variable and not secure. However, in some communities, such as Austin, TX, a percentage of the capital budget is allocated to trees and landscaping.

Local Public Policy

Creating local public policy is usually a complex, political process, so it is important to understand how local governments operate in the communities where you work. Every community has a different process for creating and implementing local public policy. Steps may commonly include:

Issue or problem is identified

Policy if often created when a need or issue is perceived within the community. Usually, an elected official, city manager, local government department or attorney, citizen group, or individual citizen initially defines the need or issue. Also, the media can draw attention to a particular issue.

Issue is recommended for study and further development

If the local elected officials, such as the city council, recommend studying the issue, they will usually either assign it to a committee, local government department, or a group of citizens or they may study the issue themselves. Whoever is studying the issue gathers information and participates in work sessions to find ways to address the issue.

Policy is drafted

Once all the information has been collected, an appropriate policy is drafted and

presented to elected officials. The drafted policy may be a new one or integrated into existing policy as an amendment, revision, or addition.

Elected officials vote on policy
The policy is presented at a meeting of the elected officials. The elected officials vote to approve, reject, or hold the policy for further study.

Policy implemented
If the elected officials vote to approve, the policy is implemented.

Policy evaluated
A process for evaluating the policy should be developed.

Find out what process the local government has for creating local policy.

Example of the creation of local public policy
A community may become concerned that the street trees are in decline and dropping limbs, creating a public hazard. The mayor appoints a Tree Board to explore the adoption of a tree ordinance to define the local government's responsibilities for maintaining and caring for the public's trees and reducing hazards. The Tree Board collects general information on hazard trees in the community and looks into how other communities address this issue. The Tree Board drafts an ordinance that addresses the handling and prevention of hazard trees in the community. The ordinance is presented at a city commission meeting, and the commission votes to approve. The Public Works Department, as stated in the ordinance, starts implementing the policy.

It is at the local level of government that citizens have the best opportunity to influence public policy.

Tree Boards

Tree Boards or tree commissions are comprised of a group of citizens appointed by local government officials to support the community's urban forestry program. Tree Boards are often created in response to a crisis, such as a natural disaster, rapid land development, or insect/disease epidemic. Sometimes communities create a Tree Board because they recognize the need to improve or maintain the urban forest. A Tree Board is commonly formed by tree ordinance, executive order or resolution, or citizen initiative.

Tree Boards often coordinate tree planting programs.

Tree ordinance

Tree Boards are often established by the local tree ordinance. In this case, the local government develops a legal charter for the Tree Board defining the Board's authority and responsibilities.

Executive order and resolution

Tree Boards can also be created by executive order of the mayor, chief executive officer, county chairperson, or other local government official. The city commission or council can also create a Tree Board by adopting a resolution.

Citizen initiative

Citizens who see the need for such an organization in their community can form a Tree Board. Sometimes the citizen initiated board is established when the local government is unable or unwilling to create a Tree Board. Some of these Tree Boards evolve into non-profit organizations.

The State forestry agency usually offers technical and educational assistance to Tree Boards.

What is the Role of the Tree Board?

A Tree Board's responsibilities vary from playing only an advisory role to actually implementing policy. There is no limit to what Tree Boards may do because of the wide variety of issues in a community, ranging from concern for individual and historic trees to the loss of trees from land development. Table 1 lists examples of some possible roles a Tree Board may play in a community.

Table 1. Possible Tree Board roles and their descriptions

Role	Description
Advisory	Advise and provide technical assistance to local officials, non-profit organizations, businesses, or homeowners on issues related to trees, such as policy, planting, maintenance, inventory, and management.
Coordination	Coordinate various urban forestry activities in the community, from tree planting projects to educational programs.
Recruiting citizen support	Encourage the grass-root support that is critical to the development and success of an urban forestry program.
Liaison	Function as a liaison between local and State government officials and the citizens of the community.
Fund raising	Assist with raising funds to support the urban forestry program.
Public education	Foster educational opportunities, such as workshops, training, and conferences, for homeowners, businesses, homebuilders and developers, road maintenance departments, and others. Prepare an annual report of Tree Board activities to be distributed to citizens, local government officials, and the media.

The publication, "A Handbook for Tree Board Members," by G.W. Grey is a good resource.

Tree Board By-laws

Tree Boards often operate under by-laws or a charter that define their mission and responsibilities. The by-laws should be developed to meet the needs of the community

and should be reviewed regularly to verify that they still meet the needs of the community. Several components are common to the by-laws of a Tree Board.

Contact your State urban forestry coordinator for copies of Tree Board by-laws.

Purpose or mission statement
The by-laws or charter should clearly state the purpose and mission of the Tree Board in the context of the needs of the community. A clearly stated purpose and mission statement may avert future problems arising from Tree Board actions.

Membership
The by-laws should specify the number of Tree Board members, how they are to be selected, necessary qualifications, and term of office. Tree Boards are generally comprised of members of the community who represent a cross-section of neighborhoods, interests, and professions.

- Selecting members
  Two important criteria should guide the selection of Tree Board members: Each member needs to have the desire and motivation to be on the Tree Board. And the membership should be broad based to enhance the Board's credibility and influence. Often having board members whose experience and background are not related to trees, such as engineering, planning, legal, media, and finance, can be helpful. Usually the mayor or city council is involved in selecting and appointing members. Tree Board members are often volunteers and not paid for their work.

- Define roles
  It is also advisable to define the roles of individual Tree Board members and develop job descriptions and maybe even a set of guiding principles, including decision-making rules to help steer them.

Responsibilities
The Tree Board's responsibilities vary from community to community and those responsibilities need to be stated in the by-laws.

- The Tree Board's jurisdiction needs to be determined. For example, is the Tree Board responsible only for trees located on public property or for both public and private trees?

- Determine whether the Tree Board will have only an advisory role or policy implementing role. Based on the defined role, the Tree Board will be responsible to the mayor, city council or commission, city manager, or department head.

Operational
The operational section of the by-laws includes information on how the Tree Board will operate, such as choosing officers, keeping records, quorum requirement, meeting times, and information dissemination.

Checking Your Understanding of
Local Government and Tree Boards

On a separate sheet of paper, answer these questions about the important points you need to remember:

1. Why is it important to understand the role local government has in urban forestry public policy?

2. How can citizens assist the local government in developing policy?

3. What is a Tree Board? List examples of what Tree Boards can do for a community.

Answers are at the end of the unit.

Local Public Policy Tools

A range of public policy tools can be used to meet the vision, goals, and objectives for the community's urban forest. Understanding these tools is important because their application impacts the community's forest. Think about how these different tools can be used to maximize the benefits and minimize the costs of the urban forest. The public policy tools that will be discussed in this unit include:

- Comprehensive plan
- Land-use plan
- Ordinances
- Variances
- Subdivision regulations
- Land-development permits
- Performance standards or controls
- Urban growth boundaries
- Transfer of development rights
- Acquisition of open space
- Conservation easements
- Conversions
- Landowner tax incentives

A common denominator of these tools is that they require collaborative planning. This is a process where people work together, including landowners, industry, regulatory agencies, citizens, and other interested parties, to address problems, issues, or concerns. These diverse interest groups work collaboratively to understand the issues, resources, needs, and perspectives. Together they develop a plan to meet future needs of the community. Refer to the Working with the Public unit for more information on collaborative planning.

Comprehensive Plan

A comprehensive plan is a written document and map intended to chart a community's future. The plan typically includes guiding principles, goals, objectives, standards, and policies that will help the community attain its vision for the future. Usually, comprehensive plans cover a 20-year period, but that varies from State to State. They often include information on issues important to the community's development, such as past and future population, economics, employment, housing, schools, transportation, natural resources, and parks. The comprehensive plan can identify potential locations for trees, greenspace, or sensitive areas. Also, the plan should identify the best locations for less desirable land uses, such as a landfill. Local governments will use local public policy tools, such as zoning ordinances, subdivision regulations, and building codes, to implement the comprehensive plan.

Contact your State government to find out what agency is responsible for comprehensive planning.

Components of a comprehensive plan
Comprehensive plans are usually comprised of several chapters or components. Many of these chapters address specific issues in the community, such as land use and transportation, and contain information that is related to the urban forest.

- Population
  This component of the plan supplies historical, current, and projected population numbers for the community.

- Land use
  The land-use plan guides development of real estate in the community and recommends how the land should be used. It contains information on the estimated acreage and densities for each land use type and guides future zoning decisions and the planning for infrastructure. The land-use plan is discussed in detail later.

- Transportation
  The transportation plan addresses issues related to moving people and commodities in the community, such as the future location, character, and extent of highways, rail, air, and port facilities as well as bicycle and pedestrian paths.

- Natural resource and historic resources
  This is a plan for protecting natural and historic resources in the community. Examples of natural resource issues that may be addressed include trees, sensitive natural areas, topography, wetlands, water and air quality, wildlife, and stream buffers. The plan often includes information on historic neighborhoods, landmark buildings, and other historical resources.

- Community facilities and utility
  This plan determines the most appropriate future location, character, and extent of public lands, buildings, facilities, and utilities. It often addresses open space, park and recreation facilities, stormwater runoff, and land near streams and rivers.

- Housing and community development
  This plan attempts to assure a decent residential and economic environment for all citizens. It often contains information on age, type, condition, and location of housing, as well as the community's economic base and labor force.

The comprehensive plan addresses natural resources in a community.

The comprehensive planning process

Many States require that local governments develop or revise their comprehensive plans periodically, such as every 5 years. Usually, the local government-planning department, regional planning commission, or consultant hired by the local government is responsible for developing a comprehensive plan. Because public participation is important to the process, there will often be public hearings to receive public input. Many communities follow these four steps when developing or revising a comprehensive plan:

- Inventory or assess resources
  Collect information on factors important to the community's growth, such as population, employment, housing, traffic, parks, and natural resources. Included should be historic, current, and future projections for each of these factors.

- Develop guiding principles, objectives, and goals
  Based on the inventory of resources, future projections, and public input, the community develops guiding principles, objectives, and goals.

- Develop implementation strategy
  The implementation strategy includes short, medium, or long-term actions to reach the objectives and goals. It can also include policy statements to guide implementation of the plan.

- Revision
  As the community grows and changes, comprehensive plans are often modified to meet the new demands of the community. A review process should be built into the plan.

Get involved with regional and local comprehensive planning process.

Land-Use Plan

Regulating how land is developed and used is one of the most common components of public policy at the local level. Land-use planning can control the type of use, density of

use, aesthetic impact of use, and impact of use on cultural and social values of a community. It is a tool that local governments can use to determine the best use of land to meet the community's long-term needs and goals. The local government will use other public policy tools, such as ordinances, to implement the land-use plan. Some communities have no land-use plan while others strictly regulate land use.

Land-use classifications
The land-use plan classifies the different types of land use in the community. Each type of land use is subject to specific regulations on how the land can be developed and used. Land use classifications may include:

- Agricultural, rural, and undeveloped
- Residential, single family, duplex, and multifamily
- Corridor business and neighborhood
- Downtown
- Commercial, office, and institutional
- Light and heavy industrial

Two types of land-use plans
The land-use plan typically includes a written report and a map that describe the goals and objectives for real estate development in the community. There are two basic types of land-use plans, a current land-use plan and comprehensive land-use plan.

- A current land-use plan illustrates the current land-use classifications in the community
- The comprehensive land-use plan illustrates how the community wants real estate to be developed in the future

The local government planning office will usually have land-use or zoning maps that illustrate different types of land use in the community.

Ordinances

Ordinances are public policy tools used to protect the health, safety, and welfare of the community. Ordinances can be purely administrative, such as establishing a tree board, or they can establish rules that must be complied with, such as topping of trees on public property will not be allowed. The local government can only pass ordinances on issues that the State government through enabling legislation allows them to regulate.

Communities can have a wide variety of ordinances that address issues such as land use, trees, parking lots, erosion, stormwater, and noise. Ordinances typically have standards that the property owner must comply with. For example, the parking-lot ordinance may require a minimum size area for tree planting or the zoning ordinance may prescribe maximum building height. Some ordinances regulate on a site-specific basis, such as protecting stream banks or shoreline on a specific project. Other ordinances may regulate on a non-site specific basis, such as protecting the water quality or watershed of a region. Ordinances can be effective tools for implementing the comprehensive plan. Following is a list of the most common types of ordinances that may affect trees in the community.

Tree ordinances
One of the more common types of ordinances adopted by communities today is the tree ordinance. Often they are enacted in response to changes caused by rapid land development. Tree ordinances range in complexity from simple tree-replacement standards to more comprehensive ones addressing natural resource issues. For example, a basic ordinance may protect the public from hazard trees on public properties while a comprehensive landscape and tree preservation ordinance may apply to private land as well. Tree ordinances can also require the developer to submit a tree-protection plan with the other site plans as part of the overall development and building-construction process. More information on tree ordinances can be found later in this unit.

Zoning ordinances
A zoning ordinance regulates how land is used in the community, and this influences the urban forest. Examples of issues that a zoning ordinance may regulate include building height, amount of open space, population density, off-street parking, visual clearance, landscape strips, shoreline excavation, and erosion and sedimentation. The zoning ordinance divides the community into various districts, based on land-use classifications. These land-use classifications, such as agricultural, commercial, or multifamily, set standards or codes on how land can be used in each classification. For example, standards for structure height for land zoned as commercial would probably be different than for land zoned as single-family. Also, a property owner could not build a multi-family housing unit on property zoned for agricultural use. There are different ways that the zoning ordinance can be used to facilitate tree protection.

- Rezoning
  There is generally a process whereby a property owner can request the local government to change the zoning for the property. For example, a developer may request that a piece of property currently zoned for agricultural use be rezoned for multi-family, residential use. Rezoning property often requires an application to the local government, public notification and hearings, and local government review, recommendations, and a decision to approve or disapprove. The local government may require the property owner to meet certain conditions before the rezoning is approved. For example, the property owner must comply with the tree ordinance or provide a 25-foot undisturbed buffer along the property line. The property owner can appeal and file for reconsideration of the zoning decision.

In some communities, landowners must comply with the tree ordinance as a condition for rezoning.

- Bonuses or incentive zoning
  This is where zoning regulations are relaxed as an incentive for the developer to provide public amenities. For example, a developer will offer certain amenities, such as leaving community open spaces or developing at a slower pace, in exchange for permission to build at a higher density.

- Density or cluster zoning
  Density or cluster zoning allows modification of lot sizes and frontage requirements on the condition that other land in the development is used for parks, open space, schools, or other public need.

Landscape ordinances
Landscape ordinances usually regulate landscaping, plant material, and design. They may also address screening, sun control, or air quality.

Timber harvesting ordinances
Many communities have timber harvesting ordinances that regulate where and how timber harvesting can be done. Sometimes these ordinances will include best-management practices, prevent timber harvesting in residential neighborhoods, and limit where hauling trucks can travel, to prevent damage to road surfaces and bridges from the excessive weight.

Parking-lot ordinances
Parking-lot ordinances establish landscaping requirements in parking lots. This may include regulating the amount of and width of landscape area, types of plant material, planting procedures, and screening requirements.

The landscaping in this parking lot was designed based on a parking-lot ordinance.

Erosion and sedimentation control ordinances
These ordinances regulate the amount of erosion and sedimentation that will be tolerated on a site. They often control the type of land disturbance activities permitted, existing and proposed vegetation on the site, and types of erosion and sediment control devices to be used.

Storm water management ordinance
Stormwater management ordinances are concerned with the amount of stormwater runoff, stormwater detention areas, and vegetative buffer strips.

Water quality ordinances
These ordinances regulate activities that occur in or near watershed areas, lakes, rivers,

streams, and wetlands. Water quality ordinances may address watershed protection, riparian buffers and other similar issues.

Sign ordinances
Sign ordinances regulate signs in the community, for example their dimensions, location and visibility.

Find out what ordinances impact trees.

Variances

A variance is when a standard in an ordinance is waived or exempted. For example, a property owner requests that the local government modify or waive the standard in the tree ordinance specifying size of trees planted. The property owner submits an application to the local government which reviews it and decides whether to grant the variance. A variancecan also be requested as part of the rezoning process. Reducing road width to allow more room for sidewalks and tree growth is an example of a variance request.

Subdivision Regulations

Subdivision regulations establish design standards for when subdividing land into smaller lots. Subdivision regulations can address a variety of issues, such as type of development, road width, construction of sidewalks, utility rights-of-way, water and sanitary sewer facilities, easements, and design. Usually, subdivision regulations require site plans for the subdivision to be approved by the local government before land disturbing activities, such as excavation and clearing of vegetation, can occur. If one of those site plans is a tree protection plan, tree protection can be addressed early on in the planning process.

Land-Development Permit

Many communities require property owners to apply for a land-development, disturbance, or demolition permit before they can begin any land-disturbing activities, such as clearing, grubbing, grading, excavating, transporting, and filling. Linking the tree ordinance to the land-development permit is useful for regulating site-specific activities. For example, the tree ordinance may require that a tree-protection plan be submitted with the application for a land-disturbance permit along with other site plans. The ordinance may also require that the local government urban forester or arborist inspect the site.

A land-development permit is often required before any land disturbing activities can begin.

Every community has a different process for obtaining a land-development permit. However, steps to acquire a permit may include:

- Property owner submits an application for a land-disturbance permit and site plans, as required by the local government. The tree ordinance may require that a tree-protection plan be submitted with the other site plans.
- Local government departments review the application and site plans to assure they meet appropriate local and State standards, such as standards for erosion control, stormwater runoff, road construction, number of parking spaces, and tree preservation. Conditions for rezoning would also be reviewed.
- The local government will often inspect a site before the land disturbance permit is granted. This inspection may include evaluating the tree protection methods by the urban forester or arborist.
- Local government either approves or requires revision of the permit application.
- If the permit is approved, the property owner can begin the land disturbance activities.
- The local government conducts follow-up inspection

 Austin, Texas has had a tree preservation ordinance since 1983 and it is tied to the land development permit.

Performance Standards or Controls

Performance standards or controls require a shift in focus from how the land is used to how it performs, for example they focus on outcomes, not prescriptions. Some might call this an "ecosystem" based approach to managing natural resources. Performance standards can be developed for energy conservation, carbon sequestration, air quality, water quality, stormwater runoff, erosion and sedimentation, wildlife, and other related issues. The community sets a standard it wants these natural processes, such as air and water quality, to adhere to. Land development is then conducted in such a way that the natural processes maintain this standard. For example, given the proposed changes at the site, drainage and detention structures are built so the rate and volume of water leaving the site are the same as before development.

Technology, such as remote sensing and geographic information systems, can be used to help understand how land development is going to impact the natural processes. And with this information, future performance controls can be developed. This technology can help in developing performance standards specific to issues that the community wants to address.

Marion County, Florida has an ordinance that uses performance standards.

Urban Growth Boundaries

Another tool is the establishment of urban growth boundaries. An urban growth boundary encourages growth inside the boundary, while maintaining the forest, agricultural, and open space areas outside the boundary. This limit could be based on geographic features within the community or an arbitrary boundary line drawn on a map. Communities have used various techniques to encourage development inside the boundary and to facilitate the conservation of land outside the boundary:

- Limit the development of services, such as sewers and water, outside the boundary.
- Offer tax incentives for developers to build inside the boundary.
- Maintain the boundary through zoning. For example, property zoned as agricultural could not be rezoned.
- Acquire or conserve open space outside the urban growth boundary.
- Transfer development rights from a property located outside the boundary to property located inside the boundary.
- As with most of these public policy tools, flexibility is important.

Portland, Oregon adopted an urban growth boundary in 1980, that is considered one of the more effective in the country.

Transfer of Development Rights

Transfer of development rights occur when the development rights of a property are severed from that property and made available for transfer to another property. The owner of the property who sells the development rights retains ownership but cannot develop. The owner of another property may purchase the rights, allowing the receiving site to be developed at a higher density. This is particularly useful where urban growth boundaries exist. The owners of land outside the boundaries can transfer and sell their development rights to developers inside the boundaries, which would give the latter permission to build more profitable projects at higher densities.

Montgomery County, Maryland has successfully used transfer of development rights to preserve agriculture land along its urban fringe.

Acquisition of Open Space

The acquisition of open space and sensitive land is an effective, non-regulatory practice. Land trusts, often non-profit or quasi-governmental organizations, maybe charged with purchasing, holding, and managing land for conservation purposes. Land trusts participate in a broad range of land acquisition activities, including resource inventory, planning, fund raising, financing, public education, and outreach. Funding for land acquisitions can come from contributions, grants, local bonds, and impact fees.

Conservation Easements

A conservation easement is a legal agreement between a property owner and the local government or land trust to limit the type and amount of development on the property. Conservation easements may be tax deductible.

Conversions

Conversions involve converting abandoned or derelict urban land into public open space, greenspace corridors, or redevelopment. Common examples include the "Rails to Trails" program, creation of "pocket parks" on vacant urban home sites, and regional parks on abandoned industrial properties. This also includes redeveloping abandoned urban land rather than developing agricultural or forest land. Often the cost of acquiring this land is minimal, but its restoration could be cost prohibitive, especially on sites often referred to as "brownfield developments," where cleanup costs, such as removing contaminated soil, might be involved.

Landowner Tax Incentives

Landowner tax incentives offer preferential taxation under which the land is assessed only for the value of its agricultural or open-space use and not for any alternative development value. In some States, a property owner can apply for and receive a conservation-use valuation for agricultural or timberland property. This is particularly useful when used in conjunction with urban growth boundaries.

Tree Ordinances

A tree ordinance is an important public policy tool that can be used to help achieve the community's vision for its urban forest. The tree ordinance sets standards and guidelines for managing the urban forest. A tree ordinance can address a variety of issues:

- Establish a Tree Board or commission
- Specify standards for planting, pruning, and maintenance
- Prohibit topping trees
- Require the licensing of private tree-care firms
- Require permits for removal of trees
- Require submission of a tree-protection plan with other site plans
- Require protection of trees during construction activities
- Require inspection of tree-protection techniques before, during, and after construction activities
- Establish landscaping standards for developing properties
- Establish the principle that trees are part of the city infrastructure
- Specify cooperation among departments and agencies

Types of tree ordinances

There are different types of tree ordinances; some are comprehensive while others address only one specific issue. The type of tree ordinance that a community develops reflects issues in that community.

- Street tree ordinances typically establish standards for managing trees on public property.
- Tree -protection or conservation ordinances are often enacted in response to rapid land-use changes that resulted in the loss of trees. These ordinances will often set standards for tree protection or replacement on construction sites.
- Landscaping ordinances establish standards for landscape design and plant material.
- View ordinances regulate the planting and removal of trees in certain areas to protect the view.
- Historically significant tree ordinances establish standards for protecting historically significant trees in the community.
- Exotic or undesirable tree species ordinances establish standards for planting and removing exotic or undesirable species.

Go to the local government web site and search all articles in the city code using the word "tree."

Keys to Successful Tree Ordinances

It is essential that a tree ordinance meet the needs of the community it is being written for. Too often a community will copy an ordinance that was successful in another community and later find that it does not meet its needs. An ordinance may be more flexible if it emphasizes what needs to be done rather than describing "how" to do it. A

community that is developing or revising an ordinance, can do several things to help ensure success of the ordinance.

One of the best references on writing tree ordinances is the "Tree Conservation Ordinances" manual, written by Chris Duerksen, and distributed by the American Planning Association and Scenic America.

Establish broad base of support
It is extremely important to establish a broad base of support by identifying and involving those in the community interested in urban forestry. Such support will increase the credibility of the tree-ordinance development process. The list of supporters could include people and organizations involved in land development, landscaping, tree care, non-profit organizations, local businesses, local government, universities, utilities, and others. Individual citizens interested in urban forestry can be key players. Try to be inclusive so everyone has a vested ownership in the tree ordinance. Talk with people and find out what problems and concerns they have related to urban forestry. Address these problems and concerns early in the process so they do not continue to be problems in the future. By working with key players you will be able to identify potential resources to help develop the ordinance.

Become familiar with local government
As stated earlier, learning about the local government – officials and staff; management and administration; roles of commissions, boards, and authorities; budget process; and how local policy is created – is crucial to developing an ordinance that meets the community's needs.

History of trees in the community
Knowing what has happened in the past can provide valuable insight into how to proceed to the future. What is the history of trees in the community? Does the community have a tree inventory or management plan? Has there been a previous attempt to pass an ordinance? If so, what were the key issues and why did the attempt fail? Talk with previous Tree Board members about how to successfully develop a tree ordinance. Go to the public library and local planning department to find out if there are any records on the history of trees in the community.

Identify important issues
The community needs to identify what urban forestry issues need to be addressed—a needs assessment. For example, hazard trees, loss of tree cover, and stormwater runoff may be issues identified as important in one community. Make sure all the key players have an opportunity to identify issues. The "Purpose" section of the ordinance will be based on these issues.

Use educational materials, workshops and training as a tool to communicate information about the ordinance.

Political, economic, and market forces
The political, economic, and market forces in the community are also important. What is

the political climate in the community? In many communities, ordinances are enacted because of citizen pressure on elected officials. In some communities the economic and market forces are driving developers toward more natural-resource-sensitive development. In these communities, ordinances might just provide the developer with the incentive to incorporate tree protection into the overall planning process. A tree ordinance also puts all developers on the same playing ground because it requires uniform application.

Developers often name housing and apartment complexes after trees.

Find out what legal issues are important
Before a community starts developing a tree ordinance, it is essential that the Tree Board, local government, or legal advisor look into the legal aspects. A good understanding of the legal issues is important because the validity of several sections in the ordinance, such as the purpose, authority, definitions, standards, and enforcement, may be tested in court. If this happens, the test may be related to enabling legislation or the issue of "taking."

- Enabling legislation
  A community may need authority or enabling legislation from the local or State government to develop and enforce tree activities. Enabling legislation gives a community police power to protect the health and welfare of the citizens. A community can rely on different types of State enabling legislation to implement a legal tree ordinance. For example, most States have laws protecting environmental conditions, such as soil conservation, water quality, and wildlife habitat and land-use activities, such as planning and zoning. Some states even have specific legislation enabling communities to adopt tree ordinances.

- "Taking" issue
  "Taking" refers to the constitutional right to own property and not have that property "taken" for public use without compensation. Ordinances may impact what property owners can and cannot do on their land; therefore, the issue of "taking" needs to be considered when developing an ordinance.

Determine how the ordinance is going to work
A key consideration in developing a tree ordinance is determining how the ordinance is

going to work. Look for ways to integrate the ordinance into existing local government regulations. For example, a tree protection ordinance could be linked to the land-development permit and rezoning process.

One of the best ways to make the ordinance work successfully is to link the ordinance to existing local government programs and processes.

Develop administrative standards, as a separate document
Administrative standards can be a separate document that is referenced in the local ordinance code, assuring that an administrative approach instead of a regulatory approach will be used. Administrative standards allow the local government, such as the urban forester or arborist, the flexibility to negotiate what measures need to be taken. An advantage to administrative standards is that they allow for flexibility and negotiation.

A tree ordinance needs to be flexible to allow for negotiation and compromise.

Monitoring
The ordinance needs to be monitored or reviewed regularly to make sure it is accomplishing its original intent.

- Establish the principle that trees are part of the city infrastructure
- Specify cooperation among departments and agencies
- Is the ordinance too comprehensive or complicated?
- Can adjustments be made to make it more effective?
- Are there any enforcement problems that need to be modified?
- Has the ordinance had a positive or negative impact on economic land development in the community?

Ordinance Structure
Ordinance structure refers to the content and organization of the ordinance, such as purpose, definitions, and enforcement. Listed below are examples of sections that may be found in an ordinance.

The ordinance needs to be structured to best accomplish the community's intended goals.

Purpose
This section states why the community values trees, the benefits they provide, and what the ordinance is trying to accomplish. This section needs to be based on enabling legislation to prelude its legality being tested. For example, a community may base their purpose on "trees improving water quality and reducing soil erosion" if there is enabling legislation related to erosion control and water quality.

Authority
This section of the ordinance states what legal authority the local government has to adopt a tree ordinance. Usually, the legal authority can be set by State and/or local

legislation. Some ordinances have been invalid because they did not have the legal authority to be established.

Applicability
This section specifies who and what activities must comply with the ordinance. For example, the ordinance may apply to all activities on public property or all activities that require a land-disturbance permit. This section should also spell out any exemptions to the ordinance. For example, small residential lots and agricultural areas may be exempt from complying with the tree ordinance.

Definitions
This section defines the terms used in the ordinance. It needs to be considered carefully to assure clarity because definitions may be a factor in a court case.

Creating and establishing a Tree Board
Some tree ordinances will include a section establishing a Tree Board or commission. Often the Tree Board's duties and responsibilities, terms of office, and other relevant information are included in this section.

Standards
This section of the ordinance describes the minimum standards required to comply with the tree ordinance. There are many different types of standards that can be used in tree ordinances, some of these are described in Table 2. The standards selected should be based upon the issues and needs in the community.

Look at tree ordinances from other communities to see how they have written their standards.

Table 2. Descriptions of some of the general standards that may be used in tree ordinances

Standard	Description
Tree planting	These standards typically describe how to prepare the planting area, planting techniques, and post-planting procedures.
Tree care	These standards cover activities that will improve tree health and protect trees from construction damage, such as pruning, fertilization, mulching, and watering. Techniques to prevent soil compaction and reduced aeration are also covered.
Tree species	These standards state what species should and should not be planted in a given situation.
Tree selection	Tree selection standards describe how to select healthy tree stock.

Transplanting	Transplanting standards describe procedures on how to transplant trees.
Tunneling for utilities	These standards describe requirements for utility installation and maintenance near trees, and suggest alternatives to trenching through roots such as tunneling.
Aeration system	These standards describe how to determine if an aeration system is needed and includes instructions on how to install a system.
Design	The design standards can require that a tree protection plan be submitted with the land-development permit. These standards are often linked to the land-development process.
Minimum tree coverage or replacement	A minimum tree coverage requirement could be measured as canopy cover, number of trees per acre, or minimum basal area (square foot of tree area measured cross section at diameter at breast height) of trees per acre.
Encroachment	Encroachment standards can include techniques to be used during clearing, trenching, and grading to prevent damage to the protected root zone.
Landscape strip and buffer	These standards list requirement for landscape strips and buffers, such as widths of strips, curb stops, parking lot landscape islands, species selection, and percent coverage in trees.
Special	Special standards can apply to unique characteristics of a site, such as a vegetative buffer along a stream tributary within the property boundaries.

Enforcement
This section describes how the ordinance is going to be enforced. It should include information on who is responsible for the enforcement, define what constitutes a violation, and describe the process for issuing fines, penalties, and appeals. The appeals process should allow flexibility, negotiation, and compromise.

Effective date
This section establishes the date when the ordinance goes into effect. The ordinance will be effective in its current format until revised.

Conflicts and severability
This section addresses how the tree ordinance relates to other ordinances in the community. For example, if the tree ordinance were in conflict with a traffic safety ordinance, this section would describe which ordinance prevails over the other. The severability section assures that if one section of the ordinance is disallowed through court process, that section stands alone and doesn't void the entire ordinance.

Tree Protection or Conservation Ordinances
Currently, the demand to enact tree-protection or conservation ordinances is at an all time

high in the South. When helping a community develop a tree-protection ordinance, certain issues should be considered.

Integrate the ordinance into existing local government regulations
When developing a tree-protection or conservation ordinance, look for ways to integrate the ordinance into existing local government regulations, such as the land-development and rezoning processes.

- Land-development permit process
  If the tree ordinance is linked to the land-development permit process, the property owner will need to comply with the tree ordinance in order to obtain the land-development permit. As part of the overall land-development/disturbance permit process, the tree ordinance can require that a tree-protection plan be submitted with the other site plans required to obtain a land-development permit. Comparing and/or integrating the tree-protection plan with the other site plans, such as the utility and grading plans can adjust site plans adjusted to actively protect the trees.

  Refer to the "Trees and Construction" unit for more information on site plans.

- Planning and rezoning process
  Linking the tree ordinance to the planning and rezoning process allows tree protection to begin early in the design stage of the project. For example, the tree ordinance may require property owners to comply with the tree ordinance as a condition of rezoning a property. Or, if the ordinance were concerned with establishing and maintaining street trees, subdivision regulations could prescribe construction standards including roads and rights-of-way, and appropriate locations for both utilities and trees to prevent costly re-design.

Tree ordinances can require that tree protection fencing be placed around trees.

Tree replacement standards
Historically, tree protection ordinances have established requirements for tree replacement based on preexisting site conditions; for example, a diameter-inch of tree must be replaced for every diameter-inch lost. However, a standard based on preexisting site conditions is not recommended because this system breaks down when applied to heavily wooded sites or sites totally devoid of trees. A preferred method may be to establish minimum tree coverage standards (presented in table 2). Minimum tree coverage can be based on what is necessary to begin restoring ecological function, such as control of storm water runoff. These standards can be applied with flexibility when working with developers in deciding which trees to protect and where planting might be more appropriate.

Compliance and enforcement
There are various ways to ensure compliance with a tree protection ordinance:

- Permit process
  The permit process is the first and best way to ensure compliance. For example, if the developer does not comply with the ordinance, the building permit will not be issued. The permit process can also regulate the removal, planting, and pruning of trees on public or private property.

- Certificate of occupancy
  The ordinance can require that the project meet the ordinances minimum standards before a certificate of occupancy is issued on newly constructed buildings.

- Performance bonds
  A developer is sometimes required to post a bond to ensure compliance with the tree ordinance. Bonds are particularly useful when the developer is ready to occupy a building, but it is not planting season. A bond is issued in lieu of planting until planting season. Sometimes performance bonds are used to ensure survival of newly planted trees for a specific period of time, for example 2 years.

- Stop-work orders
  Many communities have the authority to temporarily rescind permits or stop development if a developer is in violation of an ordinance. Such stop-work orders can be costly to the developer and so they can be an effective enforcement tool. Generally stop-work orders are used as a last resort before using legal enforcement.

- Legal enforcement
  Legal enforcement is where a developer is issued a citation for non-compliance or violation of a tree ordinance. These violations are generally treated as misdemeanors and result in fines by the court. Usually, the fines go to the court but occasionally they go to the urban forestry program. Although the courts do offer legal enforcement, this last resort effort usually accomplishes little for the

urban forest. Even when it gets to this point, it is better to negotiate a resolution outside of court.

Trees in Civil Matters

Civil law suits over trees are occurring in courts across the United States. These lawsuits can involve a wide variety of parties, such as homeowners, private landowners, utility companies, private tree companies, homebuilders associations, and local governments. The rights, duties, and liabilities of these parties related to trees are documented in civil law (Merullo and Valentine 1992). Litigation about trees is a complex subject and constantly changing due to these court cases. Civil laws that impact urban forestry are generally related to the following topics:

- Property owner's (private and public) responsibility for hazards, safety, and liability.
- Ownership when a tree straddles a property line.
- Compensation if the value of trees is diminished or lost due to accidents, poisoning from pesticides, or vandalism.
- Compensation as the result of "taking" of trees due to rights-of-way acquisitions, road improvements, and utility construction.
- Trimming trees near billboards.

Go to a law library, city public library, city hall, or county courthouses or go on the Internet to find out what State and locals laws apply to urban forestry.

Checking Your Understanding about Local Public Policy Tools

On a separate sheet of paper, answer these questions about the important points you need to remember:

1. Why is it important to get involved with the comprehensive planning process?

2. Describe factors that are important to developing a successful tree ordinance.

3. Why would it be beneficial to link the tree protection ordinance with the rezoning and land development permit process?

Answers are at the end of the unit.

Case Study

The Big Picture

Sam, a local forester, has been advising the Tree Board of a growing southern city on various issues. The mayor of the community recently returned from a national convention for mayors where she attended a workshop on urban growth management. She announced to the Tree Board that she wanted to expand their responsibilities to address broader natural resource and open space issues. She also asked the Tree Board to change its name to "Commission on Natural Resources and Open Space" and write a new charter. She wanted this new commission to serve as an advisor to the mayor, city council, and planning commission on these issues.

The Tree Board was excited about the mayor's sudden interest in addressing broader natural resource issues, but the members were a little unsure of how to go about doing this. They knew that Sam had contacts with other natural resource agencies in the State and they thought he might have information to help them.

You and the Mayor and the Tree Board

Put yourself in Sam's place assisting the Tree Board. Think about how you would help the Tree Board respond to the Mayor's request. Use the questions below to help you get started:

- What resources do you think would help the Tree Board? Have other communities been in a similar situation?
- What challenges do you see the Tree Board facing?
- How will the elected officials respond to the mayor's wanting to broaden the responsibilities of the Tree Board?

The outcome of the real story follows this case study. After you have written the steps you would follow, compare your story with what really happened in "The Rest of the Story."

Rest of the Story
Communication is Key

The first thing the Tree Board did was create a steering committee to tackle this new venture. They asked Sam to serve on the committee. Sam agreed to participate but he also recognized that this expanded focus was beyond his area of professional training and expertise. He knew that he could provide assistance related to trees but that other resource experts would also need to participate. He recommended that someone with the State's Department of Natural Resource also be on the steering committee. Sam offered to coordinate a workshop on broader natural resources issues if the committee members were interested. He also said he would make some phone calls to find out how other communities had addressed this same issue.

The Steering Committee recognized that the proposed expanded responsibilities would require cooperation with city departments that oversee activities related to natural resources in the community. And before they could even begin identifying issues, they had to understand how these departments worked and how their activities impact natural resources. So the steering committee interviewed department heads (Public Works and Planning) to learn what they do and how they work. They found that not only did Public Works and Planning Departments have regulations that affected natural resources, but so did the Parks and Recreation Department. They also realized that there were "turf" battles among the different departments that prevented the departments from working well together.

Through their research they found that there were several ordinances, such as landscape, erosion and sedimentation, parking lots and signs that addressed issues related to trees. Based on all the information they collected, the steering committee wrote a new charter and developed a host of recommendations, ranging from the revision of local development standards to the establishment of quasi-governmental organizations to acquire public land for open space and to address issues that go beyond the city limits.

But when the Steering Committee presented its recommendations to the mayor and city council, the city council members were not enthused about broadening the role of the Tree Board or its recommendations. It was then that the Steering Committee realized they had made a big mistake by not keeping the city council members informed throughout the whole process. So, the Steering Committee made appointments with individual city council members to discuss the recommendations and to get their input and support. After many meetings and much discussion, the recommendations were revised and the city council members voted to adopt the new charter and further study its recommendations.

Politics – You Can't Live With It and You Can't Live Without It

- What resources do you think would have helped the Tree Board? Where would you find those resources?

- Were the challenges you listed different from the ones this Tree Board was having?

- How have you dealt with contentious issues within a community?

For More Information

Books and Resources

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Web Sites

American Farmland Trust
http://www.farmland.org

American Planning Association
http://www.planning.org

Center for Watershed Protection
http://www.cwp.org/

International Society of Arboriculture, Guidelines for Developing and Evaluating Tree Ordinances
http://www.isa-arbor.com/tree-ord/

Louisiana State University, School of Landscape Architecture
http://www.design.lsu.edu/greenlaws

USDA Forest Service, Southern Region, Urban Tree Ordinance Index
http://www.urbanforestrysouth.usda.gov/ordinances/index.htm

Univeristy of Georgia, Institute of Ecology, Office of Public Service and Outreach
http://outreach.ecology.uga.edu

Next?

There will be many opportunities for you to assist communities with public policy issues related to urban forestry. Think about what you need to know to participate in the development and implementation of public policy that impacts urban forestry.

- What specific information do you need about communities to help you understand public policy issues related to urban forestry?

- What people in your community, including government officials, individuals, and local organizations, are involved in the development and implementation of public policy?

- What are some of the communication skills that will help you work with government officials and community groups? What are some of the ways you can practice and improve these skills?

- What are some of the resources within your State you can use to find out more about public policies that relate to urban forests and urban ecosystems?

Checking Your Answers
Checking Your Answers about Local Government and Tree Boards

1. Why is it important to understand the role local government has in urban forestry public policy?

The local government has primary responsibility for managing and conserving a community's urban forest, which may include planning, funding, staffing, implementing, and enforcing ordinances, and responding to needs of the public. It is at the local level where policy decisions, such as zoning and tree ordinances, directly impact the urban forest.

2. How can citizens assist the local government in developing policy?

There are many opportunities for citizens to participate in local government policy.

- Run for office, such as mayor or city commissioner
- Volunteer or be appointed to a commission, board, or authority
- Be a member of a committee that is studying a policy issue
- Participate in public meetings and offer input into the budget process
- Bring an issue to the attention of the community and elected officials
- Be a member of a Tree Board

3. What is a Tree Board? List examples of what Tree Boards can do for a community.

A Tree Board is comprised of citizens who give support to the local government's urban forestry program. Responsibilities and activities of Tree Boards vary from community to community. Examples of possible roles include:

- Advise and assist the local government, organizations, and citizens.
- Coordinate urban forestry activities
- Recruit citizen support for programs and activities.
- Serve as a liaison between local government and citizens.
- Raise funds for programs and activities.
- Sponsor educational opportunities for local government, organizations, and citizens.

Checking Your Answers about Local Public Policy Tools

1. Why is it important to get involved with the comprehensive planning process?

The comprehensive planning process involves developing long-range vision, principles, and goals for the community. The local government then establishes regulations, such as ordinances, to implement the comprehensive plan. If natural resources and trees are incorporated into the comprehensive planning process, regulations, such as tree ordinances, will be enacted to address those issues. Getting involved with the

comprehensive planning process is one way to prevent problems related to urban forestry rather than react to them.

2. Describe factors that are important to developing a successful tree ordinance.

Many factors are important in developing a successful tree ordinance:

- Establish a broad base of support to assure the credibility and ownership of the process.
- Become familiar with the local government.
- Knowing the history of trees in the community can help prevent previous mistakes and identify resources.
- Knowing the important issues in the community will help determine the purpose of the ordinance.
- Knowing the political, economic, and market forces can help prevent problems and identify opportunities.
- Verify the legality of the ordinance.
- Determine how the ordinance is going to work.
- Allow negotiation and flexibility by using administrative standards.
- Regularly monitor the ordinance.

3. Why would it be beneficial to link the tree protection ordinance with the rezoning and land-development permit process?

Since the local government already has a land-development process in place, it is best to use that process when developing the tree ordinance. The main benefit of linking the ordinance to the rezoning and land-development permit process is that tree protection can be considered early in the design stage instead of after the fact.