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- A guide to developing a community



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# A GUIDE TO DEVELOPING A COMMUNITY

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This guide was written by the Community Tree Preservation Task Force of the Minnesota Shade Tree Advisory Committee. The mission of the Task Force is to preserve existing trees during development and to reforest land through:

- **education;**
- **improved communication;**
- **supporting the partnerships of builders, developers, foresters and communities;**
- **guiding communities in developing their own tree preservation program.**



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## The Value of Trees

**Trees have a great deal of financial value, from increased property values to various environmental benefits.** Trees stabilize the soil and control water pollution, yield advantageous microclimatic effects which conserve energy, preserve and foster air quality by removing carbon dioxide (CO<sub>2</sub>) and airborne pollutants, abate visual and noise pollution, and provide a natural habitat for wildlife. They also provide welcome shade to people and add color and interest to the urban landscape. Trees provide a psychological boost to urbanites. People are generally more satisfied with their neighborhoods if there are trees. Workers are more productive and hospital patients recover faster if they can see trees outside their windows. The benefits of established trees in our communities are subtle and often overlooked.

## The Magnitude of the Problem

Communities have long recognized the importance of trees. Tree and woodland preservation is an emerging environmental issue as communities also address concerns involving wetlands, flood plains, storm water, water quality, steep slopes, and air quality. New construction too often leads to tree loss and remaining trees lose vigor because of damage sustained during construction. Communities can mitigate both tree loss and tree damage with well conceived tree preservation ordinances or policies.

## The Purpose of This Guide

This guide outlines a process by which each community can develop a tree preservation ordinance consistent with their own particular goals and needs. Communities are encouraged to educate and involve all of the potentially interested or affected parties in this process. Also, important elements of a successful ordinance are discussed. A listing of additional available resources is also included.

# PLANNING PROCESS

## Tree Inventory

**The first step in defining the goals of the ordinance is to obtain an inventory of the current situation.** The initial resource assessment could include information regarding:

- identification and location of the types of vegetation (i.e., cover types) which occur in the community;
- identification of any unique ecosystems;
- location of particularly large and/or historic trees;
- profiles of the existing trees including species and size distributions.

The initial evaluation should note areas of priority for preservation such as wooded 100 year floodplains, wooded stream corridors, wooded slopes, buffer zones, and aesthetically or environmentally fragile areas. A map of these areas can lead to comprehensive planning and identify potential areas likely to be adversely affected by development activities. Knowing all of these factors can help establish the emphasis of the ordinance.

## Assessment

**A community must first assess their tree resources before any constructive ordinance decisions can be made.** Each community's ordinance must reflect the unique assets of its own urban forest. Once the current resources have been identified, informed and attainable goals for protection can be established. This process can create an effective and usable tree preservation ordinance.

## Goals and Scope of a Community Tree Preservation Ordinance or Policy

**Each community must determine its own needs and goals, and design its ordinance to best achieve these objectives.**

The goals of tree preservation ordinances can include:

- reducing tree loss during development;
- reducing damage to standing trees during construction;
- providing for replacement of trees lost during construction;
- providing for planting trees where none occurred previously;
- providing for the maintenance of preserved trees after construction is completed.

The scope of the ordinance (or policy) may cover only projects undertaken by the city on public land or it could also include work by utility companies, private residential, commercial or industrial projects. There may be a minimum size for a project to be regulated, measured in land area or in project cost. The ordinance may regulate only tree preservation or may also include replacement and new planting. It may or may not include provisions for education or enforcement. **Determining the goals and scope will be an important part of developing the ordinance.**

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## Drafting an Ordinance

**The process by which the ordinance is developed is as important as the actual language.** An ordinance should create a mechanism for the exchange of information. Therefore, the relationships formed during the ordinance development process are crucial to its potential success.

An ordinance marks the creation of a new “organization”, composed of people brought together from different professions, positions and interests for the purpose of tree protection. This creation of a working organization takes time for meetings, discussions, and phone conversations. The process must build trust amongst the various parties.

**The challenge of an ordinance is not getting it passed, but getting people to follow its provisions.** The best ordinances come about when: (1) the ordinance provides for effective communication; (2) everyone affected has a role in developing the ordinance, starting with the basic objectives; and, (3) the objectives are simple and easy to communicate.



## Importance of Education

**The most important element of a successful tree preservation program is education.** The exchange of practical information, unique concerns, and specific issues can lead to a better understanding among those involved in drafting the ordinance.

**Education** should begin before an ordinance has been drafted and should address the economic constraints of tree preservation and the physical constraints of constructing on wooded lots. Unrealistic ordinances prohibit development and construction in wooded areas, which may not be the goal of the community.

Education should be offered to the following persons:

- City Planners
- Engineers
- Building Inspectors
- City Advisory Commissions
- Contractors/Subcontractors
- Home/Property Owners
- Neighborhood Associations
- Foresters
- Citizen Groups
- City Councils
- Utility Companies
- Realtors
- Developers
- Landscape Architects

Home/property owners must understand the importance of their active involvement during the construction process. They should also have a basic knowledge of proper tree care to successfully maintain the trees which remain on their lot. Construction workers must understand the goals of a tree preservation program and the importance of preserving a tree's root system.

**Education** can take many forms including:

Workshops

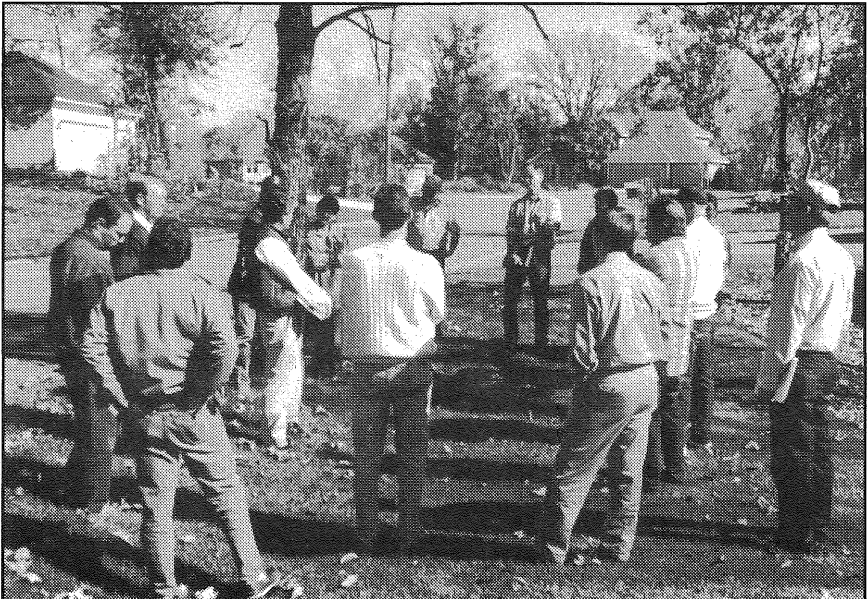
- Workshops with Community Leaders and Advisory Groups
- Contractor Seminars
- Staff Training Sessions

Publications

- Mailing to Interested/Involved Parties
- Newsletters
- Handouts

Awards/Events

- Recognize Contractors Who Excel at Tree Preservation (e.g., Builders Association of Minnesota, Awards of Environmental Merit, etc.)
- Historic Trees Brochures/Big Tree Contests





# TYPICAL ORDINANCE ELEMENTS

## Scope

The scope of the ordinance (or policy) will set the tone and determine how much regulation a local authority desires to assert over the protection and/or preservation of its forest resource, and the extent of the educational efforts directed towards the public.

Tree preservation ordinances have been developed locally and nationally to protect and preserve trees on private and public property. They are usually developed to coincide with zoning or property subdivision regulations. They can be very simple or complex in their scope. A simple ordinance may stipulate that the cutting of any tree larger than a certain diameter can be done only by permit and must be within a designated construction area. A complex ordinance on the other hand may include formulas to determine percentage of tree loss and the mitigation of the trees lost during construction with a specified number of newly planted trees.

## Purpose/Authority

In most cases, tree preservation ordinances have been upheld in the courts as reasonable extensions of a local government's zoning authority. However, this authority needs to be consistent with that given to the local governmental body through state statute. Once this is determined, the ordinance should clearly state its purpose or goals. This will help with the implementation, enforcement, and defense if the ordinance is challenged.

## Definitions

Any terms or common phrases that have special meaning within the body of the ordinance should be listed and defined. By using standard defined words the likelihood of misunderstanding or confusion when reading or enforcing the ordinance will be reduced. Be specific in defining terms such as a "significant tree" (including "type", "species", "size"), "tree loss" and "construction damage" and/or "grading damage". Sometimes after writing the ordinance, it will be necessary to add or revise a definition to assist with its readability.

## Plan Review Process

The ordinance should explain the process of how a new/proposed development will be reviewed. This section should walk the prospective developer through the review of the project and detail the information to be submitted with a request for rezoning, platting or permit.

Elements that may be required in the review process include an inventory or survey of the existing trees (including species and size) on the site, (also, an accurate footprint of the proposed building on the site should be provided by the developer), an estimate of the proposed tree removals, an explanation of the tree protection techniques to be used such as protective fencing, informational/warning signage, proper equipment and material storage areas, and pre- and post-construction care of the remaining trees. If replanting is required, the developer may also need to submit a landscaping plan for approval.

It is critical that the ordinance specify the minimal tree protection methods that would be acceptable. Also, a professional forester, certified arborist or landscape architect familiar with tree preservation issues and techniques should have the authority to review the site and development plans prior to their approval and any construction performed.

## Preservation

The heart of the ordinance should be the preservation of trees in a woodland development. There are many variations to the intent of tree preservation, but the bottom line becomes what you want to preserve, “the forest or the trees” or “what aspects of the forest or the trees that you want to preserve”? This often becomes an issue of just how many trees make up a woodland.

Some ordinances will list a percentage of trees lost versus the total trees remaining in the form of a tolerance barometer, i.e., if more than 35% of the trees are removed by a development, this would be unacceptable and a new plan would have to be submitted for approval.

Another approach is to specify that the forest left following development will be similar to the one existing before the project was completed, i.e., if 15% of the trees on the site were larger than 24 inches, then trees this size should make up 15% of the trees remaining after construction. The intent of this provision is to have a woodland of similar size distribution after development, thereby preserving the character of the woods.



## Replacement

Tree replacement is a simple concept, but to be equitable it can become a very complex procedure. For example, an ordinance may require that the loss of a 30-inch diameter tree must be replaced with the planting of fifteen 2-inch diameter trees. However, not only is it difficult, if not impossible (at times) to find enough suitable planting locations for the replacement trees, this approach fails to mitigate the environmental effect of mature tree loss.

A variety of replacement strategies are possible including:

- requiring developers to set aside wooded areas as preserves;
- sliding scales;
- percentage replacement;
- off-site reforestation;
- flexible no-net loss formulas.

Each approach has its advantages and disadvantages-none is perfect. When replacement of trees is included in an ordinance, the questions, "why, how much, and where?" need to be primary considerations. **The intent of a tree preservation ordinance should be to provide incentives for unique and creative project designs that complement the woodlands and replace excessive tree loss.**

## Implementation

The uniform and unbiased implementation of any ordinance can fail if some precautions are not observed. Those who are charged with implementation must be able to do so without bias or prejudice (avoiding politics). The ordinance should be easy to read and understand for everyone, including the developer, the staff, the elected officials, and the citizens of the community, or frustration and mistrust may develop.

## Incentives

Developing an ordinance which creates incentives is a positive way to achieve compliance. Examples include the preserved trees being credited to the landscaping typically required on a project. Also, a protected woodlot may be dedicated to the community in lieu of park dedication requirements.

## Enforcement

Most ordinances contain provisions for enforcement and penalties for violations should they occur during the construction process. Enforcement usually involves an inspection process, and, when violations occur, the developer may be held accountable by one of several methods:

- withholding of occupancy permits until the problem is corrected;
- loss of money in the form of a bond that was posted prior to the start of construction;
- fines;
- stoppage of the project if violations are extreme.

Some developers have been taken to court, losing their case and required to reimburse thousands of dollars related to the tree loss. Some ordinances require the violator to make reparations to the community by donating trees to be planted on public property.

In some instances, an ordinance will cover the loss of trees through bonding for several years to protect against tree loss due to construction injury. These ordinances usually have a decreasing bond clause which reduces the amount of money each year upon determination of the health and condition of the trees impacted by the construction.

## Summary

Trees and woodlands are valuable elements in any community's infrastructure. Development in a community from the construction of a single building to the improvements found in a new residential subdivision can have adverse and permanent impacts upon this important natural resource.

Each community must decide upon its own appropriate balance of trees and development. Both are important. The creation of a tree preservation ordinance can assist in determining what an appropriate balance is for the community. When all of the affected parties from property owners to developers/builders to city officials are involved in making these decisions, and ultimately, creating the tree preservation ordinance, the community inevitably improves the quality of life for its residents without sacrificing economic progress.





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