

# INTRODUCTION

The following book, containing trees with a USDA Plant Hardiness listing of Zone 6 or colder, is designed to help you choose appropriate trees for a variety of urban situations. However, there is no one perfect tree for any situation! The most successful approach is to select trees to match site conditions and limitations, based upon a thorough site assessment. Diversity is one key to a successful tree planting program. Over-planting of one species in an area can result in monocultures that encourage the build-up of insect populations and diseases that can destroy an entire planting.

A reasonable strategy for most urban plantings is to limit any one species to between 5% and 10% of a total urban population. Consequently, if a disease or insect infestation should occur, 90-95% of the tree population would remain unaffected and intact. Unfortunately, in most urban areas perhaps only five or fewer species make up the great majority of trees planted.

## **Why do a site Assessment?**

If there is no one perfect tree, it is because there is no one homogeneous urban environment or site. The urban environment is a conglomeration of soils, microclimates and other site conditions. Both above ground and below ground conditions can change dramatically in the space of ten feet. Needless to say, the lists of trees that follow are provided only as a guide for selection. A comprehensive site assessment should occur which considers plant requirements such as climate and microclimate considerations (hardiness zone, light conditions, heat, wind), soil factors (pH, texture, compaction levels, drainage characteristics, yearly salt application), above-ground limitations (wires, proximity to structures), and below-ground limitations (rooting space, utility issues). Only when there is a thorough understanding of the environmental variables at a potential planting site will we be able to make appropriate tree selections. The cost of skipping this step can be counted by dead or poorly growing trees and unrealized benefits to the community.

The information in this list has been gleaned from many sources. Among them are *Landscape Plants for Eastern North America*, by Harrison Flint (2<sup>nd</sup> Edition, 1982), *Manual of Woody Plants* by Michael Dirr (5<sup>th</sup> edition, 1998) and *The Proceedings of the Metropolitan Tree Improvements Alliance (METRIA)*. Numerous nursery owners, city foresters and arborists as well as nursery catalogues were also consulted. Furthermore, our observations and research at the Urban Horticulture Institute in the Department of Horticulture at Cornell University figured prominently in the final project. Given the wide breadth of sources, I feel this is reliable information that nevertheless is subject to regional variations and interpretation. Observe trees in your area before planting to see if there are any species that are doing particularly well or poorly. Also important to note is that tree tolerances described by this book refer to trees that have become established in the landscape. All newly transplanted trees are much more prone to damage from environmental stresses.

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