

## **Forestry Division Management Plan – Tree Planting (2003)**

### **Goals**

- The initiation of a reforestation plan to bring our urban street tree population to a “Fully Planted” status within 10 years. “Fully Planted” equals a street tree population of 28,850 street trees. (Inventoried Trees as of 9/10/99) + (Available Plant Site from Survey)
- The revision of our Street Tree Master Plan to improve species diversity, long-term aesthetics and reduced risks for exotic pests.

### **Reforestation**

#### **Determination of “Fully Planted Status”**

A plant site survey was conducted by Forestry Division personnel to determine the number of parkway planting sites currently available. The survey inspected all sites having the minimum spacing requirements for planting. The current requirement for tree planting is 35’ on center.

If a site had sufficient open space on the parkway, it was further inspected to ensure that there was no other reason it would be considered an unsuitable plant site. Sufficient open space on the parkway does not always mean that the site is suitable for tree planting. Some, but not all, of the limiting factors are:

- The location of underground utilities such as gas, water and sewer
- Unsuitable tree lawn planting width
- Overhang and competition from other trees which would result in a poor opportunity for survival
- A recent tree removal
- Citizen rejections of tree in front of their residence

#### **During this initial survey, the following information was gathered:**

- Address of plant site
- Site Number and Blockside information (for inventory purposes)
- Initial species designation
- Plant List Designation, if known

\*\*Plant sites were designated to a specific list only if the inspector knew the removal date of the previous tree, if a stump was still present and if the plant site could not be offset.

#### **Achieving and Sustaining a “Fully Planted” Urban Forest**

To achieve and sustain our urban street tree population at 28,850 trees and to adequately budget for plant material, the following factors need to be considered:

- The number of plant sites presently available

- Plan year 1 losses of trees requiring removal
- Annual losses due to Dutch Elm Disease and
- Annual other tree losses
  - Storm losses
  - Transplanting losses
  - Other losses

### **Size Frequency and Preservation of Older Trees**

It is important to remember that the sustainability of an urban forest is also dependent on active management of the age of the urban forest stands. While people love to look at even aged stands of trees arching over the city streets, they are not the goal of our planting program. Even age stands are synonymous with unsustainability. A far more important component of sustainability is the systematic replacement of our annual tree losses up to our “Fully Planted” status.

### **Revision of Master Plan**

#### **History**

The previous Street Tree Master Plan is a product of the 1950’s. As cities and towns across America were having their urban forests devastated by Dutch Elm Disease, Evanston made two important moves to protect their urban forest. A strict Sanitation Program to limit elms lost from DED to a manageable number to allow for reforestation and the creation of a Master Plan to replace elms lost to the disease. The Sanitation Program was and continues to be a fantastic success story.

The creation of the original Street Tree Master Plan sought to achieve two major objectives.

- Species diversity to protect against ravaging exotic disease or insect pests
- Uniformity of trees on a block by block basis for aesthetics

While the original Street Tree Master Plan has primarily achieved its second objective, the plan has failed to achieve adequate species diversity and the resulting protection of the urban forest which that diversity provides. Tree of the genus *Acer* represent almost 25% of our street tree population. With the introduction of a new exotic pest (Asian Long-Horned Beetle), our population is once again at risk. Additionally, while the planting of only one species on a block by block basis is attractive and can protect the total urban forest against an exotic pest if proper species diversity is attained, it fails to protect entire blocks from devastation should an exotic be introduced.

#### **Objectives of Revision**

- To achieve species diversity whereby no single species represents more than 10% of our urban street tree population on a block by block as well as a city-wide level.
- To formulate, implement and continually evaluate both a general (city-wide) approved species list as well as an approved species list on a block by block basis.

The block by block approved species list would take into consideration both site and soil conditions, tolerances to environmental factors, and tolerances to other urban pressures specific to the block. Additionally, the block by block list would change as species diversity was achieved over time.

- To incorporate, within the boundaries of sound urban forestry practices, an element of choice for our citizens regarding the type of tree to be planted.
- The systematic replacement of trees lost to disease, storm or other reasons if there is sufficient room for new planting.

### **An Evolving Street Tree Master Plan & Approved Species List**

As mentioned earlier, the existing Street Tree Master Plan has essentially created monocultures on each block of the City. Certainly, we want to avoid planting trees which would contribute to this situation in the future. Additionally, we want to remedy this situation over time. Essentially, this means that our New Street Tree Master plan will be a series of procedures and policies aimed at attaining our primary goal of species diversity.

Any new master plan should ideally have as a goal, the planting of the perfect tree for each plant site, while conforming to the overall goal of city-wide and block by block species diversity. What this means, operationally and again ideally, is that the Forestry Staff should have data regarding the soil type, pH, water retention capabilities and available nutrients for each and every plant site. Additionally, we should know something about the site conditions at each plant site such as the specific use of the land around each site, traffic conditions, exposure to wind, salt spray and other environmental factors.

Achieving species diversity on a block by block basis is a process that will require constant evaluation and re-evaluation as we proceed with successive planting over the years. Therefore, the new Street Tree Master Plan must evolve over time as a series of policies and procedures aimed at achieving diversity and sustainability. With all plant sites currently identified, the procedures must now be aimed at:

- Allocating the plant sites to smaller management units or “Plant Lists”
- The selection of a proper species for each and every plant site which achieves our species diversity goals and improves survivability rates
- The systematic placement of future tree losses to appropriate “Plant Lists”
- The constant re-evaluation of our species mix New Planting Procedures

### **With all current plant sites scheduled for replacement, the following tasks remain:**

- Composition of an “Approved Species List”
- Final Species Designation for sites
- Systematic replacement of future tree losses
- Monitoring systems for species diversity
- Changes in Citizen Involvement Programs

The “Approved Species List” found as part of this management plan is a general list of trees which the Forestry Department may plant or allow to be planted on the City’s parkways. The placing of a tree on the “Approved Species List” does not mean that it is an acceptable candidate for a specific site. The approved species list may be changed or be amended by the Forestry Division at any time.

Additionally, the “Approved Species List” will designate the time of planting (either spring or fall) for all species on the list. Additionally, for species that do not transplant easily, participation in the “Larger Tree Program” will not apply to all species of trees and will be so designated on the approved species list.

*\* This is a listing of tree species that are approved for planting on parkways. This does not give residents permission to plant them, rather it just gives an idea of which trees we are currently planting, as well as which trees would do well on their private property. Residents would still need to go through the permit process if they wanted to plant their own tree.*

### **Initial Designation of Plant Sites**

During the initial plant site survey, an initial species designation was assigned to each plant site. This initial designation was made from the current “Approved Species List” and was chosen primarily as a plant that would move us toward our goal of species diversity. There was insufficient time during the initial survey to take soil samples or consider other planting related factors. Further Inspection and Testing

With all sites currently allocated to more manageable “Plant Lists”, Forestry staff will re-inspect each plant site for final species designation prior to planting. Before a final species designation is made, Forestry staff will gather the following data:

- Soil data
  - Soil type (minimally a profile)
  - Compaction testing
  - pH testing
- Species mix on that block
- Evaluation of micro-environment and other environmental factors

The data gathered from the further inspections of plant sites should be incorporated into our tree management software in the form of new location layers. This can be easily accomplished and would greatly aid Forestry staff with planting decisions in the years to come.

### **Allowing for Citizen Choice in Species**

One of our stated goals is to allow, “Within the boundaries of sound urban forestry practices”, the ability of our citizens to have some participation in the tree planting program as to choice of species. It is imperative, should this program be adopted, that the Forestry Division have final say in the designation of the size and species of the tree to be planted.

After the further inspection of the plant sites by Forestry staff, a list of three to five available species for planting at that site will be given to the affected resident. Forestry staff has always notified citizens of its intention to plant as a part of our larger tree program. This “larger tree” program will be modified and expanded to allow the citizens a choice of trees as approved by the Forestry Division after the site inspection. The choices available will be on the form used to submit money for the larger tree and must be sent by the deadline indicated. Failure to do so will result in the forfeiture of any choice by the resident.

### **Final Species Designation**

After the deadline for the return of money for larger trees and indication of species choice, a final species designation will be made. This will be the species chosen by the affected resident if a form has been returned by the deadline. In the case where no form has been returned, Forestry staff will make the final species designation.

The final designation of a plant site is dependent on the number of trees approved for planting each year by the City Council. Should the City Council not allocate funding for as many trees as designated on the existing plant lists, adjustments must be made and plant sites shifted accordingly. Additionally, should the number of trees approved for planting be increased from these levels, appropriate adjustments to the plant lists will also be made.

### **Systematic Replacement of Trees**

Future tree removals will automatically trigger an inspection of the site for future replacement. Shortly after removal, these sites will be inspected, tested and placed on a future plant list without a request having to be made by the citizen.

### **Continuing Evaluation of Species Diversity**

The achievement of our species diversity goals will entail constant evaluation and re-evaluation of our species mix. To achieve this, it is imperative that Forestry staff obtain, keep current, and periodically update planting and species data. This would include:

- The incorporation of new location layers into our tree inventory software that would allow for the storage of soil and other site data
- The maintenance of our tree inventory data
- The periodic re-inventory of our parkway trees

### **Summary**

Staff believes the management plan for tree planting will achieve our long term goals of achieving a “fully planted” status within ten years, and incorporates the changes needed for sustainability of our urban forest.