

Chapter 8: Recommendations for Syracuse's Urban Forest

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After integrating information from various sources on the structure, composition, and health of trees, including survey data and the input of tree experts, Re-Leaf Syracuse developed the following 10 goals for facilitating the management of Syracuse's urban forest resource into the 21st century and beyond.

1. Increase street-tree stocking levels to a minimum of 60 percent in residential areas of each TNT area.

Residential areas have street-tree stocking less than 60 percent in four TNT areas: 2-Westside, 3-Southside, 7-Northside, and 8-Lakefront. Increasing street-tree stocking levels in these areas would greatly benefit local residents and allow for a more equitable distribution of street trees for Syracuse residents. To increase stocking of residential street trees to a minimum of 60 percent in TNT areas 2, 3, 7, and 8, approximately 2,925 new street trees need to be established while sustaining the existing population. The new planting would include 1,095 trees in TNT 2, 1,150 trees in TNT 3, 625 trees in TNT 7, and 55 trees in TNT 8.

Establishing these trees over the next 15 years would require about 195 new street trees per year in addition to replacements for removed street trees. This program would increase overall street-tree stocking in Syracuse to nearly 51 percent.

The public survey indicated that TNT 2 and 3 sustained the most damage from the Labor Day Storm. In TNT 2, 3, 5, and 7, more than 50 percent of the respondents indicated there are too few street trees. TNT 5-Eastside also had a relatively large amount of storm damage. However, residential street-tree stocking in TNT 5 is 79 percent, so planting priorities should target TNT areas with relatively low residential stocking, particularly areas 8 (10 percent stocking), 2 (39 percent), and 3 (47 percent), before increasing stocking in Eastside.

Respondents in TNT 6-Eastwood (residential street-tree stocking of 61 percent) generally were satisfied with the amount of street trees (59.5 percent). Although this area could benefit from increased stocking, it should likely receive relatively low priority for planting compared to areas with less than 60 percent stocking.

Nearly 80 percent of the respondents in TNT 4-Valley were satisfied with the amount of street trees in their neighborhood. This area also had the highest percent tree cover in the city (46.6 vs. 27.8 percent in the next closest TNT (5)). Based on these findings, TNT 4

probably should receive the lowest priority with respect to future tree plantings. Once residential areas in all TNT areas have reached 60 percent stocking, efforts to continue to increase stocking levels in an equitable manner among all TNT areas could continue in order to enhance tree benefits received by local residents.

Street trees should be established in cooperation with homeowners and planting should follow specifications as outlined in the Appendix. About 70 percent of the residents surveyed indicated a willingness to assist with street-tree maintenance. The city's tree planting program should capitalize on this willingness to increase the long-term survival and overall health of street trees.

2. Facilitate tree planting on private properties to help the city attain an overall tree cover of 30 percent.

The overall average tree cover for Syracuse, currently at 26.6 percent, could be reasonably increased to 30 percent. Assuming that the existing cover is maintained, about 1,360 new trees would be needed each year over the next 25 years to attain a canopy-cover level of 30 percent.¹⁵

Given the existing tree cover distribution, residential land distribution, and public survey responses, the following is suggested priorities for establishing new tree cover:

- Highest priority: TNT areas 2, 3, and 7
- Medium priority: TNT areas 5 and 6
- Lowest priority: TNT areas 1, 4 and 8

Although a priority of TNT areas is suggested here, all TNT areas should be managed to sustain existing tree cover and increase tree cover as needed. Some of these new trees could come from the proposed increase in street-tree stocking. Others could come from natural regeneration in areas that are allowed to revert to forest (e.g., through reduction of mowing or other practices that prohibit regeneration).

Residents would gain the greatest benefit if these new trees are established in residential lots. Programs could be developed to educate homeowners and increase

¹⁵Based on average tree-crown width of 30 feet at maturity. Given a city area of 25.1 square miles, 34,000 new trees would be needed (550 acres of cover) to increase tree cover by 3.4 percent.

voluntary planting of trees on their lots. Also, ordinances (see Appendix) could be enacted to directly facilitate the establishment of new trees on private property. For example, New York State's Department of Transportation (DOT) initiated a program for public tree planting on private land. DOT will plant a tree in front of a resident's house along a state road, but outside of the state road right-of-way. The homeowner signs an agreement that states that DOT is responsible for the survival of the tree only for the first two years. Homeowners must obtain approval from DOT to perform maintenance activities such as pruning or removal. A similar program could engage city residents in enhancing the community forest.

Tree planting in Syracuse also could be increased through the Syracuse Neighborhood Initiative program. This planting would increase property values, provide community forest parks, develop a sense of community, and strengthen and revitalize communities neighborhoods.

3. Increase species diversity in Syracuse through the use of a variety of proven, well-adapted, but relatively uncommon species.

The results of various analyses revealed that many of the species that are recommended by the tree experts are uncommon within the city. Likely explanations for the limited use of these species are that relatively few people know about these species and/or that the nursery trade does not supply ample stock of these trees. Educating both the public and tree-stock providers about these less common but recommended species might lead to more of the trees being planted in Syracuse.

Of the 10 most common street trees, Norway, silver, and sugar maple were not recommended for use on streetside strips that are 5 to 12 feet. These three species currently account for 38.6 percent of Syracuse's street trees. Reducing plantings of these maples and increasing the planting of other recommended but relatively uncommon street-tree species would increase diversity and likely sustain or enhance overall forest health. Recommended species that are relatively uncommon in the city include Japanese tree lilac, serviceberry (*Amelanchier* spp.), black tupelo (*Nyssa sylvatica*), Tartarian maple (*Acer tataricum*), Turkish hazelnut (*Corylus colurna*), Crimean linden (*Tilia x euchlora*), goldenrain tree (*Koelrueteria paniculata*), silver linden (*Tilia tomentosa*), Chinese elm (*Ulmus parvifolia*), sweetgum (*Liquidambar styraciflua*), Kentucky coffeetree (*Gymnocladus dioicus*), river birch (*Betula nigra*), Kousa dogwood (*Cornus kousa*), yellowwood (*Cladrastis kentukea*), eastern redbud (*Cercis canadensis*), and English oak (*Quercus robur*). Some of these species should be tested to ensure that they can adapt to Syracuse's street-tree environment. Common species with proven durability as a street tree should continue to be planted. In establishing new species, managers need

to take care not to introduce species with the potential to invade natural forest areas (i.e., exotic invasive trees). When increasing street-tree diversity, effort should be made to increase the use of relatively large trees, depending on site/space constraints.

4. Facilitate tree maintenance to minimize hazards and potential damage, and increase tree health.

The street-tree inventory identified the current health and condition of Syracuse's street trees. City staff should prioritize management activities to: a) remove dead trees, b) remove trees identified as immediate or scheduled removal, c) work to improve the health of trees in poor condition, d) enhance the maintenance program for young trees during the establishment phase to increase survival rates and reduce future maintenance needs (e.g., pruning to train form of young trees or correct structure problems), and e) develop a program to train volunteer citizens to maintain small-diameter trees.

An annual windshield survey to assess drastic, visible changes in tree condition could be conducted by city staff or trained volunteers to improve the health of street trees and minimize potential hazards to residents.

5. Periodically update the street-tree inventory.

The 100 percent street-tree inventory that was completed in 2000 is an important database that will be useful in managing this resource and ensuring future tree health. However, the database can become obsolete quickly if not updated to account for changes in the tree population through planting and removal activities. It is suggested that Syracuse invest resources to maintain the database by updating records as work is performed on trees or as trees are removed or planted. Updated field inventories would help keep the database current. An updated inventory also will allow the city to maintain better records on which trees are performing the best and have the longest lifespan. These data can be used to improve species selections, to reduce maintenance costs, and increase tree longevity.

Annualized inventories in which a portion of the street-tree population is reinventoried each year (e.g., 1/10 of area is reinventoried annually so the entire database is updated after 10 years) should be considered. Enlisting the aid of local students in reinventoried the population would be a relatively low-cost means of updating the inventory and educating the students about urban forests.

6. Maintain Tree City USA status and annual Arbor Day celebrations.

Two newly implemented programs within Syracuse, if sustained, likely will help keep the city's urban forest viable and healthy while educating city residents. Tree

City USA, a national recognition program sponsored by the National Arbor Day Foundation, demonstrates to residents and potential funding agencies a city's level of dedication and commitment to comprehensive urban forest management. The first Syracuse Arbor Day Celebration, held at Thornden Park on April 29, 2000, was sponsored by Re-Leaf Syracuse and included tree planting, maintenance, and removal demonstrations, as well as family-oriented activities. About 500 people, 30 organizations, and 10 tree-care businesses participated in the event, which increases public awareness of urban forestry issues.

7. Encourage public participation and input in forest management in Syracuse.

As Syracuse's urban forest resource is managed for the public, public input is critical to ensure that the urban forest plan and management are meeting the needs of city residents. It is recommended that annual meetings be conducted to facilitate interactions between those who implement the urban forest plan and the public. The meetings can serve as a vehicle for facilitating dialogue and conveying information on current progress and problems (e.g., a state of Syracuse's urban forest report), and exploring new ideas. These meetings could be sponsored by Re-Leaf Syracuse and include residents from various TNT areas and other interested citizens.

8. Produce brochures to facilitate public education about urban forestry.

Public education is a key to improving urban forest health and management throughout Syracuse. It is suggested that a series of educational brochures be developed and distributed to the general public. Brochures could be developed on: a) information presented in the comprehensive management plan, b) how to properly plant, prune, and maintain trees, and c) recommended tree species for the Syracuse area.

9. Sponsor participatory demonstration tree planting and maintenance activities on streets around schools to facilitate public education for all ages.

Another possibility to help facilitate public education is involving local students in tree planting and maintenance activities around their schools. Programs could be developed to educate students about tree planting and tree care. Schools and students could use the trees planted in their areas as living laboratories to better understand trees and tree care, nature, and ecology in urban environments. Education of children on trees and their proper care likely will lead to improved urban forest health and increased interest in urban forest issues.

10. Encourage acquisition of donations, grants, and other funds to increase outside funding to sustain Syracuse's urban forest.

One of the keys to sustaining urban forest structure, health, and benefits is adequate funding to maintain the tree population. New sources of maintenance funding would help sustain tree health and forest viability into the future. Creative funding ideas need to be developed and pursued. Some ideas might include encouraging public donations or corporate sponsorship of Re-Leaf Syracuse or other nonprofit agencies dedicated to improving Syracuse's urban forest. Grant writing by the city or other groups (e.g., in TNT areas) to secure funding also could improve the urban forest resource. A list of groups that may fund urban forestry/community development projects (e.g., New York State Department of Environmental Conservation, Syracuse Neighborhood Initiative, HUD) should be developed and distributed to local groups that might develop proposals for local funding.

Goal Implementation

This urban forest master plan for Syracuse and its recommended goals are not the end of the process but the beginning. On the basis of the plan's findings and recommendations, the city needs to develop and implement specific management plans to attain goals that are most appropriate for the residents of Syracuse. Such plans will have to be developed within the political and managerial structures of the city and should include items such as budget, staffing, timelines, and specific objectives.

Conclusion

Syracuse's urban forest is an important and valuable resource. Properly managed and maintained, these trees will provide important benefits for city residents that will increase in the future. This report contains an extensive database of Syracuse's urban forest and the public attitudes and desires related to it. These data can be used to help improve Syracuse's urban forest and sustain this resource through the 21st century. Ideas presented in this master plan are suggestions for resource managers to enhance this important resource in the future.

This report provides only the framework by which Syracuse can begin to create and enhance its forest environment. Many specific details and new ideas can be developed and fostered by public involvement and interaction among agencies. This plan sets the framework for future discussions and interactions that will ultimately make Syracuse a more healthy and vibrant community through the use and management of urban vegetation.