



Summary and Conclusions

Goshen's public tree population has its problems with sustainability, but the current population adds to the beauty and livability of the City. The public tree population has a heavily skewed species distribution in fair condition with an insufficient amount of young replacement trees. As trees get older, they become increasingly inefficient in withstanding the inherent stresses of an urban environment and are subject to decline without professional and regular management. With that in mind, the City of Goshen should strive to achieve the goals of this Urban Forest Management Plan.

Generally stated, Goshen's goals and actions need to reach them include:

Achieve Population Sustainability

1. Construct planting projects so that each year all plantings meet the 10% species and 20% genus rule.
2. Maples should be restricted to small numbers for future plantings and other suitable species should become the focus of future plantings.
3. Manage the tree population so there are at least four young trees for every one mature tree.
4. Work to minimize the number of poor and worse conditioned trees and replace all dead or dying trees.
5. Eliminate breeding sites for insects and diseases by quickly treating, pruning, or removing infested trees.
3. Implement a routine pruning program where all trees are maintained on a cyclical basis to improve tree health and aesthetics and increase safety.
4. Apply best management practices for tree maintenance including tree crew training, insect and disease control programs, fertilization, irrigation, and cabling and bracing.
5. Schedule maintenance activities for and perform them during optimal biological periods to sustain vigorous tree health and to ensure the best chance for survival of the City's trees.
6. Consistently budget and plant approximately 289 trees per year to replace trees removed and plantings sites inventoried in 2010.
7. Plant the "right tree for the right place" to minimize future conflicts with surrounding infrastructure and improve tree health.
8. Complete the GPS/GIS-based inventory of planting sites located along City streets and assign a list of three to five available species for planting at each site, dependent on size of growing area and any constraints that should be considered.
9. Determine a desired stocking level.
10. Consider species that need less maintenance and are desired for characteristics such as spring flowers and fall color.
11. Apply best management practices for planting including tree fertilization, tree mulching, tree planting designs, tree planting program assistance, tree planting process, tree pruning, tree purchasing, tree species diversity, and tree species selection



Increase Environmental and Economic Benefits

1. Plant large-growing species wherever possible to maximize the population's potential benefit; however, limit the planting of maples and utilize a wider range of species to reforest the community by including both native and non-native, urban-tolerant species.
2. Apply the concept "right tree for the right place" to help minimize maintenance costs in the future and potentially provide a greater net benefit value and benefit-cost ratio.
3. Replace the 769 trees recommended for removal within seven years starting in 2012 and begin filling all identified vacant planting thereafter to achieve the desired stocking level by a predetermined set by the City.
4. Professionally manage and protect public trees to preserve them now for all citizens and to expand them for future citizens.
5. Conduct a thorough inventory every ten years or more frequently if rapid changes in the urban forest occur, such as severe storms, serious insect and disease problems, or a dramatic increase in new tree planting occurs.
6. Every five years, conduct an i-Tree Streets analysis as to see the benefits produced by managing Goshen's public trees through the Urban Forestry Management Program.

Reduce Risk Among the Population

1. Complete all identified Removals and Crown Cleans by 2016.
2. Complete all identified Priority 1 and 2 Other Maintenances by 2017.
3. Use the Prioritized Maintenance List as a general guideline for implementation of the ten-year program.
4. Begin the Large and Small Routine Pruning Program in 2017 and prune approximately 772 large-growing trees and 21 small-growing trees per year.
5. Begin the Young Tree Training Program in 2017 and training prune approximately 1,258 young trees per year.
6. Prune young trees for the first time three years following planting. Only dead or broken branches should be removed at the time of planting.
7. Develop an organized and documented approach to ensure cyclical tree maintenance. This may include pruning a certain number of City tree management zones each year in order to meet the annual routine pruning goal.
8. Perform all needed crown cleaning, crown reduction, and crown thinning at the same time to reduce travel time and costs.
9. Schedule maintenance activities for and perform them during optimal biological periods to sustain vigorous tree health and to ensure the best chance for survival of the City's trees.
10. Monitor trees for pest and disease signs and symptoms.
11. Update the inventory database on a daily, weekly, or monthly basis to reflect changes made through tree maintenance and observation.
12. Compare the City's annual urban forestry expenditures and number of tasks completed at the end of each year to that projected at the beginning of each year.
13. Conduct an i-Tree Streets analysis every five years to see the return of benefits produced by managing Goshen's public trees through the Urban Forestry Management Program.



Execute Needed Changes in Support of the Urban Forestry Management Program

1. Develop a tree emergency response system so to proceed with emergency tree maintenance in an organized manner, thus maximizing safety and minimizing costs. Such a system will require a formal tree emergency protocol, outlined emergency response steps, safety standards, debris removal plans, public communication means, and contact lists.
2. Employ a forestry crew under guidance of the City Forester. This should be a crew of four, full-time employees including one supervisor and three field staff.
3. Develop a well-planned and structured volunteer program to help plant trees and prune small trees to save on tree maintenance costs for the City and City residents.
4. Provide educational training opportunities for professional forestry staff. The City Forester, Shade Tree Board, and tree crew from the Street Department or future installment under the Forestry Division are Goshen's professional forestry staff. Training opportunities could include workshops, seminars, webinars, online courses, institutes, conferences, and certifications.
5. Perform a detailed budget analysis and expand the public tree planting and maintenance program funding levels in the Forestry Division to carry out tree maintenance, conduct adequate planting, and perform emergency response, as well as for support management, staff, equipment, and contractual services.
6. Regularly review and revise and/or amend ordinances as needed related to public and private trees and any changes which may occur in the Urban Forestry Program.
7. Build upon the strong public relation and education program that promotes the value of quality trees and quality tree care at the broader scale. Various public outreach campaigns should be aimed at educating the citizens, City officials, developers, and contractors of Goshen and gaining their support for the urban forestry program.
8. Build funding for tree care to help move the forestry program from a reactive program to a proactive program.

The management of trees in a municipality is challenging, to say the least. Balancing the recommendations of experts, the wishes of council members and other elected officials, the needs and abilities of residents, the pressures of local economics, the concerns for liability issues, the physical aspects of trees, the forces of nature and severe weather events, and the desires for all of these factors to be met simultaneously is quite a daunting task. **The City of Goshen's Park and Recreation Department, Shade Tree Board, Street Department, elected officials, and citizens must carefully consider each specific issue and balance these pressures with a knowledgeable understanding of trees and their needs.** If balance is achieved, the City's beauty will flourish and the health and safety of its trees will be maintained.