Lakewood Tree Action Plan

Mission

Maximize the economic, environmental, and social benefits that a well-planned and sustainable Urban Forestry Program can deliver to the residents of the City of Lakewood.

Goals

1. Maintain the health and vigor of all trees in the Lakewood Urban Forest – to capture the long-term ecological, economic and social benefits, and for public safety.
2. Always plant the largest suitable tree for the site selected. Large trees live longer and provide greater economic and ecological benefits than small trees. Undersized trees fail to maximize the potential of the site. This failure is lost value for the community.
3. Achieve a fully stocked Urban Forest to benefit all locations throughout the City of Lakewood and reach the peak Urban Tree Canopy that our municipality can achieve and sustain.
4. Comprehensive master planting plan for every street identifying primary and secondary species to be used on each street. Species will be selected based on largest species best suited for each site and overall distribution of species to ensure proper diversity.

A Peek Into The Past

- GOOD - We planted a lot; BAD – Often, not the appropriate tree size or species for the space.
- Poor tree species diversity. In 1996 it was determined that just ten tree species comprised 82% of the population and that one genus - ACER (Maple) - comprised 39% of the total population.
- In 1996, the City of Lakewood commissioned a complete public tree inventory in which each city tree was counted and identified along all street right of ways, city parks and on city/public property. 11,009 trees were counted, providing to us the foundation of our city tree inventory for which we continue to maintain, utilize and build upon to this day – an invaluable resource.
- In 1996, as part of the city tree by tree inventory process, the total value of the City of Lakewood urban forest was estimated to be $12,098,891 with an average single tree value of $1,099.00, using guidelines then established by the International Society of Arboriculture.
- In 1976, the City of Lakewood first achieved Tree City USA status. The City of Lakewood has since been designated a Tree City USA community for 44 consecutive years by the National Arbor Day Foundation – the 2nd longest streak in the State of Ohio.

Here We Are Today

- As of December 2020, the City of Lakewood public tree inventory consists of 13,718 trees.
- 79% of Lakewood is presently covered by the canopies of trees.
- Good tree species diversity. The top ten tree species comprise 59% of the population and that one genus - ACER (Maple) – comprises 26% of the total population.
- The 2021 estimated value of the City of Lakewood urban forest, using tree valuation guidelines developed by the United States Forest Service is estimated to be $20,700,462.00 - with an average single tree value of $1,509. Formula in brief: 13,718 total trees; Base Value of 65 (Midwest States) x 78.5 (Cross-sectional average of a 10-inch diameter tree) x .70

(Species) x .65 (Condition) x .65 (Location) = $1,509 Total Value Per Tree x 13,718 = $20,700,462.00 – Estimated value of the City of Lakewood Urban Forest.

- Stresses, both environmental in the form of pests from afar (i.e. Emerald Ash Borer and Asian Longhorn Beatle) and climate greatly impact the health of our urban forest and future planting decisions.
- The acknowledgement that trees are public infrastructure - that trees play a significant role in storm water mitigation and help protect our greatest natural asset – Lake Erie.

Continue to Improve - Strategy and Initiatives

Grow what we know – Trees are infrastructure. The regular care and maintenance required by an urban forest is a small investment relative to the large returns they provide. For publically owned trees – less than $1 invested returns over $3 in benefits.

Objectives

1. Plant a diverse population of trees. One tree for each removal (replace) AND at least 10% of the vacant viable planting sites identified and inventoried at the beginning of each year.
2. Remove or prune, for safety, all dead and hazardous trees each year.
3. Prune (train) each newly planted tree every 3 years for the first 10 years.
4. Regular maintenance pruning cycle on every Lakewood street at least once every 5 years.
5. Provide the necessary resources to adequately care for trees beyond the actual newly planted date.
6. No annual net loss of tree planting versus tree removals – Ever! 7. Build upon the program initiated in 2013 for private yard tree planting efforts and offering residents better tree price opportunities in conjunction with the City Reforestation Program.

Actions – To Meet Objectives

Action 1. Maintain one of our greatest assets – The Tree Inventory of all our trees and planting sites throughout the city.

Specifications:

- Maintain Tree Inventory with the following information – Accuracy is a must:
    - Size—Diameter at breast height (four and one-half feet) in inches
    - Tree species name – both the common name and scientific name
    - Condition—Excellent, Good, Fair, Poor
    - Maintenance--Routine, High, Hazard
        - Action Recommended (Routine)—Scheduled Removal of dead or damaged branches; Canopy lift with regular pruning cycle
        - Action Recommended (High)—Immediate Removal of dead or damaged branches
        - Action Recommended—(Hazardous) Immediate Removal of hazardous branches, or immediate removal of tree
    - Location
        - Address, street, or park/public facility location. Utility wire conflict or other potential site/tree conflict
    - Tree lawn size – width
    - If vacant, what size tree can be planted – Large, Medium or Small

Action 2. Comprehensive planting plan – both street trees and parks.

Specifications:

- Master tree planting plan for every street identifying primary and secondary tree species to be used on each street. Species will be selected based on species best suited for each site and distribution of species to insure optimum diversity.

- Assign Species Spacing to City of Lakewood Street Segments:
    - 6 Segments between Species
    - 4 Segments between Genus
    - 2 Segments between Family
- Master tree planting plan for every City of Lakewood Park. In park areas where growing conditions are appropriate the use of native trees should always be considered. This will provide greater genetic variation within the urban canopy. Certain parks provide the canvass to be more far more creative than what is only suitable for street tree selection – we must utilize those sites to their full potential.

Site Selection Parameters:

- Minimum overhead clearance for
    - (Small Trees) 25 feet
    - (Medium Trees) 50 feet
    - (Large Trees) 60 feet
- Minimum distances for ALL trees from
    - Overhead wires—10 feet (lateral distance)
    - Underground utilities—5 feet (lateral distance)
    - Side structures—20 feet
    - Tree lawn width—Minimum 3.5 feet
    - Intersection—25 feet
    - Visible utilities—10 feet
    - Fire hydrants—10 feet
    - Driveways (both planting side and opposite side)—10 feet
    - Other trees and planting sites—25 feet

A Plan for Diversity = High Reward

To accomplish the goal of increasing tree diversity and reducing the likelihood of large tree losses across the city, the following steps should be taken by the City of Lakewood to protect one of its greatest assets:

The 30-20-10 model, as recommended by the Ohio Department of Natural Resources, provides a useful guide and suggests that the total tree inventory contain no more than 30% of a single family, 20% of a single genus, and 10% of a single tree species.

The City of Lakewood recognizes this goal though the assessment of urban site conditions for street tree planting and the number of tree species available for the Northeast Ohio climate.

The development and use of sequencing, planting multiple tree species on the same block, provides a model to increase diversity on a block by block basis. Pairing species for aesthetic and maintenance concerns will vary based on need and can be changed to tailor the planting scheme to meet conditions present on the site.

The city will not plant:

- large trees under power lines or other sites too small for the mature tree size
- trees in sites in which they will not survive and thrive
- small trees in sites appropriate for larger trees

Action 3. Go Big.

- Always plant the largest suitable tree for the selected site.
- Large trees live longer and provide greater economic and ecological benefits than small trees.
- Undersized trees fail to maximize the potential of the site. This failure is lost value for the community.
- Never plant small trees in tree lawn sites appropriate for larger trees regardless of resident's preferences.

Action 4. Systematic annual hazard assessment and proactive removals.

Specifications:

- Hazard Tree Assessment program through regular Tree Inventory:
    - Identify trees with structural defects that need to be removed.
    - Each year, remove a minimum of 1% of total tree inventory for optimum long-term public safety. In an urban forest environment, removals must be done for safety and to mimic what would take place in a natural forest setting with big tree demise, but we can't just let the trees fall or fail within a highly populated setting.
    - Identify trees with structural defects that can be pruned to make safe.

Action 5. Allocation of resources - No annual net loss of tree planting versus tree removals – Ever!

Specifications:

- Create long range work plan and allocate a budget that will sustain it.
- Priorities and budgetary resource flow chart
    - Hazardous tree removal (Highest priority)
    - Dangerous limb removal
    - New tree planting
    - Site selection – Right Tree in Right Place
    - Young-tree-training – will save significant costs in future
    - First year watering for new plantings
    - Correct past sins/mistakes and remove a certain percentage of small trees (i.e. Kwanzan Cherries along Alameda or Lakewood Hts.) occupying a large tree site and replace with large tree specimen to increase canopy cover over time
    - Regular maintenance pruning on every street - every 5-6 years

- Other young tree care/protection as needed (i.e. trees in parks)
- Other new planting site alternatives – such as front yard planting where tree lawns are too small to support a tree - minimum medium size tree capacity to gain mutual benefits to city and resident
- Other site preparation (Lowest priority)

Action 6. Prioritize the first ten years.

Investing more during planting and within the first 10-years of a newly planted tree's life results in a 75% reduction of tree maintenance/removal costs over the course of the next 50 years – Ohio Division of Forestry.

- **Priority One:** Plant a diverse population of tree species on every City of Lakewood street and within parks.
- **Priority Two:** Prune (train) each newly planted tree every 3 years for the first 10 years – no exceptions. Aim for the best long-term canopy lift and spread while trees respond and recover best to pruning. Some of this can be done during the winter months – weather permitting.
- **Priority Three:** Determine how best to invest city resources. Contract out more hazard tree removals to free up more proactive pruning to be done each year. Many cities have shifted towards contracting out increasingly more removals to focus more internal resources on the first 10-years strategy with forestry division staff.
- **Priority Four:** Focus on planting most new trees in the fall. Studies show that trees planted in the fall have a better survival rate than trees planted in spring. Primarily because less heat season stress during the first 18-months after planting (only one summer season).

Opportunities for Growth

Urban forest issues are consistent with the City's priorities for both residents and city leadership.

- Sustainability/Green Lakewood – A 2013 Community Vision Priority.
- Environmental benefits
- Storm water retention – Trees part of green infrastructure.

- Walkability
- Maintaining property values and quality of life to retain homeownership base and attract new residents.
- Reforesting and beautifying city parks. Plan for and plant the next generation of city park and green space trees.
- Enhance the urban forest experience for all Lakewood residents.
- The Emerald Ash Borer infestation makes urban forest issues more visible.
- Hurricane Sandy aftermath – Made hazardous tree removal less controversial.
- We have a strong starting point: Our up to date tree and site inventory and high percentage of viable planting sites already stocked with trees.
- We have an experienced forestry crew.

Vision for the City of Lakewood Urban Forest.

- The tree canopy meets or exceeds recognized canopy standards – 33.5% by 2035.
- The urban forest is diverse in both species and age.
- The urban forest is looked at as a green trademark, recognized for its critical role in the City's leadership on sustainability issues.
- Public trees are proactively maintained to ensure public safety and to protect and enhance the City's urban forest investment.
- Residents, property owners, and businesses are educated about the value of the urban forest and involved in maintaining and enhancing the City's tree canopy.
- The City, in partnership with schools and community organizations, offers a variety of opportunities for citizens to learn about urban forest issues and to provide financial and volunteer support to improve the City's tree canopy, including tree planting and maintenance on both public and private property.

- The City of Lakewood Forestry Division is recognized for its proactive approach, responsiveness to citizens, expertise in addressing urban forest issues, and effective use of resources.
- The Division's operational plan includes strategic priorities for tree planting and maintenance.
- The Division enhances its urban forest program by accessing volunteer, financial, and technical assistance resources available locally and at the state and national levels.
- The urban forest helps to maintain property values and quality of life to retain homeownership base and attract new residents.