CITY OF BUCHANAN

Urban Forestry Plan

Cultivating a Resilient and Livable City

A Comprehensive Approach to Sustainable Urban Greening

DEPARTMENT OF PUBLIC WORKS
PLANNING COMMISSION
BUCHANAN TREE FRIENDS

ADOPTED BY PLANNING COMMISSION:

ACCEPTED BY CITY COMMISSION:

I. Introduction

This document outlines a comprehensive plan for establishing, maintaining, and expanding Buchanan's vibrant urban forest that benefits our community, its people, wildlife, and the environment.

The Urban Forestry Plan and its vision and goals are intended to be reviewed and updated every five (5) years, as appropriate.

II. Vision and Goals

- **Vision for 2030:**
    - Well-stocked, diverse, well-maintained urban forest
    - Tree City USA certification and potential growth award
    - Maintain 36% tree canopy coverage
    - Engage in a ten-year tree canopy assessment

- **Urban Forestry Plan Goals**

  The City of Buchanan establishes the following goals to preserve, maintain, and develop its urban forest. (For details, see Section IV: Urban Forestry Goals, Objectives, and Tactics)

  Goal 1: Planning, Budgeting, and Funding

  Create an actionable, practical, and adaptable Urban Forestry Plan. Specify costs of plan implementation and the sources of funds to meet these costs.

  Goal 2: Planting, Maintenance, and Inventory Management

  Manage the city's urban forest through consistent plantings, ongoing maintenance, and necessary removals, regularly using and updating the city's tree inventory database as a key tool in all urban forestry activity.

  Goal 3: Education

  Maintain and celebrate Buchanan's Tree City USA status and engage and inform city officials, leadership, staff, and citizens on the importance of trees in a community, their environmental impact, and their impact on property values.

III. Benefits of Trees

Urban forests are much more than a patchwork of trees scattered throughout city parks, boulevards, and backyards. They are living infrastructure, underpinning the health, beauty, and resilience of the urban environment and providing meaningful and measurable environmental, social, and economic benefits.

Environmental Benefits
Trees absorb pollutants like carbon dioxide, nitrogen dioxide, and particulate matter, cleaning the air and improving overall air quality. Trees help reduce stormwater runoff, preventing pollutants from entering waterways and improving water quality. Urban forests absorb carbon dioxide, a major greenhouse gas, and help reduce the urban heat island effect, contributing to climate resilience. Trees provide shade, reducing the need for air conditioning in summer, and act as windbreaks, decreasing heating costs in winter. Trees can help reduce noise pollution by absorbing sound waves, creating quieter and more peaceful environments. Urban forests provide food and shelter for various bird and animal species, enhancing urban biodiversity. Trees absorb rainwater, reducing the risk of soil erosion and flooding in urban areas.

Social Benefits
Studies show that access to green spaces and trees can reduce stress, improve mental health, and even lower crime rates. Urban forests can indirectly contribute to lower healthcare costs by improving air quality and promoting healthier lifestyles. Trees can also contribute to public safety, helping to calm traffic along neighborhood streets.

Economic Benefits
Homes and neighborhoods with well-maintained trees tend to have higher property values. Urban forests can create more attractive and enjoyable public spaces, fostering a sense of community and improving quality of life. People tend to linger in and more frequently patronize business districts with trees. Additionally, trees can contribute to increased tourism and recreation, boosting local economies.

IV. The Buchanan Tree Friends

Mission Statement

To grow a thriving environment for trees in Buchanan through advocacy, conservation, and education.

Buchanan Tree Friends (BTF) is a city government committee that collaborates with the city's Department of Public Works to advance forestry in Buchanan. Founded in 2017 and operating under the city's Plan Commission, BTF has achieved excellent results and begun to turn the tide for the city's forests.

V. Overview of Buchanan's Trees

2018 Tree Canopy Assessment

As a result of BTF advocacy, an Urban Tree Canopy Assessment (UTC) was completed by Davey Resource Group, Inc. (DRG) in partnership with ReLeaf Michigan in 2019. This project was funded by a Great Lakes Restoration Initiative (GLRI) grant through the United States Forest Service. A UTC uses satellite imagery to assess land cover across a community. These data can be used to understand trends of tree canopy cover across a community. The full UTC report, including analyses in all six communities participating in this program can be found online (https://sjrtreecanopy.weebly.com/).

Using 2018 satellite imagery from the National Agriculture Imagery Program, this UTC determined that Buchanan's tree canopy accounts for 597 acres or 36% of the city's total land area. Additionally, 26% (431 acres) of the city is covered by impervious surfaces such as buildings or pavement, 35% (581 acres) by grass or other low-lying vegetation, and only small portions of the city covered by bare soil or water (*Table 1*).

Land Cover Class	(%)	Acres
Tree Canopy	36%	597
Impervious Surfaces	26%	431
Grass/Low-Lying Vegetation	35%	581
Bare Soil	0%	6
Open Water	3%	43
		1,658

Table 1. Buchanan's Land Cover Classes.

The greatest extent of tree canopy in Buchanan is located on private, residential (39%) and agriculture/forest (54%) lands (*Table 2*). These two property classes account for the largest share of trees across the city. Institutional lands (e.g. government, education, etc.) have relatively high levels of impervious land cover (54%); as does commercial properties (53%). However, commercial lands account for a relatively small proportion of total land area (4%).

Land Use	Land Area		Land Cover Classification				
	(%)	Acres	Tree Canopy	Impervious Surfaces	Grass/ Low-Lying Vegetation	Bare Soil	Open Water
Agriculture/Forested	23%	375	54%	3%	32%	0%	11%
Commercial	4%	66	9%	53%	38%	0%	0%
Institutional	20%	327	18%	54%	27%	1%	0%
Open Space/Recreational	10%	164	30%	9%	60%	1%	0%
Residential	44%	726	39%	27%	34%	0%	0%
Total		1,658					

Table 2. Land cover by land use.

Buchanan's UTC also explored where trees could be planted that would have the greatest impact on capturing stormwater (*Figure 1*). By no means is it recommended that *every* open space in the city is planted with trees. However, these data can be used to prioritize tree planting where trees will do the most environmental good.

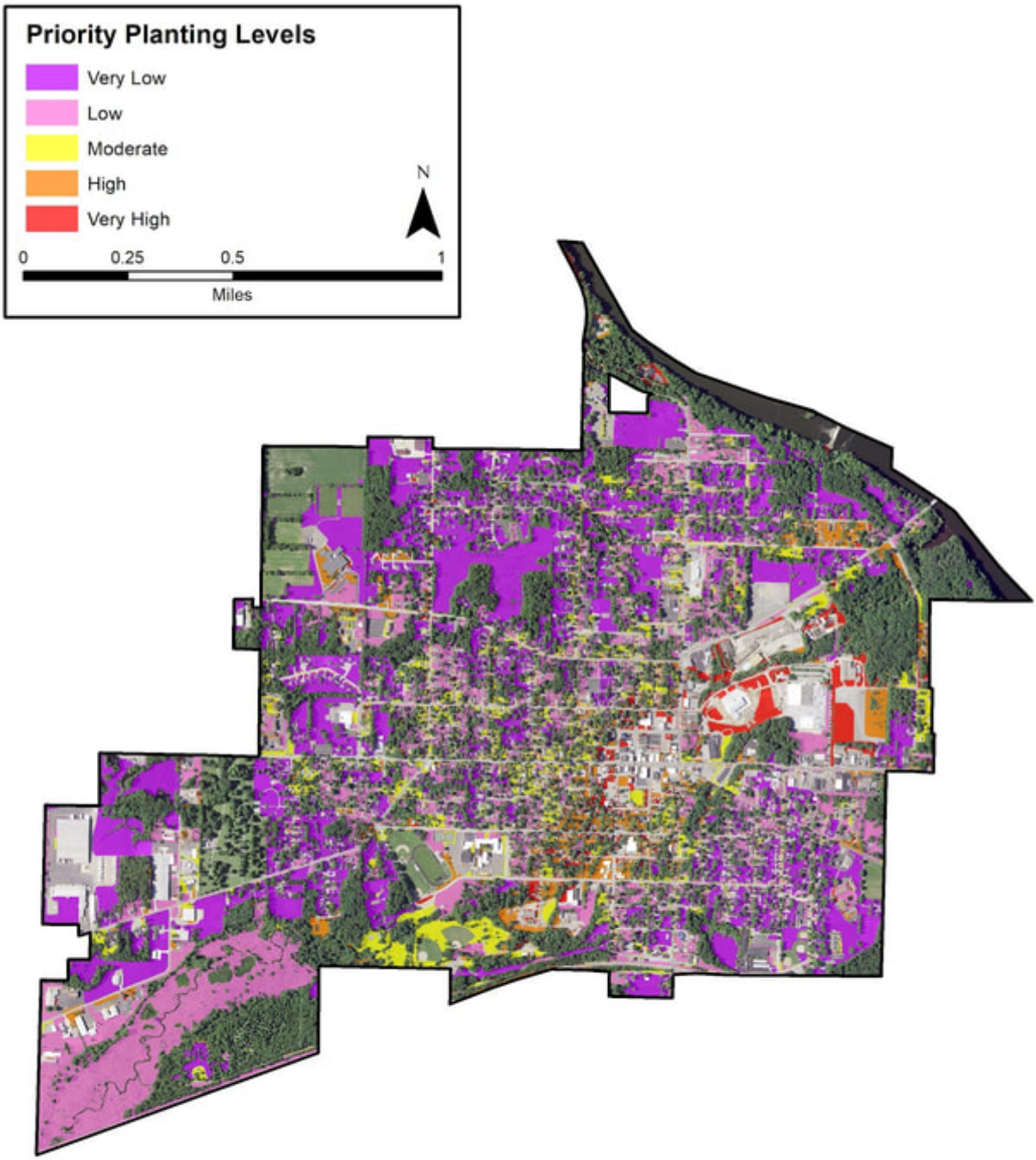

Figure 1. Prioritized planting locations by priority.

2022 Tree Inventory

The UTC was followed in 2022 by a tree inventory, also completed by DRG. This project was funded by an Urban and Community Forestry Program grant from the Michigan Department of Natural Resources, funded in part by the United States Forest Service and matching funds from the City of Buchanan.

Buchanan's Tree Inventory included the systematic assessment of 1,589 trees along city streets and within other public properties. Each tree was located and information was collected on the tree species, diameter at standard height (4.5 feet above grade), condition, risk level, and maintenance need. Subsequently, additional trees and planting sites have been added by the city; the current database includes 1,713 records.

The tree inventory data were originally delivered in standard geographic data formats, as well as in an on-line database supplied by DRG, called TreeKeeper. The city continues to manage tree inventory data in the on-line database. However, the data can easily be exported at any time in geographic formats that allow for incorporation in other mapping utilities or software.

Ultimately, Buchanan's Tree Inventory data provide an important snapshot of Buchanan's urban forest. These data can be used to track metrics on urban tree performance (e.g. species distribution, size distribution) as well as plan the necessary maintenance work (e.g. tree removal and pruning).

Buchanan's urban tree population contains a preponderance of maple trees (*Acer spp.*) (*Figure 2*). Trees in the maple genus currently represent 56.4% of the tree population. No other genus of tree exceeds 5% of the tree population. The most common tree species are sugar maple (*Acer saccharum;* 29.3% of the population), Norway maple (*Acer platanoides*; 8.6% of the population), silver maple (*Acer saccharinum*; 8.5% of the population), and red maple (*Acer rubrum*; 8.3% of the population). Industry best practices are for a single genus to represent no more than 20% of the total tree population.

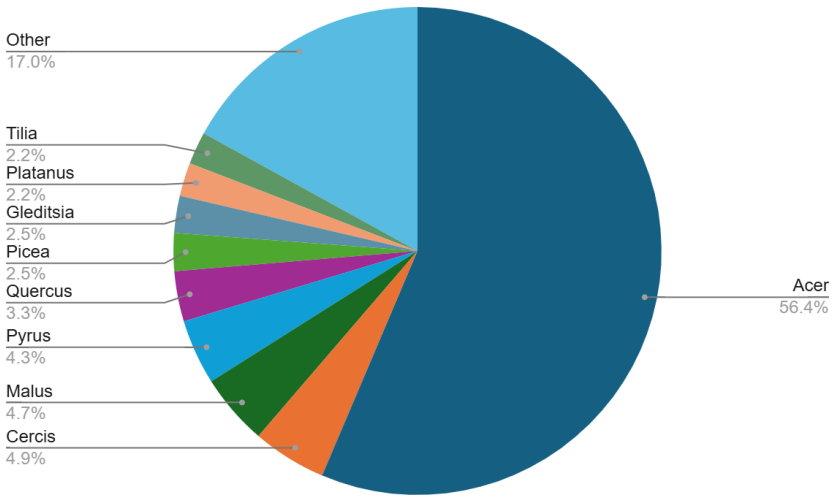

Figure 2. Tree genus by percentage of the total population.

Buchanan's tree population is relatively evenly distributed between small and medium tree size classes (*Figure 3*). However, there are a substantial number of trees in the two size classes covering trees from 19 to 30". This indicates that Buchanan has a 'maturing' tree population and may experience increased maintenance needs over time. The 328 trees in the less than 6" size class may not be enough to fully replace the trees removed, over time.

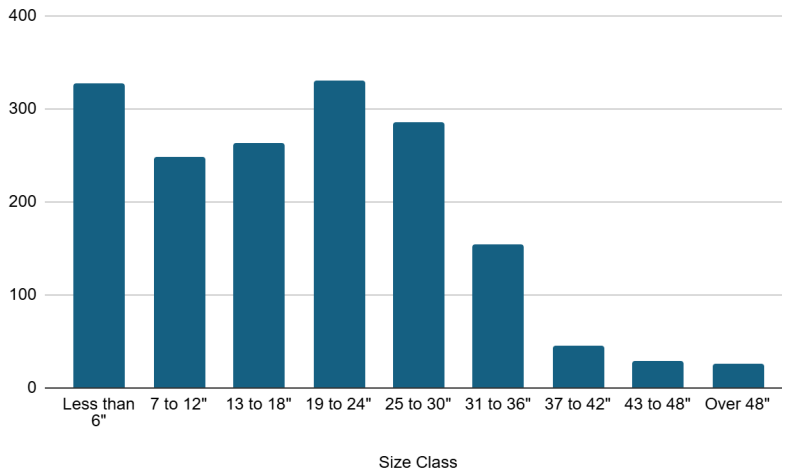

Figure 3. Tree count by 6-inch size class.

Buchanan's tree population is relatively healthy (*Figure 4*). Approximately 81% of the tree population is in fair or better condition. Roughly 19% of the population is dead or in poor condition.

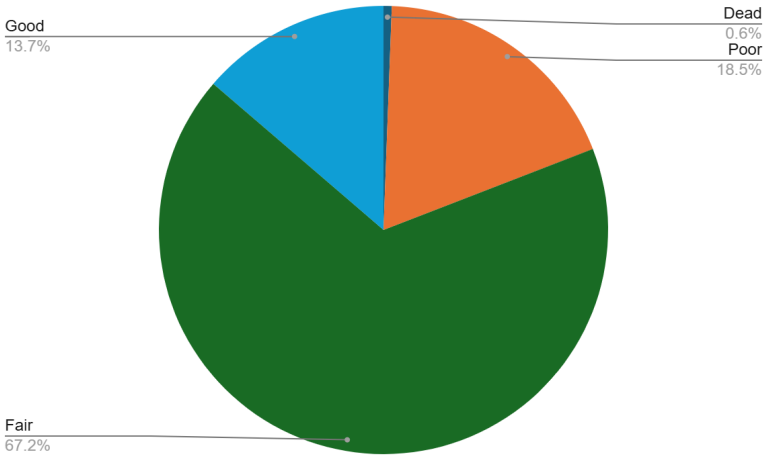

Figure 4. Buchanan's tree population by tree condition.

Lastly, the tree inventory identified tree maintenance needs (*Table 3*). These maintenance needs are prioritized based on risk assessed according to American National Standards Institute (ANSI) A300 protocols, the standard for the arboricultural industry.

	High	Low	Moderate	N/A	TOTAL
Remove	43	100	185		328
Priority Prune	16	5	234		255
Routine Prune		784	17	1	802
Train		203		3	206
Stump Removal				18	18
N/A				104	104
TOTAL	**59**	**1092**	**436**	**126**	**1713**

Table 3. Tree maintenance needs by risk level.

The 2022 tree inventory provided a solid baseline for Buchanan's urban forest. However, an inventory is only valuable if it is regularly maintained and the data are accurate. The following actions are necessary to preserve the usefulness of the inventory:

- Expand the inventory to include areas not initially captured, such as parks, schools, cemetery, etc.
- Improve systems, entering all tree activity (removals, planting, etc.) in the city's tree inventory database.
- Use the inventory's work order function to manage tree maintenance workflow and help keep records of what work has been completed and what is needed
- Conduct an annual windshield assessment of the health of all trees in the urban forest to help prioritize further tree maintenance activities.

This plan recommends continually updating the tree inventory to anticipate and mitigate negative changes in the health of the city's urban forest.

VI. Work Plan

The following is a narrative of the work program organized by "Annual" and "Cyclical/Programmatic" work. "Annual Work" represents ongoing activity that should be regularly performed, and "Cyclical/Programmatic Work" means activities or projects that may be needed from time to time to support the city's forestry program.

Each year, more detailed annual plans will be developed with cyclical activities noted in that particular year.

Annual Work Program

A. Budgeting and Funding

Budget amounts in the Urban Forestry Plan are based on expenditures for removal, tree planting, general maintenance, and storm-damage clean-up. The Tree Friends and city staff will review budgets annually and recommend to the City Commission for incorporation into the Buchanan City Annual Budget (July 1 – June 30). The following table is the recommended funding allocation for annual tree-related activities:

ACTIVITY	% of annual budget
Removal of hazardous, dead, and declining trees	35%
Tree maintenance activities (pruning, young tree training, etc.)	35%
Tree Planting, watering, and establishment	20%
Administrative and management activities (inventory updates, training, managing work orders, etc.)	10%

Funding for the tree program comes from a variety of sources:

- City Budget: Allocate stable municipal funding for forestry operations, capital planting, and maintenance.
- Grants:
  - Michigan Department of Natural Resources
  - United States Forest Service Great Lakes Restoration Initiative and Landscape Scale Restoration programs
  - Local Utilities
  - Local foundations
  - Other sources
- Tribute Tree purchases
- Donations of money and time from local businesses and community organizations
- Resident cost-share planting program (if implemented). (See Section VII. Goal 1)
- Project budgets (i.e., replacing trees as part of infrastructure projects).

B. Priority Tree Maintenance Needs

During the inventory, a risk level (e.g., n/a, low, moderate, high, or extreme) was assigned to each tree. It is generally accepted standard practice to handle tree maintenance concerns prioritized based on risk. Initially, inventory data were used to address a number of high-risk actions. However, several tree maintenance issues captured in the 2022 tree inventory remain and should be prioritized for action.

C. Regular Tree Assessments

While the tree inventory is useful in establishing initial tree maintenance priorities, trees are living things that grow and change. To support monitoring of the tree population, the city will develop a systematic approach to regular tree assessment across the community. This approach will help frame the annual program of tree work in Buchanan. This annual program will be augmented with tree planting and related activities to support future growth of the urban forest.

Tree maintenance is prioritized based on an understanding of tree risk. The American National Standards Institute (ANSI) A300 committee has established an industry-accepted approach to tree risk assessment. This has been further supported by the International Society of Arboriculture's (ISA) best practice guides. Additional context on tree risk is outlined in Appendix A. Together, these frameworks inform the city's tree risk management approach.

The basics of the city's regular assessment are to perform a Level 1 Limited Visual Assessment:

- Annually or after any significant weather event (e.g., ice storm with greater than ¼" accumulation, tornado, derecho, etc.), Major roads and thoroughfares, high pedestrian traffic streets and areas.
- Every other year, along all remaining streets. This may be performed all at once or alternated between different areas each year.

A limited visual assessment may be performed from a slowly moving vehicle with hazards and cab-mounted flashers activated. It is helpful to have two people perform the evaluation, one driving and one looking for tree maintenance concerns. Alternatively, an assessment may be performed on foot or by bicycle. Trained volunteers can perform this activity.

The purpose of the assessment is to identify public trees with conditions of concern that are probable to fail before the next evaluation, likely to fail and impact public areas, and would cause significant to severe damage or disruption to public interests. The specifications for the level one limited visual risk assessment should be regularly revisited to ensure they match the city's priorities. Generally, these include but are not limited to:

- Dead trees 10 inches or greater in diameter within the right-of-way.
- Trees 10 inches or greater in diameter with significant structural defects such as major decay, large horizontal or vertical cracks, large cavities, or dead or declining canopies that are within the right of way.
- Trees 10 inches or greater in diameter with signs of recent or changing lean or shifting root plates that are within the right of way.
- Dead, dying, diseased, decayed, broken, or otherwise damaged limbs greater than 4" in diameter that overhang sidewalks, streets, or other places of public congregation.

Such trees shall be indicated for pruning or removal to mitigate the risk concern identified. Any maintenance needs that are identified shall be completed as soon as practicable within the limitations of the city's available budgetary and personnel resources.

D. Responding to Resident and Stakeholder Tree Concerns

Many tree issues will be captured during regular tree assessments. However, tree issues may still arise outside inspection cycles. Therefore, it remains important that the city respond to any resident-initiated request to inspect or review a public tree within 10 business days.

When performing a tree assessment triggered by a resident-initiated request, the tree should be inspected within the context of the time period for the next scheduled regular assessment. For example, if the next regular assessment for the tree in consideration is 9 months out, the likelihood of failure of the tree or a major part of the tree should be estimated within 9 months.

An assessment performed in response to a resident-initiated request shall review the subject tree from the ground from 360 degrees, provided all sides of the tree are accessible. The purpose of the assessment is to identify public trees with substantial defects that are likely to fail before the next assessment and likely to impact public areas or an adjacent property.

Generally, these mirror the conditions of concern noted in the regular assessment, such as:

- Dead trees 10 inches or greater in diameter within the right-of-way.
- Trees 10 inches or greater in diameter with significant structural defects such as major decay, large horizontal or vertical cracks, large cavities, or dead or declining canopies that are within the right of way.
- Trees 10 inches or greater in diameter with signs of recent or changing lean or shifting root plates that are within the right-of-way.
- Dead, dying, diseased, decayed, broken, or otherwise damaged limbs greater than 4" in diameter that overhang sidewalks, streets, or other places of public congregation.

If the issue identified by the resident rises to an issue of concern for tree management (e.g. high or extreme risk level), the tree issue should be addressed as soon as time and resources allow. Otherwise, the resident should be informed of the results of the inspection and the approximate timeline of the next planned tree assessment for the area in question.

E. Tree Planting

The city's Tree Inventory included 1,589 trees, 1,503 of which are located along community streets. This comes out to about 57 trees per mile, which is considered fairly low-stocked for Michigan communities.

Tree mortality due to both natural causes and tree removal for infrastructure projects is expected to range around 2% or around 30 trees per year. Therefore, to maintain a continuous population of trees, the city should plan to plant 35 to 45 trees each year. To improve stocking levels, it may be more appropriate to plant 50-60 trees each year.

All new trees planted should have a minimum of 2" caliper and be included in the recommended plantings list published by the Michigan DNR. (https://www.michigan.gov/dnr/managing-resources/forestry/urban/recommended-trees).

Planting should comply with Chapter 106 Article 2 of the Code of Ordinances of the City of Buchanan (Appendix B). Street trees should be planted a maximum of thirty (30) feet apart.

Planting should focus on the following priorities:

- Entrances to the city
- Areas of need as identified by Urban Canopy Assessment and Tree Inventory

Buchanan's tree population is lacking in tree diversity. The inventory determined that over 55% of the tree population are maple, many of which are sugar maple (*Acer saccharum*). To the extent possible, no additional maple trees should be planted until a greater degree of tree diversity is achieved.

Perhaps most importantly, planting may be limited by how many trees can be reasonably watered. No more trees can be planted than can be watered for 2 seasons. Each newly planted tree should receive 5-10 gallons of water each week, applied slowly to soak into the soil, from May through October. Willing residents may be able to augment the city's watering efforts.

The costs of planting may be defrayed through creative partnerships and programs. Partners like the Buchanan Tree Friends can help raise funds to offset planting costs. Additionally, memorial or tribute tree programs can offer opportunities for loved ones to honor a family member or friend, helping the city to raise funds for tree planting.

Beyond street and park trees, the largest opportunity for enhancing canopy across Buchanan is on private lands. While there may be limitations on how public resources can be expended on private lands, creative cost-share or incentive programs, or piggybacking on city tree purchases may be ways the city can extend its support to private lands. These, or similar options, should be explored as possible ways to increase tree canopy across the city.

F. Trees and Infrastructure Projects

Unfortunately, trees and infrastructure can come into conflict. This sometimes happens when tree roots lift sidewalks or pavement, or when utility work may require the removal of a tree for access. Addressing these infrastructure concerns is important and may result in the damage or loss of trees. However, with appropriate consideration, these losses can be managed and minimized.

To ensure that trees are given full consideration during infrastructure projects in Buchanan, the city should require a tree assessment as part of initial project planning and design. This assessment should identify trees within the project footprint, evaluate their health and structural condition, and determine their potential to be preserved. Involving the city's Department of Public Works and/or contracted arborists early in the process allows for thoughtful decisions about whether trees can remain in place, what protective measures are needed, and where design adjustments could reduce conflicts. By addressing trees at the outset, Buchanan can balance its infrastructure needs with the long-term benefits its urban forest provides.

In addition to planning for protection, Buchanan should ensure that infrastructure projects include both the preservation of existing trees and the planting of new ones in their budgets and bids. For trees that will be retained, contractors should be required to implement protective measures such as root zone fencing, careful excavation practices, and post-construction monitoring to minimize stress and damage. When tree removal is unavoidable, clear standards should guide replacement ratios, species

selection, and site preparation to ensure successful establishment. By embedding both protection of existing trees and the costs of new plantings directly into public works projects, the city can safeguard its current canopy while also investing in its long-term growth.

When existing trees are found to be lifting sidewalks or conflicting with utility maintenance in Buchanan, the city should follow a structured assessment and decision-making process before removal or major alteration is considered. This includes evaluating the tree's health, size, and contribution to the neighborhood, as well as exploring design alternatives such as root pruning, sidewalk rerouting or flexing, using alternative paving materials, or adjusting utility access points. Where conflicts cannot be avoided, mitigation measures—such as phased root management or engineered solutions to accommodate roots—should be prioritized. Only when all feasible alternatives have been exhausted should removal be considered, and in those cases, plans for tree removal and replacement should be clearly documented and implemented.

G. Record-keeping

Maintenance of appropriate records is an important function in the management of urban forests. Complete and organized records of tree maintenance tasks completed can help show program effectiveness, better predict future resource needs, and demonstrate due diligence.

As tree work is completed (e.g. tree removed, pruned, or planted), the city will update records in the city's tree inventory database. At a minimum, the city will delete trees that are removed and add trees that are planted. The city should also update tree risk, condition, and maintenance needs as work is performed. Ideally, the city also updates tree diameter and other data fields to maintain an up-to-date tree inventory and keeps track of work performed (e.g., work records) for each tree as it is addressed.

Beyond the tree inventory, records, and documents such as tree work specifications (e.g. for pruning, removal, etc.), industry standards, and past bid or proposal documents are helpful references. Collectively, these documents can help the city demonstrate to its residents, contractors, elected leaders, and the legal system (if required) that the city takes its forestry program seriously.

To ensure accurate numbers are available for grants, progress updates, and other purposes, the city and the Tree will produce a quarterly update/audit of forestry activity.

H. Outreach, Education, and Engagement

Everyone across the community does not always recognize trees as important public infrastructure. Unlike other community assets, trees also grow on *both* public and private lands. For these reasons, it is essential to involve residents, business owners, and community leaders in the planting and care of community trees. Moreover, public engagement is a great way to leverage strong partnerships, like that with the Buchanan Tree Friends.

A key component of education and outreach is Buchanan's Tree City USA status, which has been maintained for the last 33 years. The Arbor Day Foundation, which grants Tree City USA status, also offers growth awards for achievements in urban forestry. The city should strive to earn these awards.

In Buchanan, outreach and education can be most effective when delivered through familiar and trusted channels. Simple approaches such as regular social media posts from the Tree Friends Facebook page, updates on the municipal website, and short articles in the local newspaper or community

newsletter can help residents understand the value of trees and the role they play in managing stormwater, providing shade, and enhancing neighborhood character. Highlighting "Tree of the Month" features, sharing seasonal care tips, or posting about recent tree projects can spark interest and keep trees visible as part of everyday community life.

Beyond communication, hands-on engagement opportunities are a powerful way to build support for Buchanan's urban forest. This plan foresees the development of a volunteer corps to assist in plantings, young tree training, watering, and low-level maintenance.

Organizing volunteer tree planting events, neighborhood tree walks, or "adopt-a-tree" programs can bring residents, business owners, and community groups together around a shared goal. Local schools, service organizations, and faith groups can be invited to participate, creating intergenerational connections and shared ownership in the community's trees. Pairing these events with short demonstrations on planting, mulching, and watering can double as both service and education, ensuring that participants leave not only with new trees in the ground, but also with the knowledge to care for them long term.

Cyclical/Programmatic Work

Some aspects of the city's forestry program are not annual in nature. Rather, additional investment, activities, or projects may be needed from time to time to support the city's forestry program.

A. Inventory Update

Trees are living, growing, changing organisms. As such, the city's tree inventory was 'outdated' almost as soon as it was conducted in 2022. At some point in the future, the inventory will benefit from an update by a qualified professional. This update will include a confirmation of existing trees and species and update key data fields such as tree diameter, condition, risk level, and maintenance need.

The best practice is to update a portion of the tree inventory (i.e., 1/10th of trees) every year. However, many communities have their inventory completely reassessed all at once on a roughly 7-year basis. This investment will need to be revisited as Buchanan's tree inventory continues to age.

B. UTC update

Unlike a tree inventory, which looks at individual trees, an urban tree canopy (UTC) assessment provides a community-wide picture of where trees exist, where they could be planted, and how canopy cover changes over time. Because land use and development patterns evolve, Buchanan's UTC assessment will eventually become outdated as well. At some point in the future, the assessment will benefit from an update using current aerial imagery, GIS analysis, and local verification. This update would confirm existing canopy coverage, identify gains or losses in tree cover, and help set realistic planting goals. It can also help show where tree canopy has changed and trends in those changes to better inform local policies, outreach and engagement, and planting initiatives.

Best practice is to update a UTC assessment every 5–10 years, or after major development or storm events that may significantly impact tree canopy. Some communities also supplement full reassessments with lighter "check-ins" that use freely available satellite imagery to track broad canopy trends (e.g. iTree Canopy, iTree Landscape; http://www.itreetools.org). Revisiting this investment on a

regular basis will allow Buchanan to measure progress toward canopy goals, better target tree planting, and ensure that the urban forest continues to provide equitable benefits across the community.

C. Plan update/review

Buchanan's Urban Forestry Plan is a living document, and like the urban forest it guides, it should evolve. As community priorities shift, new best practices emerge, and data from the tree inventory and canopy assessment become available, the Urban Forestry Plan will benefit from periodic review and updating. This process ensures that policies, goals, and management strategies remain aligned with Buchanan's needs and resources, while also allowing the city to incorporate lessons learned from recent projects and community feedback. An updated plan can also strengthen alignment with regional and statewide initiatives, positioning Buchanan for future funding and partnership opportunities.

Best practice is to revisit an Urban Forestry Plan every 7–10 years, or sooner if major changes occur in the community or the urban forest or new data (e.g. inventory, canopy study) become available to support management. Updates should include a review of progress toward existing goals, adjustments to planting and maintenance priorities, and the addition of new objectives that reflect current conditions. For Buchanan, this may mean refining canopy goals, expanding community engagement strategies, or strengthening policies around tree protection during development. By committing to a cycle of review and renewal, the city can ensure that its Urban Forestry Plan remains a practical and forward-looking tool for sustaining and enhancing Buchanan's urban forest.

VII. Urban Forestry Goals, Objectives, and Tactics

Goal 1: Planning, Budgeting, and Funding

Create an actionable, practical, and adaptable Urban Forestry Plan. Specify costs of plan implementation and the sources of funds to meet these costs.

Planning

Objectives

- ► All urban forestry activity is consolidated into one plan.
- ► Established challenging but achievable goals given capacity constraints.
- ► Informed and coordinated staff-driven and volunteer-driven operations.

Tactics

- Use the Urban Forestry Plan to make annual funding recommendations to the City Commission.
- Annually review the plan for needs that can be covered through funding sources other than the city's budget.
- Implement regular communication regarding the plan and progress through social media and the city's website.

Budgeting

Objectives

- ► Specific annual planting, maintenance, and removal costs, including the value of volunteer activities, are understood.
- ► An appropriate forestry program spending mix for the City of Buchanan is established.
- ► Solidify existing and research new sources of funding for urban forestry.
- ► A resident cost-share program is established and at least 50 trees have been planted on private property.

Tactics

- Work with the City Manager and Department of Public Works to establish a cost and spending mix for urban forestry.
- Research and acquire a tool that can enhance fundraising activity.
- Create a list of available grants and deadlines and apply for funding.
- On an annual basis, apply for DNR tree planting grants, urban forestry grants, and all other available funding or grants.
- Improve and expand the Tribute Tree program.
- Develop a resident cost-sharing program for trees planted on private property
    - Explore resident cost-sharing programs in municipalities of similar size,
    - Create a DRAFT Buchanan-specific program
    - Seek citizen input on the idea
    - Implement the program
    - Evaluate and encourage private donations to support urban forestry.
- Explore the concept of a tree endowment to last into perpetuity.

Goal 2: Planting, Maintenance and Inventory Management

Manage the city's urban forest through consistent plantings, ongoing maintenance, and necessary removals, regularly using and updating the city's tree inventory database as a key tool in all urban forestry activity.

Planting

Objectives

- Established goals for planting trees in numbers that will maintain and grow the city's tree canopy coverage.
- Continue to use the canopy study to identify areas in need of planting.
- Promote and improve species diversity throughout Buchanan's urban forest to minimize the potential for disease, insect infestation, and forestry devastation. Leverage the DNR's tree species list to develop a list of recommended tree species specific to Buchanan's unique needs.

Tactics

- Adopt written guidelines for planting, including procedures for selecting and placing trees.
- Increase planting of large-growing tree species.
- Consider native trees, where responsible.
- Review/update zoning standards for species diversity.
- Review/update the city's recommended tree species list.

Maintenance

Objectives

- Adopt written specifications and standards for tree maintenance.
- Provide for the regular maintenance of trees in the community to promote and protect the health, safety, and welfare of the public.
- Supplement ongoing city-staffed forestry activity using volunteers, where appropriate for tree maintenance.
- Maintain and expand partnerships with professionals to ensure effective and efficient urban forest management.

Tactics

- Perform regular tree assessments as identified in this plan.
- Prune or remove trees identified in the inventory or during regular assessments on public property or that overhang public property. A priority will be the pruning or removal of trees that interfere with the visibility of signs or intersections.
- Address hazardous conditions created by tree roots under sidewalks or in public utilities.
- Enhance partnership, communication, and coordination with AEP/I&M Power regarding ongoing maintenance and removal activity.
- Provide proper training for in-house personnel on tree planting and maintenance.
- The city will contract for tree work only with qualified and insured arborists or tree maintenance firms experienced in structural maintenance of trees.
- Respond quickly to requests by property owners regarding tree concerns.
- Conduct multiple volunteer-staffed low-level maintenance events.

Inventory

Objectives

- Expand the scope and use of the tree inventory.
- Identify locations needing trees.
- Assure a healthy mix of diverse species in Buchanan's urban forest.

Tactics

- Confirm the staff position responsible for tree inventory maintenance and create a backup to ensure maintenance continuity.
- Use Davey Resource Group for ongoing support, as appropriate and desired.
- Research the cost benefits of integrating the inventory with the city's existing GIS.
- Expand the tree inventory to include those areas not covered in the original 2022 effort.
- Use the inventory to establish a priority list for pruning or removing the remaining elevated tree risk concerns.
- Maintain accurate records of work assigned and completed in the tree inventory database.
- Conduct annual volunteer-staffed "windshield surveys" of the city's trees using the tree inventory database to evaluate changes in the urban forest.
- Use the canopy study to identify priority areas for tree planting.
- Tag newly planted trees and record tree data.
- Make the tree inventory available online.
- Anticipate, plan, and budget an inventory update.

Goal 3: Education

Maintain and celebrate Buchanan's Tree City USA status and engage and inform city officials, leadership, staff, and citizens on the importance of trees in a community, their environmental impact, and their impact on property values.

Objectives

- Maintain and celebrate Buchanan's Tree City USA status.
- Receive growth awards from the Arbor Day Foundation as appropriate.
- Report to the Buchanan City Commission annually on the Tree Friends' activities and accomplishments.
- Develop a tree education program for city residents, covering topics such as tree selection, planting, and care.
- Inform the public about the Urban Forestry Plan and the importance of the city's forestry program.
- Foster a sense of urban forest ownership by offering a resident participation tree-planting program.
- Encourage residents to report tree concerns to the city.
- Encourage community organizations such as the Lions Club, Scouts, and school groups to participate in tree-related activities sponsored by the city.
- Build a volunteer corps to assist in plantings, young tree training, watering, and low-level maintenance.

Tactics

- Maintain Tree City USA credentials.
  - Annual Arbor Day Celebration
  - Annual Arbor Day Proclamation
  - Tree Board (i.e. BTF) or department/official responsible for trees
  - Minimum $2/capita spent on forestry each year
- Promote the city's long-standing status as a Tree City USA
- Apply for growth awards for significant program development, increases, or unique projects.
- Create materials for residents on:
  - Selecting the right tree
  - Tree planting and care
  - Participation in the tree planting program.
  - Identifying/hiring qualified tree contractors.
  - The city's urban forestry program.
- Provide information on how to report tree concerns, damaged trees, tree conflicts with overhead wires, impediments to visibility, clearance problems, etc.
- When appropriate, invite community organizations to participate in tree-related activities, such as the National Arbor Day celebration.
- Enhance the information on the city's website about trees and their importance and promote the city's urban forestry milestones and successes.
- Review the city Tree Ordinance: Chapter 106 Article 2 of the Code of Ordinances of the City of Buchanan to ensure it continues to meet Buchanan's needs and objectives.
- Establish a consistent tree education program.

VIII. Implementation

The Urban Forestry Plan was drafted to help manage the City of Buchanan's urban forest. Without a commitment of the resources necessary to implement the plan's components, the goals and objectives of the Tree Friends within the plan will not be achieved. Implementing the plan is imperative to protecting and enriching the city's urban forest, which is essential to preserving the quality and community character of the town.

Use of the Urban Forestry Plan - Implementation Playbook 2025 and Field Guide, attached as Appendix C, will help implement the Urban Forestry Plan for a healthy and thriving urban forest in Buchanan.

IX. Acknowledgments

The Buchanan Tree Friends wishes to thank everyone who contributed to the preparation and development of the City of Buchanan Urban Forestry Plan. Many people have donated their time, energy, and enthusiasm to its creation. Special acknowledgment should be given to the members of the Buchanan Tree Friends: Brian Murphy, Richard Martin, Elaine Rowland, Lane Martin, Jared Hutenstein, Cheri Martin, Cole Martin, Matt Pleasant, and Cala Moeller, as well as City Manager Tony McGee and Department of Public Works Director Mike Baker of Buchanan. Gratitude is also extended to Lee Mueller, CF, of Davey Resource Group, Inc., without whose guidance, this plan would not have been completed.

Appendix A – Tree Risk Primer

Every tree, regardless of defects, condition, location, and other factors, has an inherent risk of whole or partial tree failure. Risk assessment seeks to provide a metric of the level of risk associated with any given tree to allow for risk management to be undertaken by a tree manager. The current editions of ANSI A300 (Clause 13) standards and the ISA's associated publication Best Management Practices: Tree Risk Assessment were used to guide an organized, systematic, and reproducible method for assessing tree risk.

Trees can have multiple modes of potential failure with varying levels of risk associated with each. During Buchanan's tree inventory, the mode of failure with the greatest associated risk was recorded as the overall risk rating for the tree. The specified time frame for the risk assessment was one year. However, for regular tree assessment, Buchanan may wish to use a time-frame based on the next anticipated assessment.

Risk ratings can help tree managers set priorities and organize tree work. Generally, trees with higher risk ratings should be maintained or removed first, to lower the risk and liability associated with these trees. It is up to the tree manager to decide what level of risk is acceptable and under what circumstances.

Levels of Risk Assessment

Arborists assess tree risk using different tools and at different levels of detail. ISA best management practices suggest three levels of risk assessment, from least to most intensive.

Level 1: Limited Visual Assessment
A walk-by or drive-by assessment designed to quickly scan a large population of trees and identify those which need a more advanced assessment due to defects with an imminent or probable likelihood of failure. Level 1 assessments do not typically result in risk ratings but rather provide a list of tree locations with any recommended remedial action. A recommendation for which trees should be assessed at the next level of assessment may be recommended. This method may be a good option when funding for a full inventory and risk assessment is not available or after major storms when a rapid survey of damage is needed.

Level 2: Basic Assessment
A detailed, 360-degree visual inspection of individual trees assessing the site, roots, trunk, and branches resulting in an assessment of the tree's health and a risk rating that can be used to prioritize tree work within a large population of trees. A level two assessment is completed in many tree inventories or when evaluating an individual tree for maintenance options.

Arborists conducting a level two basic risk assessment.

Level 3: Advanced Assessment
Additional inspection following a Basic Assessment that uses specialized equipment (e.g. resistograph, aerial inspection, pull test, etc.) to provide more detailed information about a specific tree condition of concern, typically to help make management decisions about that specific condition. Advanced assessments may require use of a bucket truck to reach defects in the crown of the tree, equipment, and experience to perform sonic tomography to map decay pockets, or sampling of diseased plant tissue for identification in a lab, to name a few examples. Level 3 assessments are warranted in situations where a tree is particularly valuable and worthy of additional attention or that tree removal or maintenance activities could prove exceptionally disruptive to the public (e.g. street closure).

Process of Risk Assessment

The primary components of a risk assessment in line with the current editions of ANSI A300 (Clause 13) standards and the ISA's *Best Management Practices: Tree Risk Assessment* are as follows.

Time Frame
Tree risk should be assessed within a specified time frame. Since all trees are likely to experience whole or partial tree failure at some point during their existence, and since conditions of a tree and site can change dramatically over time, setting a specific time frame for risk assessment is essential to conveying risk accurately and determining appropriate management practices. Most risk assessments will have a specific time frame of one to three years. Predictive power decreases as time increases, so assessments are not typically done for more than a five-year period. Depending on the nature of the local forestry program, it may be appropriate to consider a time-frame that roughly aligns with the expected inspection interval (timeline between regular tree assessments).

Likelihood of Failure
The first step in assessing tree risk involves determining the likelihood that the tree or tree part will fail within the specified time frame. Site factors, such as slope, soil texture and saturation, and recent grading or tree removals, are considered in tandem with tree factors such as health, species-specific failure profile, damage, and structural defects. The likelihood of failure is then characterized as either:

- ***Improbable*** – The tree or tree part is not likely to fail during normal weather conditions and may not fail in extreme weather conditions within the specified time frame.
- ***Possible*** – Failure may be expected in extreme weather conditions, but it is unlikely during normal weather conditions within the specified time frame.
- ***Probable*** – Failure may be expected under normal weather conditions within the specified time frame
- ***Imminent*** - Failure has started or is most likely to occur in the near future even without significant wind or increased load.

Likelihood of Target Impact
The next step is to determine how likely it is that the tree or tree part in question will impact a target if it fails. This involves consideration of the potential targets located around a tree, which may include fixed structures such as houses or playground equipment with a constant occupancy rate and mobile targets such as people or vehicles with lower occupancy rates, as well as an assessment of where a tree or tree part will land if it fails. Protection (e.g. a roof, direction of fall) to the target is also taken into consideration. The likelihood of target impact is then characterized as either:

- ***Very Low*** – The chance of the failed tree or tree part impacting the specified target is remote.
- ***Low*** – There is a slight chance that the failed tree or tree part will impact the target.
- ***Medium*** – The failed tree or tree part could impact the target, but it is not expected to do so.
- ***High*** – The failed tree or tree part is likely to impact the target.

Combined Likelihood of Failure & Target Impact

The likelihood of failure and the likelihood of impacting a target are combined using the matrix below to determine the likelihood of failure impacting a target.

Likelihood of Failure	Likelihood of Impacting Target			
	Very Low	Low	Medium	High
Imminent	Unlikely	Somewhat Likely	Likely	Very Likely
Probable	Unlikely	Unlikely	Somewhat Likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat Likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Consequence of Failure & Target Impact

The consequences of a tree failing and striking a target are a function of the value of the target and the amount of injury, damage, or disruption that could be caused by the failure and impact. Considerations when determining potential consequences include the size of the part which may fail, the fall distance, characteristics of the target, and whether there are any structures which may protect the target. Consequences of failure and target impact are characterized as either:

- *Negligible* – Does not result in personal injury, involves low-value property damage, or disruptions that can be replaced or repaired.
- *Minor* – Involves minor personal injury, low- to moderate-value property damage, or small disruption of activities.
- *Significant* – Involves substantial personal injury, property damage of moderate- to high-value, or considerable disruption of activities.
- *Severe* – Involves serious personal injury, high-value property damage, or major disruption of important activities.

Risk Rating

The combined likelihood of failure & target impact is then combined with the consequence of failure & target impact in the matrix, below, to produce a risk rating. There may be multiple modes of potential tree failure and multiple targets to consider, and each combination of failure and target will result in a different risk rating. The overall highest risk rating is usually used as the risk rating for the tree

Likelihood of Failure & Target Impact	Consequences			
	Negligible	Minor	Significant	Severe
Very Likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	Extreme
Somewhat Likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

Risk Mitigation, Prioritization, and Residual Risk

Once a risk rating is assigned, the final step is to determine whether risk mitigation is necessary and prioritize risk mitigation work. Extreme and High-Risk trees should be managed first, followed by Moderate Risk trees as time and budgets allow, or as deemed necessary by the tree manager. Low Risk trees can typically be maintained during routine maintenance cycles or when time and budgets allow.

Risk mitigation can take many forms. Common methods of mitigation include tree removal or pruning to remove parts that may fail. Other forms of mitigation may include cabling and/or bracing weak branch unions, moving targets such as sheds or play equipment outside the anticipated impact zone, excluding targets from the impact zone using fencing or other barriers, and/or monitoring the tree. Ultimately, it is up to the tree manager to decide what mitigation techniques are appropriate for each tree and what level of risk is acceptable.

Residual risk is the risk remaining after mitigation and considering the residual risk after a mitigation action may help tree managers determine the best actions to take. For example, a tree with a large dead limb over a busy intersection might have a High-Risk rating, but removal of that limb would sufficiently mitigate the risk such that the residual risk is low. In this case, it may be best to remove the dead limb but retain the tree. In other cases, there may not be any mitigation option short of tree removal which will reduce risk to an acceptable level, in which case the tree should be removed.

City of Buchanan Tree Ordinance

ARTICLE II. - TREES

DIVISION 1. - GENERALLY

Sec. 106-26. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Large trees means those attaining a height of 45 feet or more.

Medium trees means those attaining a height of 30 to 45 feet.

Municipal arborist means the superintendent of the department of parks and cemetery, or other qualified designated official of the city, assigned to carry out the enforcement of this article.

Park means all public parks having individual names.

Principal thoroughfare means any street upon which trucks are not prohibited.

Property line means the outer edge of a street or highway.

Property owner means the person owning such property as shown by the county auditor's plat of the county.

Public places means all other grounds owned by the city.

Public trees means all shade and ornamental trees now or hereafter growing on any street or any public areas where otherwise designated.

Small trees means those attaining a height of 20 to 30 feet.

Street or highway means the entire width of every public way or right-of-way when any part thereof is open to the use of the public, as a matter of right, for purposes of vehicular and pedestrian traffic.

Treelawn means that part of a street or highway, not covered by sidewalk or other paving, lying between the property line and that portion of the street or highway usually used for vehicular traffic.

Trees means trees, bushes and shrubs.

Vegetation means recognized ornamental perennials not exceeding 16 inches in height.

(Comp. Ords. Rev. 1991, § 35.212; Ord. No. 2017.06/403, 6-26-17)

Cross reference— Definitions generally, § 1-2.

Sec. 106-27. - Obstruction; pruning of trees.

(a) *Duty of owner.* It shall be the duty of any person owning or occupying real property bordering on any street upon which property there may be trees, to prune such trees in such a manner that they will not obstruct or shade the street lights, obstruct the passage of pedestrians on sidewalks, obstruct vision of traffic signs, or obstruct view of any street or alley intersection. The minimum clearance of any overhanging portion thereof shall be ten feet over sidewalks, and 12 feet over all streets except truck thoroughfares which shall have a clearance of 16 feet.

(b) *Notice to prune.* Should any person owning real property bordering on any street fail to prune trees as provided in subsection (a) of this section, the city manager or his/her appointee shall provide a notice ordering such person, within ten days after receipt of written notice, to so prune such trees.

(c) *Service of notice.* Such notice shall be deemed to be properly served if a copy thereof is:

(1) Delivered personally;

(2) Sent by certified or first-class mail addressed to the last known address; or

(3) If the notice is returned showing that the letter was not delivered, a copy thereof shall be posted in a conspicuous place in or about the structure affected by such notice.

(d) *Failure to comply.* When a person to whom a notice order is directed shall fail to comply within the specified time, it shall be lawful for the city to prune such trees, and the cost thereof shall be assessed to the owner as provided by law.

(Comp. Ords. Rev. 1991, § 35.216; Ord. No. 2016.01/398, 1-11-16)

Sec. 106-28. - Abuse, mutilation of public trees.

Unless specifically authorized by the municipal arborist, no person shall intentionally damage, cut, carve, transplant, or remove any tree; attach any

rope, wire, nails, advertising posters, or other contrivance to any tree; allow any gaseous liquid, or solid substance which is harmful to such trees to come in contact with them; or set fire or permit any fire to burn when such fire or the heat thereof will injure any portion of any tree.

(Comp. Ords. Rev. 1991, § 35.217)

Sec. 106-29. - Protection of trees.

No person shall excavate any ditches, tunnels, trenches, or lay any drive within a radius of ten feet from any public tree without first obtaining a written permit from the municipal arborist.

(Comp. Ords. Rev. 1991, § 35.219)

Sec. 106-30. - Placing materials on public property.

No person shall deposit, place, store or maintain upon any public place of the city any stone, brick, sand, concrete, or other materials which may impede the free passage of water, air, and fertilizer to the roots of any tree growing therein, except by written permit of the municipal arborist.

(Comp. Ords. Rev. 1991, § 35.220)

Sec. 106-31. - Penalty.

Any person violating or failing to comply with any of the provisions of this article shall be guilty of a misdemeanor, and upon conviction thereof shall be fined a sum as provided in section 1-15 of this Code.

(Comp. Ords. Rev. 1991, § 35.221)

Secs. 106-32—106-40. - Reserved.

DIVISION 2. - MUNICIPAL ARBORIST

Sec. 106-41. - Duties.

The municipal arborist shall have the authority to promulgate the rules and regulations of the arboricultural specifications and standards of practice governing the planting, maintenance, removal, fertilization, pruning and bracing of trees on the streets or other public sites in the city, and shall direct, regulation and control the planting, maintenance, and removal of all trees and vegetation growing now or hereafter in any public area of the city. He shall cause the

provisions of this article to be enforced. In his absence these duties shall be the responsibility of a qualified alternate designated by the city.

(Comp. Ords. Rev. 1991, § 35.213; Ord. No. 2017.06/403, 6-26-17)

Sec. 106-42. - Authority.

(a) The municipal arborist shall have the authority and jurisdiction of regulating the planting, maintenance and removal of trees on streets and other publicly owned property to insure safety or preserve the aesthetics

of such public sites.

(b) The municipal arborist shall have the authority and it shall be his duty to supervise or inspect all work done under a permit issued in accordance with the terms of this article.

(c) The municipal arborist shall have the authority to affix reasonable conditions to the granting of a permit in accordance with the terms of this article.

(d) The municipal arborist shall have the authority to formulate a master street tree plan with the advice, a hearing, and approval of the city commission. The master street tree plan shall specify the species of tree to be planted on each of the streets or other public sites of the city. From and after the effective date of the master street tree plan, or any amendment thereof, all planting shall conform thereto.

(1) The municipal arborist shall consider all existing and future utility and environmental factors when recommending a specific species for each of the streets and other public sites of the municipality.

(2) The municipal arborist, with the approval of the city commission, shall have the authority to amend or add to the master street tree plan at any time that circumstances make it advisable.

(Comp. Ords. Rev. 1991, § 35.214)

Sec. 106-43. - Interference with.

No person shall hinder, prevent, delay or interfere with the municipal arborist or any of his assistants while engaged in carrying out the execution or enforcement of this article; provided, however, that nothing in this article shall be construed as an attempt to prohibit the pursuit of any remedy, legal or equitable, in any court of competent jurisdiction for the protection of property rights by the owner of any property within the city.

(Comp. Ords. Rev. 1991, § 35.218)

Sec. 106-44. - Promulgation of rules, regulations.

The municipal arborist shall have the authority to promulgate the rules and regulations of the arboricultural specifications and standards of practice governing the planting, maintenance, removal, fertilization, pruning, and bracing of trees on the streets or other public sites in the city. Copies of these rules and regulations shall be on file in the office of the city clerk.

(Comp. Ords. Rev. 1991, § 35.230)

Secs. 106-45—106-55. - Reserved.

DIVISION 3. – PERMITS

Sec. 106-56. - Planting and maintenance.

(a) No person shall plan, spray, fertilize, preserve, prune, remove, cut above ground, or otherwise disturb any tree on any street or city-owned property or plant any form of vegetation on city- owned property or in the public right-of-way without first filing an application and procuring a permit from the municipal arborist or otherwise specified municipal authority. The person receiving the permit shall abide by the arboricultural specifications and standards of practice adopted by the municipal arborist.

(b) Application for permits must be made at the office of the municipal arborist not less than 48 hours in advance of the time the work is to be done.

(c) Standards of issuance. The municipal arborist shall issue the permit provided for in this section if, in his judgment, the proposed work is desirable and the proposed method and workmanship thereof are of a satisfactory nature. Any permit granted shall contain a definite date of expiration and the work shall be completed in the time allowed on the permit and in the manner as therein described. Any permit shall be void if its terms are violated.

(d) Notice of completion shall be given within five days to the municipal arborist for his inspection.

(e) The application required in this section shall state the number of trees to be set out; the location, grade, species, cultivar or variety of each tree; the method of planting; and such other information as the municipal arborist shall find reasonably necessary to a fair determination of whether a permit should be issued.

(f) Whenever any tree shall be planted or set out in conflict with the provisions of this section, it shall be lawful for the municipal arborist to remove or cause removal of the same, and the exact cost thereof shall be assessed to the owner as provided by law.

(g) The application required in this section shall state the number and kinds of trees to be sprayed, fertilized, pruned, or otherwise preserved; the kind of treatment to be administered; the composition of the spray material to be applied; and such other information as the municipal arborist shall find reasonably necessary to a fair determination of whether a permit should be issued.

(Comp. Ords. Rev. 1991, § 35.215; Ord. No. 2017.06/403, 6-26-17)

Sec. 106-57. - Removal, replanting and replacement.

(a) Wherever it is necessary to remove a tree from a treelawn in connection with the paving of a sidewalk, or the paving or widening of the portion of a street or highway used for vehicular traffic, the city shall replant such trees or replace them. Provided that conditions prevent planting on treelawns, this requirement will be satisfied if any equivalent number of trees of the same size and species as provided for in the arboricultural specifications are planted in an attractive manner on the adjoining property.

(b) No person or property owner shall remove a tree from the treelawn for the purpose of construction or for any other reason, without first filing an application and procuring a permit from the municipal arborist, and without

replacing the removed tree or trees in accordance with the adopted arboricultural specifications. Such replacement shall meet the standards of size, species and placement as provided for in a permit issued by the municipal arborist. The person or property owner shall bear the cost of removal and replacement of all trees removed.

(Comp. Ords. Rev. 1991, § 35.215)

CITY OF BUCHANAN

Urban Forestry Plan
Cultivating a Resilient and Livable City

Implementation Playbook

2025 Field Guide

A Plain-Language Companion to the 2025 Urban Forestry Plan

Table of Contents

Section 1 – Purpose & Connection to the Urban Forestry Plan

This Playbook is the companion to the City of Buchanan's 2025 Urban Forestry Plan. It translates the Plan's goals into clear actions for city leadership, the Department of Public Works (DPW), the Planning Commission, the Buchanan Tree Friends (BTF), and residents. Success means planting and maintaining the right trees, updating data, and communicating progress clearly.

Section 2 – Who Does What (Roles + Activity-Level RACI)

R = Responsible • A = Accountable • C = Consulted • I = Informed

Key Activity	City Commission	City Manager	DPW	Planning Commission	Tree Friends	Residents
Urban Forestry Budget & Funding	R	A	C	I	C	
Tree Planting & Replacement	I	A	R	C	R	C
Tree Maintenance & Pruning	I	A	R	C	C	
Tree Inventory Data Management		A	R	C	C	
Volunteer & Community Engagement	I	C	C		R	I
Public Outreach & Education	I	C	C		R	I
Annual Forestry Report & Presentation	A	R	R	C	C	I
Grant & Cost-Share Program Management	I	A	C	C	R	
Plan Review & Continuous Improvement	A	R	C	C	C	I

Section 3 – Annual Forestry Calendar (Aligned to Fiscal Year: July–June)

Month	Focus & Priority Tasks
July	Kick off new fiscal year. Begin mid-season watering, pruning, and maintenance. Update tree inventory database carry-forward items.
August	Continue maintenance; monitor planting survival; community watering outreach; spot inspections; annual tree/windshield survey.
September	Prepare for fall planting; order and stage new trees; recruit volunteers; resident outreach.
October	Major fall planting events; site prep; school and community engagement.
November	Finish planting and mulching; compile annual data; inventory cleanup; progress review.
December	Data entry catch-up; finalize estimates for next year; public recognition of volunteers.
January	Annual planning meeting; set next year's targets; discuss any anticipated infrastructure projects; review prior performance; integrate into FY budget.
February	Finalize forestry budget requests; coordinate with City Manager/Finance; early outreach for summer.
March	Spring prep — order trees, engage volunteers, plan Arbor Day, prep planting maps.
April	Spring planting (weather permitting); activate watering systems; Arbor Day engagement.
May	Continue planting and watering cycles; inspections; volunteer watering rounds; data logging.
June	Final maintenance; prune where possible; finalize annual report draft; handoff to new fiscal year.

Section 4 – Tree Inventory Database Usage Guide

The central database for Buchanan's street and park trees that the city currently uses TreeKeeper software. Use TreeKeeper or any subsequently used software to log plantings, removals, pruning, and inspections. Keep data current to support budgeting and reporting.

- DPW: Log all plantings, removals, pruning, and responses to resident-initiated tree requests within 10 business days.
- Tree Friends: Log volunteer maintenance and event activity; flag concerns.
- Planning/Clerk: Maintain backup exports quarterly to the city's shared drive.
- Reports: Use TreeKeeper exports to populate the Annual Forestry Report (Section 9).Section 5 – Recordkeeping & Data Protocols

Section 5 – Recordkeeping & Data Protocols

Good records protect the city and improve planning. Follow these minimum standards:

- Enter all work (plant, prune, remove) in the tree inventory database within 10 business days.
- Conduct annual windshield assessments and update condition/risk flags.
- Attach notes/documents for infrastructure conflicts and resolutions.
- Assign a primary and backup data steward to avoid lapses.
- Produce a quarterly update/audit of forestry activity

Section 6 – Community Engagement & Communication

Build visibility and momentum with three anchor touchpoints each year and light, regular updates.

- **Arbor Day (April):** Education, planting demonstration, and Tree City USA recognition.
- **Summer Watering Day (July):** Volunteer watering blitz, check tree bags, spotlight "Tree of the Month."
- **Fall Planting Weekend (October):** Neighborhood plantings; pair with school and service group participation.

Section 7 – Funding & Grants Quick Guide

Target a balanced mix: 35% removals, 35% maintenance, 20% planting, 10% admin. Augment general operating funds with grants, tribute tree purchases, and donations:

- Michigan DNR Urban & Community Forestry grants
- Great Lakes Restoration Initiative (GLRI) grants
- Arbor Day Foundation opportunities
- Tribute Tree and Resident Cost-Share Programs
- Local business sponsorships (in-kind watering, materials)

Section 8 – Annual Work Plan Template

Use this each January to set targets and owners for the new fiscal year.

Goal Category	Annual Target	Responsible Party	Budget Source	Status (√ Complete)
Tree Planting	50 trees planted (25 residential via cost-share)	DPW + Tree Friends	Grants + City Budget	
Maintenance	50 trees pruned; 100 trained	DPW	City Budget	
Removals	Based on natural mortality rates, Buchanan can expect roughly 20-30 tree removals/year.	DPW	City Budget	
Education	3 events; Tree City USA renewal	Tree Friends	Donations + Grants	
Recordkeeping	100% entries current by Dec 1	DPW (Data Steward)	—	

Section 9 – Annual Forestry Report Template

Use this summary each July for the City Commission.

Metric	Value
Trees planted (total / residential / public):	_____ / _____ / _____
Trees removed:	_____
% inventory updated in TreeKeeper:	_____ %
Volunteer hours:	_____
Grant funds secured ($):	$_____
Canopy diversity progress (e.g., % maples):	Maples: _____ % | Other: _____ %
Top 3 priorities for next fiscal year:	1) ____ 2) ____ 3) ____

Section 10 – Continuous Improvement & Review Cycle

Each January, review results and update the Annual Work Plan. Every five years, update the full Urban Forestry Plan with new canopy and inventory data. Capture lessons learned and carry them forward.