URBAN FORESTRY MANAGEMENT PLAN

VILLAGE OF WILLIAMSVILLE

NEW YORK

Dates covered by plan:
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Prepared for:
Village of Williamsville Tree Board
Village of Williamsville Department of Public Works

Prepared by:
Dan DeLano, Deputy Mayor
Ben Vilonen, Public Works Crew Chief
Maggie Hamilton, Director of Community Development

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Village of Williamsville Board of Trustees

Executive Summary

Williamsville is a unique Village, second to none when it comes to small town character, outstanding citizens, and the potential for a world class urban forest. This document outlines the path to this achievable goal, providing an overall management plan for the urban forest. It outlines the current condition of our urban forest, how it came to be, and the long term vision for its future. It concludes with the policies and management practices that must be implemented in order to successfully execute this plan.

Williamsville is divided East-West by the Onondaga escarpment, and North-South by the Ellicott Creek, and thus has four distinct types of soil areas: rocky, loamy, silt, and clay. In addition the Village has heavily trafficked streets and therefore heavy salt use, which poses species selection challenges. Understanding these challenges coupled with adherence to this management plan will allow us to reach our goal of a healthy and striving urban forest.

This management plan gives you a brief look into Williamsville's history, showing the past and present condition of the urban forest, which is currently in a state of rebuilding, and most importantly it shows you the benefits of a properly managed and maintained urban forest. It outlines the actions required to further enhance the health and beauty of Williamsville's existing trees, and lays out the Village's ambitious urban forestry goals for the future.

A healthy urban forest provides health, economic, and environmental benefits. With a detailed list of goals, objectives, and actions, Williamsville's Urban Forestry Management Plan (UFMP) provides a roadmap to rebuild and maintain our urban forest.

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Williamsville's Urban Forestry Vision and Mission

Vision statement

Our vision for the future of Williamsville's urban forest is to have a large variety of trees consisting of various sizes, ages, and species. The trees should be selected and maintained according to the Best Management Practices (BMP's) established by the International Society of Arboriculture (ISA).

Our UFMP can help us achieve a healthy and sustainable urban forest. By properly managing plantings and caring for trees, we can benefit our citizens with improved economic and environmental wellbeing. Our UFMP will ultimately result in increased public safety, and enable our employees to provide more cost effective maintenance.

Mission statement

The mission of the Village of Williamsville Tree Board, with the creation of this document, is to maintain and expand our current urban forest in a sustainable, cost effective manner following current ISA and American National Standards Institute (ANSI) BMPs. We aim to enhance Williamsville's urban forest by planting additional trees, shrubs and ground covers wherever possible and as needed in the Village right-of-ways, properties, and parks.

Introduction

Why we need a plan

We need an Urban Forest Management Plan to better help our citizens as well as our employees understand the importance and proper care of our urban forests. Benefits from a properly managed and maintained urban forest include but are not limited to, cleaner air quality for our Village, increased property values, an overall improvement in mental happiness, cooler temperatures from the shade they provide, a reduction in water consumption in landscaped areas, increased public safety due to trees being properly structured/pruned, and an overall added beauty to our community.

Adoption of this Urban Forest Management Plan ensures proper care and growth of our urban forests through durable installation and long term maintenance. The result will be a well maintained and healthy urban forest, as well as successful planning and management for future development. With this plan in place, and its successful operation, the Village of Williamsville will benefit greatly, and the employees and citizens of Williamsville will enjoy these benefits for many years.

Given the cost of removal and replacement of trees in our urban forests, we look to create this management plan to help protect the investment of our existing urban forest and to constantly expand with healthy additions. With proper maintenance and care of existing trees, shrubs and landscaping, we look to keep them healthy and thriving with proper pruning, watering, replacement choices, and maintenance techniques. We will accomplish this by following specific guidelines for nursery quality when planting young trees, having the shaping and pruning of our urban forest performed or overseen by a certified arborist, and practice best watering and maintenance techniques for the existing urban forest and its additions. Thus keeping our ever expanding urban forest a healthy and thriving attribute for our citizens to enjoy.

Having in place a successful UFMP (Urban Forest Management Plan) will help in preventing and addressing any challenges brought on by storms, invasive pests, or disease. By following the Village's UFMP, our trees will be properly selected for their areas, pruned and maintained properly, resulting in less damage from pests, disease, and broken limbs or downed trees due to severe weather.

Having an Urban Forest Management Plan also reduces liability on the Village due to the fact we have a clear legal document showing the Village is following a specific management plan to properly maintain our urban forest, in the unfortunate event an accident should occur.

Building a successful Urban Forest Management Plan is not only beneficial in keeping the Village's urban forest healthy, properly maintained, and aesthetically pleasing, but it also opens up the possibility to future grant money. Having an Urban Forest Management Plan in effect, we are more likely to be recognized as professional and serious in properly using money granted by those outside powers.

Benefits provided by trees

Trees are valuable infrastructure. They provide a countless amount of benefits to our community including, cleaner air quality for our Village, increased property values, an improvement in mental health, and cooler temperatures from the shade they provide, a reduction in water consumption in landscaped areas, and an overall added beauty to our community. Studies have also proven that people will buy and pay more for goods and services in properly managed urban forested areas.

According to a study performed by Dan Burden, a partner and senior urban designer with Glatting, Jackson, and Walkable Communities Inc**,** the planting cost of a $250-$600 (includes first 3 years of maintenance) street tree returns over $90,000 of direct benefits for the lifetime of that tree. Examples of these benefits include but are not limited to:

Health and Safety Benefits:

- Increased motorist and pedestrian safety.
- Trees call for planting strips which further separate motorist from pedestrians, buildings and other urban fabric to increase safety.
- Trees create a more pleasant environment bringing about increased walking, talking, socializing and pride in our village, improving the village's atmosphere for business to thrive.
- Improved air quality: Trees in street proximity absorb 9 times more pollutants than more distant trees.
- Reduced blood pressure, improved overall emotional and physiological health.

Economic and Infrastructure Benefits:

- Business on tree-scaped streets show 20 percent higher income intake, which is often the essential competitive edge needed for on and off main street store success.
- Less drainage to our infrastructure: Trees absorb the first 30 percent of precipitation through their leaf system, and up to 30 percent more precipitation is absorbed into the ground.
- Slows sun related degradation of pavement and other materials.
- Added value to adjacent homes, businesses, and tax base. Realtor estimates of street tree vs. non-street tree comparable streets result in a $15,000- $25,000 increase in home or business value; which in turn creates an increase of property tax revenues for our village.

Environmental benefits:

- Trees create a more pleasant environment and bring about increased walking, talking, socializing and pride in our village, improving the village's atmosphere for business to thrive.
- Trees convert streets, parking lots, and village walls into more aesthetically pleasing environments.
- Screen less desirable views.
- Cool the air through transpiration, reducing the urban heat inland effect.
- Provide habitat for wildlife.
- Create a connection to nature and the human senses.

Scope of the Plan
Planning Timeline

Complimentary documents and attachments as detailed in the goals, objectives, and action items in this plan should be generated no later than 2020.

The plan has a 20-year horizon with 10-year planning increments. We plan to use it on a daily basis to help ensure that proper management and care of the Village's urban forest is upheld. We also plan to revisit it on an annual basis to help monitor if/how efficient the UFMP goals and objectives are being implemented, and if changes need to be made.

At the end of the first 10-year period, we are confident that the plan we have presented here will have the improved changes necessary to reinstate it for a length of time greater than that of the original 10-year period.

Relationship to other planning documents

This plan acts as an accessory to other planning documents that set forth Village regulations, such as the Village's Street Tree Ordinance, and the approved Street Tree List. This UFMP should be used in tandem with these other documents as a strong guiding mechanism in tree selections, proper planting procedures, maintenance, and long term care in all forested areas.

Status of the Urban Forest

Historical Context

Our Urban Forest Management Plan focuses on Williamsville's street and park trees.

Past design and limited tree selection have left us with a high level of vulnerability to species specific disease and pest problems, and due to the short life span of certain selected species, we find parts of our urban forest coming to the end of their natural life cycle. Combine this with the devastation and removal of a good amount of our tree canopy in the October 2006 storm, maintaining our urban forest has been a great challenge. Historically, these sections of our urban forest have been maintained by a variety of workers using a variety of techniques with no formal training. The Village Tree Board understood that without mandatory adherence to ISA best management practices, and a replacement plan in place that mandates greater species diversity, emphasizing native plantings when possible, our urban forest would have continued to decline. A diverse tree species list was established with the help of the Village, NYSDEC, and NYSDOT arborists and an aggressive replanting campaign began in 2008. Close to 1200 trees were planted in the Village from 2008 to fall of 2016. We are now at the point where these trees are going to need shaping in order to insure a more manageable urban forest. There will always be trees to remove and replace. Thus the importance of implementing this plan. A GIS based tree survey was done in the summer of 2015, including a health assessment of the trees and dimensions. This survey also included potential planting sites and will be updated annually.

Management

Summary of current tree management practices/programs

Currently, the Village trees are maintained by the Department of Public Works. Their duties include but are absolutely not limited to tree maintenance, tree removal, planting, trimming/pruning, watering, as well as disaster removal/repair, tool maintenance/repair, and much more. They also report back to the Tree Board with any extraordinary concerns regarding tree issues. Large removals and pruning that must take place at a great height are contracted out.

Community

Values

We highly support community involvement in our UFMP, from community outreach programs to community education. With proper education, training, and supervision, volunteers are a valuable asset to the Village of Williamsville. Expanding community involvement would be a great success of this UFMP. Increasing volunteerism and instilling a sense of ownership for their Village in residents will help strengthen and beautify our community. The Village of Williamsville has a strong volunteer base involved in our Tree Board and plantings, but, like anything, it can always improve.

Local concerns

The main concern with community involvement is the lack of training an average volunteer has, not realizing what it takes to successfully plant, grow, and maintain a healthy tree. One of our main goals with this management plan is to address that concern with community education to help citizens reach their goal of successfully contributing to the Village's beautiful urban forest.

Community

Community involvement should be an important part of our growing and thriving urban forest. Our goal is, and has been, to increase community involvement through the village's website, creating a more open channel of communication between citizens and the program. The Village of Williamsville's Street Tree List should continue to be available to the public through the Village's website and should have a press release through local papers annually to show any changes or additions. Community involvement is important in Village neighborhoods to strengthen and personalize care for trees.

Communication between volunteer groups and the Tree Board is imperative and should be more easily achieved. Volunteer groups are often well intentioned, but without communication from staff and Tree Board members, improper tree selection may take place. Additionally, it is critical that proper care for the trees is performed by trained and knowledgeable individuals

Goals, Objectives, and Actions

Goal 1

Increase Species Diversity in the Village's tree inventory to have no more than 30 percent of any one tree family, 20 percent of any one genus, and no more than 10 percent of any one species.

Objective 1.1

Enhance the Village of Williamsville's Street Tree List for landscape uses and encourage planting of natives where appropriate.

Action 1.1.1

The Village of Williamsville Street Tree List should be visited annually by the Public Works Crew Chief, the Parks Committee, The Tree Board, and the Village Arborist.

Action1.1.2

Generate a matrix of attributes for each tree on the approved Street Tree List.

Action 1.1.3

Circulate the draft to appropriate Village staff for concurrence and approval, then add to the UFMP.

Objective 1.2

Create a master planting plan for UFMP area.

Objective 1.3

Identify areas where age and species diversity is needed and develop a program to diversify.

Action 1.3.1

Inspect all trees in each landscape zone at the rate of one quadrant per month to determine age and species diversity needs in the Williamsville inventory. All should have been inspected at the end of 18 months.

Action 1.3.2

Prioritize the quadrants according to the greatest need.

Action 1.3.3

Ideally trees will be removed in the summer so that they may be replaced with new plantings in the fall.

Action 1.3.4

Remove and replace trees according to funding and priority.

Goal 2

Establish Tree Replacement Program, i.e. removing improper species of trees and/or addressing trees planted in the wrong place, replace root bound trees, and trees that are reaching the end of their useful life.

Objective 2.1

Identify problem trees, root bound trees, trees at the end of their useful lives, and trees planted in improper locations for their species. Develop a long term removal and replacement policy.

Action 2.1.1

Develop a priority rating system for tree removal.

Action 2.1.2

Inspect all trees in each quadrant at the rate of one zone per month so that all trees in the Williamsville inventory have been inspected throughout an 18 month cycle.

Action 2.1.3

Prioritize the zones according to the greatest need.

Objective 2.2

Establish a policy that mandates the replacement of removed trees, where appropriate, within a set period of time.

Action 2.2.1

The Public Works Chief with the help of the Tree Board liaison and Tree Board, should write a plan for the 2018-19 fiscal year budget for replacement and removal needs.

Action 2.2.2

Have the plan reviewed by the appropriate Village staff for approval.

Action 2.2.3

All trees removed shall be replaced with a designated species selected from the Village's Street Tree List unless the space doesn't meet appropriate planting criteria. (This will be clearly outlined in the written policy)

Goal 3

Develop a tree care policy based on ISA and ANSI A300 standards.

Objective 3.1

Develop tree pruning guidelines based on ISA and ANSI standards that are specific to the needs of the Village of Williamsville. These address the different needs of young tree maintenance, adult tree maintenance and mature tree maintenance.

Action 3.1.1

Tree Care policy shall follow ANSI A300 Part 1 (2008 printing) and ISA Best Management Practice tree pruning guide.

Action 3.1.2

Have the policy reviewed by the appropriate village staff for approval.

Action 3.1.3

Attach the policy to a municipal ordinance.

Objective 3.2

Establish a tree pruning program that is appropriate for the needs of the trees.

Action 3.2.1

Develop a 5-year trimming schedule for the Village's quadrants.

Objective 3.3

Establish tree planting specifications for both tree stock selection and for the actual planting procedure.

Action 3.3.1

Write tree planting specifications for both tree planting and tree selection.

Action 3.3.2

Add the written specifications to the UFMP.

Objective 3.4

Tree protection during construction.

Action 3.4.1

Mandate compliance with ANSI A300 Part 5 (2012 printing) and ISA companion publication during construction in city owned landscaping.

Goal 4

Increase Canopy Cover.

Objective 4.1

Identify and define the current canopy cover of the Village and then establish a long term goal.

Action 4.1.1

Using various technologies and available literature determine existing canopy.

Action 4.1.2

Plant to expand canopy cover. (A long term goal for the percentage of canopy cover expansion will be established after 4.1.1 is determined.)

Objective 4.2

Based on the long-term goal the village determines, develop a planting plan that addresses and accomplishes this goal over a measurable time frame.

Action 4.2.1

Identify potential planting sites and potential tree selections for those sites with a greater canopy.

Action 4.2.2

Develop an implementation plan based on priorities established in goal 1.

Goal 5

Establish a policy for qualified staff to approve new development tree plantings in the Mixed Use zones in the village.

Goal 6

Secure adequate funding to support a healthy urban forest in the Village. Determine cost of implementing UFMP.

Objective 6.1
Preform needs assessment and identify costs based on goals and objectives.

Action 6.1.1
Assess the overall costs, including planting costs, maintenance costs, watering costs, labor costs, etc.

Action 6.1.2
After an overall cost has been identified, take those numbers to the appropriate parties to find a funding source to adequately care for each aspect of the UFMP.

Action 6.1.3
Once those funds are secured they should continually be increased at the discretion of the Village Board to keep on track with inflation.

Objective 6.2
Increase LLMD funding where appropriate and when possible.

Action 6.2.1
Advocate with Village staff and Board for increased funding such as grants, general fund, donations, or increased fees, to help in funding the tree program.

Goal 7
Create a Community Educational Program.

Objective 7.1
Work with or develop non-profit groups and participate in the education of said groups.

Action 7.1.1
Contact citizens, non-profit groups, and neighborhood associations to help them inspect and evaluate trees.

Action 7.1.2
Give replacement tree options.

Action 7.1.3
Aid the public in planting design, i.e. bed size, irrigation, soil volume, soil type, etc.

Objective 7.2
Designate maintenance responsibilities.

Action 7.2.1
If the community plants in the village, maintenance responsibilities shall be designated at the time of planting. Either the citizens take responsibility for a healthy life span of said trees, or the responsibilities are given to the village.

Action 7.2.2
Help educate the community, if maintenance duties are assigned, to insure proper care and maintenance of said trees through good watering, pruning, and overall maintenance techniques.

Objective 7.3
Create an interactive online program.

Action 7.3.1
Work with the Village's Director of Community Development to make the UFMP available to citizens through the village's website.

Goal 8
Computerize Tree Inventory.

Objective 8.1
Manage existing tree inventory on a semi-annual basis following each planting.

Action 8.1.1
Research and monitor grant availability.

Goal 9
Enhance interdepartmental communication.

Objective 9.1
Establish Policy and Procedures to enhance interdepartmental communications and aid in the further success of a village wide UFMP.

Action 9.1.1
Identify where the village lacks interdepartmental communication.

Action 9.1.2
Once those above areas are identified, work on striving for excellent communication, whether it be through common practice or Village policies.

Action 9.1.3
Continue on that path of great interdepartmental communication to help strengthen all employees' knowledge of the importance of a UFMP.

Appendix

Technical Guides and Standards:

ISA

http://www.isa-arbor.com/

ANSI

http://www.ansi.org/

ANSI A300

http://www.tcia.org/business/ansi-a300-standards

ANSI A300 Part 1 (2008)

http://www.tcia.org/business/business-resources/ansi-a300/part-1

ANSI A300 Part 5 (2012)

http://www.tcia.org/business/business-resources/ansi-a300/part-5

ISA BMP Tree Pruning Guidelines

http://www.isa-arbor.com/store/product.aspx?ProductID=58&CID=73

ISA Companion Publication

http://www.isa-arbor.com/store/product.aspx?ProductID=154

Policies and Ordinances:

Village of Williamsville Tree Code

http://www.ecode360.com/10129522

Other:

Dan Burdens 22 Benefits of street trees

http://www.ufei.org/files/pubs/22BenefitsofUrbanStreetTrees.pdf