

City of Burnsville

Emerald Ash Borer Management Plan



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Prepared by the Burnsville Forestry and Natural Resources Staff

Approved September 21, 2010

Purpose

By implementing the provisions in this management plan, the City can mitigate the disruption to its urban forest caused by a pending infestation of the tree pest Emerald Ash Borer (EAB). The goal of this plan is to position the City to be ready for EAB when it arrives and buffer its impact. It identifies specific strategies, policies, and the resources needed to assess the impact of an EAB infestation and prepare our community for its arrival. The strategies and policies identified endeavor to distribute the costs associated with certain and widespread tree death over a manageable time period, as well as lessen the social and economic impact that such an extensive loss will have on the quality of life in Burnsville. The Plan addresses the impacts of EAB on both public and private properties throughout our community.

Definitions

Public Right-of-Way

A strip of land granted for a transportation or utility purpose, such as a street boulevard. For practical purposes, fifteen feet from the curb is considered a guideline for Burnsville right-of-way boundaries; however, the extent of this area will vary from property to property.

Public Trees

Trees existing wholly or partially upon City-owned property, such as parks, or on public right-of-ways, such as street boulevards or medians. See Diagram – Appendix D

Private Trees

Trees existing wholly or partially upon privately-owned land and existing outside of City easements and right-of-ways, such as in yards. See Diagram – Appendix D

Diameter at Breast Height (DBH)

The diameter (inches) of a trunk cross section, measured at 4 ½' above the ground

Quarantine Zone

Minnesota Department of Agriculture-designated area restricting the movement of ash tree material

Host species

Tree species in the genus *Fraxinus* (ash), all of which are susceptible to EAB infestation

Non-host species

Tree species that do not act as a host (i.e. foster growth and reproduction) for Emerald Ash Borer

Introduction

Emerald ash borer (EAB), *Agrilus planipennis*, is an exotic beetle that was discovered in southeastern Michigan near Detroit in the summer of 2002. The adult beetles nibble on ash foliage but cause little damage. The larvae (the immature stage) feed on the inner bark of ash trees, disrupting the tree's ability to transport water and nutrients. An ash tree infested with EAB has almost zero chance of survival. As of 2009, thirteen states and two Canadian provinces had EAB infestations. EAB was found in St. Paul, MN in May of 2009 and several months later in the cities of Minneapolis and Falcon Heights. Those beetles are thought to have been in the area for least a few years. The City of Burnsville abuts the Minnesota River Valley, which contains many ash trees and is therefore a natural corridor for EAB movement.

As is the case for many suburban Cities developed primarily in the 1960's and 1970's, Burnsville has an over-abundance of green ash (*Fraxinus pennsylvanica*) on both private and public property, including boulevards.

In some Burnsville neighborhoods, such as the North River Hills area, it is estimated that over 70% of the boulevard trees consist of mature green ash. The complete loss of these trees and others throughout the City due to EAB could have a devastating effect on home values, quality of life and the environment if the City does not prepare for its arrival.

While no one can accurately determine when the insect will arrive in Burnsville, our best estimate would be as soon as 2010 and probably within the next five years. According to the Minnesota Department of Agriculture staff, the EAB could already be here - brought here via firewood or from out of state nursery stock.

The current evidence from Michigan and Ohio show that once EAB becomes established, it takes about five to ten years to infest and kill the majority of the ash trees in a city.

Administration

The Superintendent of Forestry/Community Landscaping (City Forester) will be responsible for implementing and following up on the provisions of this plan, with assistance from Forestry and Natural Resources Department staff.

Public Education & Communication

The Mayor, City Council, Parks and Natural Resources Commission, and key City staff will receive periodic updates on the status of EAB in our community through normal channels. All media relations will follow normal city protocol.

Forestry staff will continue to coordinate with the Minnesota Department of Agriculture and other entities concerned with EAB to ensure that the City is following the best practices for detecting and managing EAB. As timing and budget allow, staff will attend conferences, workshops, and seminars related to EAB. Staff will also maintain good communication with adjacent municipalities to ensure mutual awareness of EAB management strategies and to develop mutual aid and equipment sharing as appropriate.

The City will endeavor to educate its citizens on EAB management through means such as the City's website, public meetings, direct communications, mailings, literature, local newsletters and newspapers, videos, local television, and upon request, by attending community group meetings.

Specifically, the City will utilize the following tools:

- The City will create and maintain an EAB informational page on the City's website.
- Beginning in 2010, the City will offer non-EAB susceptible, large canopy, replacement trees at its annual tree sale. Residents interested in acquiring trees at a wholesale price may purchase trees through this program.
- A contact list containing pertinent resources for EAB information and management will be created, made public, and updated as needed.
- Staff will make information available to residents and businesses regarding hiring a qualified arborist and will provide a list of licensed contractors (See Policy and Ordinance Review section). This information will be available on the City's webpage or will be mailed to interested parties by the Forestry Department upon request.
- Beginning in 2010, the City will host a series of public workshops to inform Burnsville residents and businesses about EAB. The workshops will include information regarding EAB identification and monitoring, insecticide treatment options, hiring a qualified arborist, and managing EAB-infested wood. If available, MDA staff will be at the workshops to answer specific and technical questions. The Forestry Intern will assist with the development of such workshops.

- The City will utilize the educational workshops offered through the University of Minnesota’s Tree Care Advisors program. The Tree Care Advisors are a network of community based volunteers under the direction of the University Department of Forest Resources, that have been trained to give free or low-cost EAB educational workshops to the public.

Policy and Ordinance Review

One objective of this plan is to update the key city ordinances and policies relating to trees to prepare for an EAB outbreak and its consequences. It is recommended that the following policies and ordinances be pursued and/or updated:

Boulevard Tree Permit Program

Because residents may wish to remove and replant ash trees in their boulevard areas as a result of EAB infestation or treat existing ash trees with a protective insecticide, staff will update and implement a permit program for tree work within the boulevard.

Section 8-3-3 of Burnsville’s City Code states:

No person shall plant, spray, fertilize, prune, remove, cut above the ground, or otherwise disturb any tree, shrub or plant on any street or public property without first filing an application and procuring a permit from the City.

However, the City lacks a streamlined permit program for such activities. As part of this plan the Forestry Department will hire an intern (See Costs and Budget Planning section) to assist staff with implementing such a permit program and handle the possible initial surplus of permit requests.

Staff developed a boulevard tree planting permit program previously and City Council briefly visited the topic at a Work-session in 2008. Staff has developed boulevard tree planting guidelines, the costs associated with boulevard trees, as well as a listing of ordinances that may be affected by the program’s implementation (See Appendix C). Previously, a lack of staff funding prevented the program’s implementation. The boulevard tree planting permit program and ordinance should be revisited and implemented, as soon as possible, in light of the current EAB threat and the anticipated need to replace and treat ash in boulevard areas.

Tree Contractor Licensing Program

The arrival of EAB in Burnsville will trigger a significant increase in the number and frequency of contractors performing tree work on public and private Burnsville property. Tree work is inherently dangerous and subject to injury and property damage. Further, improper management of diseased trees on public and private property can cause the spread of tree diseases. Staff proposes developing a tree contractor licensing program to promote safe, effective tree care practices and encourage tree care contractors to possess the knowledge to effectively manage diseased trees, including those infested with EAB, and to ensure that they possess the insurance to limit the liability to their customers. Having safe, informed contractors working on Burnsville’s trees will reduce the potential negative consequences of an increased amount of tree work due to EAB.

Staff proposes hiring an intern to assist with the development of a licensing program using similar programs from surrounding communities as a guide. Currently, Lakeville, Savage, Apple Valley, and Egan all have licensing programs and have good examples of licensing programs which Burnsville could borrow from.

To give potency to its tree contractor licensing program, staff proposes including into the City Code a requirement that tree contractors wishing to perform work within Burnsville city limits must first obtain a license from the City. This ordinance would be similar to those in neighboring communities. Requiring that tree care companies obtain a license and register their contact information with the City will establish good communication with contractors regarding EAB, quarantine zone restrictions, wood disposal sites, and other pertinent information.

In addition, the City should require tree contractors working on City projects to be licensed. Also, the City will consider requiring its tree contractors to be certified by the International Society of Arboriculture (ISA), a non-profit tree care advocacy and education organization with tens of thousands of certified members.

In the event that a State agency implements a more restrictive tree license program governing tree contractors throughout the state, that program will supersede the City's. No plans for a statewide licensing program are underway at this time.

Current City Ordinance Regulating Tree Pests on Private Property

Tree pests and diseases do not differentiate between publicly and privately-owned trees, so a comprehensive tree disease management program must also regulate trees on private property to help limit the spread of tree diseases. Section 8-3-5 of Burnsville's City Code states the following:

(B) Diseased and Infected Trees.

1. The City may enter upon private lands to inspect trees, plants or shrubs whereon insect pests and plant diseases may be found to have injuriously affected either said trees, plants or shrubs or which may injuriously affect the public health and welfare. The City may conduct field inspections, including the removal of specimens for laboratory analysis that may be necessary to determine the presence of said infestation or to locate any private lands which might serve as a breeding place for diseases or insects. Before making any inspection on private property, the City shall give notice of the inspection to all affected residents and property owners either through an individual oral or written notice, or by publishing the notice in a local newspaper.

2. If a disease or insect infestation is found, the City may, by written notice, give the property owner a definitive time but not less than twenty (20) days to remove, treat or dispose of the infested trees, plants or shrubs. If the work is not satisfactorily completed within the time prescribed, the City may enter upon the property and remove and/or treat the infested area and assess the cost thereof to the owner as provided by law in the case of special assessments.

At this time, no changes are anticipated to Section 8-3-5 since the ordinance language is broad enough to incorporate EAB as "insect pests." If needed, staff may update the ordinance language to reflect future changes regarding EAB management in response to future research.

Additional Tree Ordinances

A listing of the ordinances that may be affected by the Boulevard Tree Planting Program is listed in Appendix C. Staff will need to revisit these ordinances, evaluate their consistency and implement changes as needed. The Forestry Intern will assist with this process.

Strategies for Private Trees

"Private Trees" are defined as those that exist wholly or partially upon privately-owned land and exist outside of City easements and right-of-ways, such as in yards.

The City's strategies for dealing with EAB preparation and management of **private** trees will focus on the following areas:

- 1) Responding to EAB Infestations on Private Property*
- 2) Stewardship of Public Trees*
- 3) Removal/Disposal of Private Ash Trees*
- 4) Providing Lists of Licensed Contractors*

1. Responding to EAB Infestations on Private Property

EAB infestations, known or suspected, on private property will be handled by City staff in accordance with existing City ordinances (See Section 8-3-5 of the city code). This section of the City Code gives the City the authority to enter upon private property to inspect private trees for tree pests and require the property owner to remove the infested material. Since EAB does not differentiate between publicly or privately-owned ash trees and since EAB on one property threatens ash trees on nearby properties, detection and control of EAB on private property will become be an increasingly important strategy.

2. Stewardship of Public Trees by Private Parties

Because it reduces the financial burden on the City, stewardship of public trees will be encouraged. With prior approval from Forestry staff and/or a permit, private parties will be allowed to perform work on public trees, including but not limited to: insecticide treatments, pruning, and removals (if necessary). Pruning or removal work may be performed by the private party or a City-licensed contractor.

The City will utilize the “trunk injection” application method for insecticide treatments on all public ash trees. This approach minimizes the potential environmental impacts of the insecticides utilized to treat for EAB. Residents that wish to treat boulevard trees on public property will be asked to utilize a licensed tree contractor and the “trunk injection” method of application, with the most effective and environmentally preferred insecticide available, as determined by the City Forester.

Residents will be discouraged from utilizing pesticides that are applied directly to the soil or sprayed on the tree bark or canopy, due to the possibility that the chemicals will drain into surface or ground water, as well as, a number of other negative environmental impacts. Residents will also be discouraged from treating trees with insecticide if EAB has not been discovered within 15 miles of the tree.

3. Removal / Disposal of Private Ash Trees

Removal and disposal of ash trees on private property will be the sole responsibility of the property owner. Due to the limited storage space available, private parties may not use City facilities to dispose of ash trees. The City may offer a quarantine site for EAB-infested ash trees if the Minnesota Department of Agriculture recommends or requires it.

4. Providing Lists of Licensed Contractors

One strategy identified in this plan is the need to implement a tree contractor licensing program in our community. As part of the City’s tree contractor licensing program, the City will generate and maintain a list of contractors who possess a license to operate within the City and it will be offered on the City’s website and upon request.

The City will also offer on its website and upon request, a list of contractors possessing certification from the International Society of Arboriculture, a non-profit tree care advocacy and education organization. See Policy and Ordinance Review section for information about the licensing program.

Strategies for Public Trees

Public trees are defined as those existing wholly or partially upon City-owned property, such as parks, or on public right-of-ways, such as street boulevards or medians. The City’s strategies for dealing with EAB preparation and management of **public** trees will focus on the following areas:

- 1) *Information gathering*
- 2) *Ash tree assessment*
- 3) *Preparation and Action*

The first objective in EAB preparedness is information gathering. The City lacks a complete inventory of ash trees on public property, including boulevards, parks, medians, and around public buildings. The second objective is to assess the values and liabilities of ash trees using the inventory information and determine the City's cost of a full-scale EAB infestation. The final objective is to set forth preparation and action strategies and determine the resources needed to lessen the burden of an EAB infestation.

1. Information Gathering

Currently, the City lacks a comprehensive digital inventory of public trees and the need for such information is essential for urban forest planning and management, especially in preparation for EAB's arrival. In the fall of 2009, staff initiated an inventory program using decommissioned equipment from the City's Information Technology Department and utilizing volunteers to collect the data. Due to the lack of funding for this project and the associated lack of appropriate equipment and sufficient labor, this approach to the inventory has proven to be very slow. At the current rate, the estimated completion of the inventory is over five years. In order to speed up this process, staff proposes funding for labor and equipment to complete this project by 2011. The City will conduct an inventory of all ash trees growing on its rights-of-way, boulevards, in parks, and on other municipal properties. For each tree, its location, species, size, and condition will be collected.

Dakota County has previously digitized trees in Burnsville, so staff has access to the locations of many public trees; however, while the data gives the location of each tree, it lacks information about tree species, size, condition, and other useful information. Using the basic county-generated tree information, staff estimates that around 15,000 trees exist in the boulevard right-of-way, 8,000 trees exist in the built environment of parks, and 1,000 exist in on other municipal properties, such as public grounds and parking lots. Of these trees, the City estimates that around 50% (12,000 trees) are green ash. More accurate information is needed in order to calculate costs and guide management.

Staff has used \$7,000 from the 2010 Forestry budget to hire an intern whose primary responsibility will be to collect inventory data, but will also assist with other aspects of this EAB Plan. Staff also proposes using up to \$3,000 of the Forestry budget to purchase equipment to collect digital inventory data quickly and efficiently. After the inventory is complete, the inventory equipment will be used in the field by Forestry staff to update tree data as work is performed and/or trees are removed.

The goal of the inventory is to provide staff and decision makers with a comprehensive and quantitative summary of the urban tree canopy to help manage, assess and make decisions regarding the urban forest and about EAB preparation. The inventory data itself will be used as a working database and will be updated frequently to reflect actions performed on City trees.

Other information gathering will include research to determine more accurate pricing for work on ash trees—such as removals and insecticide treatments. Pricing information will be synthesized using a variety of sources, from contractor quotes to information from tree experts and City Foresters from other metro cities. Also, staff will continue to gather information about the best EAB control methods as the research develops.

2. Ash Tree Assessment

Using the information collected via the tree inventory, the following will be determined:

- Percent of public tree canopy comprised of ash
- Areas of high ash density on public property
- Number of ash contained in boulevards, parks, and other municipal property
- Age structure of ash trees in urban forest
- Condition ratings for all ash trees, including potential hazard trees
- Percent tree cover

Using this information, the following assessments will be made, using free, reputable tree assessment software, and working knowledge of tree management and removal costs. Appendix A gives an example of the type of information that can be generated using inventory data.

- Percent tree cover to be lost due to EAB
- Neighborhoods that will be most affected by EAB
- Areas in need of increased tree diversity
- Quantitative benefits that Burnsville's public trees provide to: property values, stormwater reduction, energy costs (heating/cooling), pollution removal, and carbon storage (See Appendix B for an example)
- Accurate cost to remove ash trees infested with EAB*
- Accurate cost to replace ash trees removed due to EAB*
- Accurate cost to preventatively treat valuable ash with insecticide*

* An estimate of these costs is included in Table 1 in Costs and Budget Planning section and they are based on 2010 tree management costs

3. Preparation and Action

(A) Protection of Public Ash Trees with Insecticides

Based on a citywide inventory of public ash trees and budgetary allowances, the city will determine which, if any, ash trees will be chemically treated with an insecticide known in the scientific community to be effective at preventing EAB infestations. Because research in this field is currently evolving, the city will monitor all treatments for their effectiveness and future use. The City has begun purchasing equipment to perform such treatments in-house, but contractors may also be utilized. The cost to treat ash trees are given in Table 1 in the Costs and Budget Planning section.

Priority will be given to ash trees that are in good condition, provide the most public benefit, and whose loss would be most detrimental to the landscape. Forestry staff and the Forestry Intern will determine priority treatments.

The City will utilize the "trunk injection" application method for insecticide treatments on all public ash trees. This approach minimizes the potential environmental impacts of the insecticides utilized to treat for EAB. The city will not treat trees with insecticide if EAB has not been discovered within 15 miles of the tree.

(B) Protection of Public Ash Trees by Private Parties

Protective pesticide treatments may be applied at the residents' discretion and expense after first obtaining a prior permit issued by the City (see Policy and Ordinance Updates section). Treated trees will be removed at the City's cost if the City determines the treatments have failed and EAB infests the tree. Residents that wish to treat boulevard trees on public property will be asked to utilize a licensed tree contractor and the "trunk injection" method of application, with the most effective and environmentally preferred insecticide available, as determined by the City Forester.

(C) Monitoring

As time and budget allows, strategically located public non-asset ash trees will be annually selected and prepared as detection trees, either using City forestry staff or in coordination with the Minnesota Department of Agriculture. These trees will be set up in the spring and removed for examination in the fall. If an EAB infestation is discovered, a thorough survey of the surrounding area will be made and acted upon.

All ash wood from pruning or removals on public or private trees, whether they are removed in-house or contracted, shall be inspected for EAB by looking for characteristic signs and symptoms. The tree care contractor licensing program will help ensure that this process is conducted by trained, professional arborists. Monitoring will be concentrated in the northeast quadrant of the City, where natural EAB migration is most likely to affect first due to its proximity to the Minnesota River Valley. Trained volunteers will be utilized as ‘First Detectors’ of the EAB to the fullest extent possible.

(D) Removals

Public ash tree removal will be prioritized based on risk to people and property. Higher-risk public trees will be removed first, followed by those that are no longer assets to the community (dead, dying, diseased, or miss-sited). During the development review process, staff will recommend that ash trees be prioritized for removal over other species when tree impacts cannot be avoided. Because City staff does not have the resources and equipment to perform large-scale removals, City-licensed contractors will be utilized for most removals. This plan recommends an increase in the tree contractor budget in order to remove such ash trees prior to EAB infestation. See Costs and Budget Planning Section for more information.

If EAB is discovered in Burnsville, removals will occur under the requirements and guidance of the Minnesota Department of Agriculture (MDA). This plan recommends that the City set up an emergency fund to offset the sudden costs of an EAB infestation.

(E) Wood Utilization and Disposal

The City will develop a plan to use or dispose of the wood generated from public trees during the removal program. The plan must comply with the Minnesota Department of Agriculture’s (MDA) regulations for handling regulated material. Wood that cannot be used for lumber, turning, firewood, or mulch, will be disposed of according to MDA specifications.

The City will use its compost site for ash trees removed from **public property** (if allowed by the MDA) and will identify possible additional sites to be used if capacity at the compost site is reached.

(F) Canopy Replacement and Care

As the budget permits, removed public ash trees will be replaced with non-host species that will enhance the planting site, are appropriate for the planting site, and add to the diversity and general health of the urban forest. Trees will be planted in accordance with the City’s Tree Planting Specifications, and obtained from local nurseries. Plantings will be budget based and prioritized by canopy cover and species diversity goals as identified by the City Forester. Those areas needing the most trees to reach their goal will be planted first. No plantings will be made that cannot be adequately maintained. New plantings will comply with City ordinances related to tree diversity and the City shall utilize the 10-20-30 rule to increase species diversity. That is, the City endeavors to maintain a public tree canopy that comprises of no more than 10% of trees in the same species (e.g. Red Oak), no more than 20% of trees in the same genus (e.g. all Oaks), and no more than 30% of trees in the same family (e.g. “Fagaceae” – includes trees such as chestnut and beech in addition to oak).

Action Steps Needed Prior to the Arrival of EAB

Table 1 lists the immediate action steps that are needed in order to successfully prepare for the EAB. Costs are included when they are known or can be estimated. Some components have been brought forward from other City Council-approved plans, such as the 2007 Natural Resources Master Plan (NRMP), and are items for which funding has been put on hold due to budget challenges. As a result, many programs have been deferred. Staff recommends moving forward with these programs at this time and to focus them on preparing for EAB’s arrival in our community.

Table 1 - Summary of Strategies and Funding Plan

Strategy	Year 1 - 2010	Year 2 - 2011	Year 3 - 2012	Year 4 - 2013
Complete inventory of city park and street trees. 1 intern in 2010, 2 interns in 2011. Continue to utilize volunteers *	.35 FTE \$ 7,000	.70 FTE \$ 14,000		
Purchase equipment for insecticide treatments and for digital tree inventory	\$ 3,000			
Provide staff support for implementing EAB Plan strategies. Create education programs for EAB and tree planting and care*			.50 FTE \$ 30,000	1.00 FTE \$ 60,000
Using inventory, perform assessment of ash trees to determine values and potential removal costs. Develop a digital tree management and removal tracking program			By City Staff	
Perform insecticide treatments once every 3 years on high value ash trees (approximately 80 trees/year or a total of 240 trees)		\$ 5,000	\$ 5,000	\$ 5,000
Expand tree pruning and removal budget. (Current budget: \$84,000/year)*		\$ 10,000	\$ 20,000	\$ 40,000
Create a boulevard tree planting program and replace removed ash. (25 trees/year)*		\$ 5,000	\$ 5,000	\$ 5,000
Expand the tree maintenance program for newly planted trees*		\$ 10,000	\$ 10,000	\$ 10,000
Hold EAB workshops for residents and businesses and develop public education materials		\$ 1,000	\$ 3,000	\$ 3,000
Monitor for EAB	By City Staff and Contractors			
Update City website with information about EAB	By City Staff and Intern(s)			
Review policies and ordinances related to EAB Management Plan	By City Staff and Intern(s)			
Develop Blvd Tree Planting/Maint. Permit program*	By City Staff and Intern(s)			
Implement a tree contractor licensing program	By City Staff and Intern(s)			
Refine budget and equipment needs	By City Staff and Intern(s)			
ANNUAL BUDGET REQUIREMENT	\$ 10,000	\$ 45,000	\$ 73,000	\$ 123,000
INCREASE OVER PAST YEAR'S BUDGET	\$ 10,000	\$ 35,000	\$ 28,000	\$ 50,000

* Items previously approved in the Natural Resources Management Plan

Additional Costs Anticipated when EAB Arrives

Example Costs from EAB-affected Communities

Ann Arbor, MI was one of the first cities infested with EAB. Because they did not have time to plan they suddenly found themselves with thousands of dead and dying ash trees that had to be removed (5,000 in public right of ways and 5,500 in city parks). The estimated removal and disposal cost of the ash trees was \$ 4.2 million over two years. The city placed an EAB tax levy on the ballot to raise the funds. The levy was defeated and the city was forced to reallocate existing funds in other department budgets.

The City of Minneapolis is planning for the need to spend up to \$26M for removing and replacing ash trees on public property, not including parks and natural areas.

Emergency Fund for EAB Response

The arrival of EAB will undoubtedly increase the number of ash trees that die and need to be removed in a short period of time. Increasing the contractor tree removal budget as recommended will allow the City to conduct initial removals on low-value, high-risk ash, but it will not accommodate the increase in removals required once EAB arrives. The Forestry Department's current annual tree pruning and removal budget of \$84,000, if directed solely on ash removals, could only remove 125 ash trees per year and would eliminate funding for all other tree work.

Accordingly, it is recommended that the City create an emergency EAB fund (or funding mechanism) to prepare the City financially for an EAB infestation. An EAB infestation will create thousands of dead trees that, *at a minimum*, will need to be removed for public safety reasons. The estimated cost just to remove 12,000 ash trees (see cost breakdown below) is around \$ 8.1 million. These costs would likely be spread out across 2-10 years depending on the nature of the EAB infestation.

<u>Item</u>	<u>Contracted Service</u>	<u>Total Cost</u>
Removal	\$ 400/tree	\$ 4.8 million
Stump Grinding	\$ 275/tree	\$ 3.3 million
Re –Planting (Estimated 12,000 trees)	\$ 500/tree	\$6.0 million
	REMOVAL & REPLACEMENT TOTAL	\$ 14.1 million

Planning now and spreading out the cost for such a significant financial burden will reduce the severity of the impact to the City of Burnsville's budget when EAB arrives.

Financing Options

1. Grants:

It is likely that the Minnesota Department of Agriculture and/or other state or federal agencies may award grants to communities affected by EAB as they have recently done in several metro communities. While the City will actively pursue such grants as they become available, they should not be relied upon. Demand for such grants will grow as the infestation continues and the grants are unlikely to cover significant portions of the funds needed to completely address the effects of EAB.

2. *Ramp up the City's Current Reserve Fund:* the City of Burnsville does have a reserve fund that can be utilized for emergencies. This Reserve fund could be increased over the course of the next few years, in anticipation of drawing it down when EAB arrives in our community.

3. *Assessments and Tax Levies:*
Other municipalities that are currently dealing with EAB infestations have instituted assessments and tax levies to offset the cost of treating and/or removing ash trees in boulevard areas.

Summary

The items contained in this plan represent the best approach to address the threat of EAB for our community using the most relevant information available to date. As EAB becomes better understood and management strategies adapt, the City's plans will need to remain flexible to adjust accordingly.

By taking a proactive approach toward EAB planning and preparation, the City can better position itself to roll with the ecological and financial punches that EAB will undoubtedly throw. While the estimated costs of a response to an EAB infestation are staggering, proper planning and preparation can mitigate such costs and help prevent the City from being caught off guard.

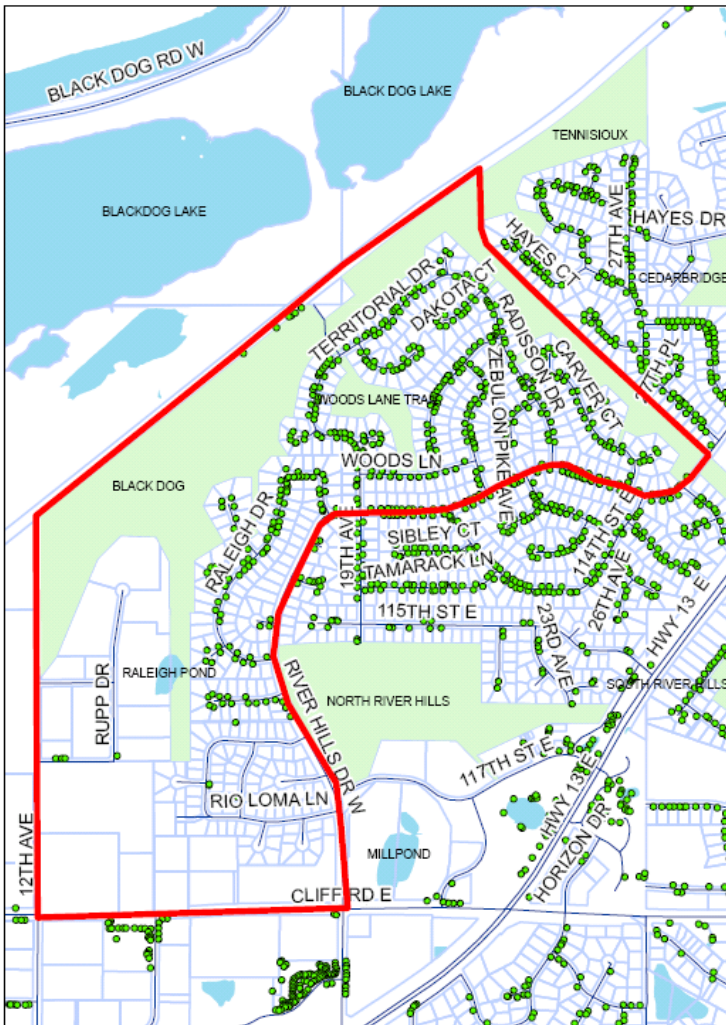
Appendices

Appendix A

Using a small completed portion of Burnsville’s tree inventory data that was collected in late 2009 from the Black Dog Neighborhood, sample statistics were run to show usefulness of the inventory data. Such data can be used to guide management and calculate costs. The map shows the location that the sample data was taken from, and the chart and table show the condition and size class (inches in diameter) of ash trees in the Black Dog Neighborhood. In this one neighborhood alone, there are 332 ash trees, many of which are between 10 and 30 inches in diameter and most of which are in fair condition.

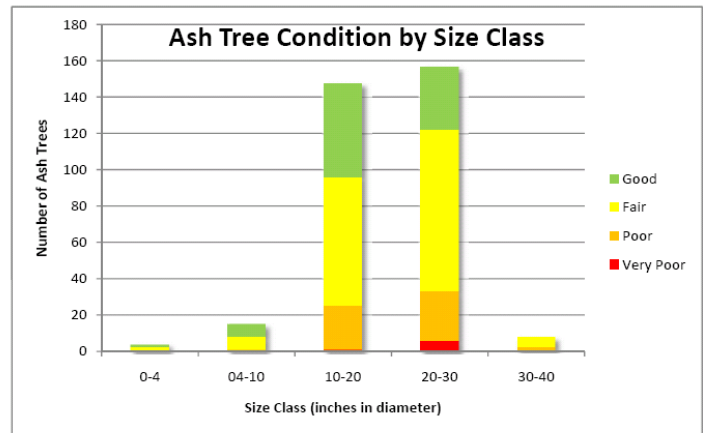
Black Dog Neighborhood
 Completed Inventory Area
 Used to Generate Chart and Graph

- Boulevard Trees
- Parks
- Water



Ash Tree Sample Statistics,
 Black Dog Neighborhood

DBHCLASS	Condition				Grand Total
	Very Poor	Poor	Fair	Good	
0-4			2	2	4
04-10		1	7	7	15
10-20	1	24	71	52	148
20-30	6	27	89	35	157
30-40		2	6		8
Grand Total	7	54	175	96	332

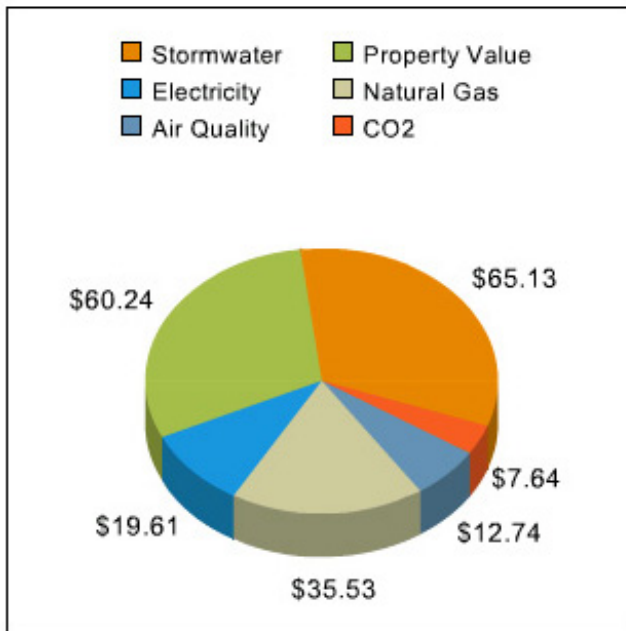


Appendix B

The following is an example of how Burnsville's tree inventory can be used to assess tree values and benefits to the community. By entering information about the City as well as Burnsville's inventory data, once completed, a free software program developed in part by the United States Forest Service generate tree benefit information such as this, either on a tree-by-tree basis and/or on a whole-City basis. Such tools will help assess the values of our urban tree canopy and can also help staff develop cost-benefit ratios and guide management and associated costs.

Breakdown of your tree's benefits

Click on one of the tabs above for more detail



Green ash
Fraxinus pennsylvanica

This 20 inch Green ash provides overall benefits of: \$201 every year.

While some functional benefits of trees are well documented, others are difficult to quantify (e.g., human social and communal health). Trees' specific geography, climate, and interactions with humans and infrastructure is highly variable and makes precise calculations that much more difficult. Given these complexities, the results presented here should be considered initial approximations-a general accounting of the benefits produced by urban street-side plantings.

Benefits of trees do not account for the costs associated with trees' long-term care and maintenance.

If this tree is cared for and grows to 25 inches, it will provide \$254 in annual benefits.

Appendix C

Boulevard Trees– Potential Ordinance Amendments

To incorporate elements of this plan, including the Boulevard Tree Planting Program, the following ordinances will likely require amendment:

Title 3 – Forestry – provisions may need to be amended to correspond to Zoning/Subdivision ordinance amendments – *Requires City Council approval only*

Title 3-12-2 – Business Licenses for Mobile Home Parks – may need to address tree plantings for consistency with Zoning/Subdivision Ordinance. *Requires City Council approval only*

Title 4 – Building Code – may need to address tree plantings for consistency with zoning/subdivision ordinance – *requires City Council approval only*

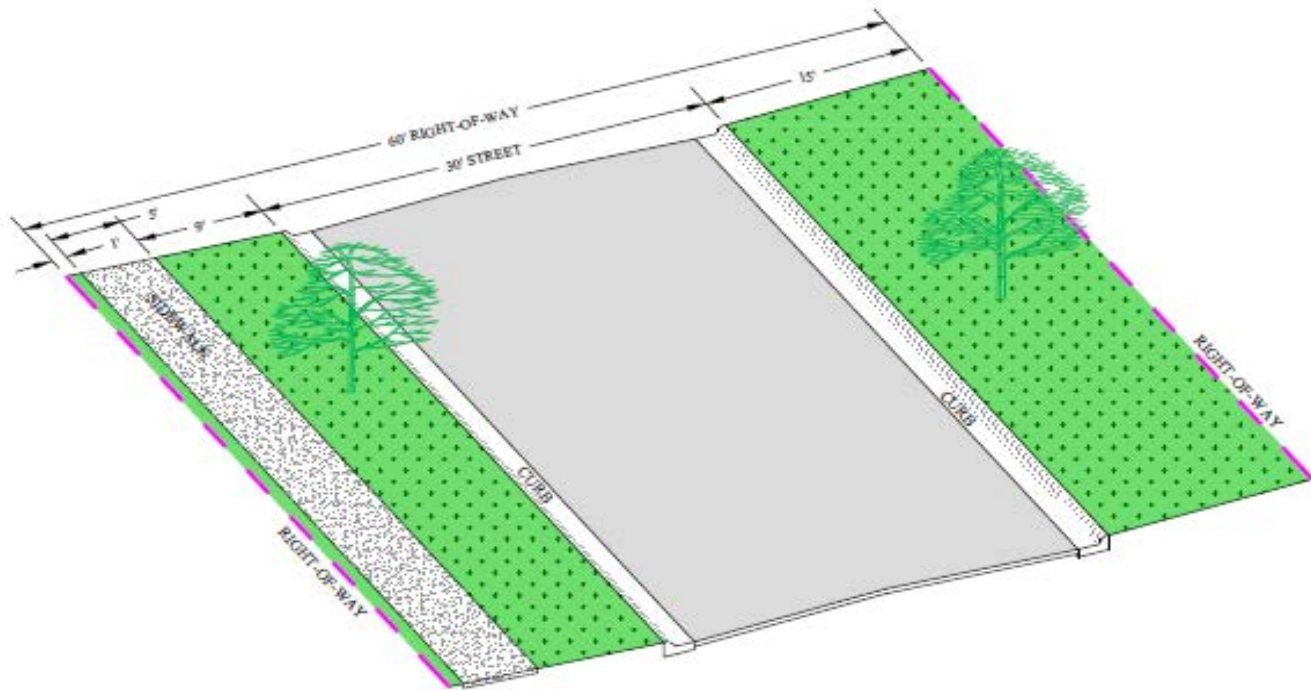
Title 8 – Public Ways and Property – may need to address tree plantings in public right-of-way and consistency with other parts of this Title – *requires City Council approval only*

Title 10 - Zoning Ordinance – to incorporate definitions, and boulevard tree/shrub planting standards as part of Landscape section of ordinance. *This will require a public hearing before the Planning Commission and then City Council to approve the amendment.*

Title 11 - Subdivision Ordinance – to refer developers back to the zoning ordinance landscape section related to boulevard tree/shrub planting. *As a matter of practice, we usually take Subdivision Ordinance amendments to the Planning Commission for recommendation however this is not required, the City Council can approve amendments to Title 11.*

Compiled by Parks and Public Works Administration, Engineering, and Planning staff, 2008

TYPICAL BOULEVARD DIAGRAM



APENDIX D