VILLAGE OF BELLEVUE

PARKS, RECREATION & FORESTRY

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Urban Forestry Management Plan

2024 - 2028

Updated: April 2024

2828 Allouez Ave.
Bellevue, WI 54311
(920) 468-5225
VillageOfBellevueWI.gov

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2024 – 2028

Village of Bellevue
Parks, Recreation & Forestry Department

Acknowledgements:
The success of this management plan was made possible through dedication and hard work. The plan was prepared by:

Tyler Schiesser
Village Forester & Parks Foreman

Kyle Casper
Director of Parks, Recreation & Forestry

Shauna Joski
Administrative Assistant

Approved By Village of Bellevue Park Commission/Tree Board:
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Approved By Village of Bellevue Village Board:
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EXECUTIVE SUMMARY

The Village of Bellevue is the fifth largest and one of the fastest growing municipalities in Brown County with a continuously increasing population and expanding urbanization of agricultural land into homes and businesses. The Village is a safe and comfortable community serving its current residents and welcoming new residents and visitors with opportunities to raise a family in a place that provides work, quality housing and places for outdoor leisure and recreational opportunities.

Trees play an important role in the environmental, economic, social and health benefits provided to residents and visitors of Bellevue. Trees beautify streets & parks, provide shade & energy savings, assist in stormwater management, improve air quality & mental health, increase property value, enhance quality of life and provide food & shelter to local wildlife. Bellevue recognizes the benefits that a healthy urban forest provides to the community and invests in the forestry program every year.

The urban forestry management plan provides an analysis of the Village's public tree inventory, current management & maintenance requirements and future recommendations for planting, maintenance & removal of trees.

Purpose

The urban forestry management plan is used to guide the planting, maintenance and removal of trees in the urban forest in the Village of Bellevue in order to maximize the environmental, economic, social and health benefits of public trees to the community in a financially responsible way. The plan is reviewed and adopted every 5 years to provide recent data on the current size, health and condition of the urban forest, as well as provides maintenance requirements and recommendations for the future of Bellevue's public tree canopy. Where possible, cost estimates and expenditures will be provided. Additionally, there is information provided about the benefits of community trees along streets and in parks that can be used in the management and decision-making processes for green infrastructure in the urban forest.

Scope

The 5-year urban forestry management plan (2024 - 2028) will be based on the public tree inventory and include data, recommendations, budgeting and other information regarding the planting, maintenance and removal of trees in the public tree inventory. It includes trees that are publicly-owned and exist within the municipal limits of the Village of Bellevue. The plan does not include maintenance recommendations for those trees of which are owned by private entities, although, some information and ordinances within the plan pertain to both publicly and privately-owned trees.

Resource Overview

The Village of Bellevue's public tree inventory contains:

- A total of 4,741 trees
- 17% canopy cover
- Top species: maple (25.75%), linden (12.29%), oak (7.36%), honeylocust (6.22%)
- 17 new species introduced to streets and parks since year 2020
- Value of urban forest in year 2016 was $221,520 per year
- 18 trees to remove
- 4 stumps to grind
- Unknown number of vacant planting sites
- Mostly even aged inventory; few large trees
- 1,597 trees recommended for training prune and 3,144 trees recommended for routine prune
- 1,622 trees without diameter and condition data

Resource Benefits

Bellevue's total urban forestry benefits for street trees was last calculated in year 2016 at $221,520, as stated in the 2017 – 2021 urban forestry management plan. The dollar amount in benefits of the urban forest have changed since year 2016 with the loss of larger canopy trees by emerald ash borer. However, it is expected that total street tree benefits will increase over the next few decades with the replacement of ash trees and additional planting programs being utilized by the Village Forestry Department. Current data must be collected to estimate current benefits. An updated dollar amount for the total benefits of the urban forest is a future goal of this plan.

INTRODUCTION

Bellevue's Urban Forestry Management Plan

WHAT IS THE URBAN FOREST?

For the purpose of this management plan, the urban forest is a collection of green space including trees, shrubs and other vegetation contributing to the green infrastructure within a defined urban space across all public and private property. Most urban green infrastructure requires continuous upkeep by humans to maintain a healthy and functional urban forest that provides benefits to the community. Trees within the urban forest growing in populated areas require more maintenance to reduce risks to targets such as people and buildings while allowing trees to survive in environments that limits their production in comparison to natural, undisturbed forested land, where resources like air, water and space are more plentiful.

GEOGRAPHICAL LIMITS

The urban forestry management plan includes all land within the boundary of the Village of Bellevue, which covers approximately 14.33 square miles. The Village of Bellevue is in central Brown County, Wisconsin. It is bordered by the City of Green Bay to the north, the Town of Humbolt & Town of Eaton to the east, the Town of Ledgeview & City of De Pere to the south and the Village of Allouez to the west. The Village is the fifth largest community in Brown County with a population of 15,935 (2020 Census). According to the US Census Bureau, 2022 population estimates were 16,588.[1] Bellevue continues to invest in commercial development, expansion of residential neighborhoods, as well as parks and other places for residents and visitors to enjoy free time.

The Village of Bellevue's population has increased approximately 16 times larger over the last 50 years. As farmland develops into homes and businesses, it is important to maintain greenspace and plant trees within these areas. The urban forestry management plan is a useful tool and reference to outline some of the plans and goals for forestry staff and for members of the community to get an insight on management strategies and visions their community may have for the future of the urban forest as it continues to expand and develop.

HISTORY OF BELLEVUE

The Town of Bellevue was incorporated in 1857 and reincorporated as the Village of Bellevue in year 2003. Many positive changes within the Forestry Department have occurred over the last 20 years regarding the evolution of the forestry program. Staff continue to introduce new ideas and resources into the forestry program to make frequent improvements.

THE REASON FOR A PLAN & RECOMMENDATIONS

The Forestry Department is responsible for managing all trees within the urban forest and maximizing the benefits of trees within Bellevue for residents and visitors of the community, as well as all other organisms living in the surrounding environment. As the Village continues to grow, the need to plant trees and designate green space becomes more important. With expansion of urbanization, the area of urban forest that needs to be managed is larger and more resources are required for its maintenance.

The plan is useful for Village staff, decision makers and stakeholders to understand how Bellevue will execute the management of the urban forest. There is important information that can be learned from reading this plan. The plan identifies why it is important to relay funds towards the forestry program so current and new assets can be maintained and forestry benefits continue to increase in Bellevue.

The Village of Bellevue Parks, Recreation and Forestry Department has a mission statement:
"Bellevue Parks, Recreation & Forestry Department provides essential community park, recreation & urban forestry services through quality driven, citizen-focused and fiscally responsible efforts."

With this mission in mind, the Village of Bellevue has adopted a 5-year urban forestry management plan to layout a functional approach for managing all of Bellevue's public trees based on information in the public tree inventory and what will best serve the citizens of the community. Public trees provide many environmental, economic, social and health benefits to the municipality and its residents. The plan addresses ways the Village is able maximize benefits it receives from its trees. The plan focuses on the current tree inventory, maintenance requirements and future plans to expand and enhance the Village's urban tree canopy.

[1] census.gov estimated population

SUPPORT FOR THE URBAN FOREST

The successful management of the urban forest requires that all involved in its management be understanding of department goals and how they may be achieved. The plan helps members of the Village Board and members of the Village Park Commission, who also serve as the Village Tree Board, and residents of the community to understand how Village staff will approach management of the urban forest. All funds to support management must be approved by board members who approve budget decisions, so it is important that all members understand and support current and future forestry maintenance needs and goals.

The main reason for developing an urban tree program is to benefit residents of Bellevue. Trees are a long-term investment and often take decades to return measurable financial benefits, such as stormwater interception or extended useful life of asphalt on shaded streets. Due to the long life of trees and their inability to relocate, it is important to plant trees with the future in mind. Community education is also integral for residents to understand the purpose of public trees, the reason for planting and the community benefits that are received from trees along streets.

WHAT TREES WILL THE PLAN ADDRESS?

The plan will include all trees, shrubs and other green space that are publicly-owned by the Village of Bellevue. This is in inclusive of all land that is manicured & unmanicured public right-of-way, named & unnamed property that is considered public parkland, linear trail systems and public facilities properties.

Trees on private property are part of the urban forest and are as important as public trees, but they are not directly managed or maintained by the Village of Bellevue. The Village does reserve the right to enter onto any private property under municipal code § Chapter 427 when a potential nuisance is suspected and Village intervention of a private tree is required for some reason. Currently, the Village does not monitor for nuisance trees on private property unless an issue is noticed by staff or brought to staff attention by a citizen. Private trees have many benefits to property owners and wildlife and the planting of trees on private property is always encouraged by Bellevue when it makes sense. Planting trees on public and private property increases the overall canopy cover within the Village, which can help reduce negative impacts of urban environments on people of the community. Canopy cover is the area of ground, impervious surface or building that is covered by tree canopy. An increase in canopy cover is an increase in benefits provided by trees.

HOW LONG WILL THE PLAN COVER?

The Village adopted its first urban forestry management plan in year 2009. Since then, there has been one update to this plan in year 2017. This plan will cover a span of 5 years, addressing the years 2024 – 2028.

HOW IS THE PLAN GOING TO BE DEVELOPED?

The plan will be developed by Village staff and include tree data, observations, ideas and recommendations pertaining to where staff would like to allocate time, resources and funds within the Forestry Department, as it relates to the future of Bellevue's urban forest. As Bellevue continues to grow, the need for staff to dedicate more resources towards managing public trees and greenspace will become more evident. The plan is a layout of current assets and a vision of what is expected and recommended for the future.

Urban Forestry Benefits for Bellevue

Trees are living green infrastructure that increases in value over time. They are one of the few investments that a community can foster to receive additional benefits on a regular basis. Since trees are alive and grow, there is required maintenance that comes with a cost to the municipality. The same is true with other infrastructure. Proper care and maintenance ensures that the benefits received from the trees outweigh the costs.

Trees in a properly managed urban forest provide environmental, economic, social and health benefits to people. Management and maintenance of urban trees is necessary to prolong the life of trees growing in urban areas, maximize benefits trees provide and maintain public safety or prevent trees from becoming a nuisance.

SHADE & CANOPY COVER

Shade is one of the most noticed services that trees provide. Streets that are lined with trees can be a few degrees cooler in the summer compared to streets that do not have trees. Impervious surfaces such as asphalt and concrete do not absorb as much radiation from the sun when under the canopy of trees. The shade over streets results in reduced surface temperatures of pavement and air for a more comfortable and people-friendly environment. By planting more trees over roads, canopy cover is increased and the amount of ground area that is exposed to direct sun radiation is lessened. Currently, the Village has 17% canopy cover. A map of canopy cover can be found in the appendices, on page 55. An increase in urban tree canopy, including trees on private property, is associated with higher environmental, economic, social and health benefits. In the summer months, shade provided by tree canopies to cover homes and other buildings decreases the amount of electricity needed to cool dwellings. In the winter trees do not have leaves but provide continued benefits in the form of wind breaks, especially coniferous trees. The wind break lowers the amount of heat lost from homes and other structures, so less energy to heat buildings is required. Trees help homeowners spend less money on heating and cooling costs. Lower energy consumption leads to less environmental impact. Shade from trees also prolongs the life of roads by blocking and filtering damaging sunlight from deteriorating the components that make up the road pavement surfacing. This is an economic benefit to municipalities when roads last longer. Another winter benefit is that under certain conditions, trees over roads may lessen the amount of snow that accumulates on streets and in some cases speed up the melting process.

Street tree canopy cover.

STORMWATER MANAGEMENT

Trees are often part of stormwater management programs in municipalities and sometimes maintenance costs associated with tree planting or pruning may come from stormwater budgets. Leaves on trees intercept or slow the speed of rainwater before it hits the ground. Some of the precipitation that falls will never reach the ground because leaves and other tree parts retain water until it evaporates. Rainwater that is intercepted by a trees canopy can help to reduce erosion and limit stormwater runoff, as more water can absorb into the soil. The more water that the soil can absorb results in less water that has to be processed by storm sewer infrastructure. With the combination of water that is held within the canopy and interception by tree parts, better infiltration of water into the soil can occur, where trees also uptake some water via roots. Overall, water influx on storm sewers is reduced compared to roads with no trees. When the financial benefits of many trees are combined, the savings make a relevant case to support the planting of street trees.

The Village of Bellevue has received grants from entities that pay for trees to be planted on public property to assist in the management of stormwater. One of the most recent grants received by the Village pertaining to stormwater management was granted by the US Forest Service to GBMSD and the Village is one of the sub-awardees of the grant. Because of the grant, trees will be planted along streets and in Village parks & facilities. Streets are the primary focus for placement of trees in relation to stormwater management, as trees over impervious surfaces will provide the most stormwater benefits.

CARBON SEQUESTRATION

Trees are the world's best carbon-capturing machines and it doesn't cost taxpayers any more money for this provided service. Aside from removal of harmful respiratory pollutants from the air, trees also remove carbon dioxide from the air. The process of taking carbon dioxide out of the atmosphere and storing it in the form of some plant material biomass, is referred to as carbon sequestration. Atmospheric carbon dioxide has increased from the burning of non-renewable fossil fuels, such as coal and petroleum products, that contributes to greenhouse gases that trap heat in the atmosphere. Trees play an important role in improved urban air quality and reduced climate change through physical and biological processes the improve quality of life for humans.

PHYSICAL HEALTH BENEFITS & AIR QUALITY

There are physical benefits that trees provide to people. People are more likely to exercise if they can do so on a shaded street or in a park, amongst the trees. Whether walking a dog down the street or enjoying a picnic in the park, trees are there to make an experience more pleasant. In addition to making spaces visually appealing and more comfortable for physical activity, trees also clean the air of impurities like pollen, dust and smoke, that might harm people who spend time outdoors. Small particulate matter can stick to leaves and other parts of trees, functionally removing pollutants from the air. This helps people with respiratory issues living in cities with lower air quality. There are also many other ways that trees can help with pollution, such as removing greenhouse gases from the air and creating oxygen.

IMPROVED QUALITY OF LIFE

Trees provide social benefits by creating a space where people can gather and interact. Trees provide an appealing aesthetic component to the urban landscape and soften the look of urban infrastructure including concrete, asphalt, or buildings. Forested neighborhoods are home to people that are mentally happier and enjoy a higher quality of life. Incorporating trees into urban environments helps people understand first-hand the benefits of trees, encourages exercising and makes them better appreciate nature. Street trees can increase property values anywhere from 3 – 15%, according to the Arbor Day Foundation.[2] In addition, some studies show a reduced rate of crime where street trees are present.

BENEFITS FOR WILDLIFE & INCREASED BIODIVERSITY

Humans are not the only ones that benefit from trees. It is also important to note that trees draw in wildlife from surrounding areas by providing food and shelter. Many residents enjoy viewing wildlife, such as birds, squirrels and deer, from their homes. Newer subdivisions often have fewer of these animals when compared to older subdivisions, due to lack of trees. Over time, wildlife will move into an area as vegetation matures, providing shelter and food for animals. Trees also increase soil microorganism biodiversity by improving soil quality through the addition of organic matter over time and other relationships between trees and microorganisms in soil.

[2] Arbor Day Foundation, *Trees for Better Streets, No. 45*

CURRENT URBAN FORESTRY ASSETS

Village of Bellevue's Public Tree Inventory

A tree inventory is an important part of an urban forestry management plan. First, it is important to understand what trees exist within the bounds of the urban forest before management recommendations and goals can be made. A tree inventory is exactly that; it provides quantity and species information, as well as data for size, condition and more. Staff have spent time updating the species information, quantities and locations of trees in the inventory for use in this plan. As updating data can be a time-consuming ordeal, it is best to update data within the inventory on a regular basis, as to not fall behind.

Public street trees lining Kettle Creek Drive.

The Village of Bellevue currently has a total of 4,741 trees inventoried. There are many more publicly-owned trees than ones that are included within the inventory. Trees that are chosen to be included in the inventory are ones that are significant for some reason. Reasons include location, such as a street tree or proximity to a building, or the tree may simply be large/old and therefore special attention is recognized. The tree inventory is not a complete compilation of all public trees. The inventory will often include trees in parks that are in a manicured turf area but will not include all trees in wooded areas of parkland or other natural areas.

The Village Forester teamed up with the GIS/IT Manager and the GIS Interns over the last 2 years to update some species information in the Village tree inventory. Updated and accurate data is important for managing the urban forest. Much has changed since Bellevue's first urban tree inventory that was completed in year 2009 through a grant funded by the Wisconsin Department of Natural Resources for tree inventories in communities. Staff will continue to improve data as time and resources are available. Other crucial data to be updated within the next few years includes diameter measurements and condition ratings for all trees within the inventory.

GIS

GIS or Geographic Information System plays a very important role in urban forestry, as well as many other Village departments. This is a key piece of technology that Village staff can use to record data on all trees within the Village. Every tree within the inventory is mapped in GIS, where data for location, species, size, condition and more can be found in a table associated with any tree. There is an online version that residents can access on the Village website. There, residents who wish to see public tree locations and basic species information, may do so.

SPECIES DIVERSITY

There are 4,741 trees in Bellevue's public tree inventory. The trees are comprised of 24 families, 53 genera and 118 species. Since the year 2020, 13 species of trees have been introduced into the public right-of-way for planting as street trees; a list of these trees can be found in Table 1.

TABLE 1. NEW STREET TREE SPECIES ADDED TO INVENTORY SINCE YEAR 2020

#	Scientific Name	Common Name
1	*Aesculus glabra*	Ohio Buckeye
2	*Betula nigra*	River Birch
3	*Carpinus caroliniana*	Blue Beech
4	*Carya ovata*	Shagbark Hickory
5	*Cercidiphyllum japonicum*	Japanese Katsura
6	*Cladrastis kentukea*	American Yellowwood
7	*Cornus mas*	Cornelian Cherry Dogwood
8	*Liriodendron tulipifera*	Tulip Poplar
9	*Liquidambar styraciflua*	American Sweetgum
10	*Metasequoia glyptostroboides*	Dawn Redwood
11	*Prunus sargentii*	Sargent Cherry
12	*Taxodium distichum*	Baldcypress
13	*Zelkova serrata*	Japanese Zelkova

TABLE 2. TOP TEN TREE SPECIES IN INVENTORY

#	Tree	%
1	Maple	25.75%
2	Linden	12.29%
3	Oak	7.36%
4	Honeylocust	6.22%
5	Elm	4.85%
6	Spruce	4.78%
7	Apple	4.76%
8	Lilac	3.71%
9	Coffeetree	2.74%
10	Hackberry	2.53%

The top 5 tree species in Bellevue are maple, linden, oak, honeylocust and elm, which can be found in table 2.. Maple trees account for 25.75% of the inventory, or 1,221 trees. Linden, oak and honeylocust combined add up to another 25.87% of the inventory, or 1,226 trees. This means that 51.62% of Bellevue's public tree inventory is comprised of trees from 4 genera, maple and linden accounting for highest percentages. After review of the data, staff have lessened the number of maples and lindens that are planted as street trees and have focused on planting species with lower quantities across the inventory. Common hackberry and Kentucky coffeetree are 2 species of trees that the Village has been planting more of. Combined, they account for 5.27% of the inventory, or 250 trees. These trees are affordable and urban tolerant, making them great choices for planting as street trees.

The Village has made efforts to diversify the species of trees that line its streets and fill its parks. The approach for diversity was used when replacing trees on streets that lost ash trees and is also considered during other planting operations in the Village. This has increased the resilience of Bellevue's urban forest when looked at from a holistic approach. With increased tree diversity, especially on a single street level, it is less likely for an entire block to experience catastrophic tree loss, meaning nearly every tree on a block is removed. There are multiple streets within the Village that have experienced catastrophic tree loss after ash trees were removed upon attack from the emerald ash borer (EAB). Trees on these streets were replaced with multiple different species within the same road block. Since most properties received 2 trees, the goal was that each property has at least 2 different tree species. For properties that had more than 2 trees, there may be duplicates on the same property, but not consecutively. With this setup of trees, if a new species-specific invasive insect or disease were to enter Bellevue, hopefully only 1 tree may be lost from any particular property, instead of both.

TABLE 3. % OF INVENTORY PER FAMILY

#	Tree	%
1	Sapindaceae	27.33%
2	Tiliaceae	12.29%
3	Fabaceae	10.76%
4	Rosaceae	10.54%
5	Fagaceae	7.48%
6	Pinaceae	6.89%
7	Oleaceae	5.41%
8	Ulmaceae	4.97%
9	Cannabaceae	2.53%
10	Betulaceae	2.43%
11	Ginkgoaceae	2.29%
12	Bognoniaceae	1.72%
13	Salicaceae	1.42%
14	Cupressaceae	1.19%
15	Platanaceae	0.84%
16	Hamamelidaceae	0.48%
17	Magnoliaceae	0.41%
18	Cornaceae	0.18%
19	Juglandaceae	0.18%
20	Rutaceae	0.18%
21	Cercidiphyllaceae	0.14%
22	Anacardiaceae	0.04%
23	Moraceae	0.04%
24	Caprifoliaceae	0.02%

AGE & SIZE DISTRIBUTION

The age and size distribution of trees within the Village trends on the younger side of the age spectrum, with few mature trees in comparison to juvenile and newly planted trees. Bellevue is in a unique situation where many of the trees that line streets are relatively young and immature. Many of the larger trees within the Village are located in parks and on private property. This is because the implemented policies of the current forestry program are relatively new, first taking effect approximately 20 years ago. Bellevue did not have a program that planted street trees prior to year 2003. All trees planted prior to then were planted by homeowners, either by their own purchase or as a handout from the developer of the subdivision at the time.

In year 2009, 26% of Bellevue's street trees were ash species. Today, only 1.68% of the current inventory is comprised of ash trees. Many of the oldest trees within the Village were ash species that have been removed and replaced with small trees. To date, the Village has removed approximately 630 ash trees from along streets. In general, it will take 15 – 30 years for the new replacement trees to reach the size of the trees that were removed. Table 4 shows the quantity of ash trees, distributed by diameters, that were removed from the public right-of-way. The larger the diameter, the more benefits a tree would have delivered. The majority of trees removed were between 6 – 12" dbh (approximately 15 or less years planted) and 12 – 18" dbh (approximately 15 – 30 years planted).

TABLE 4. SIZE & QUANTITY OF ASH REMOVED SINCE 2020

#	Diameter (dbh)	Quantity
1	0-6	55
2	6-12	373
3	12-18	197
4	18-24	3
5	24-30	1
6	30-36	1

One of the largest tree in Bellevue is an eastern cottonwood tree located on Manitowoc Court.

Because many of the street trees in Bellevue are less than 25 years old, the population of trees is relatively even-aged, meaning most trees are the same size and age. It is important to have an uneven-aged tree population, consisting of trees of all ages and sizes. The diverse age and size distribution ensures that there will be smaller trees to replace larger trees that may require removal, succumb to wind events, lightning strikes, ice damage, insects and/or diseases and other factors. Uneven-aged tree populations are an important part of a healthy urban forest, with more young trees than old trees. As the urban forest in Bellevue matures, an uneven tree population will eventually occur over decades. Some pockets of uneven-aged trees exist in subdivisions that were built into wooded lots on private property, but many of these trees are also not within the public right-of-way. The larger trees existing within these areas were not removed as the areas were developed.

Trees deliver more benefits as they increase in size and age. It is important that Bellevue takes priority in ensuring that larger trees are protected, all new plantings are done correctly and that all trees are in favorable locations to prevent conflicts and/or removals in the future.

Staff will be collecting diameter and condition/health data of trees at the time of pruning, starting with the year 2023 pruning zone. The goal is that within the next 5 years, staff will have updated diameters of trees which will provide data for staff to reflect upon that can be used in the next management plan to find dollar amount of benefits provided by Bellevue's public trees. Currently, the data is out of date which limits its accuracy and usefulness as it pertains to this plan.

HEALTH & CONDITION

There are many attributes to evaluate when assessing the health and condition of a tree. Professional assessment is determined by a combination of factors such as overall appearance, symptoms of stress, recent growth increments, structure, insect/disease problems, defects to trunk or branches and presence or extent of decay. Taking a proactive approach and looking for trees that may have issues helps keep people and other targets safe by reducing the risk associated with trees.

Safety of the community is a high priority for the Village of Bellevue. Any concerns regarding the safety of trees on public property shall be directed to the Village Forestry Department. When staff find or are notified of a dead tree or one in poor condition, the Forester will assess the level of risk the tree poses to the public. If the tree is in a dangerous condition and the risk level is unreasonable at the time of assessment, removal will occur immediately, or some form of barrier or notification will be made for people adjacent to the area. Trees with an elevated risk rating that are not an immediate public danger will be removed during the next removal operations. Trees that are removed are often replaced when favorable conditions exist.

Forestry staff have taken multiple approaches to making sure that the overall health and condition of trees in Bellevue rises. This includes removal and replacement of dead, dying, diseased and/or damaged trees. Juneberry Drive, the east side of Mayflower Road and the south side of Ontario Road, within the Village, are 3 streets that are lined with many declining Norway maples. These streets are primary roads where removal and replacement efforts have been focused, unrelated to ash trees. There are a number of trees on these streets that have declined to the point of death and/or have become a safety risk from dead or decayed tree parts. The issue with many of the trees in decline is associated with the presence of girdling roots, due to improper planting practices at the time of installation. Staff will continue to focus on these areas and remove trees that pose a public risk. As funds are available, staff will replace the trees.

Starting in year 2023, staff will be collecting health and condition data on all trees on a 5-year cycle. This will coincide with the pruning schedule, so that at the time of pruning, data will be collected and entered into the GIS for easy viewing. New condition data will be useful for viewing the overall health of Bellevue's trees to decide where time may need to be spent on risk management and removal & replacement efforts.

Year 2015 tree conditions ratings listed approximately 66% of the inventory in good condition, with a common rating of 0.8. Current condition ratings within the GIS rate most trees within Bellevue at a 0.8 condition rating, on a scale of 0 – 1. A condition rating of 0 would be a dead tree and a condition rating of 1 would be a perfect tree. The condition data from the year 2015 has become irrelevant because many of the trees existing within the inventory at that time were ash and no longer exist. There are currently 1,622 trees within the Village that do not have a condition rating associated with the tree. Many of those trees are newly planted. Staff will continue to gather data in the upcoming years for presentation in the next urban forestry management plan.

Summary of Inventory and Limiting Factors

INVENTORY ANALYSIS

- 485 Norway maples in the inventory, with high susceptibility to girdling roots associated with species. The Village will focus on removal and replacement of many declining trees.
- 371 freeman maples in the inventory, with high susceptibility to storm and wind damage due to poor structural integrity associated with species. Pruning can help to reduce the risk of tree failures.
- 247 Greenspire lindens in the inventory, with high susceptibility to annual defoliation by Japanese beetles. This species is no longer planted as a public tree.
- 92 callery pears in the inventory, with high susceptibility to storm damage, winter die-back and has been associated with invasive tendencies. This species is no longer planted as a public tree.
- 13 new tree species have been added for use as street trees; 17 new species when including new species in parks. The Village is doing well with diversity goals.
- The Village tree inventory conforms to the 30-20-10 rule for diversity, with the exception of maple (*Acer*).
- Tree diameter (size) and condition/health data have not been updated since 2009 – 2010, meaning available data is irrelevant and non-reflective of the actual current tree sizes.

OBSERVATIONS & LIMITATIONS

- The Village has generally large right-of-ways, fit for street tree planting. Many tree boulevards are without sidewalks.
- There are many vacant planting sites. Additional funds and policy revisions are needed to increase stocking levels.
- Budgets and staff are inadequate to fulfill planting policies and goals.
- Canopy cover is expected to increase with urbanization moving east. Trees will be planted on land that is currently and primarily bare agricultural cropland with few wooded or natural areas.
- Many large canopy trees were lost to emerald ash borer, decreasing overall canopy cover in the short-term.

CHAPTER 2 – WHAT DO WE WANT?

THE FUTURE OF BELLEVUE'S URBAN FOREST

Future Management Goals for 2024 – 2028

GOALS:

1. Hire a full-time Park Maintenance Laborer position.
2. Increase forestry planting budget.
3. Continue staff training and maintain credentials.
4. Maintain updates on the public tree inventory and gather diameter & condition information.
5. Continue to increase tree species diversity.
6. Continue programs to fill vacancies and figure out how many vacancies exist.
7. Create an ordinance and specifications that focus on public tree protection and preservation; apply fines for trees wrongfully removed and/or damaged and enforce these policies.
8. Increase developer fees for new subdivisions tree planting program.
9. Update arboricultural specifications manual.
10. Focus on community education and engagement in tree programs.

HIRE A FULL-TIME PARK MAINTENANCE LABORER POSITION

There is a growing need for an additional full-time staff member within the Parks, Recreation & Forestry Department. The addition of a Park Maintenance Laborer would have a beneficial impact on the department by helping to assist with tasks related to parks and forestry. As the Village adds public land and develops it into parks, trails, greenspace, as well as plants more trees that require maintenance, staff numbers must increase to provide the same level of service that the community has grown to expect. Spring is the most difficult time of the year that puts a lot of strain on department staff. There are many projects in forestry and parks taking place at the same time, such as tree planting operations and the opening of all Village parks. The Village of Bellevue should have 2 full-time employees according to the "Urban Forestry Best Management Practices for Public Works Managers", which sources data for the average number of municipal urban forestry staff based on community size, from findings in the ISA Research Trust and the USDA Forest Service.[3] Bellevue is understaffed compared to surrounding communities of similar size. It is recommended that funds are budgeted for the addition of a new full-time Park Maintenance Laborer that will be dedicated to work within the Parks, Recreation & Forestry Department.

INCREASE FORESTRY PLANTING BUDGET

Staff recommend that the budget for planting be increased to accommodate the inflated cost to plant trees, as well as the increase in the number of trees being planted in Bellevue. The current forestry budget cannot adequately support the funding required to satisfy the planting opportunities that exist within the Village. Some plantings have to be skipped due to low funds and inability of staff to complete the quantity of plantings internally. The are multiple areas around the Village that qualify for street trees through one of the planting programs and would benefit from tree planting, but streets are not being stocked due to lack of funds.

CONTINUE STAFF TRAINING AND MAINTAIN CREDENTIALS

Staff that work to serve the Village of Bellevue take pride in the work they do for the community. One of the ways that staff can best serve the community is to maintain credentials and regularly attend informational conferences or seminars that allow them to stay up to date with the latest trends and information occurring within their field of expertise. By attending conferences, the Village Forester can maintain the credential of certified arborist through the International Society of Arboriculture. Staff learn about many things from what other communities and tree care professionals are doing to address topics related to the urban forest. There is information about new insect and diseases that foresters and other tree care professionals should be on the lookout for and trends with some that are already established. Maintaining training and credentials is important to the Village as well as to the staff that perform work for the Village. The Village should continue to invest funds in staff training, as has been done in the past.

MAINTAIN UPDATES ON THE PUBLIC TREE INVENTORY AND GATHER DIAMETER & CONDITION INFORMATION

Staff have focused on updating crucial information within the GIS tree inventory over the last couple years, mostly during the winter of 2022 through the summer of 2023. It can be a tedious process to update the information as it requires a lot of time to collect data in the field for species, diameter, condition and more. Some data may be collected via drive-by, or viewing from inside the vehicle without exiting, which can save time. Some information may have to be physically measured with an instrument or done by a professional that is good at estimating diameter of trees from a distance. Information that requires exiting the vehicle takes much more time to gather. After collection of data, it must then be entered into the GIS where it becomes useful information for managing the urban forest. It requires teamwork between staff from different departments within the Village. The data is forever changing and updates will always be required since trees are living and constantly changing in size, health, condition, etc. As trees are removed, replaced, new trees are added and tree characteristics morph, information will have to be updated. This is something that staff will be working on in the foreseeable future, to have a completely updated dataset with accurate information for all the public trees included in the inventory within Bellevue. The goal is to have all information be no older than 5 years, coinciding with the 5-year pruning cycle, when most data will be collected.

CONTINUE TO INCREASE TREE SPECIES DIVERSITY

There are a few ways that staff can increase the species diversity within the public tree inventory. The Village has added 13 new species of trees that have been planted along streets. There are more than 13 additional species that have been added to the public inventory when counting trees that have not been planted along the streets but rather parks or grounds, such as cucumber magnolia, Douglas-fir, eastern hemlock and Norway spruce. Staff utilize all opportunities and brainstorm new ways to increase species diversity in Bellevue because of the many benefits for the urban forest in the future. Other sections of this plan talk about ways Bellevue is prioritizing species diversity around the Village as one of the main focuses in the Forestry Department.

[3] *Urban Forestry Best Management Practices for Public Works Managers*, icma.org

It is a recommended that the Village budget for the construction of a tree nursery. A tree nursery will allow the Village to purchase small container trees for a lower price and grow them to an appropriate size for planting along the streets or in parks. Buying trees smaller will allow staff to choose from a larger selection of species. Additionally, purchase of smaller container trees is easier to transport. Increased species selection will allow for more diversity in boulevard plantings. Uncommon/specialty trees that are large enough for boulevard planting are often too expensive to purchase in high quantities with Village budgets. Small container trees can be purchased cheaper but would require a few years in a nursery to grow to a size that can withstand the impacts experienced by trees in the public right-of-way, such as snow thrown from snowplow trucks. To make this happen, the Village would have to designate land for the nursery and purchase fencing to protect the small trees from wildlife browsing, such as deer and rabbits that would cause damage to the trees. A water source would also be necessary, either on-site water or off-site water that is transported to the site via truck with a water tank. Staff will look at options and costs to see if this is a realistic possibility for the Village. There may also be grants that staff can investigate for the purchase of materials to create a tree nursery.

CONTINUE PROGRAMS TO FILL VACANCIES AND FIGURE HOW MANY VACANCIES EXIST

There are an unknown number of vacant planting sites to fill within the Village. Although, many vacancies are found within subdivisions constructed prior to the development of the Forestry Department. Development of a forestry program allowed Bellevue to begin formally managing street trees within the right-of-way, as well as adding new trees adjacent to properties after the construction of new homes.

Bellevue currently uses the planting program, "planting of trees when streets are reconstructed", to fill vacancies in older subdivisions. Currently, only roads which have had complete utility replacement, in addition to road resurfacing, may receive street trees. If a road is resurfaced and the underground utilities did not need repair or were not in need of repair and/or replacement prior to resurfacing, the road may not receive street trees. It is recommended that this policy be looked at further by Village departments involved, to understand factors for this decision and how it may be improved or revised to encourage tree planting on streets after road resurfacing or utility update projects, that did not require utility work or where utilities were deemed in acceptable condition. Additionally, all trees that are planted on reconstructed roads are to be charged to the owner of the property. This is something the Village should re-evaluate as well.

CREATE AN ORDINANCE THAT FOCUSES ON PUBLIC TREE PROTECTION AND PRESERVATION;
APPLY FINES FOR TREES WRONGFULLY REMOVED AND/OR DAMAGED AND ENFORCE THESE POLICIES

The Village has lost multiple street trees within the last few years from unapproved removal by contractors or damage to street trees during construction. Trees that were not scheduled to be removed, have been removed because there were no specific policies in place to protect trees in construction zones. Many trees have also been impacted by utility work that has occurred in close proximity to trees and caused damage to tree roots that may have long term negative impacts on the health of the trees, as well as potentially causing structural stability problems, either immediately from damage to the structural root plate, or in the future from past damage resulting in root decay and eventual failure of the structural root zone. Trees receiving damage from poor construction practices may become a liability in the future, which could have been prevented at the time of construction through policies protecting trees from damage. There are ways to minimize damage to trees during construction through practices such as proper root pruning or simply clear communication with contractors and site managers. Without a tree protection ordinance in place, all Village incidents involving damage to existing street trees were a complete loss. It is recommended this subject be addressed and the Village find ways to better protect its green infrastructure from damage, in the same way that other infrastructure is protected. Communication and early involvement of forestry staff in construction projects can save a lot of negative impacts from occurring.


10 yr. old street tree - broken off at the ground during construction.


A trunk of a small tree was damaged with large pieces of concrete and other debris.


Roots were damaged w/equipment during utility work & left with ragged, broken roots.

Many communities have adopted policies that protect trees from construction damage due to careless work. Fines for damage and periodic supervision are some ways the Village can prevent problems. One important investment into a tree is the time it takes a tree to grow to a certain size before providing measurable benefits. A tree that was planted 10 years ago often has a small canopy and doesn't provide many benefits. However, there are 10 years worth of time and maintenance invested into that tree since its purchase and installation. If that tree is removed and replaced, it will take an additional 10 years of time before it reaches that same size, 20 years after the initial planting date. There is decade of lost time and benefits on the investment, which was preventable. The time investment in trees must be taken into consideration as trees cannot be reproduced over short time frames compared to much other infrastructure. It is difficult for forestry staff to monitor all trees in construction sites. Many times, staff are unaware of problems until it is too late, only finding out through observation. Communication between the Village and construction companies is key to preventing problems. Policies that inflict penalties may be one way the Village can hinder or discourage some damage that has occurred to trees in the past and will likely occur to existing trees in the future.

INCREASE DEVELOPER FEES FOR NEW SUBDIVISIONS TREE PLANTING PROGRAM

The current fee paid by developers of new subdivisions is a rate of $5.25 per linear curb foot. Due to inflation, this amount is not enough to pay for the current cost of trees to be installed by contractors in new subdivisions. The rate should be increased to a rate where most lots can receive at least 2 trees to be planted by contractors. Village staff are recommending a fee increase to $8.15 per linear curb foot. This rate will allow the Village to plant an average of 2 balled-and-burlapped trees per lot, to fully stock new streets. Currently, Village staff have a contractor plant some trees and staff plant some trees. Staff planted trees are purchased bareroot at a cheaper price to allow for a tree to be placed every 50 – 60 feet, if possible. Increasing developer fees would allow staff to contract all plantings within new subdivisions so less time is spent by staff compensating plantings in new subdivisions. Staff can focus valuable time and resources planting trees elsewhere.

UPDATE ARBORICULTURAL SPECIFICATIONS MANUAL

It is recommended that the information in the arboricultural specifications manual be reviewed and updated as soon as possible. Acceptable planting species, specifications regarding terrace width and tree planting and more can be considered in the update. The manual should be reviewed and updated in sync with the renewal of the urban forestry management plan every 5 years, to keep the information in the manual current and relevant.

FOCUS ON COMMUNITY EDUCATION AND ENGAGEMENT IN TREE PROGRAMS

It is important to engage the community in appreciating the trees and natural space that they are fortunate to have surrounding them. Some people may not know the services that Bellevue provides if they do not have street trees adjacent to their property. Trees and greenspace within public parks play an important role in the quality of life provided to residents with access to these amenities. Staff within the department should review opportunities in which the community may be educated or encouraged to appreciate trees within parks and along streets through recreational events or other ways.

The Parks, Recreation & Forestry Department sends out a L.I.F.E guide twice a year that has information about some of the tree programs offered by the Village Forestry Department. In the guide, residents also have access to information regarding street trees that may be adjacent to their property. The guide is a useful tool the Village can use to relay information to citizens about some of the subjects involving public trees. By educating the community in some of the things going on in the Forestry Department and bringing awareness to the benefits of trees, a more positive attitude can be achieved when it comes to adding trees to Bellevue neighborhoods.

SCHEDULE OF RECOMMENDED ACTION FOR GOALS

YEAR 1:

Task	Performed By	Cost/Funding Source	Due Date
Approve planting budget	PRF staff, Tree Board, Village Board	$25,000	Done in fall 2023
Approve additional full-time staff member	PRF staff, Tree Board, Village Board	$84,929 (wages + benefits)	Fall budget approval
Collect tree inventory data and vacancies for zone 1	PRF staff	Budgeted staff time/wages	End of following summer
Attend training and maintain certifications	PRF staff	Forestry budget	End of year
Utilize planting programs to increase canopy cover and species diversity	PRF staff	Forestry budget	Spring and fall
Discuss increase of developer fees for street tree planting	PRF staff, Tree Board, Village Board	Budgeted staff time/wages	End of year
Review and update arboricultural specifications manual	PRF staff, Tree Board, Village Board	Budgeted staff time/wages	End of year
Assess pruning zones map	PRF staff	Budgeted staff time/wages	End of year
Review community engagement and education opportunities	PRF staff	Budgeted staff time/wages	Ongoing

YEAR 2:

Task	Performed By	Cost/Funding Source	Due Date
Increase planting budget	PRF staff, Tree Board, Village Board	$30,900	Fall budget approval
Collect tree inventory data and vacancies for zone 5	PRF staff	Budgeted staff time/wages	End of following summer
Attend training and maintain certifications	PRF staff	Forestry budget	End of year
Discuss tree protection and preservation ordinance	PRF staff, Tree Board, Village Board	Budgeted staff time/wages	End of year
Utilize planting programs to increase canopy cover and species diversity	PRF staff	Forestry budget	Spring and fall
Increase developer fees for street tree planting	PRF staff, Tree Board, Village Board	Budgeted staff time/wages	End of year
Assess pruning zones map	PRF staff	Budgeted staff time/wages	End of year

YEAR 3:

Task	Performed By	Cost/Funding Source	Due Date
Increase planting budget	PRF staff, Tree Board, Village Board	$36,977	Fall budget approval
Collect tree inventory data and vacancies for zone 4	PRF staff	Budgeted staff time/wages	End of following summer
Attend training and maintain certifications	PRF staff	Forestry budget	End of year
Implement tree protection and preservation ordinance	PRF staff, Tree Board, Village Board	Budgeted staff time/wages	End of year
Utilize planting programs to increase canopy cover and species diversity	PRF staff	Forestry budget	Spring and fall planting
Assess pruning zones map	PRF staff	Budgeted staff time/wages	End of year

YEAR 4:

Task	Performed By	Cost/Funding Source	Due Date
Increase planting budget	PRF staff, Tree Board, Village Board	$43,236.31	Fall budget approval
Collect tree inventory data and vacancies for zone 3	PRF staff	Budgeted staff time/wages	End of following summer
Attend training and maintain certifications	PRF staff	Forestry Budget	End of year
Utilize planting programs to increase canopy cover and species diversity	PRF staff	Forestry budget	Spring and fall
Assess pruning zones map	PRF staff	Budgeted staff time/wages	End of year

YEAR 5:

Task	Performed By	Cost/Funding Source	Due Date
Increase planting budget	PRF staff, Tree Board, Village Board	$49,683.40	Fall budget approval
Collect tree inventory data and vacancies for zone 2	PRF staff	Budgeted staff time/wages	End of following summer
Attend training and maintain certifications	PRF staff	Forestry Budget	End of year
Utilize planting programs to increase canopy cover and species diversity	PRF staff	Forestry budget	Spring and fall
Review developer fees for street tree planting	PRF staff, Tree Board, Village Board	Budgeted staff time/wages	End of year
Update urban forestry management plan	PRF staff	Budgeted staff time/wages	End of year
Review and update arboricultural specifications manual	PRF staff, Tree Board, Village Board	Budgeted staff time/wages	End of year
Asses pruning zones map	PRF staff	Budgeted staff time/wages	

MANAGEMENT & MAINTENANCE REQUIREMENTS TO ACHIEVE FORESTRY GOALS AND RECOMMENDATIONS

Management & Maintenance of the Urban Forest – Recommended Actions

The Village of Bellevue recognizes a well-managed urban forest provides many benefits to community and therefore, has established policies that allow Village representatives authority to manage and maintain it under municipal code § Chapter 427. Village staff within the Department of Parks, Recreation & Forestry, along with the Tree Board, will come up with a plan to manage Bellevue's urban forest over a period of 5 years. The Village Forester within the Department of Parks, Recreation & Forestry is responsible for management and enforcement of policies related to urban forestry program.

Trees provide many benefits to the community but there are also maintenance costs associated with trees to maximize the benefits trees provide while avoiding potential problems. Proactive tree maintenance is one way the Village can enhance tree health, aesthetics and limit liability or chance for injury or property damage. Staff can proactively focus on certain areas, such as those with higher traffic or where additional maintenance may be needed in the future. Forecasting tree maintenance needs that may become a problem if left unchecked helps prevent trees from becoming a nuisance. Pruning tactics may vary for trees existing in different landscapes, depending on how the tree merges with the current designated use of the surrounding environment, such as in an open park lawn vs in the boulevard of a busy street. Maintenance activities for the urban forest includes a variety of tasks like planting, pruning, removing trees & stumps, insect & disease management and regular tree assessment. The following sections outline current and future maintenance requirements and recommendations for the Village over the next 5 years.

TABLE 5. PAST - TREE MAINTENANCE

Year	# Planted	Pruned	# Removed & Stumped
2017	54	-	0
2018	95	-	29
2019	194	-	84
2020	195	Zone 4	122
2021	459	Zone 3	272
2022	222	Zone 2	217
2023	378	Zone 1 – 555	145

TABLE 6. FUTURE - TREE MAINTENANCE

Year	# Planted	To Purne	# to Remove
2024	250	Zone 5 – 1075	49
2025	250	Zone 4 – 1305	52
2026	250	Zone 3 – 910	54
2027	250	Zone 2 – 896	57
2028	250	Zone 1 – 555	60

Tree Planting

Since 2017, the Village has removed approximately 869 inventoried trees and planted 1597 trees. That is a 1:1.8 removal to plant ratio. In other words, in recent years, Bellevue has planted close to 2 trees for every 1 tree that was removed in the inventory. Figure 3 displays the planting and removal trends the Village has had over the last 7 years. There was a sharp drop in the number of plantings in year 2022 due to the rollover of fall ash replacement plantings to the spring of 2023. Bellevue has continued to maintain a higher rate of plantings than removals, reflective of a healthy forestry program.

The Village's year 2024 general tree planting budget is $25,000. Funds will be dedicated to filling vacant planting sites throughout the Village. At an approximate $325 per tree, for contracted services, the Village can plant approximately 76 trees. If the Village purchases bareroot trees at approximately $100 per tree, 250 trees can be planted. The Village does not need to purchase additional planting materials such as stakes, mulch or trunk protectors. Staff have made changes to planting contracts to accumulate some planting materials and make the planting process smoother and more cost-effective for the Village.

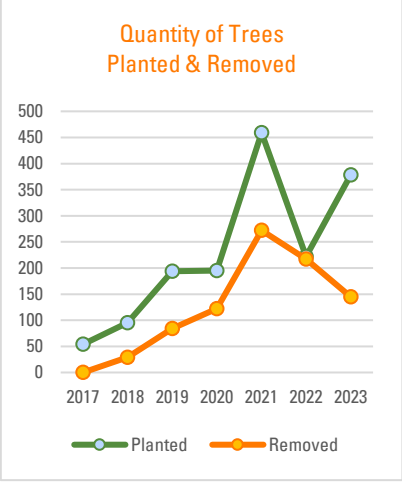


Figure 1

2024 PLANTING PROJECTIONS & BEYOND

The Village is projected to plant 302 trees during the spring of 2024 planting. The total number of trees includes those from grants, donated trees, resident plantings, new homes, miscellaneous new construction and reconstruction projects. Since 2017, many of the plantings occurring in the Village were ash tree replacements. Coordinating and dealing with the replanting of ash trees took a lot of resources, both staff time and funds. With the replacement of ash trees along streets complete, staff can focus on dedicating time and funds towards filling other vacancies that have been put to the side in recent years. If the Village plans to plant an increase of 300 trees per year through the year 2028, the quantity of trees in the inventory will increase from 4,741 to 6,241, an approximate 31% increase, as most of these trees will be a gain vs a one for one replacement (one tree is planted in the place of one tree that was removed, as with ash replacements).

It is reasonable to assume that the Village will plant approximately 300 trees per year over the next 5 years between all the planting programs and especially with all the new construction occurring throughout the Village. Currently, $25,000 has been dedicated to the planting of new trees for the 2024 budget. These funds will allow the Village to plant trees along Keehan Lane in the spring of 2024 as part of the "planting of trees when streets are reconstructed" program. The Village also plans to plant the new section of Town Hall Road and existing vacancies on Costco Way, within the TID 1 district. Vacant sites along the newly installed sidewalk on Willow Road will also be planted. Future plantings will keep the same type of areas in mind. A map of future construction projects can be found in the appendices of this document.

Large stature street trees provide the most benefits to neighborhoods in Bellevue and therefore, a strong focus is placed on planting large shade trees where space permits. If a large tree is removed, a large tree will often replace it. Small trees are used in areas with limited root space, such as in smaller boulevards or in areas with limited clearance, like under powerlines or other areas of low overhead or horizontal clearance.

It is worth mentioning that commercial developers are required to plant streets trees upon completion of a site, as part of an approved landscape plan. Although the Village does not directly oversee the planting of the trees for these projects, they are required to be within the public right-of-way and become a part of the tree inventory, to be owned and maintained by the Village. The planting of these trees adds a positive aesthetic component and provides many other benefits to areas with a lot of urban infrastructure and industry.

2024 PLANTING SCHEDULE

- Keehan Lane
- TID 1 District
- New Homes/Subdivisions
- Vacancies along Willow Road (adjacent to year 2023 sidewalk installation)

UPCOMING PROJECTS

- Sal Street and Industrial Drive
- Allouez Avenue (scheduled reconstruction year 2024)
- Verlin Road (Village of Bellevue portion scheduled for reconstruction year 2024)
- Monroe Road (pending Brown County approval)
- Lime Kiln Road (pending Brown County approval)

RECOMMENDED SCHEDULE AS FUNDS ARE AVAILABLE

- Steffens Court (reconstruction complete)
- Vacancies along Guns Street (reconstruction complete)
- Vacancies along Huron Road
- Vacancies along Ontario Road adjacent to Anna Court private homes development
- East River Trail
- Verlin Road (Brown County portion, pending approval, reconstruction complete)

VACANT PLANTING SITES

Vacant planting sites are locations throughout the Village where a tree could be planted, but one does not exist. Many of the vacancies in the Village are in subdivisions and along roadways that were built 30+ years ago. The Village utilizes a few planting programs to fill vacant tree planting sites. There is currently no data for the number of vacancies, but staff will work to gather this information during cyclic pruning over the next 5 years to deliver a quantity of vacant sites within the Village.

TREE PLANTING PROGRAMS

NEW SUBDIVISIONS TREE PLANTING

Through the new subdivisions tree planting program, the Forestry Department initiates the planting of street trees within the right-of-way adjacent to new homes, upon their completion. This planting typically occurs once a year during the spring for homes with an established lawn and upon issuance of an occupancy permit. In most cases, the cost of the trees is paid for by the developer of the home or subdivision to fund the planting of trees. Tree species, quantities and locations are selected by the Village Forester using parameters for space, site conditions and proximity to surrounding utilities. The Village can account for approximately 50 or more trees planted per year through this program.

PLANTING OF TREES WHEN STREETS ARE RECONSTRUCTED

There are many homes within subdivisions in Bellevue that were built prior to any kind of street tree planting program. These homes account for many of the subdivisions within the Village that are located west of Main Street. In an initiative to bring street trees to these neighborhoods, the Village plants street trees upon completion of road and utility reconstruction projects. According to municipal code § Chapter 427 – 6C, organized street tree planting along established streets may occur if a full road reconstruction has occurred, referring to the replacement of all underground utilities in addition to road resurfacing. This program allows residents in older subdivisions to benefit from the planting of trees. Some primary streets within the Village that have received trees from this planting program include Town Hall Road, Hazen Road, Guns Street and Manitowoc Road.

NEIGHBORHOOD TREE PLANTING PROGRAM

The Village offers the neighborhood tree planting program to those who wish to plant a street tree adjacent to their property. The trees are purchased through the Village and the cost is billed to the homeowner, often at a discounted price compared to them purchasing a tree at a nursery. Residents may choose the tree species and provide input on location. Village staff will plant, stake, mulch and water the tree at the time of planting. The Village of Bellevue will maintain ownership of all trees planted within the public right-of-way and all future maintenance will be conducted by the Village or through the Village.

PUBLIC TREE PLANTING

Residents that wish to plant a street tree adjacent to their property, on their own or by hire through a contractor, may simply fill out a tree planting permit. Pending approval from the Forestry Department, residents may plant a tree within the right-of-way adjacent to their property. No discount is offered through this method of planting as the tree will be purchased by the homeowner. The Village only approves the species and location of the tree through the permit process; tree purchase, planting and materials are handled by the property owner. The Village of Bellevue will maintain ownership of all trees planted within the public right-of-way and all future maintenance will be conducted by the Village or through the Village.

MEMORIAL TREE AND BENCH SPONSOR PROGRAM

Residents can purchase/donate a memorial tree or bench to be placed in any park. Trees and benches both come with a plaque or landscape paver that remembers the individual for whom the tree or bench was donated. Planting and future maintenance is conducted by the Village.

GRANT TREE & DONATED TREE PLANTING

Parks, Recreation & Forestry staff often apply for grants from different entities to pay for projects and fulfill various department goals, which to date have funded hundreds of plantings within the Village. Grants have funded the removal and replacement of many ash trees and the planting of many additional trees within parks and along streets. Applying for grants can supply Bellevue with dozens of free trees per year, increasing forestry benefits at a lower cost to the Village. The Village receives approximately 30 free trees every year from the First Downs for Trees program, which are donated at a shared cost between the Green Bay Packers, Essity and Green Bay Packaging.

BAREROOT TREE PLANTING

Approximately 100 bareroot trees are being held in mulch beds prior to planting.

The Village has substantially increased the planting of bareroot trees. Bareroot trees means exactly what it sounds like. The trees are dug in the spring and transported bareroot to the place they will be planted. Bareroot trees can be purchased at a lower cost and are easier to handle and transport in comparison to balled and burlapped (B&B) trees. B&B trees are expensive, heavy, cannot easily be moved by hand and take longer to recover from transplant shock. However, there are advantages to planting B&B trees, such as increased holding time, more flexibility with planting schedules, increased species selection and larger size, with larger size making B&B trees more resilient to right-of-way conditions. Although there may be some downsides to planting bareroot trees, such as they are often smaller, fewer species selections and shorter planting timeframe, staff have still greatly benefitted from the planting of bareroot trees. Bareroot trees are cheaper, easy to transport, easy to plant, faster to recover from transplant shock and since the root system is exposed, many problems associated with deep planting and girdling roots can be alleviated or corrected at the time of planting. Since staff within the department are limited and workload is higher than resources, it is beneficial to plant trees that are easily handled and can be planted quickly. Staff will continue to choose bareroot trees for planting whenever possible.

PLANTING CONSIDERATIONS

There are a few additional thoughts staff take into consideration when choosing trees to plant along streets. The previous section mentions programs the Village uses to fill vacant planting sites and increase the number of trees being planted, but there are some other considerations. Species diversity is important in protecting the tree population from attack by pests and diseases. There are mistakes that have been made in the past and current foresters can learn from them, rather than repeating. Using new information and ideas and continuing education are important when managing trees for many decades in a changing climate. Foresters want the trees planted today to be around in 100 years, if possible. Careful planning and thoughtful consideration when planting trees today will make a positive difference in the future if foresters try to understand how trees will survive in the future with a changing climate and new pest and disease introductions.

30-20-10 RULE

A guideline to follow to reduce the risk of catastrophic tree loss from insect pests or diseases is to follow the 30-20-10 rule. This guideline states that within the public tree inventory there should be no more than 10% of any one tree species, 20% of any one genus, or 30% of any one family. The Village's tree inventory conforms to these guidelines, with the exception of the *Acer* (maple) genus, which accounts for 25.75% of the total inventory. By following this guideline, it lessens the likelihood of any devastating impacts from a pest or disease that may attack trees within a genus or species. This rule is typically followed on a larger scale, such as when looking at the complete tree inventory. This guideline is not always followed at the scale of a single street block.

Current site plan standards for commercial developments followed and adopted by the Village, cite the 30-20-10 rule. However, some research has shown that the 20-10-5 rule is better. Resiliency of a tree population increases with more diversity.

The following webpage has some more information on this topic:
https://dnr.wisconsin.gov/sites/default/files/topic/UrbanForests/EABToolbox_Diversity.pdf

INCREASED SPECIES DIVERSITY IN BELLEVUE

Since 2015, the species diversity in Bellevue has increased significantly. One of the main contributing factors was the removal and replacement of ash trees and secondly the diversity of all new plantings. Data from year 2015 showed that maples (*Acer*) made up approximately 30% of the inventory and ash (*Fraxinus*) accounted for 26% of the total inventory. As of the year 2023, the current species data shows that maples make up approximately 25.75% of the total inventory and ash make up approximately 1.68% of the inventory. The remaining population of ash are ones that are treated by residents or by the Village.

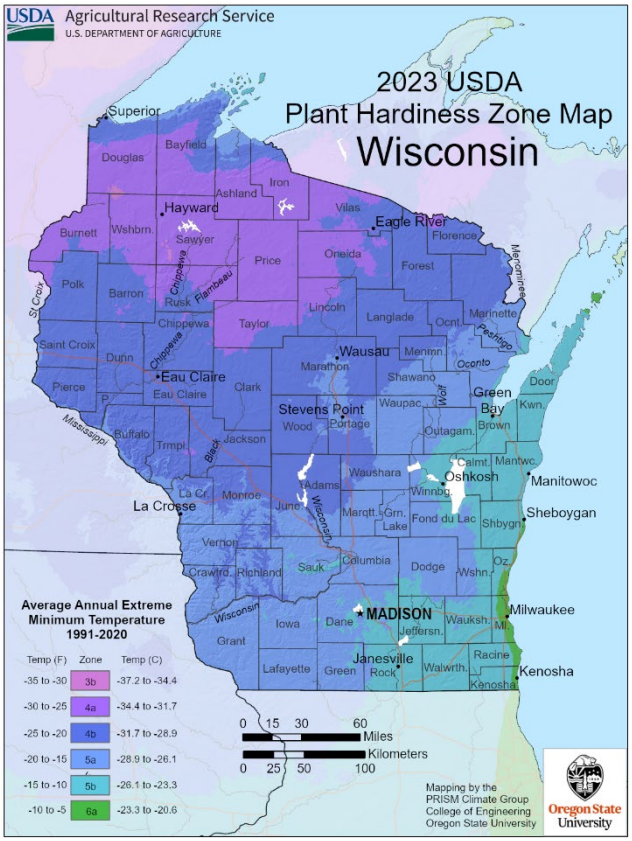
The Village has been dealing with EAB since year 2016, when it was first discovered in Bellevue. Since then, hundreds of ash trees have been removed. It was important that as ash trees were replaced, there were a variety of trees that would take their place. Creating diversity along Bellevue streets and in parks will lessen the impact of a species-specific pest or disease on the Village and on residents in the future. Staff will continue their best efforts to diversify Bellevue's streets and add new species of trees to its inventory that have not been used in the past. As time goes on, tree diversity on public property will continue to improve and resiliency of the urban forest will increase.

LEARNING FROM PAST MISTAKES

Foresters, arborists and other stewards of the urban forest understand the importance of a diverse tree population. Monocultures of trees have ruled the urban landscape for many decades, having proven to end in some significant failures. Dutch elm disease (DED), discovered in the United States in the early 1900s, killed most of the elms that lined many streets in Wisconsin decades ago. It cost communities a great deal to remove hundreds or thousands of dead elm trees and replace them with a different species of tree. The elms were often replaced with ash trees as a cheap and fast-growing alternative to the elm that were dying at a catastrophic rate. Decades after DED, the ash trees have succumbed to emerald ash borer (EAB). EAB has cost homeowners and governments millions of dollars throughout Wisconsin to remove and replace trees. Current forestry professionals can help subsequent forester by learning from the past and doing what they can to prevent catastrophic tree loss related to pests or pathogens in the future.

A WARMING CLIMATE MAY ENCOURAGE MORE DIVERSE PLANTINGS

Within recent years, there is a push to plant more trees that historically would not have existed or grown well in Wisconsin. The reason for the increased diversity of trees from warmer southern climates of the United States and other parts of the world is in response to an upward trend in wintertime temperatures for Wisconsin. With the winters showing more mild conditions, it is more likely that some trees which would not have done well in the colder climate of the past, may survive current or future winter conditions of the north. It is likely that the warming trend will continue and that a larger selection of trees may grow in Wisconsin in the coming decades. If people start to plant trees for warmer conditions today, then the future of the urban forest may be better prepared. This is something that Bellevue staff will evaluate with future plantings. According to the USDA hardiness zone map,[4] the Village of Bellevue currently sits in zone 5b with average low wintertime temperatures reaching -15 to -10 degrees Fahrenheit.



[4] USDA Plant Hardiness Zone Map, 2023

PROPER TREE PLANTING & AFTERCARE

Staff within the Village Forestry Department have made proper tree planting practices a strong priority since year 2020. There are several trees throughout the Village that have been planted incorrectly in the past by contractors that have done work for the Village. Some improper planting practices have led to instances where trees that have been in the ground for 4 growing seasons, have blown over in mild winds and require staking to hold them upright due to inadequate root systems, which are unable to develop due to deep planting. Other consequences include trees that take a long time to recover from transplant shock or trees that never grow or develop girdling roots. The long-term outlook on the life of these trees is poor and return on investment is unlikely, which is a problem that requires attention. The current Village Forester designates time to follow up with contractors and make expectations known about how plantings are to be done to ensure trees are healthy and grow to full potential in the future, rather than being predisposed to an early death and succumbing to issues related to improper or deep planting at the time of installation. Planting is a very important and maybe the most important part of a trees life because it will determine if that tree ever grows to its potential and provides a return on investment through benefits it provides. Urban forest managers cannot plan to receive benefits from a tree that has not been set up properly from the beginning by proper installation. Without proper tree planting practices, spending money to plant trees is perhaps a waste of valuable resources.

There are some challenges that the Village faces when it comes to managing its plantings. Village staff that oversee contractor plantings are often planting trees at the same time. This can make follow up and oversight difficult. Recognizing and correcting problems early is crucial to making sure work is done properly. The planting window is often short and occurring at the same time as many other things around the Village, such as opening of parks in spring. There is a critical period after planting that a tree needs to be watered to set them up for success and often the trees are not watered enough during this time because there are not enough staff. Trees are often planted before all seasonal staff begin summer work and when seasonal staff arrive, there are always tasks that take priority over tree watering. The Village will only water trees in an emergency event, such as spring of 2023, when there was a significant drought post-planting and many of the trees that were planted that spring showed severe signs of drought stress. Residents are encouraged to water the trees, but often do not. Proper tree planting and aftercare can be further improved through the addition of another full-time staff member; this is a general recommendation for the future of the department.


Tree watering bags can help people know how much water to give a tree.

Tree Removals & Stumps

In year 2023, there were 145 removals completed. Ash removals accounted for 108 removals and 37 were non-ash removals. Urban forest managers can typically expect a 1% mortality rate in any given year. For the Village, 1% would account for at least 47 tree removals for an inventory of 4,741 trees. As the tree inventory continues to grow, naturally, the number of trees removed will continue to increase as well. Mortality may occur from natural causes such as insects or diseases or from physical damage, like being struck by a motor vehicle.

The Village has a has a total of 18 street tree removals to complete in the winter of 2023 – 2024. There are 4 stumps that need grinding as of fall 2023, plus additional stumps upon completion of removals through winter 2024. There are approximately 70 ash trees along the east river trail that will need to be removed prior to the asphalt trail resurfacing project in summer of 2024. A 1% forecasted mortality rate of 50 trees is expected for year 2024. Most of the removals are completed during the winter months. Stump grinding will follow in the spring and summer months. Replanting may occur prior to, or after, stump grinding. Removal counts since year 2017 and projected removal quantities through year 2028 can be viewed in Table 5 and Table 6 on page 22.

Since year 2017, the Village has removed approximately 869 inventoried trees. The total number of trees removed since 2017 is more than 1000 trees, when trees not inventoried are accounted for in the removal total. Non-inventoried trees would typically be in wooded or natural areas where trees are not accounted for on an individual basis. These trees may have been removed due to EAB, storm damage, or some other reason and are not always replaced because of location or replanting does not make sense.

For every tree removed there is a stump associated with the removal. Stumps are removed by Village staff or contractors depending on quantity of stumps, available staff time and cost. All stumps within the tree boulevard adjacent to homes are backfilled and seeded with grass to complete restoration.

It is recommended that the Village continue to remove trees in the poorest condition. Staff can use tree risk assessment to determine which trees or existing stumps have the most risk and remove those trees and stumps first.

The Village has budgeted $10,000 for emergency removal and replanting of street trees. These funds are designated to assist the Village with cleanup and other associated costs in the event of catastrophic storm event, causing significant damage to trees on a scale too large for staff to handle internally, in a timely manner. Funds would allow the Village to contract help for such an instance.

There is an additional $11,875 designated to general tree removals and replacement, not related to an emergency event or the general tree planting budget. These funds help cover the cost of removals and replacement from trees that would fall under the 1% mortality rate per year. These funds are also important in ensuring the Village can contract services for removals that are too large or dangerous for staff to handle with the available resources. It is recommended that the emergency removal and replacement, as well as the general removal and replacement tree funds, continue to be budgeted for in the coming years. These funds allow the Village to maintain a safe and healthy tree canopy on all public property.

TREE RISK ASSESSMENT

A tree risk assessment is a visual inspection of a tree using different factors to measures the likelihood a tree will fail under certain conditions and strike a target. A tree is given a risk rating depending on the results of the inspection and a decision can be made regarding the future of the tree in question. Almost all trees have a level of risk associated with them. However, that does not make all trees a hazard. Most healthy and structurally sound trees with low likelihood of striking a target and causing damage to an object or injury to a person, will have a lower risk rating. A risk assessment takes into consideration the likelihood of a tree or tree part falling and striking people or property. Using the "ISA Tree Risk Assessment Form" from the International Society of Arboriculture, a risk rating of low, moderate, high, or extreme can be given to a particular tree. Trees within the Village are visually inspected during pruning cycles and periodically as staff are conducting business throughout the Village. Residents can also alert staff if they believe there is a safety issue.


Trees with cracked limbs have an increased risk of failure.

EAST RIVER TRAIL PROJECT – ARBORETUM RESTORATION

The Village of Bellevue manages approximately 3 miles of the east river trail (ERT) that is a shared pedestrian trial with surrounding communities. The flooding that occurred in year 2019 through 2020 had devastating impacts to the trees on the trail. The portion of the ERT, north of Allouez Avenue, is part of the arboretum of which many ash trees had been planted along the trail. Nearly all ash trees along that section of the trail have been removed but not replaced. There are issues with damage to all young trees along the trail from wildlife, particularly from deer browsing and antler scrapes on the trunks, which has killed most young trees. Staff have placed trunk protection on the small trees to protect young trees from damage. Replacement trees will be planted as funds are available.

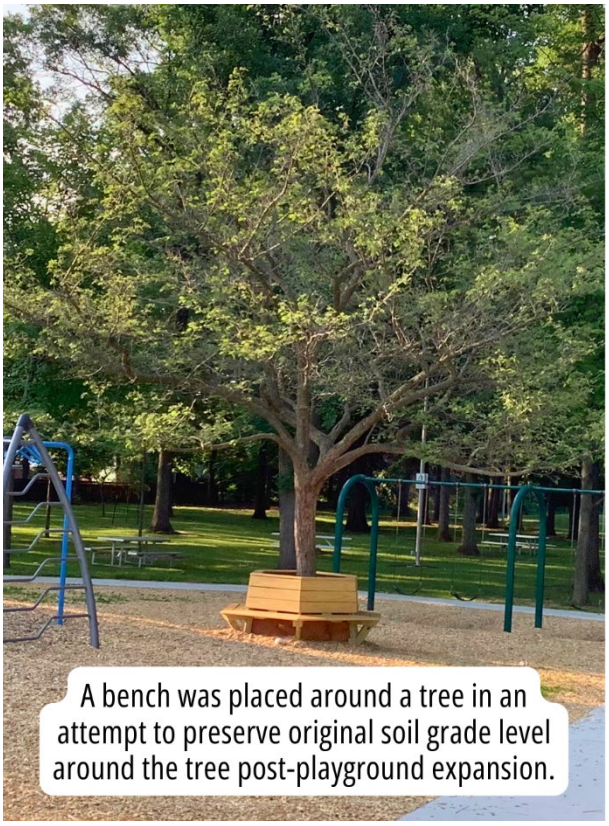
The portion of the ERT south of Allouez Avenue has no vehicle access to perform maintenance. The trail is surrounded by wetland. The hard paved surface which would allow for vehicle and maintenance equipment access is separated by wooden boardwalk sections that are not strong enough to handle the weight of machinery traffic over them. There are approximately 70 dead trees along the trail that are deteriorating but cannot be accessed by staff to remove the trees. Ash and other species have died along the trail because of either EAB, prolonged flooding or a combination of both.

The Village is working on a plan to gain access to the trail to complete removals at the same time as, or before the scheduled trail resurfacing project begins in year 2024. The Village will replant riparian species of trees if the project is completed with full vehicle access to all portions of the trail. Areas that have limited or no access will not be replanted because staff will not be able to access the area to perform maintenance on the trees.

TREE PRESERVATION

Sometimes the removal of trees for construction projects is necessary. The Village does all it can to prevent the removal of trees on public and private property in relation to construction projects. Future removal can be prevented through planning and careful placement of new trees, such as making sure that new trees are not planted in the sidewalk reserve area. Trees planted where future disturbances may occur can cause problems for staff, project engineers and even residents with adjacent property. If a tree has a high value, such as a large and old oak tree, it might be worth preserving that tree with the use of barriers and a tree protection zone to keep disturbances surrounding the tree away from the critical root zone. The Village has used fencing to set up tree protection zones as a method of protecting and preserving the integrity of roots and soil from disturbances during construction activities surrounding important trees.

Old trees and large trees are difficult to reproduce. It takes many decades or even 100+ years to reproduce an old tree, or maybe isn't possible at all given some urban conditions. Many old trees grew large and tall under good natural forested conditions that are often better than what a new tree would be expected to grow in. Urban conditions can be harsh for trees planted where there is soil compaction, pesticide use, absence of organic layer, stripping of topsoil and even nursery cultivation practices that can affect tree life expectancy and how trees grow and die. Protecting trees that have an important impact is something the Village Forestry Department has been committed to and will continue.



A bench was placed around a tree in an attempt to preserve original soil grade level around the tree post-playground expansion.

URBAN TREE WOOD & WOODCHIPS

Tree removals and pruning generates waste in the form of woodchips and wood. The biomass generated through forestry activities is disposed of at the Village compost site located off Eaton Road on the far east side of the municipal border. Residents have access to woodchips for landscaping and firewood, or whatever they chose to use the products for. There is no cost for citizens to use products for personal use.

Tree Pruning

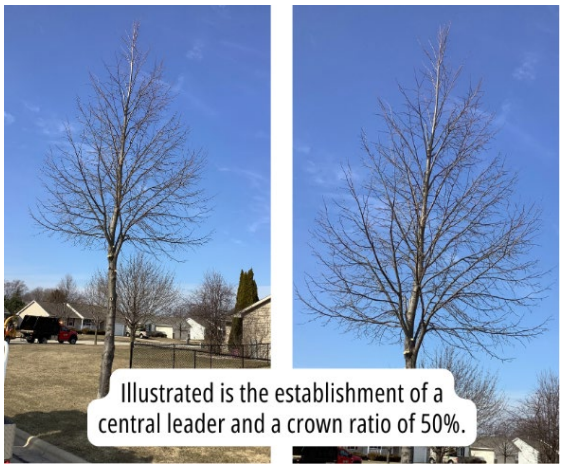
Pruning is an important part of tree maintenance to ensure the health and safety of trees and the people that live and spend time around them. The Village dedicates resources every year to perform routine pruning operations during the months of November – March on a particular portion of the inventoried trees, which are split up into 5 different pruning zones throughout the Village.

The Village has increased zone pruning to more than one zone over the last few years to catch up on some areas where emergency pruning was necessary, mostly related to clearance. The Village has entered sections of zones that were not scheduled to be pruned to do this. Currently, the Village is a in a good place regarding the pruning schedule. All areas that required emergency pruning have been completed. Based on the current tree inventory, approximately 33% of the trees in Bellevue would be recommended for training prune and the remaining 67% for routine prune. There are currently no trees recommended for emergency prune, since staff have entered multiple zones since year 2020 for trees requiring immediate attention related to safety, clearance and/or structural issues.

TABLE 7. RECOMMENDED PRUNING MAINTENANCE

Pruning Type	Quantity	Frequency	Age of Tree
Training Prune	1597	1 – 2 Year Cycle	≤15
Routine Prune	3144	5 Year Cycle	>15
Emergency Prune	0	As Needed	Any

REASONS FOR PRUNING



Trees may be pruned for many reasons, such as to remove branches that are dead, dying, diseased or damaged, or to thin the canopy to increase air and light penetration to inside of the canopy or the landscape below. Branches may be removed to achieve a minimum clearance height of 16 feet at the curb and 8 feet above sidewalks, although the crowns of trees are often brought to same height over both curb and sidewalk for aesthetic purposes. A crown ratio of 50 – 60% is standard post-pruning. Clearance above the road allows vehicles to pass without contacting tree branches, which may cause damage. Vehicles prone to damage from low hanging limbs include school buses, garbage trucks, snowplows, emergency vehicles, street sweepers and other tall vehicles that may be driving or operating close to the curb. Pruning is important to ensure trees are safe and healthy and pose the least risk to people and targets that exist in the surrounding area.

TYPES OF PRUNING

ROUTINE PRUNING

Routine pruning is a standard prune, done on a 5-year cycle, that removes tree parts which are dead, dying, diseased or damaged. Branches may be removed to achieve clearance specifications over streets, sidewalks or buildings. Trees will be assessed and pruned for structural integrity, sometimes with subordination cuts being made. Most trees within the Village, typically those over 15 years planted, fall under this type of pruning.

EMERGENCY PRUNING

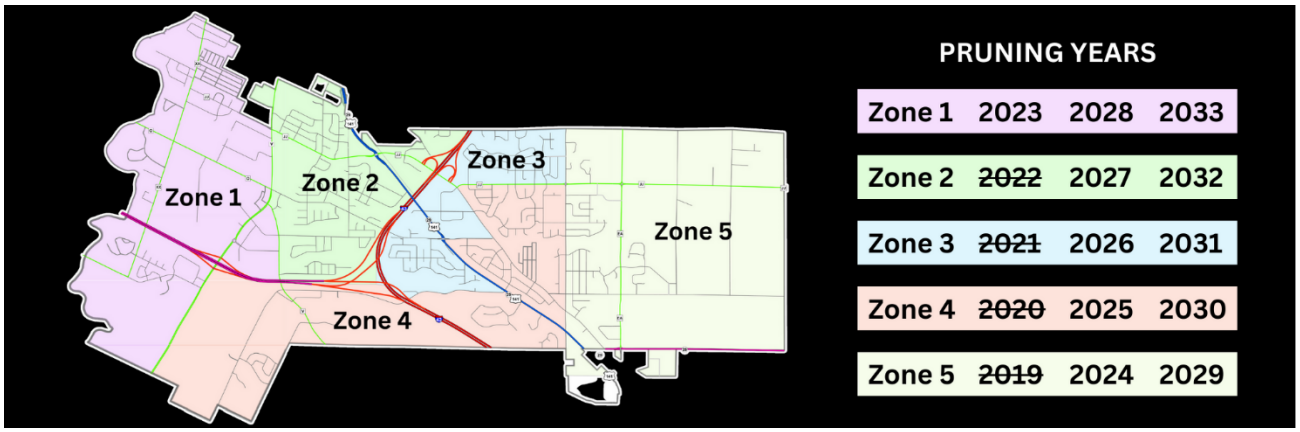
Emergency pruning is a type of pruning that warrants immediate maintenance. A damaged tree with a broken limb hanging over the road, causing a safety issue, would require immediate removal of the limb. Also, a tree part blocking visibility of a busy intersection or stop sign, would require emergency pruning. This type of pruning is done on an as needed basis.

TRAINING PRUNING

Newly planted trees and those that are less than 15 years old are on a more frequent pruning schedule and may receive annual or bi-annual pruning cuts. Cuts focus on crown raising to begin working towards clearance standards, as well as focusing on tree structure to encourage strong branch attachment, minimize tree injury/wound size and reduce susceptibility to weather events or insects & disease pathogens. Young trees can be trained to allocate resources vertically and orient new growth in favorable directions. Training pruning allows staff to prune more trees in less time, generate less waste and lessen the aesthetic impact of pruning on trees. Smaller pruning cuts are less noticeable by residents and allows the trees to seal off small wounds faster than larger cuts generated by pruning less frequently.

TREE PRUNING ZONES

Each street tree within the Village is under a minimum 5-year pruning schedule. The past and present pruning schedule can be viewed in Table 5 and Table 6 on page 22 and a larger map of the pruning zones that can be found in the appendices of this document on page 51 or on the Village website. Pruning zones 4 and 5 have the most trees in comparison to other zones. Zone 5, on the east side of the Village, is seeing a lot of growth and expansion. The zone borders and trees per zone are acceptable with regards to breakdown of maintenance requirements and time to complete zone pruning as of year 2023. The zones will need to be assessed at the time of the next plan that will start in year 2029. It is difficult to predict the how many of the estimated 300 trees planted per year will end up in each of the 5 zones. Trees quantities and locations added to each zone will be updated on a yearly basis.



Administrative Support

DEPARTMENT STAFF

The Parks, Recreation & Forestry Department (PRF) has a total of 4 full-time staff members including The Director of Parks, Recreation & Forestry, Parks & Urban Forestry Foreman, Recreation Supervisor and Buildings & Grounds Laborer. The Director oversees all aspects of the department and 3 full-time staff. The Parks & Urban Forestry Foreman manages daily parks and forestry operations and is the Village Forester. The Recreation Supervisor handles responsibilities related to recreation and community events and the Buildings & Grounds Laborer focuses on maintenance of buildings and facilities. In addition, both the Parks & Urban Forestry Foreman and the Buildings & Grounds Laborer assist the Public Works Department with winter snow plowing operations. During the summer months, the PRF Department receives 5 seasonal staff to assist with summer park and forestry operations.

The Public Works Department plays a crucial role in providing staff to assist with forestry-related pruning and removal operations, primarily taking place during the winter months. Spring and fall planting operations may be performed by contractors or village staff.


Box Truck & Chipper


Lift Truck

FORESTRY EQUIPMENT

The Forestry and Public Works Departments share equipment that is used to perform daily operations in both the summer and winter months. The Village owns a few crucial pieces of equipment that allows staff to perform tree work, such as a 40-foot aerial lift truck, a woodchipper and a stump grinder. The purchase of these items in recent years has allowed Village staff to perform work safer, faster and more efficiently. The Village can save money on contracted services by completing work internally.

FORESTRY BUDGET

The current forestry budget regarding general removal & replacement, emergency & contracted services, general planting, tools & equipment, training & certifications, outreach & other and grant funding can be seen in Table 8. The current amount budgeted is appropriate for most categories, expect for the general planting budget. It is recommended to increase this budget to allow for more plantings to be done after reconstruction projects, sidewalk installation/upgrades and replacement of dead trees. Funds to plant trees in road reconstruction project plans have not been considered or allocated to date and therefore, funds must come out of the forestry general planting budget. The current budget of $25,000 allows for the planting of approximately 76 trees at $325 per tree; that price is estimated according to the most recent planting bids available at the creation of this plan. It would be beneficial to increase the forestry planting budget by $5000 per year for the next 5 years, plus an additional 3% per year, to account for inflation. The increase in the budget would allow the Village to plant more trees. The Village can typically only afford one planting cycle per year. This means that trees can be planted in the spring or in the fall, but not both. Typically, the chosen planting cycle occurs in the spring, however, with additional funds the Village could do both a spring and fall planting.

TABLE 8. CURRENT BUDGETED EXPENSES

Category	$ Budgeted
General Removal & Replacement	$11,875
Emergency & Contracted Services	$10,000
General Planting	$25,000
Tools & Equipment	$5,500
Training & Certifications	$1,225
Outreach & Other	$3,500
Grant Funding – Free Trees	$31,250

TABLE 9. RECOMMENDED INCREASE TO PLANTING BUDGET

Year	$ Added to Budget	$ Total Budgeted
2024	$0	$25,000
2025	$5,900	$30,900
2026	$6,077	$36,977
2027	$6,259	$43,236
2028	$6,447	$49,683

In the past, the replanting budget was allocated towards the replacement of ash trees following removals. With the funds now being directed elsewhere upon the completion of ash tree street tree removals, the Village can plant more subdivisions though the "planting of trees when streets are reconstructed" program, fill vacancies in locations along streets where sidewalks have been added, replace trees that died in the arboretum along the east river trail and more. At the current rate of $25,000 for a planting budget, the Village will have a difficult time funding planting of trees along Allouez Ave., Verlin Rd., Sal St. & Industrial Dr., post-reconstruction. There will not be enough funds to allocate for all the plantings. Without the proper funding and planning, the Village will not be able to keep up with planting opportunities. The Village could purchase bareroot trees, which are less expensive and would allow for more trees to be planted for the same amount of money, however, current staffing resources do not support this option.

TABLE 10. FORECASTED BUDGETED EXPENSES

Activity	Avg. cost per tree	2024 # of Trees	2024 Total Cost	2025 # of Trees	2025 Total Cost	2026 # of Trees	2026 Total Cost	2027 # of Trees	2027 Total Cost	2028 # of Trees	2028 Total Cost
Tree Planting *contractor installed cost*	$325	200	$65,000	200	$65,000	200	$65,000	200	$65,000	200	$65,000
Tree Planting *Bellevue staff installed cost*	$125	100	$12,500	100	$12,500	100	$12,500	100	$12,500	100	$12,500
Tree Planting *total cost funded by grant, not including staff time*	$125	100	$12,500	100	$12,500	50	$6,250	--	--	--	--
Training Prune	$4	798 [A]	$3,192	1098	$4,392	1398	$5,592	1698	$6,792	1998	$7,992
Standard Prune	$45	1075	$48,375	1305	$58,725	910	$40,950	896	$40,320	555	$24,975
Removals	$27/inch	50	$13,500	53	$14,310	56	$15,120	59	$15,930	62	$16,740
Stump grinding	$75	50	$3,750	53	$3,975	56	$4,200	59	$4,425	62	$4,650
EAB treatments [C]		2	$100	28	$1,300	2	$100	28	$1,300	2	$100
Training and certifications [B]		--	$1,225	--	$1,885	--	$1,885	--	$2,055	--	$1,885
Outreach & other		--	$3,500	--	$3,500	--	$3,500	--	$3,500	--	$3,500
Equipment/Tools		--	$5,500	--	$5,500	--	$5,500	--	$5,500	--	$5,500
	TOTALS		**$169,142**		**$183,587**		**$160,597**		**$146,267**		**$131,957**

NOTE: Projected costs include employee wages and materials unless otherwise specified

A. 798 trees is half the number of current trees recommended for training prune (2 year training prune cycle), plus 300 newly planted trees added to schedule each year

B. Cost increase in 2025 with recommended additional full-time staff

C. Costs only include treated trees paid for by the Village. The cost for man treated ash are billed back to the property owner

Policies for Management of Bellevue's Urban Forest – Public Tree Ordinance

The Village of Bellevue has adopted municipal ordinance § Chapter 427 Trees and Shrubs, to protect and manage publicly owned trees and shrubs:

> "Having determined that a well-managed urban forest provides many benefits to the Village, it is hereby declared to be the policy of the Village of Bellevue, Wisconsin, to regulate and control the planting, removal, maintenance and protection of trees and shrubs upon or in all public areas of the Village in order to:
>
> A. Promote and enhance the aesthetics and general welfare of the Village.
> B. Eliminate and guard against dangerous conditions which may result in injury to persons using public areas of the Village.
> C. Protect trees and shrubs in public areas from undesirable and unsafe planting, removal, maintenance and protection practices.
> D. Protect all trees and shrubs from the damaging effects of construction, alteration or repair of utility facilities and other improvements in any public area.
> E. Guard all trees and shrubs, both public and private, within the Village against the spread of disease, insects, or pests.
> F. Prevent damage to any public sewer, water main, street, sidewalk, or other public property.

TREE WORK & REMOVAL PERMIT APPLICATION

Tree removal, pruning, fertilizing, other chemical application or any activity which may affect a public tree must first be approved by the Village Forestry Department prior to work beginning. Permits are available on the Village website or can be picked up at the Village office.

TREE MAINTENANCE REQUIREMENTS – BELLEVUE'S RESPONSIBILITY

Trees provide many benefits to the community but require maintenance to keep them from becoming a public nuisance. Tree inspections and pruning are both tools that the Village uses to ensure trees do not become problems. With proper management and maintenance, trees and people can live and exist soundly in the same place. It is the responsibility of the Village under municipal code to perform maintenance on public trees. Private trees on private property are not the responsibility of the Village.

TREE MAINTENANCE REQUIREMENTS – PRIVATE PROPERTY OWNER'S RESPONSIBILITY

The Village does not perform work on private trees but holds the authority to declare a public nuisance on any private tree with proper cause. A tree may be declared a public nuisance if the tree is blocking a sign or intersection, encroaching onto a sidewalk or encroaching the street as to hinder free pass of vehicles within the clearance zone of 16 feet at the curb or 8 feet above a sidewalk. The Village may prune private trees if there is any safety issue that requires immediate attention, such as a broken branch encroaching the street or limb blocking a sign or streetlight. Responsibility for issues related to private trees, such as sidewalk or street encroachment, that do not pose an immediate danger to the public, will fall on the owner of the property of which the trees is rooted into the ground at the base.

ARBORICULTURAL SPECIFICATIONS MANUAL

Bellevue has adopted an arboricultural specifications manual which highlights some forestry best practices for the Village to follow when performing routine operations. As stated in municipal code § Chapter 427-5 Standards and specifications for tree planting, maintenance, protection and removal, "The following document, in its entirety, is hereby adopted and made a part of this section: Village of Bellevue Arboricultural Specifications Manual.'" § Chapter 427 Trees and Shrubs. A copy of the manual be found in the appendices of this plan on page 56 or on the Village of Bellevue website.

Additional Improvements/Accomplishments within the Forestry Department since year 2017

ADDITION OF AERIAL LIFT TRUCK TO FLEET

The purchase of an aerial lift truck has allowed staff to perform forestry operations, such as pruning, more thoroughly. Pruning and removals can be done in a safer and more efficient manner than in the past. Prior to the purchase of the aerial lift truck, staff were only able to prune from the ground, which minimized pruning on tall trees to clearance pruning only. All removals that required trees to be pieced down in sections were hired out to a contractor. Staff used the lift truck for zone pruning in winter 2022 – 2023 for the first time. Staff and residents noticed a positive difference in the health and appearance of trees post-pruning with the proper equipment to perform the work. The lift truck was an important addition and improvement to the Forestry Department.

ASH TREE REMOVALS

Staff have completed Village-wide removals of ash trees from streets. All ash trees within the Village, located along the curb and intentionally planted as street trees, have been removed and replaced. This is a major accomplishment as many communities are still dealing with the borer and trying to figure out ways to handle the dead trees within the right-of-way in a timely manner.

TREE CITY USA

The Village of Bellevue has maintained the credential of Tree City USA from the Arbor Day Foundation since year 2003. The Village has received the Growth Award in year 2023 for the accomplishments made within the forestry program. Staff will continue to annually apply for Tree City USA and the Growth Award.

ARBOR DAY AT MCAULIFFE SCHOOL

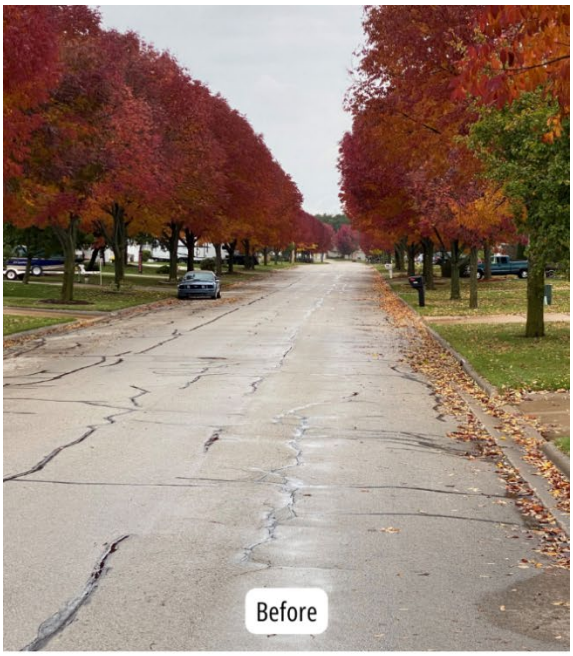
Staff within the Parks, Recreation & Forestry Department celebrated Arbor Day at McAuliffe School with the third-grade class every year by demonstrating how to plant a tree on the school grounds and teaching students about the benefits of trees. Each student receives a small tree to take home and plant as a token of the importance of trees. This event happens every year on Arbor Day, which falls on the last Friday in April.

CHAPTER 4 – INVASIVE SPECIES

Invasive species have historically had major influences on the urban forest. Forestry professionals have learned ways to deal with existing invasive species and prepare for the introduction new ones. Emerald ash borer, Dutch elm disease, oak wilt, Japanese beetle and spongy moth are some the most common invasive species that are encountered or considered important in Bellevue because of their impact on community trees, both public and private, or potential to have devastating impacts. Methods for dealing with invasives include chemical and biological treatments or sanitation practices that remove and dispose of infected trees. Maintaining tree health and increasing species diversity among the public tree inventory are important tools to help protect Bellevue's trees from devastating impacts caused by invasive insects and diseases.

Emerald Ash Borer

The Village of Bellevue has been most affected by emerald ash borer (EAB) in comparison to other existing invasive species. The Village has made extensive efforts to remove trees infested by EAB. The approach that was most cost-effective and made the most sense financially, was the removal and replacement method. The option to treat ash trees against the borer was not an option because of the high recurring expenses that would have been required on a bi-annual basis. Bellevue's tree inventory prior to the removal of the ash trees was around 26% and currently sits at 1.68%. With 1 of 4 trees in the public inventory identified as an ash tree, treatment was not financially possible, since funds to pay for the treatments would have been costly. At the price of $12 per diameter inch, in the year 2024, it would cost the Village approximately $81,000 to treat every ash tree that was removed. Treatment costs would continue to increase with inflation and need to be completed every other year. Split between 2 years for a bi-annual schedule, the annual cost to retain ash trees would have been around $40,500.



Local treatment costs for trees in the Green Bay area over the last few years have ranged from $10 – 12 per diameter inch. For the year 2023, costs for treatments are no less than $12 per diameter inch. For a tree with a 12" dbh in year 2023, it would cost a minimum of $144 for a single treatment, occurring once every 2 years. Bi-annual treatment costs would have to be budgeted for on a yearly basis, with costs varying dependent upon the quantity of trees being treated in that year's cycle. The cost would also increase with inflation over the years and as the trees increased in diameter. Most of the ash trees ranged in size from 6 – 18" dbh. A breakdown of sizes for ash trees removed can be found in Table 4 on page 14.

The alternative for dealing with ash trees was to remove the trees and replace them with a different species. This was a more financially fit option for the Village since staff where able to do the removals. Funding for replacement trees was, in part, funded by the Wisconsin DNR as part of a grant program helping communities deal with EAB. The cost for removals was staff time and materials to remove the trees, stump grinding and cost to replace the tree. The total complete cost to replace one 18" dbh ash tree was estimated at approximately $500 per tree. The cost for a new tree to be planted would not change in correspondence with ash tree diameter, however, a decrease in diameter would bring down the cost of $500 and an increase in diameter would bring up the cost of $500. For $500, an 18" dbh tree, treated at a price of $12 per diameter inch, could receive treatment for approximately 4.5 years.

ADOPT-AN-ASH PROGRAM

Prior to the removal of ash trees within the right-of-way, residents were given the opportunity to adopt street trees adjacent to their property through the adopt-an-ash program. This program allowed residents to pay for the treatment of street trees that bordered their property, to avoid removal. This program also allowed residents to adopt a tree in a park or on other public property. Staff facilitated the treatment process and residents were billed by the Village for the cost of treatment. Currently, there are still residents opting for continued treatment of street trees that border their property. There are currently 56 public trees under a treatment plan throughout the Village.

OTHER INVASIVES

Although EAB has the most significant impact on the community, there are other invasives to watch out for. Dutch elm disease (DED) and oak wilt (OW) are 2 common invasive diseases which can be vectored and transmitted by insects or through root grafts. Staff continue to watch for both diseases, although OW is more important to monitor in Bellevue, since there are many stands of oak trees within the Village on public and private property. DED usually infects elm trees that grow naturally in parks, open fields, disturbed areas or woodlands. The Village removes the trees as they are infected and die. There are currently no known cases of OW on public property within Bellevue, but cases of DED are common. Monitoring for both diseases will continue and appropriate action will be taken upon the encounter of a suspected infection. More information visit: https://dnr.wisconsin.gov/topic/foresthealth/oakwilt and https://hort.extension.wisc.edu/articles/dutch-elm-disease/.

There are other invasives on the horizon that have not yet reached Bellevue, such as spotted lantern fly. Some invasives, such as spongy moth and Japanese beetle, continue to be destructive nuisance pests that defoliate trees every year within the Village. Effects of invasive species can stress, weaken and kill trees if the damage is severe enough on a yearly basis. A trees energy reserves will eventually become depleted after years of recurring defoliation, making it susceptible to secondary pests or pathogens. Bellevue's focus on tree diversity can help to hinder or lessen the impacts of invasives on tree populations throughout the Village. There are certain tree species the Village avoids planting if they are known or observed to be favorites or most affected by invasive species. Greenspire linden is an example of a tree that is no longer planted or recommended to plant in Bellevue because of the Japanese beetles severe defoliation effects on many of those trees. The Village will continue to evolve forestry practices to tailor towards management of invasive species and their impact and influence on urban tree populations over time.

CHAPTER 5 – ARE WE GETTING WHAT WE WANT?

Urban forestry management plans deliver some insight as to how the urban forest will be managed into the future and what the goals are for the community. They are useful for displaying data and relaying information about how trees benefit the community. The Village of Bellevue adopted its first urban forestry management plan in year 2009. Since then, some goals have remained relatively the same and some have changed. Past goals can be used to reflect upon the status of the forestry program and changes or improvements that have been made towards accomplishing goals.

Overall, the Village is on track to fulfill most of the goals listed from the 2017 – 2021 urban forestry management plan. Many efforts have been made to make improvements to the Forestry Department and figure out ways to better serve the community and provide the most benefits possible through the planting and maintenance of trees in the Village. Some of the goals listed in the previous plan are similar to the goals that were created for the 2024 – 2028 plan.

Past Goals

1. Fragmentation of monoculture neighborhoods
2. Replacement of dead and declining trees
3. Population of unplanted neighborhoods
4. Increase in urban forestry staff
5. Further risk abatement
6. Continued staff training

REFLECTION ON GOALS

1. **Fragmentation of monoculture neighborhoods**
   There have been significant changes to the overall tree population that lines the streets of Bellevue, since 2017. The biggest cause for the change was the removal and replacement of nearly 25% of Bellevue's tree canopy due to EAB. Although the impact was devastating to the Village and residents of the community who had to deal with catastrophic tree loss, there is some silver lining, which is increased species diversity. As the trees were replaced, it gave Village staff the opportunity to diversify streets and replant with an array of different tree species to minimize impacts of future invasive species. As trees along streets die, they are replaced with a species that promotes diversity in that location.

2. **Replacement of dead and declining trees**
   Staff have focused on the removal and replacement of many trees in poor condition. The goal was and continues to be the removal of trees that pose the most risk to the public. There have been multiple trees removed over the last few years that were in decline for varying reasons, as well as newly planted trees that needed replacement because they did not survive or were in poor condition. Staff continue to monitor and survey for declining and high-risk trees and replace as necessary.

3. **Population of unplanted neighborhoods**
   There are multiple programs that have been mentioned throughout this plan that the Forestry Department has been utilizing to fill vacancies in neighborhoods without trees. For increasing the number of trees in unplanted neighborhoods, the most relevant planting program the Village uses, would be the "planting of trees when streets are reconstructed" planting program. Information describing all of the planting programs can be found in the planting section of this plan starting on page 22 or in the Village's arboricultural specifications manual.

4. **Increase urban forestry staff**
   Staff have been encouraging the approval of a full-time Park Maintenance Laborer position. Staff within the Parks, Recreation & Forestry Department will continue to advocate and produce relevant evidence to support the need for an additional position. More staff would be helpful in completing daily park and forestry operations. The Village manages and maintains a wonderful parks and forestry system with the staff and resources available.

5. **Further risk abatement**
   The further risk abatement ties into past goal 2: "replacement of dead and declining trees". The Village has removed and replaced many dead and dying trees within the right-of-way that pose an elevated risk. The Village is prompt about removing stumps in a reasonable time frame to minimize associated risk. Regular tree assessments and visual inspections during cyclic pruning, as well as resident notifications to the Village, help to identify and mitigate hazard trees or those with higher risk.

6. **Continued staff training**
   Staff attended conferences and training to maintain credentials that qualify them to perform the position duties for which they are professionally qualified. It is important to make sure staff are up to date with the most current information and practices occurring within the field. This is a goal that has been met every year.

Evaluation

Members of the Village Board, Village Tree Board, Village Administrator and Parks, Recreation & Forestry Department staff will meet throughout the year to determine if recommendations for achieving goals are being met. Staff will work on ways to fund some of the goals through grant opportunities and discuss cost-effective options for funding development and maintenance of the urban forest with Village leaders and decision-makers. Staff will assess goals on a consistent basis and inform Village leaders and decision-makers of changes or accomplishments towards goals during Village board meetings.

MAJOR GOALS & LIMITING FACTORS

The addition of a Park Maintenance Laborer as a full-time staff member in the department would require the Village to dedicate funds to cover an additional salary. Funds dedicated would be beneficial to members of the community in many ways, especially as Bellevue continues to further outgrow the current staffing levels. Village Board members are persuaded to consider the addition of this position.

The Village Forestry Department is asking for an increase in funds dedicated to the planting of trees across multiple planting programs. The $5000 per year increase, with 3% inflation rate on the current amount, will up the forestry planting budget by $25,000 by the expiration of this plan. Staff understand this is a large increase, paired with asking of an additional full-time staff member. There are limiting factors for goals to be reached without funds and resources that allow staff the ability to accomplish all planting and maintenance goals currently not being achieved at desired levels, as stated throughout the plan.

The Future of Bellevue

The Village of Bellevue has been expanding at a quick rate over the last several decades and it will continue to do so. The goal of the Forestry Department is to grow with the community and provide as many benefits to residents and visitors as possible. As the Village continues to spread east, the number of trees per acre within the Village will continue to increase. Many people think of the development of agricultural land as a disservice to the land. However, as the land is converted from agricultural land to urbanized land, the number of trees per area will increase. Currently, much of the land that lies east of Huron Road is farmland that has few trees and mostly serves a purpose of growing crops for farm use by private landowners. The development of these areas will not only increase the tax base in Bellevue to allow the Village to provide more services to residents, but it will also transform much of the land to places where people can enjoy parks and greenspace that did not exist before. Where there used to be farm fields with no trees, trees will be planted as part of the Village's many planting programs, which will increase the amount of land that is under canopy cover. The result is many benefits to residents and visitors of the community.

Diversity of species across the landscape and land use will continue to evolve over time, but with the policies of Bellevue Forestry Department, the changes will keep in mind people & wildlife and their access to quality greenspace, as well as enhanced living & working environments, drawing people to live, work & recreate in our community's urban forest.

APPENDIX A

Glossary Definitions

ARBORICULTURAL SPECIFICATIONS MANUAL
The urban forestry document for the Village that serves as a standard for the planting, maintaining, removing and protecting of all trees in public areas by identifying specific practices, policies and procedures.

CANOPY COVER
Defined as amount of ground space that is covered by tree canopy or forest

CLEAR-VISION TRIANGLE
Defined as the triangular area defined by two thirty-foot legs extending from two intersecting streets or an intersecting street and alley or driveway.

COMMISSION
The Park Commission of the Village of Bellevue as constituted under the Code of the Village of Bellevue.

MAINTENANCE AND PROTECTION
Includes all operations of trimming, pruning, spraying, injecting, fertilizing, treating, bracing, cabling and cutting any tree or shrub above or below ground.

PERMIT
Written permission from the Village Forester to perform maintenance and protection on any public tree or shrub, or do construction (as defined in § **427-7**) in the vicinity of any public tree or shrub. Any permit may include specifications which shall be complied with and any special provisions applicable to the purpose of the permit.

PERSON
Any individual, firm, partnership, association, corporation, or government entity.

PUBLIC AREA
Includes all public ways, parks and other lands owned, controlled, or leased by the Village.

PUBLIC NUISANCE
Any tree or shrub or part thereof which by reason of its condition and location has been declared to be a public nuisance under § **427-8** of this chapter.

PUBLIC TREES AND SHRUBS
Any tree or shrub, as herein defined, presently or hereafter planted in or upon any public area.

PUBLIC WAY
Includes all public streets, roads, boulevards, median strips, alleys and sidewalks.

RIGHT-OF-WAY
See definition for PUBLIC WAY.

SHRUB
A woody plant usually with multiple stems branched at or near the base, reaching a height of less than 12 feet.

STREET TREE
Any public tree presently or hereafter located in the public way between the curb and public sidewalk, or between the curbs of a median strip, or in the equivalent location with respect to future curb, sidewalk, or median strips where such curbs or sidewalk are not yet installed.

TREE
A woody plant usually with a single stem unbranched at the base, reaching a height of 12 feet or more.

TREE BOARD
The group of individuals appointed by the Village under § **427-2A** of this chapter designated to enforce the provisions of this chapter.

URBAN FORESTRY MANAGEMENT PLAN(S)
The urban forestry document(s) that establish specific field operations of the urban forestry program. Management plans identify and prioritize site specific tree planting, maintenance, removal and abatement activities within a multiyear time frame.

VACANCY or VACANT PLANTING SITE
A specific location suitable for the planting of a tree but one does not exist.

VILLAGE
The Village of Bellevue, Wisconsin.

VILLAGE FORESTER
The person designated by the Village under § **427-2B** of this chapter or his/her duly authorized representative designated to perform inspection or otherwise enforce the provisions of this chapter.

APPENDIX B

§ Chapter 427 Trees and Shrubs

§ 427-1 **Purpose.**
Having determined that a well-managed urban forest provides many benefits to the Village, it is hereby declared to be the policy of the Village of Bellevue, Wisconsin, to regulate and control the planting, removal, maintenance and protection of trees and shrubs upon or in all public areas of the Village in order to:

A. Promote and enhance the aesthetics and general welfare of the Village.

B. Eliminate and guard against dangerous conditions which may result in injury to persons using public areas of the Village.

C. Protect trees and shrubs in public areas from undesirable and unsafe planting, removal, maintenance and protection practices.

D. Protect all trees and shrubs from the damaging effects of construction, alteration or repair of utility facilities and other improvements in any public area.

E. Guard all trees and shrubs, both public and private, within the Village against the spread of disease, insects, or pests.

F. Prevent damage to any public sewer, water main, street, sidewalk, or other public property.

§ 427-2 **Authority and power.**
The following entities are hereby established and have authority to administer the provisions of this chapter:

A. Tree Board.

(1) Establishment. The Village of Bellevue Park Commission shall function as the Village of Bellevue Tree Board (hereinafter "Tree Board"). Its functions and duties are limited to those set forth in this chapter.

(2) Duties and responsibilities. The Tree Board shall have the following duties and responsibilities:

(a) The Tree Board, with the assistance of the Village Forester, shall prepare for Village Board approval an Urban Forestry Strategic Plan. The Urban Forestry Strategic Plan shall outline urban forestry program activities for a minimum of five years. This plan shall describe the urban forestry activities to be undertaken by the Village, the reasons for those activities, the possible funding source(s) and the means of accomplishing the activities, the alternatives available to the Village to fund or accomplish the activity, the projected date of completion and the consequences if the activity is not completed.

(b) The Tree Board, with the assistance of the Forester, shall develop and periodically review and revise, as necessary, the Arboricultural Specifications Manual.

(c) The Tree Board shall advise and consult the Forester on any matter pertaining to this chapter and its enforcement. The topics under which this advice and consultation may be given may include, but are not limited to, any of the following:

[1] Recommend for Village Board approval amendments to this chapter, development, alterations and/or revisions to the Arboricultural Specifications Manual and/or other related Urban Forestry Plans;

[2] Policy concerning selection, planting, maintenance and removal of trees, shrubs and other plants within the Village;

[3] Recommendation for the allocation of funds to the Tree Program and expenditures of funds by the Tree Program;

[4] Establishment of educational and informational programs; and

[5] Development of policies and procedures regarding the Tree Program.

(3) The Tree Board, upon request, shall hear all issues of disputes which arise between the Village and any such person whenever those issues involve matters or the interpretation or enforcement of the Arboricultural Specifications, Urban Forestry Plans and Programs or of the interpretation or enforcement of this chapter.

B. Village Forester.

(1) Establishment. The Director of Parks and Leisure Services or his/her designee shall function as the Village Forester.

[Amended 7-9-2014 by Ord. No. O-2014-12]

(2) Duties. The Village Forester shall perform the following duties:

(a) Manage the urban forestry program. The Village Forester shall implement, monitor and evaluate the Urban Forestry Program. The Village Forester shall manage the planting, removing, maintaining and protecting of all public trees and shrubs or cause such work to be done as may be necessary to preserve the beauty of public areas, public ways and to protect life and property.

(b) Provide urban forestry education and awareness. The Village Forester shall implement a program of public education and awareness that will encourage the planting, maintenance and removal of trees and shrubs on private property in furtherance of the goals of the Urban Forestry Program.

(c) Issuance of permits. The Village Forester shall issue permits as are required by this chapter. The Village Forester shall have the right to inspect all work performed pursuant to such permits.

§ 427-3**Applicability.**
This chapter provides full power and authority over all trees and shrubs which now or which may hereafter be located within all public areas and to trees and shrubs located on private property that constitute a hazard or threat as described herein.

§ 427-5**Standards and specifications for tree planting, maintenance, protection and removal.**
The following document, in its entirety, is hereby adopted and made a part of this section: "Village of Bellevue Arboricultural Specifications Manual."

§ 427-6**Street tree planting plan.**

A. Plan for the orderly planting of trees. The Village Board may establish a plan for the orderly planting of trees in the terraces or boulevards along Village streets to reduce conflicts between trees and other public use of streets, to facilitate care of the trees and to make the Village a more attractive place in which to live. The plan shall take into consideration the recommendations of the Urban Forestry Management Plan and Arboricultural Specifications Manual when determining species, size and location of trees.

B. Planting along established streets. When, in the opinion of the Tree Board, with approval from the Village Board, the street right-of-way or terrace of any established street can be improved by planned tree planting, existing trees have been removed due to the moving or construction of buildings or roadways or when the number of trees in any street right-of-way or terrace has become so few as a result of normal removal or other cause, the Village may plant or cause to be planted such trees in the street right-of-way or terraces as it deems necessary. The cost of replanting in the street right-of-way or terrace shall be assessed against owners of adjacent property in the same manner as other special assessments.

C. Planting of trees when streets are reconstructed. When streets are fully reconstructed, new trees shall be planted if, in the opinion of the Village Forester, there is adequate land in the terrace or boulevard to reasonably support tree growth. The cost of these new trees shall be assessed against owners of adjacent property in the same manner as other special assessments. The number and location of each tree, species and size of stock are to be determined by the Village Forester.

D. Planting of replacement trees. When trees are removed for the widening of any established street, for death or illness of the tree or the abatement of a nuisance, replacement trees shall be planted if, in the opinion of the Village Forester, there is adequate land in the terrace or boulevard to reasonably support tree growth. The cost of replacing these trees will be at the expense of the Village. The number and location of each tree, species and size of stock are to be determined by the Village Forester.

E. New subdivisions tree planting. The Village shall require street trees for all new subdivisions in the Village. A linear curb fee shall be charged per a developer agreement, collected and placed in an escrow account for trees. The fee shall be approved by resolution. After an occupancy permit has been issued and lawn established for any house in the development, trees shall be selected and planted in the terrace by the Village at the next most appropriate planting season. The number and location of each tree, species and size of stock are to be determined by the Village Forester.
[Amended 10-24-2018 by Ord. No. O-2018-13]

F. Neighborhood tree planting program. The Village of Bellevue shall provide a neighborhood tree planting program for residents who wish to have trees planted in the terrace area adjacent to their property. The planting program will be offered in the fall and runs concurrent with other fall plantings. The resident pays for the wholesale cost of the tree, including planting.

G. Public tree planting. Should any owner of adjacent property desire to plant a tree on any public property, written permission shall be obtained from the Village Forester in which the number, species, location and size of the tree shall be designated. The cost of such planting shall be borne by the adjacent property owner.

H. Planting along unimproved streets. Trees shall not be planted in the terrace on unimproved streets or where no curb and gutter exist.

§ 427-7**Permits.**

A. Scope of requirement. No person except the Village Forester or authorized agent of the Village may perform any of the following acts without first obtaining from the Village Forester a permit (free of charge) and nothing in this section shall be construed to exempt any person from the requirements of obtaining any additional permits as are required by law:

(1) Remove, destroy, cut, deface, or injure any tree existing in the public area or attach any rope, wire, chain, sign or any other device to any public tree.

(2) Plant, prune, fertilize or spay any tree or shrub existing on any public area in the Village or authorize or cause the same to be done.

(3) Place or maintain upon the ground in any public area any stone, concrete, brick or other impervious material or substance in such as manner as may obstruct the free access of air and water.

B. Issuance. Within 14 days of receipt of the application, the Village Forester may issue a permit to perform, within 30 days of the day of issuance, any of the acts specified in Subsection **A** immediately above, for which a permit is requested whenever:

(1) Such acts would result in the abatement of a public nuisance; or such acts are not inconsistent with the development and implementation of the Urban Forestry Management Plan or with any regulations or standards of the Arboricultural Specifications Manual; and

(2) An application has been signed by the applicant and submitted to the Village Forester detailing the location, number, size and species of trees, shrubs, or other plants that will be affected by such acts, setting forth the purpose of such acts and the methods to be used and presenting any additional information that the Village Forester may find reasonably necessary; and

(3) The applicant agrees to perform the work for which the permit is sought in accordance with the provisions of this chapter, the Urban Forestry Management Plan and with the regulations and standards set forth in the Arboricultural specifications Manual; and

(4) The applicant certifies that he/she has read and understands those provisions of the Urban Forestry Management Plan, this chapter and the Arboricultural Specifications Manual which are pertinent to the work for which the permit is sought.

§ 427-8**Public nuisances.**

A. Definition. The following are hereby declared public nuisances under this chapter:
[Amended 3-27-2019 by Ord. No. O-2019-11]

(1) Any dead or dying tree, shrub, or other plant, whether located on Village-owned property or on private property that is the cause of substantial annoyance to the general public:

(2) Any otherwise healthy tree, shrub, other plant or portion thereof, whether located on public areas or on private property, which harbors insects or diseases which reasonably may be expected to injure or harm any tree, shrub, or other plant;

(3) Any tree, shrub, other plant, or portion thereof, whether located on public areas or on private property, which by reason of location or condition constitutes a potential danger to the health, safety, or welfare of the general public;

(4) Any tree, shrub, or other plant or portion thereof, whether located on public areas or on private property, which obstructs the free passage of pedestrian or vehicular traffic or which obstructs a street sign on Village property;

(5) Any tree, shrub or other plant or portion thereof, whether located on public areas or on private property, which dangerously obstructs the view as such may be determined by the Village Forester pursuant to this chapter;

(6) Any tree, shrub or other plant or portion thereof, whether located on public areas or on private property which is or will be impacted as a result of a publicly funded construction project.

B. Right to inspect. The officers, agents, servants and employees of the Village have the authority to enter onto private property, after prior notification to property owner, whereon there is located a tree, shrub, plant or plant part that is suspected to be a public nuisance.

C. Abatement. The following are the prescribed means of abating public nuisances under this chapter:

(1) Any public nuisance under this chapter which is located on public areas shall be pruned, removed, or otherwise treated by the Village Forester or agent of the Village in whatever fashion is required to cause the abatement of the nuisance within a reasonable time after its discovery.

(2) Any public nuisance under this chapter which is located on private-owned property shall be pruned, removed, or otherwise treated by the property owner or his/her agent in whatever fashion is required to cause the abatement of the nuisance. No property owner may be found guilty of violating this provision unless and until the following requirements of notice have been satisfied:

(a) The Village Forester or agent of the Village shall cause a written notice to be personally served or sent by registered mail to the person to whom was sent the tax bill for the general taxes for the last preceding year;

(b) Such notice shall describe the kind of tree, shrub, or the plant or plant part which has been declared to be a public nuisance, its location on the property and the reason for declaring it a nuisance;

(c) Such notice shall describe by legal description or by common description the premises;

(d) Such notice shall state the actions that the property owner may undertake to abate the nuisance;

(e) Such notice will require the elimination of the nuisance no less than 30 days after the notice is delivered or sent to the person to whom was sent the tax bill for the general taxes for the last preceding year.

(3) In the event that the nuisance is not abated by the date specified in the notice, the Village Forester or agent of the Village is authorized to cause the abatement of said nuisance.

(4) The Village Forester is empowered to cause the immediate abatement of any public nuisance, provided that the nuisance is determined by the Village Forester or agent of the Village to be an immediate threat to any person or property.

§ 427-9 **Interference with Village.**

It shall be unlawful for any person to prevent, delay, or interfere with the Village or any of its agents while engaging in and about the planting, cultivating, mulching, pruning, spraying, or removing of any street trees or trees and shrubs from any public area or trees and shrubs on private property as authorized by this chapter.

§ 427-10 **Violations and penalties, claims and appeals.**

A. Except as otherwise provided, any person found in violation of this chapter or any order, rule or regulation made hereunder shall be subject to the penalty provided in § **1-4** of the Code of the Village of Bellevue.
[Amended 7-9-2014 by Ord. No. O-2014-12]

B. Assessment of claim. In the event that a nuisance is not abated by the date specified in the notice, the Village Forester is authorized to cause the abatement of said nuisance. The reasonable cost of such abatement shall be filed as a lien against the property on which the nuisance was located. In addition, the owner of the property upon which the nuisance was located shall be subject to prosecution.

C. Appeal. Any party who elects to dispute any action or decision by the Village Forester or Tree Board shall be entitled to appeal to the Village Board for a final determination.

APPENDIX C

Village of Bellevue Public Tree Species Inventory

SCIENTIFIC NAME	COMMON NAME	QUANTITY
ABIES SPP.	FIR	7
ABIES BALSAMEA	BALSAM FIR	1
ABIES CONCOLOR	WHITE FIR	5
ACER X FREEMANII	FREEMAN MAPLE SPP.	23
ACER X FREEMANII 'ARMSTRONG'	ARMSTRONG MAPLE	1
ACER X FREEMANII 'CELZAM'	CELEBRATION MAPLE	69
ACER X FREEMANII 'JEFFERSRED'	AUTUMN BLAZE MAPLE	243
ACER X FREEMANII 'SIENNA'	SIENNA GLEN MAPLE	35
ACER MIYABEI	MIYABE MAPLE	4
ACER MIYABEI 'STATE STREET'	STATE STREET MAPLE	9
ACER NEGUNDO	BOXELDER	6
ACER PLATANOIDES	NORWAY MAPLE	485
ACER PLATANOIDES 'COLUMNARE'	COLUMNAR NORWAY MAPLE	28
ACER PLATANOIDES 'CRIMSON KING'	CRIMSON KING NORWAY MAPLE	21
ACER PLATANOIDES 'ROYAL RED'	ROYAL RED MAPLE	47
ACER PSEUDOPLATANUS 'TUNPETTI'	REGAL PETTICOAT SYCAMORE MAPLE	2
ACER RUBRUM	RED MAPLE	31
ACER RUBRUM 'NORTHWOOD'	NORTHWOOD RED MAPLE	2
ACER SACCHARINUM	SILVER MAPLE	62
ACER SACCHARUM	SUGAR MAPLE	71
ACER SACCHARUM 'FALL FIESTA'	FALL FIESTA SUGAR MAPLE	2
ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN SUGAR MAPLE	11
ACER SPP.	MAPLE	13
ACER TATARICUM	TATARIAN MAPLE	39
ACER TATARICUM 'GAR ANN'	HOT WINGS MAPLE	4
ACER TRUNCATUM X PLATANOIDES 'JFS-KW202'	CRIMSON SUNSEST MAPLE	3
ACER TRUNCATUM X PLATANOIDES 'KEITHSFORM'	NORWEGIAN SUNSET MAPLE	3
ACER TRUNCATUM X PLATANOIDES 'WARRENRED'	PACIFIC SUNSET MAPLE	7
AESCULUS GLABRA	OHIO BUCKEYE	16
AESCULUS GLABRA 'JN SELECT'	EARLY GLOW BUCKEYE	10
AESCULUS HIPPOCASTANUM	COMMON HORSECHESTNUT	10
AESCULUS HIPPOCASTANUM 'BAUMANNII'	BAUMANN HORSECHESNUT	6
AESCULUS X ARNOLDIANA 'AUTUMN SPLENDOR'	AUTUMN SPLEDMOR BUCKEYE	3
AESCULUS X CARNEA	RED HORSECHESTNUT	1
AESCULUS X CARNEA 'BRIOTII'	RUBY RED HORSECHESTNUT	1
AESCULUS X CARNEA 'FORT MCNAIR'	FORT MCNAIR RED HORSECHESTNUT	28
AMELANCHIER SPP.	SERVICEBERRY	1
AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	30
BETULA ALLEGHANIENSIS	YELLOW BIRCH	1
BETULA NIGRA	RIVER BIRCH	24

SCIENTIFIC NAME	COMMON NAME	QUANTITY
BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	3
BETULA PAPYRIFERA	PAPER BIRCH	5
BETULA POPULIFOLIA	GRAY BIRCH	2
BETULA POPULIFOLIA 'WHITESPIRE'	WHITESPIRE GRAY BIRCH	3
BETULA SPP.	BIRCH	1
CARPINUS CAROLINIANA	BLUE BEECH	20
CARYA CORDIFORMIS	BITTERNUT HICKORY	2
CARYA OVATA	SHAGBARK HICKORY	4
CATALPA SPECIOSA	NORTHERN CATALPA	82
CELTIS OCCIDENTALIS	COMMON HACKBERRY	120
CERCIDIPHYLLUM JAPONICUM	JAPANESE KATSURA	7
CERCIS CANADENSIS	EASTERN REDBUD	14
CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	1
CLADRASTIS KENTUKEA	AMERICAN YELLOWWOOD	30
CORNUS ALTERNIFOLIA	PAGODA DOGWOOD	1
CORNUS MAS 'GOLDEN GLORY'	GOLDEN GLORY CORNELIAN CHERRY DOGWOOD	8
COTINUS COGGYGRIA 'THE VELVET FOG'	THE VELVET FOG SMOKEBUSH	1
COTINUS COGGYGRIA 'WINECRAFT BLACK'	WINDECRAFT BLACK SMOKEBUSH	1
CORYLUS COLURNA	TURKISH FILBERT	36
CRATAEGUS CRUS-GALLI VAR. INERMIS	THORNLESS COCKSPUR HAWTHORN	20
CRATAEGUS MOLLIS	DOWNY HAWTHORN	7
CRATAEGUS SPP.	HAWTHORN	2
CRATAEGUS VIRIDIS 'WINTER KING'	WINTER KING HAWTHORN	26
FAGUS GRANDIFOLIA	AMERICAN BEECH	6
FRAXINUS AMERICANA	WHITE ASH	31
FRAXINUS PENNSYLVANICA	GREEN ASH	48
FRAXINUS PENNSYLVANICA 'LEPRECHAUN'	LEPRECHAUN GREEN ASH	1
GINKGO BILOBA	GINKGO	61
GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKGO	45
GINKGO BILOBA 'PRINCETON SENTRY'	PRINCETON SENTRY GINKGO	3
GLEDITSIA TRIACANTHOS VAR. INERMIS	THORNLESS HONEYLOCUST	108
GLEDITSIA TRIACANTHOS VAR. INERMIS 'HARVE'	NORTHERN ACCLAIM HONEYLOCUST	12
GLEDITSIA TRIACANTHOS VAR. INERMIS 'IMPCOLE'	IMPERIAL HONEYLOCUST	20
GLEDITSIA TRIACANTHOS VAR. INERMIS 'SHADEMASTER'	SHADEMASTER HONEYLOCUST	38
GLEDITSIA TRIACANTHOS VAR. INERMIS 'SKYCOLE'	SKYLINE HONEYLOCUST	110
GLEDITSIA TRIACANTHOS VAR. INERMIS 'SUNCOLE'	SUNBURST HONEYLOCUST	7
GYMNOCLADUS DIOICUS	KENTUCKY COFFETREE	111
GYMNOCLADUS DIOICUS 'ESPRESSO'	ESPRESSO KENTUCKY COFFETREE	19
HEPTACODIUM MICONIOIDES	SEVEN SONS FLOWER	1
JUGLANS CINEARA	BUTTERNUT	2
JUGLANS NIGRA	BLACK WALNUT	1
JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	3
JUNIPERUS SPP.	JUNIPER	1

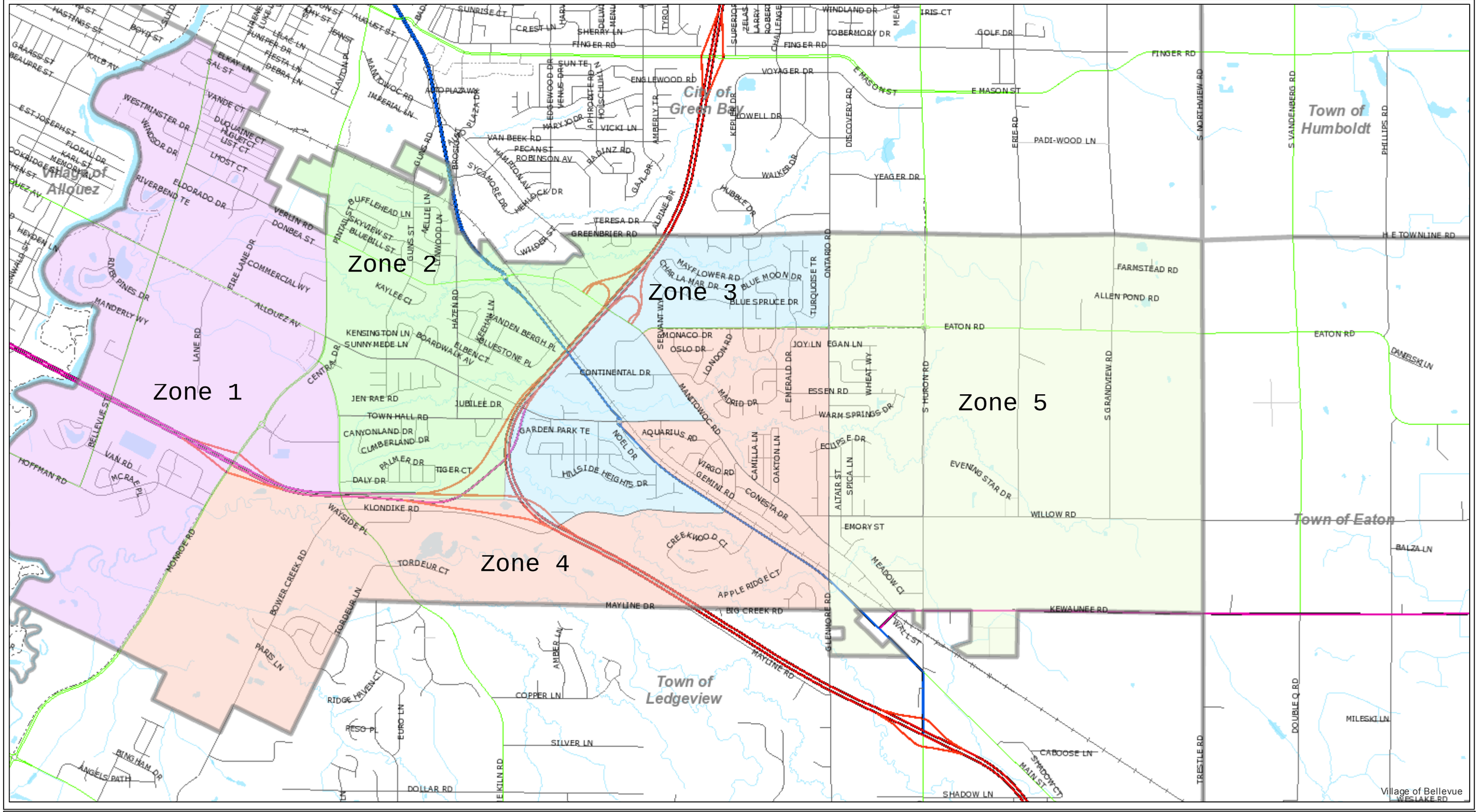
SCIENTIFIC NAME	COMMON NAME	QUANTITY
LARIX DECIDUA	EUROPEAN LARCH	1
LARIX LARICINA	EASTERN TAMARACK	11
LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEETGUM	5
LIQUIDAMBAR STYRACIFLUA 'MORAINE'	MORAINE SWEETGUM	18
LIRIODENDRON TULIPIFERA	TULIP POPLAR	16
PHELLODENDRON AMURENSE	AMUR CORKTREE	8
PHELLODENDRON AMURENSE 'MACHO'	MACHO AMUR CORKTREE	1
MAACKIA AMURENSIS	AMUR MAACKIA	41
MAGNOLIA ACUMINATA	CUCUMBER MAGNOLIA	1
MAGNOLIA 'ANN'	ANN MAGNOLIA	1
MAGNOLIA SPP.	MAGNOLIA	2
MALUS 'ADIRONDACK'	ADIRONDACK CRABAPPLE	3
MALUS DOMESTICA	EATING APPLE	2
MALUS 'JEWELCOLE'	RED JEWEL CRABAPPLE	28
MALUS 'JFS-KW5'	ROYAL RAINDROPS CRABAPPLE	23
MALUS 'MCINTOSH'	MCINTOSH APPLE	5
MALUS 'PINK SPIRES'	PINK SPIRES CRABAPPLE	3
MALUS 'PURPLE PRINCE'	PURPLE PRINCE CRABAPPLE	3
MALUS 'RED SPLENDOR'	RED SPLENDOR CRABPPLE	1
MALUS SARGENTII 'CANDYMINT'	CANDYMINT CRABAPPLE	4
MALUS SPP.	APPLE	5
MALUS SPP.	FLOWERING CRABAPPLE	70
MALUS X ASTRINGENS 'DURLEO' PP20, 167	GLADIATOR CRABAPPLE	6
MALUS X 'HARGOZAM'	HARVEST GOLD CRABAPPLE	2
MALUS 'JARMIN'	MARILEE CRABAPPLE	1
MALUS X 'JEFLITE'	STARLITE CRABAPPLE	4
MALUS X 'PRAIRIEFIRE'	PRAIRIEFIRE CRABAPPLE	40
MALUS X 'SPRING SNOW'	SPRING SNOW CRABAPPLE	26
METASEQUOIA GLYPTOSTROBOIDES	DAWN REDWOOD	28
MORUS ALBA 'PENDULA'	WEEPING MULBERRY	1
MORUS SPP.	MULBERRY	1
OSTRYA VIRGINIANA	IRONWOOD	21
PICEA ABIES	NORWAY SPRUCE	9
PICEA GLAUCA	WHITE SPRUCE	48
PICEA GLAUCA 'CONICA'	DWARF ALBERTA SPRUCE	4
PICEA GLAUCA VAR. DENSATA	BLACK HILLS WHITE SPRUCE	33
PICEA OMORIKA	SERBIAN SPRUCE	3
PICEA PUNGENS	BLUE SPRUCE	109
PICEA SPP.	SPRUCE	21
PINUS SPP.	PINE	2
PINUS NIGRA	AUSTRIAN PINE	34
PINUS RESINOSA	RED PINE	8
PINUS STROBUS	EASTERN WHITE PINE	25
PINUS SYLVESTRIS	SCOTCH PINE	4

SCIENTIFIC NAME	COMMON NAME	QUANTITY
PLATANUS X ACERIFOLIA	LONDON PLANETREE	10
PLATANUS X ACERIFOLIA 'MORTON CIRCLE'	EXCLAMATION! LONDON PLANETREE	30
POPULUS DELTOIDES	EASTERN COTTONWOOD	31
POPULUS GRANDIDENTATA	BIGTOOTH ASPEN	2
POPULUS TREMULOIDES	QUAKING ASPEN	2
POPULUS TREMULOIDES 'KLAUS SELECT'	SUMMER SHIMMER ASPEN	1
PRUNUS 'ACCOLADE'	ACCOLADE CHERRY	3
PRUNUS MAACKII	AMUR CHOKECHERRY	3
PRUNUS CERASIFERA	ORNAMENTAL PLUM	6
PRUNUS PENDULA	WEEPING CHERRY	1
PRUNUS SARGENTII 'HOKKAIDO NORMANDALE'	SPRING WONDER SARGENT CHERRY	2
PRUNUS SARGENTII 'JFS-KW58'	PINK FLAIR SARGENT CHERRY	45
PRUNUS SPP.	CHERRY	3
PRUNUS VIRGINIANA 'CANADA RED'	CANADA RED CHOKECHERRY	9
PSEUDOTSUGA MENZIESII	DOUGLAS-FIR	2
PYRUS CALLERYANA	CALLERY PEAR	3
PYRUS CALLERYANA 'AUTUMN BLAZE'	AUTUMN BLAZE CALLERY PEAR	56
PYRUS CALLERYANA 'CLEVELAND SELECT'	CLEVELAND SELECT CALLERY PEAR	33
PYRUS SPP.	PEAR	3
PYRUS FAURIEI 'WESTWOOD'	KOREAN SUN PEAR	19
QUERCUS ALBA	WHITE OAK	18
QUERCUS BICOLOR	SWAMP WHITE OAK	119
QUERCUS ELLIPSOIDALIS	NORTHERN PIN OAK	5
QUERCUS IMBRICARIA	SHINGLE OAK	2
QUERCUS MACROCARPA	BUR OAK	108
QUERCUS MUEHLENBERGII	CHINKAPIN OAK	40
QUERCUS ROBUR	ENGLISH OAK	3
QUERCUS RUBRA	RED OAK	36
QUERCUS X WAREI 'LONG'	REGAL PRINCE OAK	11
QUERCUS X MACDANIELII 'CLEMONS'	HERITAGE OAK	7
ROBINIA PSEUDOACACIA 'PURPLE ROBE'	PURPLE ROBE BLACK LOCUST	1
SALIX ALBA 'TRISTIS'	NIOBE WEEPING WILLOW	2
SALIX DISCOLOR	PUSSY WILLOW	1
SALIX INTEGRA 'HAKURO NISHIKI'	TRICOLOR WILLOW	1
SALIX MATSUDANA 'TORTUOSA'	CORKSCREW WILLOW	1
SALIX NIGRA	BLACK WILLOW	21
SALIX SPP.	WILLOW	6
SORBUS ALNIFOLIA	KOREAN MOUNTAIN ASH	2
SORBUS AUCUPARIA	EUROPEAN MOUNTAIN ASH	1
SYRINGA PEKINENSIS	PEKING LILAC	5
SYRINGA PEKINENSIS 'MORTON'	CHINA SNOW PEKING LILAC	4
SYRINGA PEKINENSIS 'ZHANG SHIMING'	BEIJING GOLD PEKING LILAC	12
SYRINGA RETICULATA 'BAILNCE'	SNOWDANCE JAPANESE TREE LILAC	5
SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK JAPANESE TREE LILAC	135

SCIENTIFIC NAME	COMMON NAME	QUANTITY
SYRINGA RETICULATA 'SUMMER SNOW'	SUMMER SNOW JAPANESE TREE LILAC	11
SYRINGA SPP.	LILAC	4
TAXODIUM DISTICHUM	BALDCYPRESS	14
THUJA OCCIDENTALIS	NORTHERN WHITE CEDAR	10
THUJA OCCIDENTALIS 'HOLMSTRUP'	HOLMSTRUP ARBORVITAE	1
TILIA AMERICANA	AMERICAN BASSWOOD	35
TILIA AMERICANA 'BOULEVARD'	BOULEVARD AMERICAN LINDEN	11
TILIA AMERICANA 'LEGEND'	LEGEND LINDEN	15
TILIA AMERICANA 'MCKSENRTY'	AMERICAN SENTRY LINDEN	20
TILIA AMERICANA 'REDMOND'	REDMOND LINDEN	82
TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	247
TILIA SPP.	LINDEN	20
TILIA TOMENTOSA	SILVER LINDEN	18
TILIA TOMENTOSA 'STERLING'	STERLING SILVER LINDEN	11
TILIA X EUCHLORA	CRIMEAN LINDEN	6
TILIA X FLAVESCENS 'GLENLEVEN'	GLENLEVEN LINDEN	114
TILIA X MONGOLICA 'HARVEST GOLD'	HARVEST GOLD LINDEN	4
TSUGA CANADENSIS	EASTERN HEMLOCK	1
ULMUS AMERICANA	AMERICAN ELM	8
ULMUS AMERICANA 'JEFFERSON'	JEFFERSON ELM	7
ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	30
ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	5
ULMUS DAVIDIANA 'DISCOVERY'	DISCOVERY ELM	1
ULMUS DAVIDIANA VAR. JAPONICA 'MORTON'	ACCOLADE ELM	11
ULMUS 'FRONTIER'	FRONTIER ELM	52
ULMUS PARVIFOLIA	CHINESE ELM	2
ULMUS 'MORTON GLOSSY'	TRIUMPH ELM	14
ULMUS 'NEW HORIZON'	NEW HORIZON ELM	65
ULMUS 'PATRIOT'	PATRIOT ELM	2
ULMUS PUMILA	SIBERIAN ELM	12
ULMUS 'REGAL'	REGAL ELM	19
ULMUS SPP.	HYBRID ELM	2
ZELKOVA SERRATA	JAPANESE ZELKOVA	6

Bellevue Tree Pruning Zones

Village of Bellevue, Wisconsin



VILLAGE OF BELLEVUE — A GREAT PLACE TO GROW

Map provided by the Village of Bellevue's Internal Interactive Web Mapping System

Please visit: www.villageofbellevue.org/GIS to access Bellevue's Interactive Web Mapping System.

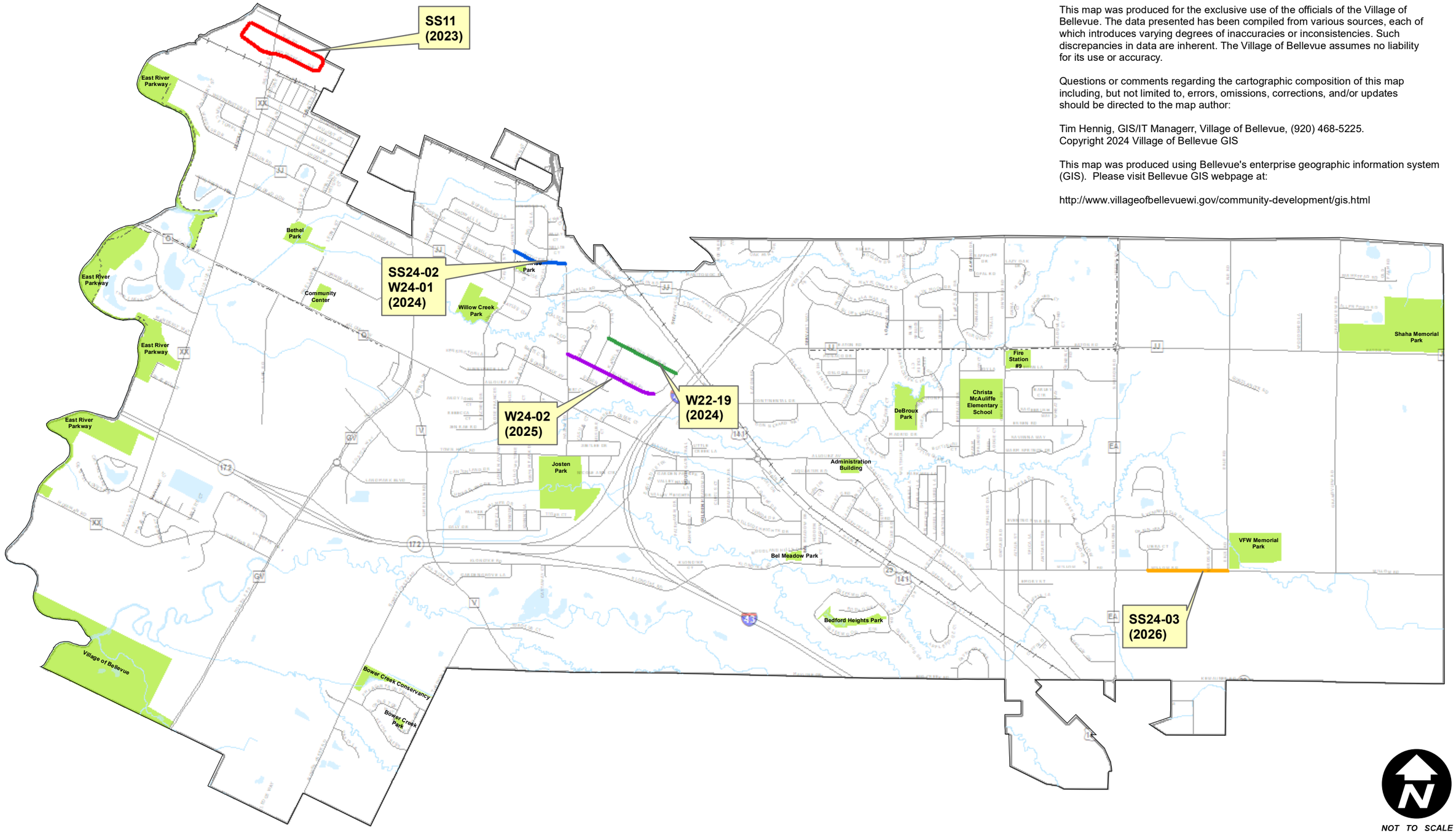
This map is intended for advisory purposes only. The data presented has been compiled from various sources, each of which introduces varying degrees of inaccuracies or inconsistencies. Such discrepancies in data are inherent. The Village of Bellevue assumes no liability for its use or accuracy.

0 — 2,875 — 5,750 Feet

N W E S

Water and Sewer Projects 2024 – 2028

Village of Bellevue, Brown County, Wisconsin



Disclaimer:

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Questions or comments regarding the cartographic composition of this map including, but not limited to, errors, omissions, corrections, and/or updates should be directed to the map author:

Tim Hennig, GIS/IT Managerr, Village of Bellevue, (920) 468-5225.

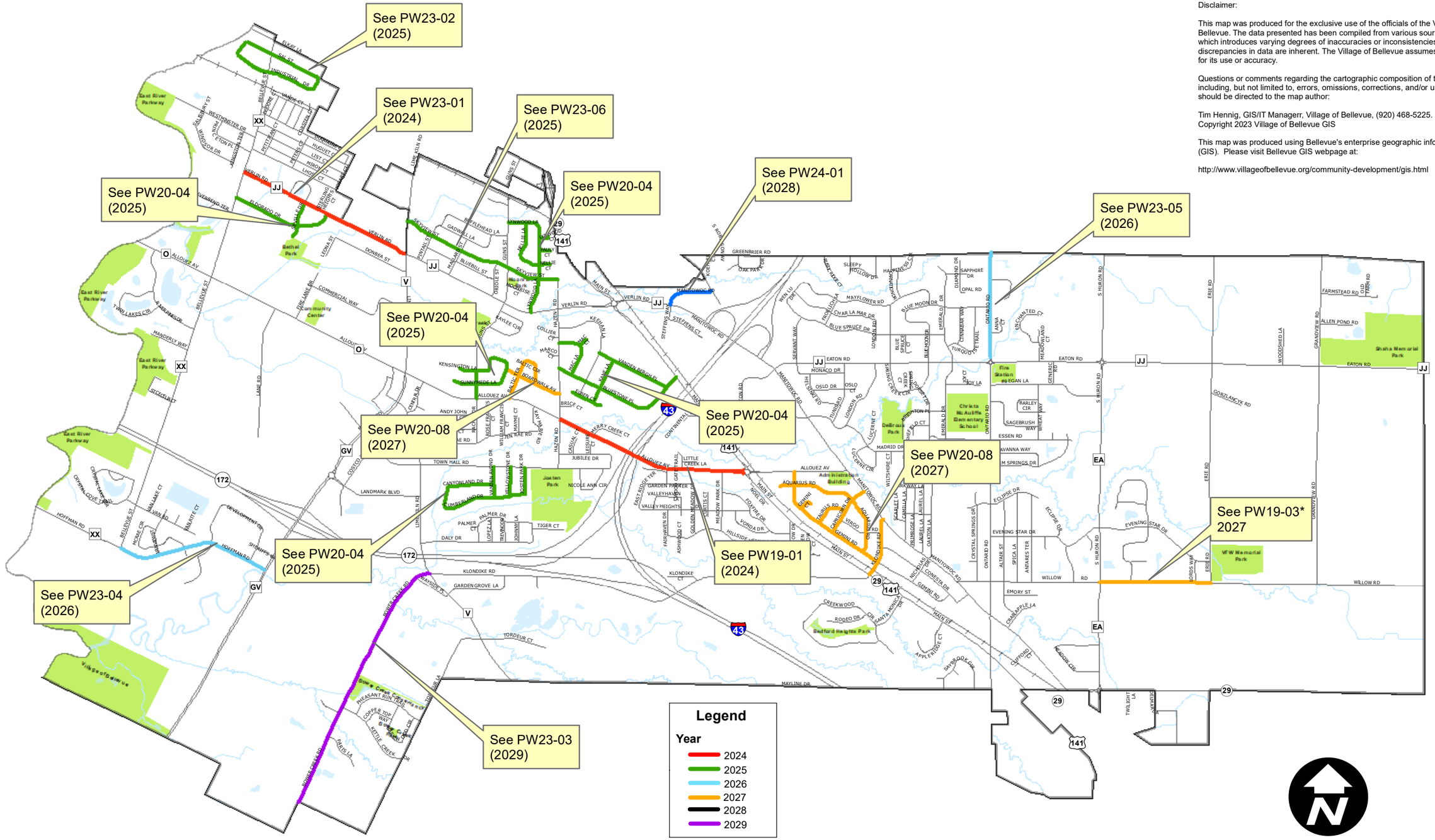
This map was produced using Bellevue's enterprise geographic information system (GIS). Please visit Bellevue GIS webpage at:

http://www.villageofbellevuewi.gov/community-development/gis.html

Q:\Public Works\Captial Improvement Programs\CIP 2024 - 2028\Sewer and Water 2024-2028 Utility Construction.mxd TMH 082123

2024 - 2029 Road Construction Projects

Village of Bellevue, WI



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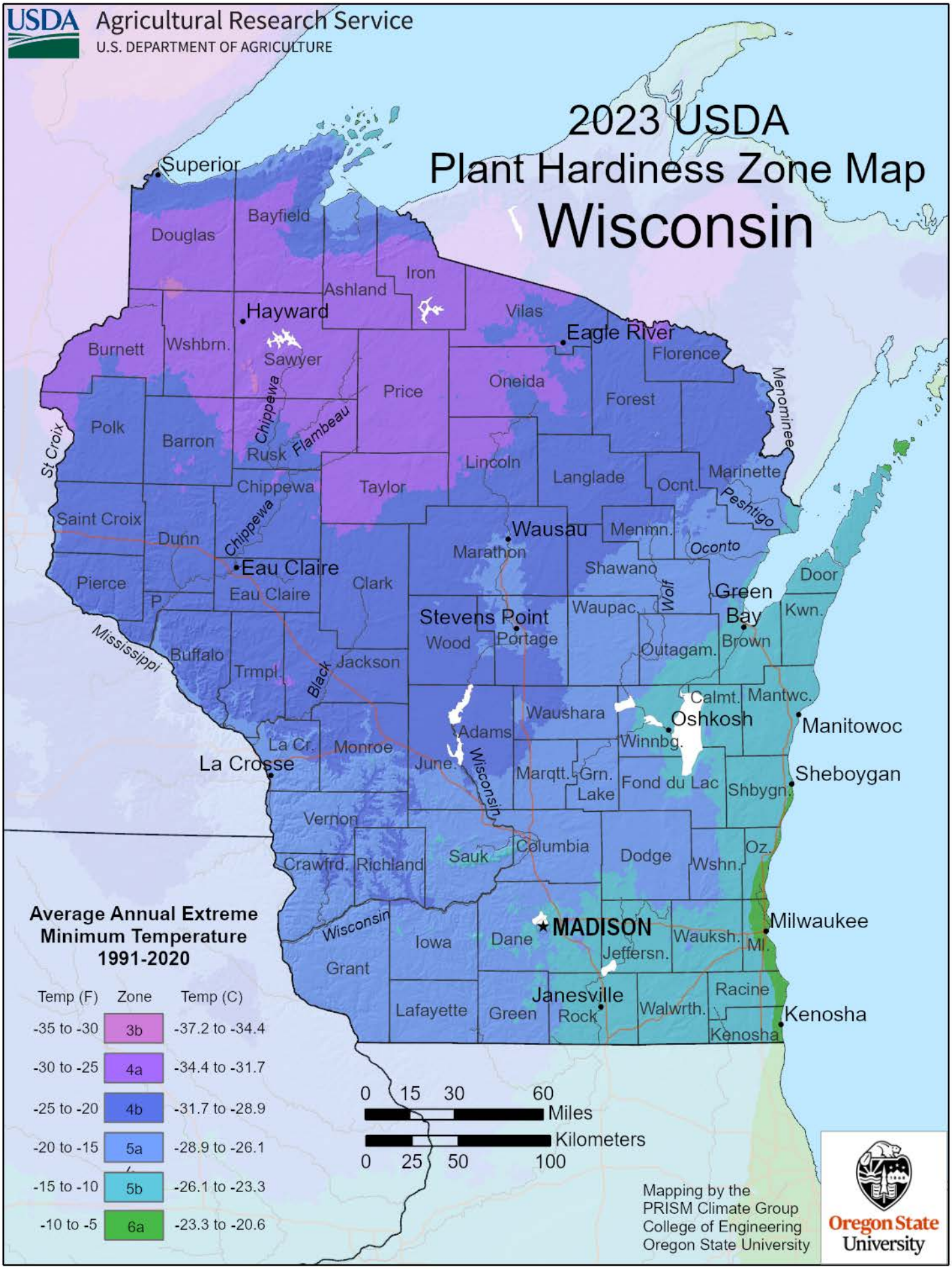
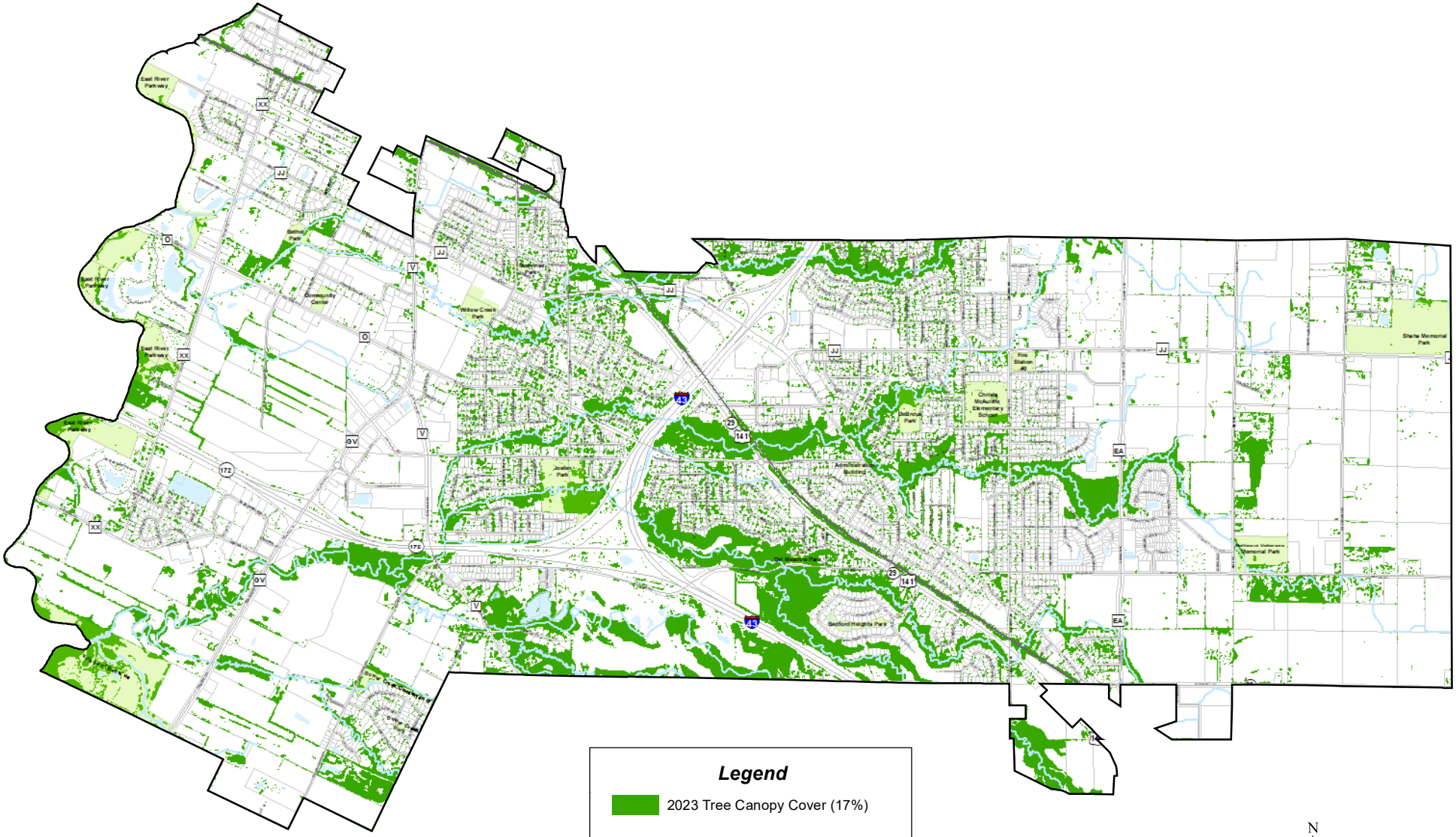
0 0.275 0.55 1.1 Miles

* Associated Sidewalk Construction Projects

Q:\Public Works\Captial Improvement Programs\CIP 2024 - 2029\2024 - 2029 Road Construction Projects.mxd TMH R1.0 081823


USDA
Agricultural Research Service
U.S. DEPARTMENT OF AGRICULTURE
2023 USDA
Plant Hardiness Zone Map
Wisconsin
Superior
Douglas
Bayfield
Ashland
Iron
Vilas
Hayward
Eagle River
Florence
Burnett
Wshbrn.
Sawyer
Oneida
Forest
Menominee
Price
Polk
Barron
St Croix
Chippewa
Flambeau
Rusk
Lincoln
Langlade
Ocnt.
Marinette
Peshtigo
Taylor
Chippewa
Saint Croix
Dunn
Wausau
Menmn.
Oconto
Marathon
Eau Claire
Shawano
Door
Pierce
Eau Claire
Clark
Wolf
Green Bay
Kwn.
Stevens Point
Waupac.
Wood
Portage
Brown
Mississippi
Buffalo
Trmpl.
Jackson
Black
Outagam.
Calmt.
Mantwc.
Waushara
Oshkosh
Manitowoc
Adams
Winnbg.
La Cr.
Monroe
La Crosse
June.
Wisconsin
Marqtt.
Grn. Lake
Fond du Lac
Shbygn.
Sheboygan
Vernon
Crawfrd.
Richland
Sauk
Columbia
Dodge
Wshn.
Oz.
Wisconsin
Iowa
Dane
MADISON
Jeffersn.
Wauksh.
Mi.
Milwaukee
Grant
Janesville
Racine
Lafayette
Green
Rock
Walwrth.
Kenosha
Kenosha
Average Annual Extreme Minimum Temperature 1991-2020
Temp (F) Zone Temp (C)
-35 to -30 3b -37.2 to -34.4
-30 to -25 4a -34.4 to -31.7
-25 to -20 4b -31.7 to -28.9
-20 to -15 5a -28.9 to -26.1
-15 to -10 5b -26.1 to -23.3
-10 to -5 6a -23.3 to -20.6
0 15 30 60
Miles
Kilometers
0 25 50 100
Mapping by the
PRISM Climate Group
College of Engineering
Oregon State University
Oregon State
University

2023 Tree Canopy Cover



Tree Canopy Cover Source: 2023 Ecopia Tech Corporation Aerial Data Extraction TMH 040324

VILLAGE OF BELLEVUE

ARBORICULTURAL SPECIFICATIONS MANUAL

ADOPTED 5/13/2009

REVISION ADOPTED BY VILLAGE BOARD 10/24/2018

Village of Bellevue, 2828 Allouez Avenue, Green Bay, WI 54311

Table of Contents

Introduction

Authority: Pursuant to authority granted under Chapter 427 of the Village of Bellevue Municipal Code and the review and assistance of the Tree Board, the following serves as the Arboricultural Specifications and Standards of Practice for the Village of Bellevue, Wisconsin, hereinafter referred to as the Arboricultural Specifications Manual.

Policy: The policy of the Village of Bellevue is to regulate the planting, transplanting, maintenance, removal and protection of public trees and shrubs in the Village in order to alleviate hazardous conditions which may result in injury to persons using the streets, sidewalks or other public property within the Village. It is also policy to promote and enhance the beauty and general welfare of the Village by protecting trees and shrubs from undesirable treatments, maintenance practices, planting and removal.

Function: The general responsibility of the Parks, Recreation and Forestry Department is to maintain trees and shrubs located on all public properties, including but not limited to right of way, medians, parks and other public facilities and places. This involves all phases of arboricultural work from planting through removal. These specifications are to serve as a standard for the planting, transplanting, maintenance, removal and protection of all public trees and will apply whether work is performed by Village employees, contractors or private individuals. In abiding by and enforcing these specifications, the Village of Bellevue makes every effort to maintain a safe and aesthetically pleasing community. Exceptions to these specifications must be approved by the Village Forester. The Arboricultural Specifications Manual shall be adhered to at all times, but may be amended at any time when experience, new research, or laws indicate that improved methods or circumstances make it advisable, and only then with the advice and assistance of the Tree Board.

Public Tree Planting Programs & Policies

The Village has adopted the follow programs and policies regarding public tree planting.

1. ***Planting Along Established Streets:*** When, in the opinion of the tree board, with approval from the Village Board, the street right-of-way or terrace of any established street can be improved by planned tree planting, existing trees have been removed due to the moving or construction of buildings or roadways or when the number of trees in any street right-of-way or terrace has become so few as a result of normal removal or other cause, the Village may plant or cause to be planted such trees in the street right-of-way or terraces as it deems necessary. The cost of replanting in the street right-of-way or terrace shall be assessed against owners of adjacent property in the same manner as other special assessments.

2. ***Planting of Trees When Streets are Reconstructed:*** When streets are fully reconstructed, new trees shall be planted if, in the opinion of the Tree Board, there is adequate land in the right of way, terrace or boulevard to reasonably support tree growth. The cost of these new trees shall be assessed against owners of adjacent property in the same manner as other special assessments. The number and location of each tree, species and size of stock are to be determined by the Village Forester.

3. ***Planting of Replacement Trees:*** When trees are removed for the widening of any established street, for death or illness of the tree or the abatement of a nuisance, replacement trees shall be planted if, in the opinion of the Tree Board, there is adequate land in the right of way or boulevard to reasonably support tree growth. The cost of replacing these trees will be at the expense of the Village. The number and location of each tree, species and size of stock are to be determined by the Village Forester. Trees destroyed by vandalism, vehicles, lawn equipment, etc. will be replaced at a cost to the person causing the damage if known.

4. ***New Subdivisions Tree Planting:*** The Village shall require street trees for all new subdivisions in the Village. A linear curb fee shall be charged per a developer agreement, collected and placed in an escrow account for trees. The fee shall be determined each year and approved by resolution. After an occupancy permit has been issued and a lawn has been established for any lot in a development, trees shall be selected and planted in the right of way by the Village at the next practical planting cycle. The number and location of each tree, species and size of stock are to be determined by the Village Forester.

5. ***Neighborhood Tree Planting Program:*** The Village of Bellevue provides a neighborhood tree planting program for residents who wish to have trees planted in the right of way or terrace area adjacent to their property. The planting program will be offered in the fall and runs concurrent with other fall plantings. The resident pays for the wholesale cost of the tree, including planting.

6. ***Public Tree Planting:*** Should any owner of adjacent property desire to plant a tree on any public property, written permission shall be obtained from the Village Forester in which the number, species, location and size of the tree shall be designated. The cost of such planting shall be borne by the adjacent property owner.

7. ***Planting Along Unimproved Streets:*** Trees shall not be planted in the right of way or terrace on unimproved streets or where no curb and gutter exist.

Tree Planting Standards

1. ***Tree Size***: All trees planted along the right of way or terraces and within public spaces must be of sufficient size to absorb the abuse and conditions common to trees planted in an urban environment. The minimum allowable size for trees are 1 ¾ inch caliper, however larger sizes may be required to ensure survival for specific situations. Tree caliper shall be measured six inches above the ground to the nearest ¼ inch.

2. ***Condition***: Unless otherwise specified, all trees shall conform to the American Nursery and Landscape Association's American Standard for Nursery Stock, (Z60.1-current edition). Each tree chosen for planting shall be high-quality, healthy tree with evidence of vigorous growth during the previous year. All trees shall have a comparatively straight, single trunk, well developed leaders and crown, and the roots shall not only be characteristic of the species, cultivar or variety, but also exhibit evidence of proper nursery pruning practices. Ornamental trees may be multiple-stemmed in all areas except street right-of-ways. At the time of planting, all trees must have a full healthy crown, be free of mechanical injuries and display no other objectionable features that will affect the future form, health and beauty of the tree.

3. ***Location***: All street trees shall be planted in a minimum of 9' of open space, of which cannot include the sidewalk reserve area. Trees must be planted a minimum of 5' from the curb and a minimum of 4' from the sidewalk or sidewalk reserve area. Trees planted in open space 10' or greater shall be planted midway between the curb and sidewalk or the sidewalk reserve area, unless in the opinion of the Village Forester, there is sufficient reason to plant the trees off-center. To allow for maintenance, minimize infrastructure conflicts and promote safety, trees shall be planted using the following guidelines:
    a. Outside of the vision triangle, as defined in the Village Municipal Code Chapter 500-410(A).
    b. 15' from a street light, fire hydrant, or power/utility pole
    c. 10' from a driveway, utility valve or utility T, or sewer lateral
    d. 6' from a water lateral
    e. 5' from back of curb
    f. 4' from sidewalk or sidewalk reserve area
    g. Only low growing trees will be permitted in areas of power lines.
    h. Trees shall only be planted on urbanized streets

    Whenever possible, trees should not be planted within 10' of a water, sanitary or storm sewer main.
    Exceptions to these guidelines may be made by the Village Forester when circumstances warrant, and public safety is not threatened.
    These guidelines are also indicated in Appendix B of this manual.

4. ***Spacing***: Future maintenance problems can be minimized by careful and thoughtful placement of trees. Spacing of trees is a function of local site conditions, the species used and their mature height spread and form. A safe minimum spacing between trees is a distance equal to the width of the species at maturity. The general guidelines for tree spacing are as follows:
    a. 40' center-to-center for small trees
    b. 50' center-to-center for medium trees
    c. 60' center-to-center for large trees

    These guidelines are also indicated in Appendix B of this manual and in the Village Municipal Code Chapter 500-1706(A)(3).

5. ***Recommended Trees Varieties***: Appendix A contains a list of tree species approved for planting in the Village based upon their mature size. The Tree Board shall review each year the trees listed in the list to determine whether any species, cultivars, or varieties should be added or removed from the list. Only small-growing trees shall be planted under overhead secondary or primary utility distribution lines. Trees planted to the side of the utility lines shall be carefully selected for mature habit to minimize future conflicts. Tree species selected must be planted in accordance with the following guidelines:
   No more than 10% in any one species,
   No more than 20% in any one genus,
   And no more than 30% from any one family.

6. ***Undesirable/Banned Street Trees***: Appendix A includes species or their varieties that are either undesirable or banned for planting on Village property, except in special locations, where because of characteristics of adaptability or landscape effect, they can be used advantageously. Their lack of suitability is based upon objectionable growth habits, fruit, form, susceptibility to serious diseases, propensity to incur storm damage and other limitations. The limitations listed for each tree or species are more serious problems encountered locally.

7. ***Planting Methods***: Proper planting methods (figure 1) are critical to ensuring a high level of transplanting success by encouraging proper root growth and reducing transplant shock.

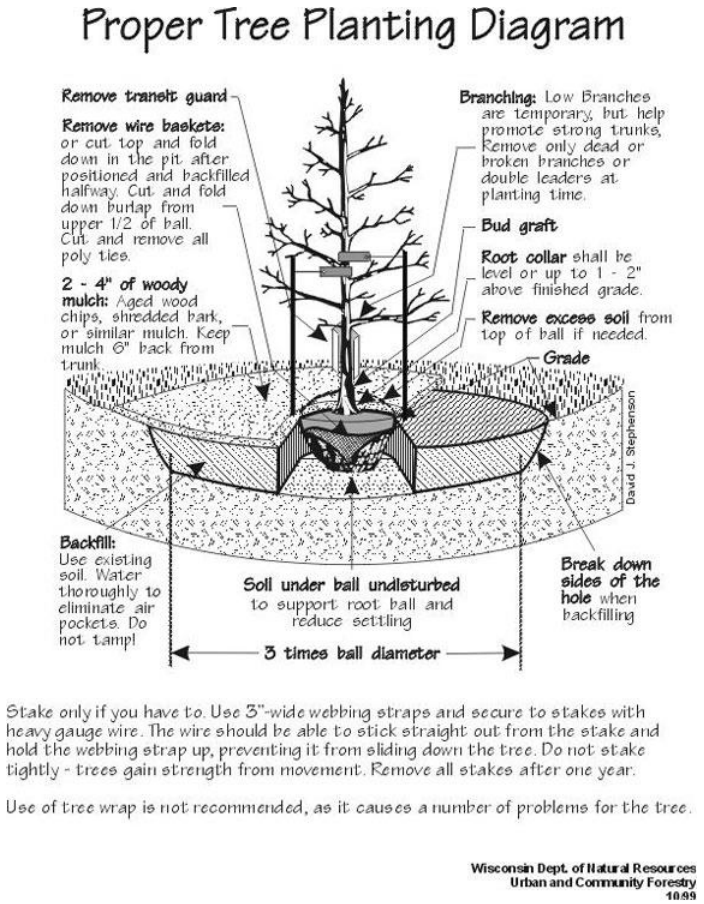


Figure 1

8. ***Installation Time Periods:*** Street tree plantings may take place during one or two time periods per season.
    a. Spring: Mid-April through May
    b. Fall: Mid-October through November. Some tree species can only be transplanted in the spring season for optimal establishment, so these species shall only be planted once per year.

9. ***Warranty:*** A 2-year guarantee shall be placed on any new tree planted by a contractor or developer. Death or damage to trees caused by sources other than poor planting or quality of tree shall nullify any warranty by the contractor or developer. The Director of Parks, Recreation and Forestry, or his/her designee shall determine the cause of death.

Maintenance of Newly Planted Trees

1. ***General***: Newly planted trees, shrubs and other plants require special maintenance for one or two growing seasons following planting. All maintenance practices shall follow approved arboricultural standards.

2. ***Watering***: Since up to 95% of the tree's roots were cut when the tree was dug in the nursery, regular watering is imperative to aid in the development of a strong new root system. Trees need to equivalent of about one inch of rain every week. When the soil is dry four inches below the soil surface, it is time to water. The Village and/or Contractor will water the trees at the time of planting. Residents are asked to help water the street trees planted in the right of way adjacent to their house during the first two growing seasons. Village staff will water all park and green space plantings, but only provide supplemental watering for plantings in residential areas.

3. ***Mulching***: A layer of mulch around the newly planted tree is beneficial. It helps reduce competition from grass and weeds, retains soil moisture, improves soil fertility and structure and protects the trunk from damage caused by mowers and string trimmers. A 2-4" layer of mulch shall be placed at an even depth around the tree. Mulch shall be pulled 6" away from the trunk so as not to be touching the trunk as this promotes fungal diseases and encourages rodents to girdle the bark at the base of the tree. Mulch should be a woody material, seasoned or composted prior to placement. The use of stone or other inorganic material is discouraged and generally not recommended.

4. ***Pruning***: No pruning should occur at the time of planting except to remove dead or broken branches. Unnecessary pruning at this time may reduce the amount of store energy the plant holds and may stress the tree. A pruning schedule may be started two years after planting.

5. ***Fertilization***: Since excessive fertilization can "burn" roots and stimulates crown growth faster than the roots can supply water, it is best to wait until the third year after planting to begin applications. Adequate quantities of the essential nutrient elements should be available after new root growth starts. Provision of good drainage and adequate soil moisture are far more important following planting than fertilization.

6. ***Staking***: Staking should only occur if necessary. Use 3" wide webbing straps and secure to stakes with heavy gauge wire. The wire should be able to stick straight out from the stake and hold the webbing strap up, preventing it from sliding down the tree. Do not stake tightly – trees gain strength from movement. Stakes shall be removed one year after planting.

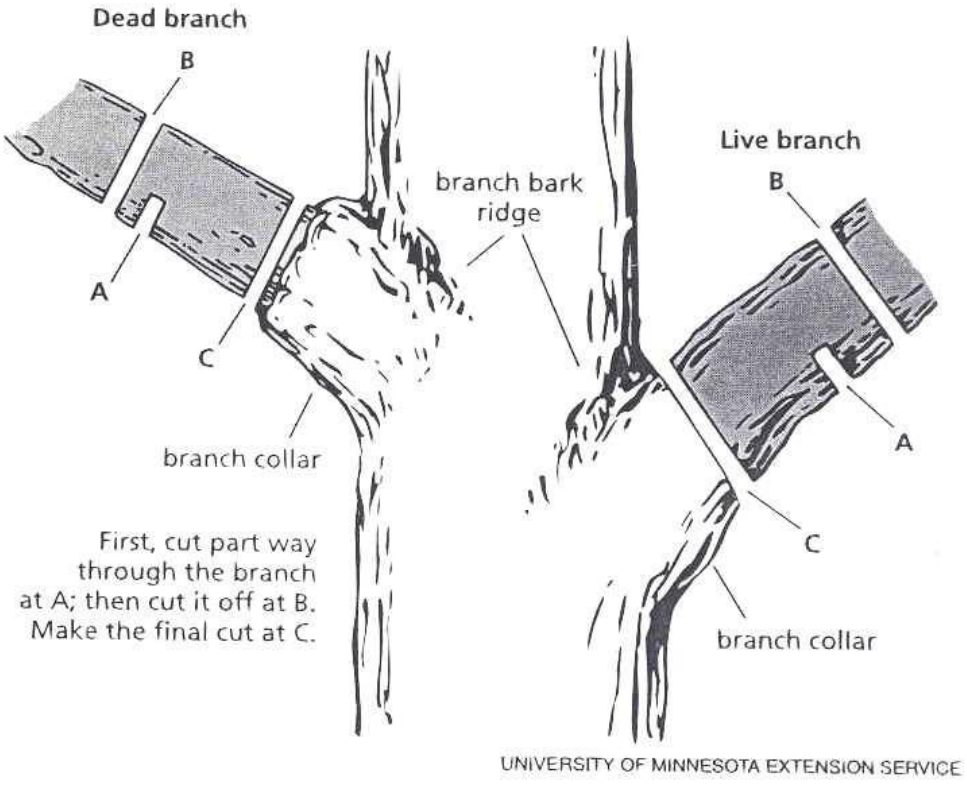
7. ***Wrapping***: Tree wrapping should not be used. However, plastic tile tree guards will be put on at the time of planting and will remain on the tree until the bark thickens enough to prevent damage or mortality from trunk injuries.

Pruning Standards

1. ***General:*** All pruning shall follow the America National Standards Institute's Standard Practices for Tree Care Operations-Pruning (ANSI A 300 (Part 1) current edition) for crown cleaning, crown thinning, crown raising, and structure development. Pruning shall improve the appearance of the trees and maintain the crown shape and symmetry typical of the species at its given size and age. Permission from the Village Forester is required before any pruning is done on any public tree.

2. ***Pruning Cuts:*** All final cuts shall be "collar cuts" made sufficiently close to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub, so that closure can readily begin under normal conditions, the face of the "collar cut" or wound area shall be circular in form. "Flush" cuts to the main stem behind the branch collar and that leave oval exposed wounds shall not be made. Cuts shall be clean and made such that all wound sides are even edged and do not leave "dog ear" ridges on one side or another. All limbs removed shall be cut in such a manner so as to prevent any ripping or tearing of the wood or bark on the parent or remaining stem. Large limbs shall be cut using the tree-cut pruning method as shown in Figure 2. Limbs shall be brought to the ground as to prevent any damage to property, publicly or privately owned.

Figure 2



3. ***Crown Cleaning:*** Crown cleaning should remove all dead, dying, diseased, crowded, weakly attached and low-vigor branches. Interior crowding and crossed or rubbing branches should be pruned where practical so as not to leave large holes in the general form of the tree. Sucker growth, trunk suckers, or water sprouts, especially where they are

present below the bottom half of the tree, should also be removed as part of the crown cleaning. Suckers and sprouts that add to the shape of the tree above 14 feet may remain in mature trees that may not have an optimum crown or shape.

4. ***Crown Thinning**:* Crown thinning should selectively remove and or prune branches back to large laterals light penetration and air movement through the crown. After crown thinning, trees and branches shall have foliage and mechanical stress evenly distributed along a branch and throughout the crown. Not more than 25% of foliage on mature trees shall be removed.

5. ***Crown Raising**:* Crown raising should remove lower branches where practical (dependent on tree size) to obtain an eventual full foliage height clearance of 14 feet on street side of tree. Work shall maintain the crown shape and symmetry typical of the species being pruned, and should balance the tree evenly. Raising should also allow an eventual clearance over the pedestrian walk (or resident side of tree) of 10 feet. Pruning may include heading cuts on lower limbs or thinning cuts to lighten lower branch loads to achieve clearance of complete branch removal from the tree trunk is not practical.

6. ***Clearance Pruning**:* Clearance of houses and buildings should be such that branches are a minimum of 15 feet from rooftops. Trees and other vegetation shall be pruned to maintain a clear line of sight when approaching all traffic control devices and intersections.

7. ***Topping***: It is an unacceptable practice to top any public tree in the Village and it is not recommended for any private tree. Topping is the indiscriminate cutting back of tree branches to stubs or lateral branches that are not large enough to assume the terminal role of growth. Topping will make a tree more hazardous in the long-term by encouraging excessive growth and extensive decay.

8. ***Pruning Tools**:* Proper tools such as hand pruners, pole saws, hand saws and chain saws shall be used for each cut. The cutting edges of each tool shall be positioned to obtain a proper cut so it will not cut, rip or harm adjacent bark areas. At no time shall any person working in trees for pruning purposes, wear spurs or any other footwear that might injure the tree being pruned.

9. ***Site Prep/Clean-up**:* Vehicle and pedestrian warning devices shall be properly placed prior to any tree work. Pruned limbs and branches temporarily placed in the right of way shall be placed in such a manner as to eliminate any obstruction to vehicles and pedestrians. Site cleanup shall include the removal of small twigs, chips, leaves, and limbs from the street, cub, right of way, sidewalk and private property with the appropriate tools for the task. The site shall be returned to the same state it existed in prior to the pruning work. No materials or tree waste may be allowed to lie on the right of way overnight.

10. ***Pruning of Oak and Elm**:* In an effort to minimize the effects of Oak Wilt and Dutch Elm disease, it is prohibited to prune Oak or Elm tree varieties from April 1st to November 1st.

11. ***Wound Dressing**:* Under normal circumstances, wound dressings or pruning paints shall not be applied to pruning cuts. The exception to using would dressings is when corrective or emergency pruning needs to be done on oaks (Quercus spp.) and American elms (Ulmus Americana) during the growing season. Application of wound dressing is recommended to prevent the introduction of pathogens such as Dutch elm disease and oak wilt which can transmitted by insects attracted to the sap of fresh wounds.

Tree Removal Policy

It is the policy of the Village of Bellevue to base tree removals on safety related criteria and liability. The Village Forester or his/her designee is the only staff member who may authorize the planting or removal of a public tree.

a. *Acceptable Reasons for Public Tree removal:* A tree may be removed when the Village Forester concludes that any of the following conditions may exist:
    i. *Any tree, shrub, or plant determined to be a public nuisance as defined in Bellevue municipal code 427—*8 (A)
    ii. Any dead or dying tree;
    iii. Public trees that must be removed due to street reconstruction.
    iv. Any otherwise healthy tree, which harbors insects or diseases, which could reasonably be expected to seriously insure or harm any other tree;
    v. Any tree which, by reason of location or condition, constitutes a potential danger to the health, safety or welfare of the general public. In the category of dangerous or hazardous trees are those with observable, critical structural defects that could cause the tree to fail during period of stress, i.e. wind, ice, etc. Included are extensive rot or cavity formations, weak forks, or crotches, and/or other characteristics that would impose an immediate liability to the Village.
    vi. The tree will be made hazardous by publicly funded construction and the project cannot be reasonably re-routed away from the tree. Any of the following conditions would result in a hazardous tree: 1/3 or more of the root system is removed or damaged by construction; or work is performed with 4' of the buttress, and 4 roots greater than 4" in diameter are removed.

b. *Unacceptable Reasons for Public Tree removal:* NOT included in the definition of a tree as a public nuisance or immediate hazard are the following:
    i. Species of trees currently classified as undesirable and thereby prohibited from being planted on Village owned property, as listed in Appendix A, with the following exceptions:
        1. Any individual tree listed in the prohibited species table that is declared a public nuisance by the Village that meets the specification for removal as previously identified.
        2. Any individual or species of tree listed in the prohibited species table that is designated by the Village as being part of a scheduled replacement program designed to upgrade Village public tree diversity or limit potential infestations or diseases.
    ii. Individual trees, regardless of species or kind, that poses either an imminent or potential hazard for which corrective action can be taken.
    iii. Trees that constitute an inconvenience to the public by virtue of leaf, twig or fruit drop; that act as source of allergies; that cause root blockage in sanitary or storm sewers; that inhibit or prevent the growing of turf beneath the canopy; that are subject to non-fatal disease or insect problems.
    iv. Trees that constitute an inconvenience to the public by virtue of their location, except those public trees that pose serious obstruction problems in terms of egress or access to private property or new construction projects. The removal of a public tree for purposes of accommodating private facilities will not be sanctioned unless the following conditions have been satisfied:
        1. There are not other reasonable design alternatives;
        2. Transplanting the tree is feasible based on currently acceptable practices.

3. The cost of removal has been determined by the Village Forester.
4. The Village is compensated for the cost for removal of the tree(s) and replacement of the tree(s) by the adjacent property owner before removal is authorized by the Village.

Tree Removal Standards

1. ***Safety Standards:*** All safety standards shall be in accordance, but not limited to, ANSI (Z133.1-Current Edition). Proper personal protective equipment shall be worn at all times while performing tree work.

2. ***Site Preparations:*** The following items must be performed prior to any tree removal:
    a. Verify tree location and description before starting removal;
    b. Vehicle and pedestrian traffic must be adequately warned and controlled prior to and during tree removal;
    c. If both lanes of traffic are to be closed in the removal operations, the Public Works Director, Police, Fire and Rescue Services must be notified prior to work commencing;
    d. Location of overhead utility lines, homeowner obstructions, etc. must be identified to avoid conflicts and damage.

3. ***Removal Procedure:*** The tree shall be removed using the safest and most efficient arboricultural methods. All precautions shall be made to prevent damage to public or private property. Any limb that cannot be controlled by hand while being cut shall have a rope or ropes attached for controlled lowering using appropriate equipment. No equipment shall be left at the work site overnight. Climbing spikes or spurs may only be used during the removal of the tree.

4. ***Clean Up:*** Pruned limbs and branches temporarily placed in the right of way area shall be placed in such a manner as to eliminate any obstruction to vehicles and pedestrians.

    Site cleanup shall include removal of sawdust, small twigs, chips, leaves, trunks and limbs from the street, curb, right of way, sidewalk, private lawns and driveways with the appropriate tools for the job. The site shall be returned to the same state it existed in prior to the removal. Under no circumstances shall any materials be allowed to lie on the right of way overnight.

    As removals may occur during or after snow events, some debris may not be immediately accessible for clean up. In these instances, debris in these areas after the snow melts shall be re-cleaned and raked.

    Wood chips, if left for the resident shall be dropped only on private property and not on the right of way or in the street. Logs left at the homeowner's request must be on the resident's property and not the right of way. Removal waste can also be delivered to the Village's Public Works Compost facility.

5. ***Stump Removal:*** The stumps of all removed trees shall be ground to a depth of at least eight inches (8") below the surrounding ground level. The excess stump chips shall be removed, the hole filled with clean topsoil and the site graded and seeded. Watering of newly established grass will then be the responsibility of the adjacent property owner. All associated costs with stump removal shall be borne by whoever bears the cost of tree removal.

1. ***Bridging, Tunneling, Drilling, etc.***: The protection of trees shall involve bridging, tunneling, drilling or boring underneath the existing trees. The surface area directly adjacent to the tree shall not be disturbed under the following guidelines:
    a. 3" DBH trees or less - two feet on either side of tree with a minimum three foot depth;
    b. 3" to 8" DBH trees - four feet on either side of tree with a minimum three foot depth;
    c. 8" DBH trees and over - five feet on either side of tree with a four foot minimum depth;

2. ***Depositing Material Near Trees***: No person shall place or maintain upon the ground in a public street or right-of-way of the Village any soil, stone, cement, lumber, or other substance or material which shall impede the free passage of water and air to any tree or shrub without leaving an open space of ground outside of said tree or the base of said shrub of an area not less than 16 square feet. Before depositing any such materials near to trees or shrubs, the person so depositing said material shall place such guards around the trees and shrubs as shall effectually prevent injury to them.

3. ***Moving Of Buildings***: The contractor shall notify the Village Forester at least 48 hours in advance of moving any buildings. If any pruning is necessary as the building is being moved, the pruning will be coordinated by the Village Forester and costs absorbed by the contractor.

4. ***Root Care***: Exposed tree roots shall be covered with backfill as soon as possible following curb and gutter removal. Root foundations must remain adequate to withstand heavy windstorms.

5. ***Sidewalk, Driveway, And Curb And Gutter Removal***:
    a. Caution should be used during removal to avoid any unnecessary damage to the tree or its root system.
    b. Roots requiring removal shall not be cut by means of mechanical root cutting machines. If root removal is essential, roots shall be manually cut with sharp hand implements.
    c. Root systems on the sidewalk or driveway side of the tree shall be cut no deeper than 9 inches below the finished grade of the new walk and not more than 5 inches from the edge of the new walk or driveway.
    d. Root systems on the curb side shall be cut not more than 12 inches behind the back of the new curb and not more than 18 inches in depth when constructing new curb and gutter.

6. ***Tree Replacement***: The Village Forester may remove and replace, at the contractor's expense, any tree(s) which has been determined to be excessively damaged.

7. ***Trunks And Lines***:
    a. At least 48 hours before start of construction, the contractor shall call the Village Forester to discuss problems with overhanging branches that might be damaged despite his/her exercising care in construction.
    b. Tree trunks shall be enclosed with wood slats, rubber tires, or snow fence wired in place where contractor's operation may scar the trunk or compact the root zone of the tree. The contractor shall exercise care to assure tree trunks, limbs, and roots are not damaged by its operation.

c. Damage to branches of the trees due to the contractor's negligence will be repaired by the Village and billed to the contractor.

Miscellaneous Standards

1. ***Fertilization:*** The Village does not, in general, fertilize right of way trees. A resident who wishes to fertilize the right of way tree(s) adjacent to their property shall request written permission from the Village Forester. All fertilization shall adhere to the American National Standards Institute's Standard Practices for Tree Care Operations – Fertilization (ANSI A 300 Part 2-Current Edition).

2. ***Cabling and Bracing:*** All cabling and bracing practices shall follow the American National Standards Institutes Standard Practices for Tree Care Operations – Support Systems, Cabling, Bracing, and Guying (ANSI A 300 Part 3 – Current Edition).

3. ***Spraying:*** The Village, in general, limits the use of pesticides on its public trees. Applications may be done for the control of specific diseases or insects with the proper timing and materials to obtain the desired level of control. Suitable precautions shall be taken to protect and warn the public that spraying is being done. All application practices shall conform to the appropriate State and Federal regulations. A resident who wishes to apply pesticides to the right of way tree(s) adjacent to their property shall request written permission from the Village. The Village Forester has the authority to approve or deny a pesticide application request. Residents applying for permission to apply pesticides must submit the following information: type of pesticide, timing (weeks(s) to be applied), quantity to be used, application method, and reason for pesticide use. If the application is done by a commercial contractor or is a restricted use pesticide (RUP), proof of a valid Wisconsin Department of Agriculture Trade and Consumer Protection Commercial Applicator License Number is also needed.

Digger's Hotline and Local Utilities

Digger's Hotline (800-242-8511) and all appropriate local utility companies must be notified prior to any underground excavation, including but not limited to: tree planting, stump removal and root repair. Three business days are customarily required as sufficient notice for the processing of locates. Proper marking of excavation sites prior to calling ensures that no resident, employee or utility are at risk from damage to unmarked utilities. Work within 18" of any underground utility requires hand digging to expose the facility and prevent unnecessary damage to utilities. Private utilities (i.e. irrigation, pet fences, private lighting etc.) located within the public right-of-way shall be marked by the adjacent property owner at their expense.

Appendix A – Planting Lists

Acceptable Small Trees (30' Max Height) – Acceptable trees for right-of-way with overhead utility lines.

*Due to an overabundance of maple species in the Village's current street and park tree inventory, maple trees are not a desirable tree to be planted in Village right-of-ways. They are not banned, however in most cases alternatives should be planted.

Scientific Name	Common Name	Cultivars
Acer ginnala	Amur Maple (Tree Form)*	
Acer tataricum	Tartarian Maple*	
Amalancheir canadensis	Serviceberry	'Autumn Brilliance'
Carpinus caroliniana	American Hornbeam	
Corylus colurna	Turkish Hazel/Filbert	
Crateagus crusgalli	Cockspur Thornless	
Crataegus phaenopyrum	Washington Hawthorn	
Crataegus viridis	Winter King Hawthorn	'Winter King'
Inermis	Hawthorn	
Maackia ameurensis	Amur Maackia	
Magnolia x loebneri	Magnolia	'Loebner'
Magnolia acuminate x denydata	Magnolia	'Butterflies'
Magnolia stellate	Magnolia	'Star'
Malus spp.	White Flowers/Red Fruit Crab	'Adirondack', 'Guinzam' (Guinevere), 'Jewelcole' (Red Jewel), 'Kinarzam' (King Arthur), 'Sutyzam' (Sugar Tyme)
Malus baccata	Siberian Crabapple	'Jackii'
Malus sargentii	Sargent Crabapple	'Select A' (Firebird), 'Tina'
Malus x zumi	Redbud Crabapple	'Calocarpa'
Malus spp.	White Flowers/ Yellow Fruit Crab	'Bob White', 'Cinzam' (Cinderella), 'Excazam' (Excalibur), 'Lanzam' (Lancelot), 'Ormiston Roy'

Malus spp.	Pink or Red Flower/Red or Purple Fruit	'Camzam' (Camelot), 'Canterzam' (Canterbury), 'Cardinal', 'JFS-KW5' (Royal Raindrops), 'Orange Crush', 'Parrsi' (Pink Princess), 'Prairiefire', 'Prairie Maid', 'Purple Prince'
Malus sargentii	Sargent Crabapple	'Candymint'
	Weeping to semi-weeping form	'Coral Cascade', 'Louisa', 'Luwick', 'Manbeck Weeper' (Anne E.), 'Molazam' (Molten Lava)
Prunus sargentii	Sargent Cherry	
Prunus	Accolade Cherry	'Accolade'
Ostrya virginiana	Ironwood	
Prunus cerasifera	Newport Plum	
Prunus nigra	Princess Kay Plum	'Princess Kay'
Prunus virginiana	Canada Red Chokecherry	"Canada Red'
Syringa pekinensis	Peking Lilac	
Syringa reticulata	Japanese Tree Lilac	'Ivory Silk', 'Summer Snow'

Acceptable Medium Trees (30' – 45' Max Height) for right-of-way planting
*Due to an overabundance of maple species in the Village's current street and park tree inventory, maple trees are not a desirable tree to be planted in Village right-of-ways. They are not banned, however in most cases alternatives should be planted.

Scientific Name	**Common Name**	**Cultivars**
Acer truncatum x *platanoides*	Shantung Hybrid Maple*	'Norwegian Sunset', 'Pacific Sunset'
Corylus colurna	Turkish Filbert	
Maclura pomifera	White Shield Osage Orange	'White Shield'
Phellodendron amurense	Amur Cork Tree	

Populus grandidentata	Big Tooth Aspen	
Pyrus calleryana	Callery Pear	'Autumn Blaze', 'Bradford', 'Cleveland Select'

Acceptable Large Trees (50' Min Height) for right-of-way planting
*Due to an overabundance of maple species in the Village's current street and park tree inventory, maple trees are not a desirable tree to be planted in Village right-of-ways. They are not banned, however in most cases alternatives should be planted.

Scientific Name	**Common Name**	**Cultivars**
Acer x freemanii	Freeman Maple*	'Autumn Blaze', 'Celebration', 'Marmo'
Acer miyabei	Miyabe Maple*	'State Street'
Acer platenoides	Norway Maple*	'Cleveland', 'Columnar', 'Crimson King', 'Crimson Sentry', 'Crystal', 'Deborah', 'Emerald Lustre', 'Emerald Queen', 'Globosum', 'Royal Red', 'Schwedleri', 'Superform'
Acer saccharum	Super Maple*	'Green Mountain', 'Fairview', ' Goldspire'
Aesculus glabra	Ohio Buckeye	
Aesculus hippocastanum	Horsechestnut	'Baumannii', 'Ruby Red'
Betula nigra	River Birch	'Heritage'
Celtis occidentalis	Hackberry	'Prairie Pride'
Cercidiphyllum japonicum	Katsuratree	
Eucommia ulmoides	Hardy Rubber Tree	
Ginkgo biloba	Ginkgo (Male)	'Autumn Gold', 'Fairmount', 'Magyar', 'Saratoga', 'Shangri-La'
Gleditsia triacanthos	Thornless Honeylocust	'Christie', 'Harve' 'Imperial', 'Moraine', 'Shademaster', 'Skyline', 'Sunburst', 'True Shade'
Gymnocladus dioicus	Kentucky Coffeetree	'Espresso', 'J.C. McDaniel'

Liriodendron tulipifera	Tuliptree	
Phellodendron amurense	Corktree	'Macho'
Phellodendron lavallei	Lavalle Corktree	'Longnecker'
Phellodendron sachalinense	Sakhalin Corktree	'His Majesty'
Quercus alba	White Oak	
Quercus bicolor	Swamp White Oak	
Quercus x bimundorum	Crimson Spire Oak	'Crimschmidt'
Quercus macrocarpa	Bur Oak	
Quercus x macdenielli	Heritage Oak	'Clemon's'
Quercus muehlenbergii	Chinkapin Oak	
Quercus robur	English Oak	'Skymaster'
Quercus Rosehill	Rosehill Oak	
Quercus x schuettei	Swamp Bur Oak	
Quercus x warei	Regal Prince Oak	'Long'
Quercus rubra	Northern Red Oak	
Taxodium distichum	Baldcypress	
Tilia	Linden	'Harvest Gold', 'Redmond'
Tilia Americana	American Linden	'Redmond'
Tilia cordata	Littleleaf Linden	'Fairview', 'Greenspire', 'Prestige'
Tilia x eucholra	Crimean Linden	
Tilia x flavescens	Glenleven Linden	'Glenleven'
Tilia tomentosa	Silver Linden	
Ulmus x (elm hybrids)	Hybrid Elm	'Morton (Accolade)', 'Homestead', 'Pioneer', 'Regal' 'Frontier', 'Morton Glossy' (Triumph), 'Morton Plainsman' (Vanguard), 'Morton Red Trip'

		(Danada Charm), 'Morton Stalwart' (Commendation), 'New Horizon', 'Patriot'
Ulmus japonica	Discovery Japanese Elm	'Discovery'
Ulmus parvifolia	Lacebark Elm	
Ulmus wilsoniana	Prospector Elm	'Prospector'

Banned/Undesirable Street Trees

Scientific Name	**Common Name**	**Reason**
	All Evergreen Species	Obstruct Visibility
Fraxinus	All True Ash Species	Susceptible to Emerald Ash Borer
Acer negundo	Boxelder	Weak wooded, attracts boxelder bugs
Acer rubrum	Red Maple	Intolerant of alkaline soils
Acer saccharinum	Silver Maple	Weak wooded, heaves pavement, heavy seed crop
Salix spp.	All Willow Species	Weak wooded, diseased foliage
Populus deltoids	Poplar, Cottonwood	Weak wooded, heaves pavement, heavy seed crop
Robinia pseudoacacia	Black Locust	Weak wooded, thorns, spread from root suckers
Betula papyrifera	Paper Birch	Susceptible to insect and disease, intolerant of disturbed sites
Betula pendula	European White Birch	Susceptible to insect & disease, intolerant of disturbed sites
Ginko Biloba	Ginko- Any Female Type	
Malus sylvestris	Common Apple	Fruit
Prunus serotina	Black Cherry	Fruit

Prunus domestica	Garden Plum	Fruit
Pyrus communis	Common Pear	Fruit
Quercus palustris	Southern Pin Oak	Intolerant of alkaline soils
Sorbus americana	American Mountain Ash	Susceptible to disease & fungal rot, heavy fruit set
Sorbus aucuparia	European Mountain Ash	Susceptible to disease & fungal rot, heavy fruit set

Appendix B – Street Tree Planting Plan

General:

- This plan shall cover all future plantings
- The Village of Bellevue will be ultimately responsible for pruning and maintenance of all trees in the right-of-way.
- A 2-year guarantee will be placed on any tree planted by a contractor or developer. Death or damage to trees caused by sources other than poor planting or quality of tree shall nullify any warranty by the contractor or developer. The Director of Parks, Recreation and Forestry or his/her designee shall determine the cause of death.
- The Village of Bellevue shall pay for any trees that will be planted in boulevards. Boulevards will need to have a minimum of 8 ft of green space to plant a tree.
- All trees must come from a reputable nursery or plantation.
- Planting guidelines:
    - All street trees shall be planted in a minimum of 9' of open space, of which cannot include the sidewalk reserve area. Trees must be planted a minimum of 5' from the curb and a minimum of 4' from the sidewalk or sidewalk reserve area. Trees planted in open space 10' or greater shall be planted midway between the curb and sidewalk (or the sidewalk reserve area), unless in the opinion of the Village Forester, there is sufficient reason to plant the trees off-center.
    - Trees shall only be planted on urbanized streets.
    - The number of trees allowed on a lot will be determined by using the criteria of keeping small and medium categorized trees approximately 50 ft apart, and large trees 60 ft apart. This guideline is also referenced in Bellevue Municipal Code 500-1706(A)(3)
    - Trees shall be planted a minimum of:
        - Outside of the vision triangle, as defined in the Village municipal code chapter 500-410(A)
        - 15' from a street light, fire hydrant, or power/utility pole
        - 10' from a driveway, utility valve or utility T, or sewer lateral
        - 6' from a water lateral
        - 5' from back of curb
        - 4' from sidewalk or sidewalk reserve area
    - Whenever possible, trees should not be planted within 10' of a water, sanitary or storm sewer main.
    - Only low growing trees will be permitted in areas of power lines.
    - Trees that are planted must be a minimum of 1.5"-2.5" in diameter and can either be bare root or Balled and Burlaped.
    - It is recommended that owners or developers plant a variety of trees to protect from disease. Only trees on an approved list by the Director of Parks, Recreation and Forestry shall be allowed.
    - The Director of Parks, Recreation and Forestry will have the final decision on the number of trees permitted in a right-of-way.
- Developers or current residents shall be able to select from a list of approved trees, provided by the Bellevue Parks, Recreation and Forestry Department. Approved trees shall be categorized in small, medium or large. This list will be selected by the Parks, Recreation and Forestry Director and will change periodically to coincide with tree availability from nurseries and current research on trees.

Current Residents:

- Current residents have an option of purchasing a tree through the Resident Street Tree Program, which is administered by the Parks, Recreation and Forestry Department. These

street trees will be offered to residents at the lowest expense offered to the Village through the annual tree purchases.
- Trees will be obtained from a reputable nursery and planted by a contractor.
- Plantings must follow all of the stated general guidelines.
- All current residents opting to plant trees in the right-of-way on their own must first complete a Street Tree Planting Permit, gain approval from the Director of Parks, Recreation and Forestry, must follow all stated forestry planting guidelines, and is contact Diggers Hotline.

New Residential Development:
- Residential development means any plat or CSM (Certified Survey Map) approved where the lots are zoned R-1, R-2, R-1-2A, or any combination thereof.
- Multi-Family (R-3) developments will be reviewed on a case by case basis to determine whether street trees will be required.
- The Village will begin planting trees in a development once a parcel has an established lawn. Trees will be planted in the next upcoming Village planting cycle.
- Undeveloped lots will not be planted until they are built upon and a lawn is established. Once built on, trees will be planted during the next appropriate planting season.
- A per lot fee will be charged within the developers agreement to cover the cost of planting of trees in the Village right-of-way.
- The Village will plant or coordinate with a contractor (i.e. nursery, landscaper, etc.) to plant trees.
- Developers approved by the Director of Parks, Recreation and Forestry may have the tree fees waived at the time of the developers agreement, provided that the developer provides for a restrictive covenant requiring trees to be planted by the developer. Tree planting by a developer will meet all criteria established by the Village Arboricultural Specifications Manual and any requirements stated in the Village Municipal Code regarding the planting of street trees. Developers will be approved by the Director of Parks, Recreation and Forestry based on work history and experience in planting trees, and quality of trees used.