

TOWN OF
Kindersley



Kindersley Urban Tree Policy
Leisure Services Department

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TOWN OF *Kindersley*

LEISURE SERVICES

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Kindersley Urban Tree Policy *Leisure Services Department*

1.0 PURPOSE

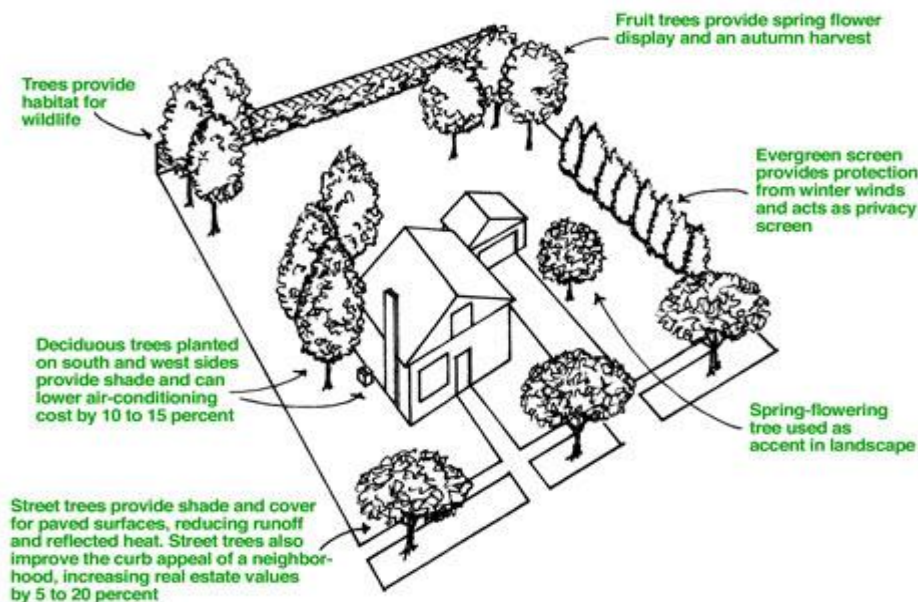
The Town of Kindersley exists so that Citizens of Kindersley enjoy a safe, attractive, vibrant and sustainable community for a reasonable investment. The Town of Kindersley believes that trees are an asset, and enhance the quality of life in our community. To ensure the Urban Forest is properly maintained as an asset, an effective and efficient Urban Forestry Management Program will be implemented.

2.0 INTRODUCTION

Urban Forestry is the generally accepted reference being used when dealing with the maintenance and care of the trees and shrubs that line our streets and beautify our parks.

A community's trees or its "urban forest" constitute a valuable but vulnerable component of the civic infrastructure. Not only do trees and shrubs provide shade, shelter, beauty, wildlife habitat and civic landmarks, they are also a statement of community pride and civic image. Trees are the "lungs of the earth" and help improve our air quality.

Throughout North America, the health of urban forests is in decline. Very few communities plant more trees than they remove and the threats of disease, vandalism, microclimate and neglect continue to diminish the vitality of the urban forest. Renewed attention is needed to conserve this very important community asset. Preserving our urban forest will leave a legacy for future generations to benefit from in many ways. These are the same benefits residents of, and visitors to Kindersley receive today.



Most trees and shrubs in communities are planted to provide beauty or shade. These are two excellent reasons for their use. Plants also serve many other purposes, and it is often helpful to consider these other functions when selecting a tree or shrub for the landscape.

3.0 Environmental Benefits: Improved Air Quality

Air quality can be improved through the use of trees, shrubs, and turf. Leaves filter the air we breathe by removing dust and other pollutants such as ozone, nitrogen oxides, ammonia and sulfur dioxide particles. Rain then washes the pollutants to the ground. Leaves absorb carbon dioxide from the air to form carbohydrates that are used in the plant's structure and function.

Improved Water Quality and Erosion Impacts

As development increases, hard non-evaporative surfaces increase, which decreases the soil infiltration by ground water. The result is increased water volume, velocity and pollutant load from runoff. Tree canopies and root systems intercept, slow and reduce storm water runoff through normal tree functions, thus reducing the effects of flooding and erosion. This increases the amount of rainwater runoff that percolates into the soil, which in turn helps purify the water by removing nutrients and sediments and recharging aquifers.

Reduced Temperature and Energy Use

Trees reduce temperatures in summer by shading surfaces, dissipating heat through evaporation and blocking wind, which transfers heat from the ground. Trees can also block winter winds and reduce the wind chill factor, which reduces energy loss due to heat dissipation.

Noise Reduction and Visual Screening

Trees provide a calming environment by absorbing noise and improving aesthetics. They soften sound waves that attempt to pass through them and further dampen these sounds by adding sounds of their own. The 'white noise' of leaves and branches in the wind and associated natural sounds, mask other man-made sounds. Trees can be used for screening undesirable and disturbing sight lines. They also reduce glare and filter out harmful UV rays.

4.0 DEFINITIONS

Planting

Plantings refer to any tree, shrub, bush or other plant material

Public Trees (Town owned)

All trees within the Urban Forest on property held by the Town of Kindersley are classed as public trees. Responsibilities will include reforestation, pruning, basal spraying and total inventory. All costs associated with these are the responsibility of the Town.

Private Trees (Residential or Commercial)

A tree/shrub that is located on the premises of a taxpayer's property is classified as a private tree. The Town does not have any trees planted in back lane areas. Therefore, any trees overhanging the back lanes are privately owned. The property owner is responsible for any tree overhanging or interfering with the use of any street, lane, sidewalk or public property.

ISA (International Association of Arboriculture)

The International Society of Arboriculture is an organization dedicated to fostering a greater appreciation for trees and to promoting research, technology, and the professional practice of arboriculture. This policy refers to standards of practices related to the Prairie Chapter of the ISA. The Town of Kindersley will implement the ISA standards in our Urban Tree Policy with regards to the following methods:

- **Replacement Cost Method (Appendix C)**

This is an ISA approved method of calculating the value of a tree and is used when the plants are of a size that can be replaced. The value is based upon the cost of replacing the same species of the same size and quality.

- **Trunk Formula Method (Appendix D)**

This is an ISA approved method of calculating the value of a plant when it is too large to be replaced. The value uses the cost of replacing the largest locally available plant and adjusting it for the size difference, the condition and location of the appraised tree.

- **Compounded Replacement Cost**

This is an ISA approved method used mostly for large plants that are bigger than those available for planting. This value is determined by taking the replacement cost (Appendix C) and the maintenance costs and increasing them by an interest rate until the replacement plant would grow to be as large as the original plant.

5.0 KINDERSLEY URBAN FOREST INVENTORY

An inventory of public trees shall be created and maintained for the purposes of continuing up-to-date information on removals, new plantings, sewer root problems, and a total inventory by species. The value of the Urban Forest inventory shall be established using the ISA approved Trunk Formula Method Worksheet and Condition Class Form (Appendix D)

5.1 General

All trees planted in the Town of Kindersley should be of a species that are suited to this climatic zone. Wherever possible, species diversity should be considered in reforestation.

See Appendix A: Recommended Species for Planting

5.2 Boulevards

Trees planted on the boulevard shall be of a species within the hardiness zone and suitable to the site. Fruit bearing trees are not allowed as boulevard trees to minimize "potential issues" with fruit on sidewalks. Other species that reduce visual sight lines need to be avoided. Careful consideration is needed in the selection process.

Residents are encouraged to maintain the boulevards in regards to cutting the grass and watering any trees present. The Town of Kindersley will be responsible for any pruning, removing and planting costs associated with public owned boulevards.

See Appendix A: Recommended Species for Planting - Boulevards

5.3 Park Areas

Where possible, trees will be planted in parks to allow for the urban forest to grow. The trees/shrubs should be planted in groupings to compliment each other and other species. Consideration of respective growth habits must be considered when choosing the trees to be planted at any particular site and preparation of landscape designs must be made prior to commencement of the work. The town has full control over all species planted in park areas.

6.0 Tree Planting (Example: Boulevards)

Citizens are encouraged to plant trees on the frontages of Town property in residential areas to help enhance their neighborhood. Often the purpose is to offer additional protection from prevailing winds and privacy to their own yards. However, application for approval must be made to the Department of Leisure Services with written approval required prior to commencement of planting.

Steps to be taken for approval to plant on town-owned land:

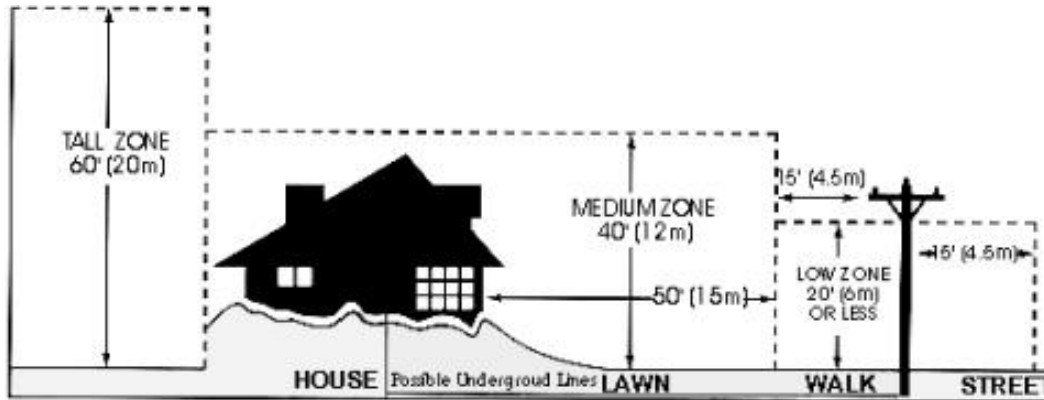
1. Application must be made in writing to the Director of Leisure Services.
2. All trees planted must conform to the criteria placed on the planting of trees as determined by this policy.
3. Final placement of the trees will be at the discretion of the Town with staking done to assist the homeowner in best location of new trees.
4. Failure to comply could result in some or all of the trees planted being removed from the property on which they are located with the cost being the sole responsibility of the property owner.
5. Upon the conclusion of the program, any changes to the property would be included in the Urban Forestry Inventory and forwarded to the property's tax file for future reference.

See Appendix A: Recommended Species for Planting

6.1 Appropriate Planting Site

When planning what type of tree to plant, remember to look up and look down to determine where the tree will be located in relation to overhead and underground utility lines.

This illustration indicates approximately where trees should be planted in relation to utility lines.



Tall Zone: Trees that grow up to 60 feet (20 meters) can be used in the area marked as tall zone. Consider your neighbor's view or their existing flower beds and trees when selecting trees in this area. Plant trees at least 35 feet (11 meters) away from the house for proper root development and to minimize damage to the building. These large-growing trees are also recommended for streets without overhead restrictions. Street planting sites must also have wide planting areas or medians [greater than 8 feet (3 meters)] that allow for a large root system, trunk diameter, and root flare. Large trees are recommended for parks, meadows, or other open areas where their large size will not be restricted, cause damage, or become a liability.

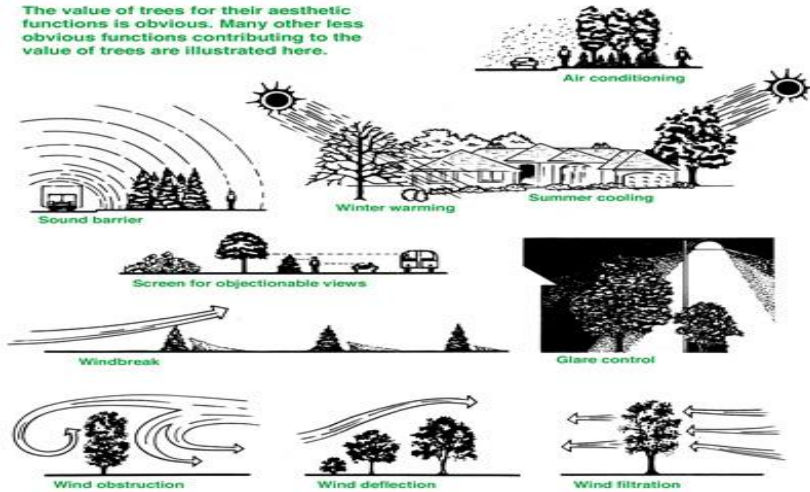
Medium Zone: Trees that grow up to 40 feet (12 meters) can be used in the medium zone. Appropriate soil spaces are wide areas [4 to 8 feet (1 to 3 meters) wide], large planting squares [8 feet (3 meters) square], and other open areas of similar size or larger.

Low Zone: This zone extends 15 feet (4.5 meters) on both sides of the wires. Trees with a mature height of less than 20 feet (6 meters) may be planted anywhere within this zone. Such trees are also recommended when the growing space is limited. These trees are appropriate as well for narrow planting areas [less than 4 feet (1 meter) wide]; planting squares or circles surrounded by concrete; large, raised planting containers; or other locations where underground space for roots will not support tall- or medium-zone trees.

Right Tree — Right Place

Planning before planting can help ensure that the right tree is planted in the right place. Proper tree selection and placement enhance your property value and prevent costly maintenance trimming and damage to your home.

The value of trees for their aesthetic functions is obvious. Many other less obvious functions contributing to the value of trees are illustrated here.



Trees and other living plants are valuable.

Trees beautify our surroundings and purify our air. However, many people don't realize that plants have a dollar value of their own that can be measured by competent plant appraisers.

6.2 Tree Value

Four Factors in Professional Valuation of Trees and Other Plants

Size. Sometimes the size and age of a tree are such that it cannot be replaced. Trees that are too large to be replaced should be assessed by professionals who use a specialized appraisal formula.

Species or classification. Trees that are hardy, durable, highly adaptable, and free from objectionable characteristics are most valuable. They require less maintenance; they have sturdy, well-shaped branches, and pleasing foliage. Tree values vary according to region, the "hardiness" zone, and local conditions.

Condition. Obviously, a healthy, well-maintained plant has a higher value. Roots, trunk, branches, and buds need to be inspected.

Location. Functional considerations are important. A tree in your yard may be worth more than one growing in the woods. A tree standing alone often has a higher value than one in a group. A tree near your house or one that is a focal point in your landscape tends to have more value. The site, placement, and contribution of a tree to the overall landscape help determine the overall value of the plant attributable to location.

All of these factors can be measured in dollars and cents. They can determine the value of a tree, whether for insurance purposes, court testimony in lawsuits, or tax deductions.

The Town of Kindersley will implement the ISA standards in our Urban Tree Policy to calculate the value of trees in our community.

7.0 TREE PRUNING

7.1 Boulevard Tree Pruning

Pruning will be undertaken by the Town of Kindersley in order to keep the Urban Forest in the best possible condition as established by good arboriculture standards. All costs associated with pruning on Town property will be covered by the Town of Kindersley. Pruning on private properties is the responsibility of the homeowner, which includes all associated costs.

Pruning Heights:

Boulevard trees adjacent to sidewalks will be pruned to the below minimum height from the ground to allow for ease of pedestrian access and access for maintenance equipment:

Street side: 13 feet

Sidewalk side: 8 feet

Current pruning practices for all Public (town owned) land include pruning starting at 1st Avenue and working up. Work begins on the east side of Kindersley then to the west. All species with the exception of elms are pruned first. Elms are pruned separately to reduce the risk of Dutch Elm Disease and only pruned outside the pruning ban time period.

7.2 Tree Pruning in Parks

This service will be completed by the Town of Kindersley to maintain trees located in the parks to good arboriculture standards.

7.3 Back Alley Tree Pruning

The purpose of back alleys and lanes is that they act as a right of way for public utilities and back yard access. All trees overhanging in the back lane area are classed as private trees. Therefore, all overhanging back alley trees are the responsibility of the homeowner.

7.4 Requests for Tree Pruning

Applications for pruning should be made in writing to the Director of Leisure Services.

1. Property owner applies in writing for proposed tree pruning to the Town
2. The Town will establish whether the tree is located on public or private property.
3. **If it is deemed to be a private planting:**
 - a.) The pruning in question is considered the responsibility of the property owner. All costs associated with the pruning will be the responsibility of the property owner. *Please note: if the tree is an elm refer to section 14.0*
4. **If it is deemed to be a public (Town) tree:**
 - a) An assessment of the planting will be made using the Tree Evaluation Form. (Appendix B)
 - b) Should the assessment find that corrective pruning, etc., is required, the Town of Kindersley will schedule the work in the pruning cycle.
 - c) All costs associated will be the responsibility of the Town.
 - d) Any change to the tree will be included in the Urban Forestry Inventory.

8.0 REQUESTS FOR TREE REMOVALS

Applications for removal shall be made in writing to the Director of Leisure Services.

Property owners requiring tree removal shall be required to contact the Town. This policy also applies to any and all construction, curb and/or repair work that would require the removal of any tree.

1. Property owner applies in writing for proposed tree removal to the Town
2. The Town will establish whether the tree is located on public or private property.
3. **If the tree is situated on private property:**
 - a.) The tree is considered the sole responsibility of the property owner. Any labor or costs associated with the removal will be the sole responsibility of the property owner. *Please note: if the tree is an elm refer to section 14.0*
4. **If the tree is situated on Town land:**
 - a) If the tree is not healthy, the tree will be removed at the sole cost to the Town.
 - b.) If the tree is healthy, all viable options to save the tree will be discussed with the property owner and will be done on a case-by-case basis.
 - c.) If the request for removal continues, the value of the tree will be established using the Replacement Cost Method Worksheet. (Appendix C).
The minimum reforestation surcharge shall be set at \$500.00
 - d.) The property owner shall be informed that he/she shall be responsible for all costs associated with the removal of the tree, as well as the reforestation surcharge.
 - e.) Once payment is received in full, removal of the tree will be scheduled.
 - f.) Any change to the tree will be included in the Urban Forestry Inventory.

9.0 SEWER ROOTS

Tree roots are attracted to moisture and in the past sewer lines were made with materials that tree roots could penetrate. Tree roots of some species can travel a significant distance to find moisture and therefore it is very difficult to find the tree that is the cause of the sewer issue. It may not be the most obvious tree and thus it is difficult to pinpoint if there are a number of trees in the area. Removing one tree will not prevent this from occurring again in the future as other tree roots will also enter the system. The Town currently uses piping materials that are impervious and therefore root problems in these lines rarely occur.

Removing trees does not solve this problem and diminishes the Urban Forest, therefore the Town of Kindersley will always consider removals as the last option in all cases.

10.0 REFORESTATION

The purpose of reforestation is to replace trees and supplement the existing forest population with additional trees where the population is low. Where possible, the Town of Kindersley will endeavor to maintain a positive tree planting to removal ratio.

10.1 Tree Nursery

The Town shall continue to maintain a tree nursery. Trees will be planted annually at the minimum equivalent rate to the number used from the nursery.

11.0 WATER PROGRAM

Proper watering is the most important factor for successful planting of trees and shrubs. To ensure adequate watering, newly planted trees will be watered a minimum of 7 times per year in the first year. In the second year, trees will be watered a minimum of 5 times a year. The minimum watering amounts depend on precipitation and mulching. Additional watering may or may not be required.

11.1 Street Trees

Where street trees are added or replaced on boulevards, efforts will be made to involve the homeowner as a partner in the tree planting. *When planting new trees, Town crews will water trees at time of planting and encourage the homeowners to water these trees on a regular schedule after the planting.*

11.2 Park Trees

Newly planted park trees will have a scheduled water maintenance program to ensure the success of the tree. The minimum seven times in the first year and five times in the second year program would apply. Where possible in new development, irrigation to tree beds would be installed.

12.0 DESTRUCTION AND USE OF CHEMICALS

No person shall apply or administer in any form any chemical that would cause death to any tree held by the Town of Kindersley.

No person shall cut, prune, or alter the appearance of any publicly owned tree, which would cause death or put the tree at risk.

If a person is found to have improperly pruned, cut or alter a public tree, that person will be held responsible for the cost of repair, replacement, or maintenance of the tree and will include a reforestation penalty.

13.0 COMPENSATION FOR DAMAGED TREES

The Town will endeavor to achieve compensation to the full value of any public tree(s) that are willfully damaged or become damaged as a result of an accident. The Town of Kindersley will follow the International Society of Arboriculture Plant Appraisal Guide to achieve a value for all trees affected by this policy.

14.0 SASKATCHEWAN DUTCH ELM DISEASE REGULATIONS

Dutch elm disease (DED) is a deadly fungus that can kill an elm in as little as three weeks by clogging its water-conducting vessels. Once a tree is infected by DED it needs to be removed and disposed of properly by either burying it or burning it.

The Town of Kindersley is dedicated to keeping DED out of our community. Every year the Saskatchewan Dutch Elm Disease Association (SDEDA) implements a **pruning ban from April 1 – August 31**. The Municipal Inspector(s) will strongly enforce no pruning or removing of elms during this period.



“elm tree” means any tree or part of a tree, living or dead, of the *Ulmus* genus and its cultivars, including the American, Siberian and Japanese elm trees, and includes any elm tree in the form of fuel wood, nursery stock, lumber, woodchips, logs, branches or bark

Observe the annual pruning ban. Do not prune your elms between April 1st and August 31st. The Elm Bark Beetle that spreads the DED fungus is attracted to freshly cut elm and is most active during this period.

Don't use, store, or transport elm wood. It's illegal! One piece of elm firewood can carry over 1800 infested elm bark beetles. The DED regulations apply to all elms including Siberian & Manchurian elms.

The Town of Kindersley is one of 40 communities in Saskatchewan that participates in the Cost-Share Program with Saskatchewan Environment. This program is part of the province's overall Dutch Elm Disease management plan. The Town of Kindersley will continue to participate as long as this program is available.

Requests During Pruning Ban (April 1 – August 31):

Any requests for pruning and/or removing any elm trees during the pruning ban must provide written request to the Director of Leisure Services. The request will then be forwarded to the Municipal Inspector(s) for authorization.

Pruning Fee: \$500.00

Pruning Without Authorization:

If pruning and or removing an elm tree occurs without written authorization from the Municipal Inspector(s) a penalty will occur. This is punishable under Saskatchewan Dutch Elm Disease Regulations and will be strictly enforced.

Fine: \$1,500.00

15.0 AUTHORITY

15.1 Administrative Authority

The office of Leisure Services - Parks Department will execute the authority over the Urban Forest and the administration of the Urban Forestry Management Program.

Appeal Process

Appeals regarding decisions made through this policy must be made in writing to the Director of Leisure Services.

- Failing satisfactory response from the Director, an appeal may be made to the Chief Administrator Officer (CAO).
- Any subsequent appeals to the decision made by the CAO should be made in writing to Town Council for the Town of Kindersley.

15.2 Enforcement:

1.) Bylaw Enforcement Officer

The Bylaw Enforcement Officer shall enforce the requirements of the municipality as related to the Town of Kindersley Urban Tree Policy in consultation with the Municipal Inspector(s) for the Town of Kindersley.

2.) Municipal Inspector(s)

The Municipal Inspector(s), as appointed by Town Council, has full authority to enforce the requirements of the municipality as well as any Saskatchewan regulated tree policies.

3.) Parks Foreman

The Parks Foreman for the Town of Kindersley has the authority to enforce this policy.

4.) Director of Leisure Services

The Director of Leisure Services for the Town of Kindersley has the authority to enforce this policy and to appoint any other person as his/her designate.

Given the value of the Urban Forest to our Community, removals will always be considered the last option in all cases.

16.0 TREE VARIETIES NOT RECOMMENDED OR ALLOWED IN ANY GREEN SPACE

This applies to both private and town owned land unless otherwise specified.

Elm Tree

All Elms which include all varieties. (Examples: Manchurian, American, Japanese or Siberian) The American Elm is probably the best available species for boulevard planting, however, given the current approach and threat of Dutch Elm Disease, it is not recommended.

Private Yards: No general public may plant this tree privately.

Public Land: The town may plant this variety if the Dutch Elm Disease monitoring continues in Kindersley on all Town owned trees.

Cotton Wood

Cotton Wood trees have been a nuisance to residents and cause problems with allergies and asthma due to the cotton-like substance they lose. No planting in both residential (private) and town owned areas.

Black Poplar (Russian)

These trees are not recommended due to the sap and sharp-pointed buds they give off. No planting in both residential (private) and town owned areas.

APPENDIX A –

Recommended Species for Planting - Please note that the recommended species for private yards are a small list of suggestions only and many other varieties are suitable and allowed.

BOULEVARDS – (Town Owned Property)

Tree Species	Scientific Name	Height	Description
Amur Maple	Acer ginnala	15-20 feet	Smallish, 'oriental'-looking tree having dense foliage and spreading habit. Very tough. Vivid scarlet autumn color makes this an excellent ornamental planting.
Black Ash	Fraxinus nigra	30-60 feet	Has a tall trunk with soft ash-gray bark and favors wet soils.
Green Ash	Fraxinus pennsylvanica	50 to 60 feet	Glossy, green, summer foliage turns yellow in fall, but drop too quickly to provide effective color. Green Ash develops a broad crown with age.
Ivory Silk Tree Lilac	Syringa reticulata	20 feet	A heavily flowering tree, covered by large plumes of small white flowers and dark green leaves.
Manchurian Ash	Fraxinus mandshurica	30-50 feet	Produces a very dense, oval to rounded, shapely crown. One year twigs are golden colored. Lacy-textured foliage.
Silver Maple	Acer saccharinum	50 feet	Summer foliage is green on top and silvery underneath. Suggested uses for this plant include shade tree.
Swedish Aspen	Populus Tremula 'Erecta' Narrow	30 - 36 feet	Has narrow columnar growth habits, orange-yellow fall color, a non-invasive root system and is cottonless. Suited for small yards.
Ventura Maple	Acer x 'Ventura'	20 feet	This vigorous grower retains its upright form and tolerates alkaline soils. Attractive orange-red fall colour.

*** No Fruit Trees / Evergreens to be planted on boulevards.**

PRIVATE YARDS / OPEN SPACES / PARKS

Tree Species	Scientific Name	Height	Description
Acute Willow	Salix acutifolia Willd	30 feet	Shiny dark green leaves with a wide-spreading crown and trunk tends to have multiple stems
Amur Cherry (Goldrush)	Prunus Maackii	30 feet	Has bronze, papery, peeling bark. It can be single or multi-stemmed. The white flowers are attractive, formal in drooping dense clusters, and followed by dark chokecherry-like fruit.
Amur Cork Tree	Phellodendron amurense	40 feet	The Amur Cork tree has corky, ridged bark with orange-yellow branchlets. Leaves are dark green and glossy and somewhat aromatic.
Assiniboine Poplar	Populus x 'Assiniboine	60 feet	A fast growing and prairie hardy poplar with no cotton or fuzz.
Bur Oak	Quercus macrocarpa Michx	50-65 feet	Drought tolerant; moderately shade tolerant. It is a small tree with rounded crown supported by crooked and gnarled branches.
Butternut	Juglans cinerea	40-60 feet	Has distinctive ridged and furrowed bark. It produces drooping clusters of sweet nuts which are used in baking. Prefers moist soils.
Hawthorn	Crataegus	10-12 feet	The glossy foliage turns a brilliant orange-scarlet in fall and the small crabapple-like fruit persists into winter.
Japanese Tree Lilac	Syringa amurensis japonica	20 feet	The Japanese Tree Lilac is the largest of the lilacs having large creamy white flower clusters. The leaves are dark green and have grayish undersides and yellow fall colour.

Tree Species	Scientific Name	Height	Description
Laurel Leaf Willow	Salix pentandra	26-50 feet	A large, rounded tree with glossy green leaves and furrowed bark.
Northern Blaze white Ash	Fraxinus americana 'Jeffnor'	40-50 feet	Dark green foliage turns purple in fall. The growth habit is an upright oval shape during the juvenile stage, developing into an open, round-topped crown at maturity. New twig growth is dark purple. Fall color in shades of maroon.
Prairie Horizon Manchurian Alder	Alnus hirsuta 'Harbin'	30 feet	It is a rapid-growing, medium-sized tree with dark green leaves. The amazing bark is gray and almost beech-like.
Sabre Aspen	Populus grandidentata 'Durman'	40 feet	Attractive coarsely toothed green leaves that emerge as a velvety purple/red color, clear, smooth bark and an upright crown form.
Selkirk Rosybloom Crab	Malus x adstringens	25 feet	A vigorous grower with a rounded, vase-like shape. Produces bright red fruit that stays on the tree all winter.
Swiss Stone Pine	Pinus cembra	25-35 feet	This attractive, slow growing, full-to-the-base pine maintains a perfect "Christmas tree shape" if grown in full sunlight.

APPENDIX B - Tree Evaluation Form

Site/Address: _____

Map/Location: _____

Owner: Public Private Unknown Other

Date: _____ Inspector: _____

Date of last inspection: _____

Hazard Rating			
_____	+	_____	+ _____ =
_____		_____	_____
Failure Potential	Size of Part	Target Rating	Hazard Rating
_____ Immediate action needed			
_____ Needs further inspection			

TREE CHARACTERISTICS

Tree # _____ Species: _____
 DBH: _____ # of trunks: _____ Height: _____ Spread: _____

Form: generally symmetric minor asymmetry major asymmetry stump sprout stag-headed

Crown class: dominant co-dominant intermediate suppressed

Live crown ratio: _____% Age class: young semi-mature mature over-mature/senescent

Pruning history: crown cleaned excessively thinned topped crown raised pollarded
 crown reduced flush cuts cabled/braced none multiple pruning events
 Approximate dates: _____

Special Value: specimen heritage/historic wildlife unusual street tree screen
 shade
 indigenous protected by government agency

TREE HEALTH

Foliage color: normal chlorotic necrotic Epicormics? Y N Grown obstructions:
 Foliage density: normal sparse Leaf size: normal small stakes wire/ties
 signs
 Annual shoot growth: excellent average poor Twig Dieback? Y N curb/pavement
 guards
 Woundwood development: excellent average poor none other

Vigor class: excellent average poor
 Major pests/diseases: _____

SITE CONDITIONS

Site Character: residence commercial industrial park open space natural
 woodland/forest
 Landscape type: parkway raised bed container mound lawn shrub border wind break
 Irrigation: none adequate inadequate excessive trunk wettled
 Recent site disturbance? Y N construction soil disturbance grade change line clearing
 site clearing
 % dripline paved: 0% 10-25% 25-50% 50-75% 71-100% Pavement lifted?
 Y N
 % dripline w/fill soil: 0% 10-25% 25-50% 50-75% 71-100%
 % dripline grade lowered: 0% 10-25% 25-50% 50-75% 71-100%

Soil problems: drainage shallow compacted droughty saline alkaline acidic small volume

disease centre history of fail clay expansive slope aspect:

Obstructions: lights signage line-of-site view overhead lines underground utilities traffic

adjacent veg. _____

Exposure to wind: single tree below canopy above canopy recently exposed windward, canopy edge

area prone to windthrow

Prevailing wind direction: _____ Occurrence of snow/ice storms: never seldom regularly

TARGET

Use Under Tree: building parking traffic pedestrian recreation landscape hardscape small features utility lines

Can target be moved? Y N Can use be restricted? Y N

Occupancy: occasional use intermittent use frequent use constant use

TREE DEFECTS

ROOT DEFECTS:

Suspect root rot: Y N Mushroom/conk/bracket present: Y N ID: _____

Exposed roots: severe moderate low

Undermined: severe moderate low

Root Pruned: _____ distance from trunk

Root area affected: _____%

Buttress wounded: Y N When: _____

Restricted root area: severe moderate low

Potential for root failure: severe moderate low

LEAN: _____ deg. from vertical natural unnatural self-corrected

Soil Heaving: Y N

Decay in plane of lean: Y N Roots broken: Y N Soil cracking: Y N

Compounding factors: _____ Lean severity: severe moderate low

CROWN DEFECTS: Indicate presence of individual defects and rate their severity (s=severe, m=moderate, l=low)

DEFECT	ROOT CROWN	TRUNK	SCAFFOLDS	BRANCHES
Poor taper				
Bow, sweep				
Codominants/forks				
Multiple attachments				
Included bark				
Excessive end weight				
Cracks/splits				
Hangers				
Girdling				
Wounds/seam				
Decay				
Cavity				
Conks/mushrooms/bracket				

Bleeding/sap flow				
Loose/cracked bark				
Nesting hole/bee hive				
Deadwood/stubs				
Borers/termites/ants				
Cankers/galls/burls				
Previous failure				

HAZARD RATING

Tree part most likely to fail: _____

Inspection period: _____ annual _____ biannual _____ other _____
severe

Failure Potential + Size of Part + Target Rating = Hazard Rating
cm);

(75 cm)

_____ + _____ + _____ = _____

use;

Failure potential:

1-low; 2-medium; 3-high; 4-

Size of part:

1 - <6" (15 cm); 2 - 6-18" (15-45

3 - 18-20" (45-75 cm); 3 = >30"

Target rating:

1-occasional use; 2-intermittent

3-frequent use; 4-constant use

HAZARD ABATEMENT

Prune: remove defective part reduce end weight crown clean thin raise canopy crown
reduce

restructure shape

Cable/Brace: _____ Inspect further: root crown decay aerial
monitor

Remove tree: Y N Replace? Y N Move Target: Y N Other

Effect on adjacent trees: none evaluate

Notification: owner manager governing agency

Date: _____

COMMENTS

Diagnostic Worksheet

Date:

Tree genus: _____

Client:

Species: _____

Site address:

Variety/Cultivar: _____

Common name: _____

Approximate age: _____

Tree location:

Signs and Symptoms:

Spread within the area:

- Within one tree Group of same species Other plant species Group within site
Neighboring site

Structures Affected:

- Foliage Fruit/flowers Twigs/branches Bark/trunk Roots

Spread within the tree:

- Localized Widespread Uniform pattern Random pattern

Patterns of abnormalities:

Foliage

- Anthracnose mold Chlorosis Mottling Scab Sooty
 Blight Disfigurement Necrosis Scale Spots
 Blisters Galls Powdery mildew Scorch Wilting
 Curling Leaf dropping Rusts Shot holes Other

Twigs/Branches

- Bleeding Dieback Scaling Wound Other
 Blight Distortion Shepherdis crooking Vascular
 Cankers Frost cracks Stunting discoloration
 Decay Lightning Sunscald Witch's brooms

Bark/Trunk

- Cankers Discoloration Gumming/bleeding Loose bark
Swelling
 Cracking Frost cracks Holes in bark Slime flux
Wounds
 Decay Galls/burls Lightning Splitting
Other _____

Roots

- Decay Distortion Girdling root Wounds
Other _____
 Discoloration Galls Shriveled

Signs

- | | | | | |
|-------------------------------------|--|---------------------------------------|--|--------------------------|
| <input type="checkbox"/> Egg masses | <input type="checkbox"/> Frass | <input type="checkbox"/> Galleries | <input type="checkbox"/> Mycelia | <input type="checkbox"/> |
| Other_____ | | | | |
| <input type="checkbox"/> Exit holes | <input type="checkbox"/> Fruiting bodies | <input type="checkbox"/> Insect parts | <input type="checkbox"/> Pupal casings | |

Site history:

Soil

- | | | | | |
|--|---|--|-----------------------------------|--------------------------|
| <input type="checkbox"/> Compaction | <input type="checkbox"/> Excessive salt | <input type="checkbox"/> Improper irrigation | <input type="checkbox"/> Nutrient | <input type="checkbox"/> |
| Other_____ | | | | |
| <input type="checkbox"/> Contamination | <input type="checkbox"/> Grading | <input type="checkbox"/> pH | deficiency | |

Environment/surroundings

- | | | | | |
|--|---|--------------------------------------|--------------------------------|--------------------------|
| <input type="checkbox"/> Competition | <input type="checkbox"/> Pollution | <input type="checkbox"/> Temperature | <input type="checkbox"/> Water | <input type="checkbox"/> |
| Other_____ | | | | |
| <input type="checkbox"/> Infrastructure conflict | <input type="checkbox"/> Poor species selection | extremes | deficiency | |

Tree History

- | | | | | |
|---|---------------------------------------|--|--|-------------------------------|
| <input type="checkbox"/> Animal damage | <input type="checkbox"/> Construction | <input type="checkbox"/> Improper | <input type="checkbox"/> Mechanical injury | <input type="checkbox"/> |
| Vandalism | | | | |
| <input type="checkbox"/> Chemical injury damage | damage | maintenance | <input type="checkbox"/> Poor wound | <input type="checkbox"/> Wind |
| Other_____ | | <input type="checkbox"/> Improper planting | forming (vigor) | <input type="checkbox"/> |

APPENDIX C – Replacement Cost Method Worksheet

Appraised Value =

$$\begin{aligned} & \text{[Installed Plant Cost x Species \% x Condition \% x Location \%]} \\ & \text{+ Removal and Cleanup Cost (if needed)} \\ \text{Installed Plant Cost} & = \text{Replacement Plant Cost + Installation Cost} \end{aligned}$$

Case # _____ Property _____ Date _____

Appraiser _____

Field Observations

1. **Species** _____
2. **Condition** _____%
3. **Trunk Circumference** _____ in./cm and/or **Diameter** _____ in./cm
or
Shrub or Vine Size (height/spread/volume) _____
4. **Location %** = [Site ____% + Contribution ____% + Placement ____%] ÷ 3 =
_____%
5. **Removal and Cleanup Costs** for appraised
plant or plant that will be replaced = \$ _____

*Regional Plant Appraisal Committee and/or
Appraiser-Developed or Modified Information*

6. **Species rating** _____%
7. **Replacement Plant Size** (diameter) _____ in.cm
8. **Replacement Plant Cost** = \$ _____
9. **Installation Cost** = \$ _____
10. Other Regional Information _____

*Calculations by Appraiser Using Field and/or
Regional Information*

11. **Installed Plant Cost = Plant Cost** (#8) \$ _____
+ **Installation Cost** (#9) \$ _____ = \$ _____
12. **Adjusted Installed Plant Cost = Installed Plant
Cost** (#11) \$ _____ x **Species rating** (#6) _____% x
Condition (#2) _____% x **Location** (#4) _____% = \$ _____
13. **Add Removal and Cleanup Costs** (#5)
(if appraised plant is replaced) \$ _____ = \$ _____
14. The **Appraised Value** is either #12 or #13 = \$ _____
15. If the **Appraised Value** (#14) is \$5,000 or more, round
it to the nearest \$100; if it is less, round to nearest \$10.
16. **Appraised Value** (#14) = \$ _____

*A median cost is the most appropriate cost to use because there are an equal number of costs greater than and less than the median. Equally important, plants and installation are available at those specific costs.

APPENDIX C Cont'd

Condition and Location Class

Class	Description	Condition
Condition		(Percent
Value)		
Excellent	Perfect specimen. Excellent form and vigor for species. No pest problems or mechanical injuries. No corrective work required. Minimum life expectancy 30 years beyond the time of inspection	100
Good	Healthy and vigorous. No apparent signs of insect, disease or mechanical injury. Little or no corrective work required. Form representative of species. Minimum life expectancy 20 years.	80
Fair	Average condition and vigor for area. May be in need of some corrective pruning or repair. May lack desirable form characteristics of species. May show minor insect, disease or physiological problems. Minimum life expectancy 10 years.	60 – 40
Poor	General state of decline. May show severe mechanical, insect or disease injury, but death not imminent. May require major repair or renovation. Minimum life expectancy 5 years.	20
Dead or Dying	Dead or death imminent within 5 years.	0

Site Location	Percent Value*
Specimen or historical trees	110
Average residential, landscape trees	80 - 90
Aboretum, park and recreation trees	70 - 80
Golf course trees	60 - 80
City street trees, shopping malls	60 - 80
Shelterbelt	60 - 80
Industrial area trees	50 - 70
Out of city highway trees	40 - 60
Native, open woods trees	20 - 40
Undesireable location	0 - 20

*Functional or placement deficiencies will reduce site location values.

APPENDIX D – Trunk Formula Method Worksheet

Case # _____ Property _____ Date _____

Appraiser _____

Field Observations

1. **Species** _____
2. **Condition** _____%
3. **Trunk Circumference** _____ in./cm **Diameter** _____ in./cm
4. **Location %** = [Site ____% + Contribution ____% + Placement ____%] ÷ 3 = _____%

Regional Plant Appraisal Committee and/or Appraiser-Developed or Modified Information

5. **Species Rating** _____%
6. **Replacement Tree Size** (diameter) _____ in./cm
(Trunk Area) _____ in²/cm²TA_R
7. **Replacement Tree Cost** \$ _____
(see Regional Information to use **Cost** selected)
8. **Installation Cost** \$ _____
9. **Installed Tree Cost** (#7 + #8) \$ _____
10. **Unit Tree Cost** \$ _____ per in²/cm²
(see Regional Information to use **Cost** selected)

Calculations by Appraiser using Field and Regional Information

11. **Appraised Trunk Area:**
(TA_A or ATA_A; use Tables 4.4-4.7) }
or c²(#3) _____ x 0.08 } = _____ in²/cm²
or d² (#3) _____ x 0.785 } }
12. **Appraised Tree Trunk Increase** (TA_{INCR}) =
TA_A or ATA_A _____ in²/cm² (#11) – TA_R _____ in²/cm² #6) = _____ in²/cm²
13. **Basic Tree Cost** = TA_{INCR} (#12) _____ in²/cm² x **Unit Tree Cost** (#10) \$ _____
per in²/cm² + **Installed Tree Cost** (#9) \$ _____ = \$ _____
14. **Appraised Value** = **Basic Tree Cost** (#13) \$ _____ x **Species** rating (#5) _____% x **Condition** (#2) _____% x **Location** (#4) _____% = \$ _____
15. If the **Appraised Value** is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
16. **Appraised Value** = (#14) \$ _____

Items 5 through 10 are determined by the Regional Plant Appraisal Committee. The **Wholesale Replacement Tree Cost**, the **Retail Replacement Tree Cost**, or the **Installed Tree Cost (#9)** divided by the **Replacement Tree Size (#6)** can be used for the **Unit Tree Cost (#10)**, or it can be set by the Regional Plant Appraisal Committee.

APPENDIX D Cont'd

Condition and Location Class

Condition Value)	Description	Condition Class (Percent)
Excellent	Perfect specimen. Excellent form and vigor for species. No pest problems or mechanical injuries. No corrective work required. Minimum life expectancy 30 years beyond the time of inspection	100
Good	Healthy and vigorous. No apparent signs of insect, disease or mechanical injury. Little or no corrective work required. Form representative of species. Minimum life expectancy 20 years.	80
Fair	Average condition and vigor for area. May be in need of some corrective pruning or repair. May lack desirable form characteristics of species. May show minor insect, disease or physiological problems. Minimum life expectancy 10 years.	60 – 40
Poor	General state of decline. May show severe mechanical, insect or disease injury, but death not imminent. May require major repair or renovation. Minimum life expectancy 5 years.	20
Dead or Dying	Dead or death imminent within 5 years.	0

Site Location	Percent Value*
Specimen or historical trees	110
Average residential, landscape trees	80 - 90
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Golf course trees	60 – 80
City street trees, shopping malls	60 – 80
Shelterbelt	60 – 80
Industrial area trees	50 – 70
Out of city highway trees	40 – 60
Native, open woods trees	20 – 40
Undesireable location	0 – 20

*Functional or placement deficiencies will reduce site location values.