



# City of Richmond

## Report to Committee

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**To:** Planning Committee  
**From:** James Cooper, Architect AIBC  
Director, Building Approvals  
**Date:** April 29, 2021  
**File:** 12-8060-20-  
010246/Vol 01  
**Re:** **Suitable Trees for Replanting List, Tree Planting Information on the City's website, and the Review of Procedures to Determine the Maximum Number of Trees in a Residential Lot**

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### Staff Recommendation

1. That the report, "Suitable Trees for Replanting List, Tree Planting Information on the City's website, and the Review of Procedures to Determine the Maximum Number of Trees in a Residential Lot," dated April 29, 2021 from the Director, Building Approvals, be received for information.

James Cooper, Architect AIBC  
Director, Building Approvals  
(604-247-4606)

Att. 2

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER 	
SENIOR STAFF REPORT REVIEW	INITIALS: 
APPROVED BY CAO 	

## **Staff Report**

### **Origin**

This report is in response to the April 7, 2021 Planning Committee referral:

- 1) That staff review the “Suitable Trees for Replanting in the City of Richmond” list and the “Tree Planting Information” on the City's website; and
- 2) That staff review the recommended maximum number of trees on a residential lot, and report back.

The purpose is to provide Council with an updated list of “Suitable Trees for Replanting in the City of Richmond” and the Information Bulletin “Replacement Tree/Tree Planting Guideline”; and

“That staff review the maximum number of trees specified for a residential lot, and report back”.

This report supports Council’s Strategic Plan 2018-2022 Strategy #2 A Sustainable and Environmentally Conscious City:

*Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.*

*2.2 Policies and practices support Richmond's sustainability goals.*

### **Analysis**

At the April 7, 2021 Planning Committee, Council members expressed concern about the potential for tree failure during extreme weather events in the City of Richmond. To mitigate the occurrence of whole or partial tree failure, staff were directed to review the list of “Suitable Trees for Replanting in the City of Richmond” and remove any tree species that may be considered “dangerous”. In addition, staff were also requested to review the maximum number of trees specified for a residential lot.

While there are no tree species that are categorized as “dangerous”, there are fast growing, softwood tree species that have a tendency to shed branches, more than others, in extreme weather events and as they reach maturity. It should be noted that these types of trees, with a habit of shedding limbs or that have a greater potential for early tree failure, do play an important role as a Pioneer Species within a forest or woodland environment. The softwood trees species contribute to the organic matter build-up of the forest floor and provide important wildlife habitat for birds and small animals. However, these same types of trees growing in an urban environment, taking into consideration their greater potential for limb failure, could pose a greater risk to damaging property or injuring people.

In response to Committee's request, staff has reviewed the list of 230 suitable replacement trees currently listed on the City website and has removed the following softwood, fast growing trees:

Jacquemontii Birch	European White Birch	Paper Birch
Cut Leaf Weeping Birch	Weeping Willow	Balsam Poplar
Paper Birch	White Willow	Northern Black Cottonwood

In order to maintain a diversified list of suitable replacement trees, staff have added the following eight trees to the list:

Frisia Black Locust	Swedish Aspen	Vanderwolf Pine	Serbian Spruce
Nootka Cypress	Oriental Spruce	Bristly Locust	Idaho Locust

In addition to the updated list of suitable replacement trees (attachment 1), staff has also updated Information Bulletin Tree-10 "Replacement Tree/Tree Planting Guideline" (attachment 2) to ensure both residents and builders have the information needed for appropriate replacement tree species choice, replacement tree size and planting guidelines to ensure successful establishment of new trees to the benefit of all Richmond residents.

Staff were also requested to "review the recommended maximum number of trees on a residential lot" as Council members expressed concern about the potential for over specification of new replacement trees as a result of the 2:1 replanting ratio for new single-family residential development sites.

The intent of the 2:1 replanting ratio is to ensure that staff are able to maximize the number of new trees to be planted in order to compensate for the loss of tree canopy when existing trees are required to be removed. This strategy also supports the continual development of a diverse and resilient urban forest. Staff are acutely aware that over-planting is not a sustainable approach, especially on residential lots, as tree crowding leads to competition for limited resources and can result in excessive pruning to maintain natural sunlight and/or address building/tree conflicts.

Tree Preservation staff currently utilize industry best practices, Arboriculture expertise and British Columbia Landscape and Nursery Association (BCLNA) Replacement Tree Spacing Standards in order to ensure the appropriate number of replacement trees are specified on residential lots. They also take into consideration the broadly different spatial requirements of different tree species, number of existing trees on site (both recently planted or mature), building configuration, overhead and underground utilities and the open space configuration of each residential lot to ensure no overcrowding takes place.

Staff will continue to ensure the appropriate number of trees are specified on residential lots as a condition of a tree removal permit, and work with residents to foster a passion for both the individual trees on their property and the urban forest as a long term benefit to the community.

April 29, 2021

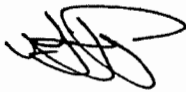
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### **Financial Impact**

None

### **Conclusion**

This report provides Council with the updated list of "Suitable Trees for Replanting in the City of Richmond" and the Information Bulletin "Replacement Tree/Tree Planting Guideline". In addition, it also identifies standards and best practices used by staff to ensure the appropriate number of trees are specified for residential lots.



Gordon Jaggs  
Program Lead, Tree Preservation  
Building Approvals  
(604-247-4910)

GJ:gj

- Att. 1: List of "Suitable Trees for Replanting in the City of Richmond"  
2: Information Bulletin "Replacement Tree/Tree Planting Guideline"



## Suitable Trees for Replanting in the City of Richmond

Tree Bylaw Section  
6911 No. 3 Road, Richmond, BC V6Y 2C1

[www.richmond.ca](http://www.richmond.ca)

### Replacement tree size for non-development

Minimum size of deciduous tree required as a condition of non-development tree permit: **6cm caliper.**

Minimum size of coniferous tree required as a condition of non-development tree permit: **3.5m high.**

### Replacement tree size for development

Minimum size of deciduous tree required as a condition of development tree permit: **8cm caliper.**

Minimum size of coniferous tree required as a condition of development tree permit: **4m high.**

**Note:** We DO NOT accept the following as replacement trees: Hedging Cedars, Palm Trees, Dwarf species or Topiaries.

### Small Trees Up To 30'

Common Name	Botanical Name	Replanting Size Requirements	Height and Spread at Maturity
Hedge Maple	<i>Acer campestre</i> 'Queen Elizabeth'	6 cm caliper	H25' x S15'
Vine Maple	<i>Acer circinatum</i>	6 cm caliper	H25' x S12'
Amur Maple	<i>Acer ginnala</i>	6 cm caliper	H20' x S15'
Paperbark Maple	<i>Acer griseum</i>	6 cm caliper	H25' x S12'
Japanese Maple	<i>Acer palmatum</i>	6 cm caliper	H15' x S15'
Japanese Angelica Tree	<i>Aralia elata</i>	6 cm caliper	H25' x S20'
Young's Weeping Birch	<i>Betula pendula</i> 'Youngii'	6 cm caliper	H10' x S10'
Eastern Redbud	<i>Cercis canadensis</i>	6 cm caliper	H25' x S25'
Drooping Nootka Cypress	<i>Chamaecyparis nootkatensis</i> 'Pendula'	3.5 m height	H20' x S12'
Hinoki False Cypress	<i>Chamaecyparis obtuse</i> 'Gracilis'	3.5 m height	H20' x S15'
Saware False Cypress	<i>Chamaecyparis pisifera</i>	3.5 m height	H20' x S15'
Fringe Tree	<i>Chionanthus virginicus</i>	6 cm caliper	H30' x S20'
Chinese Dogwood	<i>Cornus chinensis</i>	6 cm caliper	H20' x S10'
Eddie's White Wonder Dogwood	<i>Cornus</i> 'Eddie's White Wonder'	6 cm caliper	H25' x S10'
Flowering Dogwood	<i>Cornus florida</i>	6 cm caliper	H20' x S15'
Kousa Dogwood	<i>Cornus kousa</i>	6 cm caliper	H20' x S10'
Cornelian Cherry	<i>Cornus mas</i>	6 cm caliper	H15' x S8'
Hawthorn	<i>Crataegus</i>	6 cm caliper	H18' x S15'
Snow Gum	<i>Eucalyptus pauciflora</i>	6 cm caliper	H15' x S10'

### Small Trees Up To 30'

Common Name	Botanical Name	Replanting Size Requirements	Height and Spread at Maturity
Shademaster Honeylocust	<i>Gleditsia traicanthos inermis</i> 'Shademaster'	6 cm caliper	H24' x S16'
Golden Chain Tree	<i>Laburnum watereri</i> 'Vossii'	6 cm caliper	H25' x S20'
Yellow Cucumber Tree	<i>Magnolia cordata</i>	6 cm caliper	H30' x S30'
Northern Japanese Magnolia	<i>Magnolia kobus</i>	3.5 m height	H30' x S20'
Oyama Magnolia	<i>Magnolia sieboldii</i>	6 cm caliper	H15' x S15'
Saucer Magnolia	<i>Magnolia soulangiana</i>	6 cm caliper	H25' x S25'
Ornamental Crabapple	<i>Malus</i>	6 cm caliper	H15' x S15'
Japanese Crabapple	<i>Malus florabunda</i>	6 cm caliper	H20' x S30'
Prairiefire Crabapple	<i>Malus</i> x 'Prairiefire'	6 cm caliper	H20' x S20'
Red Lotus	<i>Manglietia insignis</i>	6 cm caliper	H20' x S10'
Sourwood	<i>Oxydendrum arboreum</i>	6 cm caliper	H20' x S15'
Shore Pine	<i>Pinus contorta</i>	3.5 m height	H30' x S18'
Persian Ironwood	<i>Parrotia persica</i>	6 cm caliper	H15' x S15'
Japanese Flowering Plum	<i>Prunus blireana</i>	6 cm caliper	H25' x S20'
Purpleleaf Plum	<i>Prunus cerasifera pissardi</i> 'Nigra'	6 cm caliper	H25' x S25'
Japanese Flowering Cherry	<i>Prunus serrulata</i>	6 cm caliper	H25' x S25'
Higan Cherry	<i>Prunus subhirtella</i>	6 cm caliper	H25' x S25'
Chokecherry	<i>Prunus virginiana</i>	6 cm caliper	H20' x S15'
Staghorn Sumac	<i>Rhus typhina</i>	6 cm caliper	H15' x S20'
European Mountain Ash	<i>Sorbus aucuparia</i>	6 cm caliper	H25' x S15'
Japanese Stewartia	<i>Stewartia pseudocamellia</i>	6 cm caliper	H30' x S20'
Japanese Snowbell	<i>Styrax japonica</i>	6 cm caliper	H30' x S18'
Fragrant Snowbell	<i>Styrax obassia</i>	6 cm caliper	H20' x S10'
Ivory Silk Tree Lilac	<i>Syringa reticulata</i> 'Ivory Silk'	6 cm caliper	H30' x S15'

### Medium Trees 30' to 50'

Common Name	Botanical Name	Replanting Size Requirements	Height and Spread at Maturity
Caucasian Maple	<i>Acer cappadocicum</i>	6 cm caliper	H40' x S30'
Box Elder	<i>Acer negundo</i>	6 cm caliper	H50' x S25'
Norway Maple	<i>Acer platanoides</i>	6 cm caliper	H50' x S35'

**Medium Trees 30' to 50'**

<b>Common Name</b>	<b>Botanical Name</b>	<b>Replanting Size Requirements</b>	<b>Height and Spread at Maturity</b>
Crimson King Maple	<i>Acer platanoides</i> 'Crimson King'	6 cm caliper	H50' x S35'
Crimson Sentry Maple	<i>Acer platanoides</i> 'Crimson Sentry'	6 cm caliper	H50' x S20'
Sycamore Maple	<i>Acer pseudoplatanus</i>	6 cm caliper	H40' x S25'
Red Maple	<i>Acer rubrum</i>	6 cm caliper	H40' x S20'
Red Sunset Maple	<i>Acer rubrum</i> 'Red Sunset'	6 cm caliper	H40' x S20'
Shantung Maple	<i>Acer truncate</i>	6 cm caliper	H25' x S20'
Red Horsechestnut	<i>Aesculus x carnea</i>	6 cm caliper	H40' x S40'
Ruby Red Horsechestnut	<i>Aesculus x carnea</i> 'Birotti'	6 cm caliper	H40' x S40'
Silk Tree	<i>Albizia julibrissin</i>	6 cm caliper	H40' x S50'
Pacific Madrone	<i>Arbutus menziesii</i>	3.5 m height	H35' x S20'
River Birch	<i>Betula nigra</i>	6 cm caliper	H40' x S20'
European Hornbeam	<i>Carpinus betulus</i>	6 cm caliper	H40' x S30'
Common Catalpa	<i>Catalpa bignoides</i>	6 cm caliper	H40' x S30'
Common Hackberry	<i>Celtis occidentalis</i>	6 cm caliper	H40' x S30'
Katsura Tree	<i>Cercidiphyllum japonicum</i>	6 cm caliper	H40' x S20'
Nootka Cypress	<i>Chamaecyparis nootkatensis</i>	3.5 m height	H50' x S30'
Giant Dogwood	<i>Cornus controversa</i>	6 cm caliper	H50' x S30'
Pacific Dogwood	<i>Cornus nuttallia</i>	6 cm caliper	H50' x S20'
Handkerchief Tree	<i>Davidia involucrata</i>	6 cm caliper	H35' x S20'
Hardy Rubber Tree	<i>Eucommia ulmoides</i>	6 cm caliper	H40' x S25'
Flowering Ash	<i>Fraxinus ornus</i>	6 cm caliper	H40' x S20'
Green Ash	<i>Fraxinus pennsylvanica</i>	6 cm caliper	H30' x S30'
Maidenhair Tree	<i>Ginkgo biloba</i>	6 cm caliper	H35' x S20'
Mountain Silverbell	<i>Halesia monticola</i>	6 cm caliper	H45' x S15'
Japanese Walnut	<i>Juglans ailantifolia</i>	6 cm caliper	H50' x S30'
Butternut	<i>Juglans cinera</i>	6 cm caliper	H50' x S30'
Arizona Walnut	<i>Juglans major</i>	6 cm caliper	H50' x S30'
Golden Rain Tree	<i>Koelreuteria paniculata</i>	6 cm caliper	H35' x S40'
European Larch	<i>Larix decidua</i>	3.5 m height	H45' x S20'
Cucumber Tree	<i>Magnolia acuminata</i>	3.5 m height	H50' x S25'

**Medium Trees 30' to 50'**

<b>Common Name</b>	<b>Botanical Name</b>	<b>Replanting Size Requirements</b>	<b>Height and Spread at Maturity</b>
Dawson Magnolia	<i>Magnolia dawsoniana</i>	3.5 m height	H50' x S30'
Antarctic Beech	<i>Nothofagus antarctica</i>	6 cm caliper	H50' x S30'
Sour Gum Tree	<i>Nyssa sylvatica</i>	6 cm caliper	H50' x S25'
American Hop Hornbeam	<i>Ostrya virginiana</i>	6 cm caliper	H25' x S30'
Empress Tree	<i>Paulownia tomentosum</i>	6 cm caliper	H45' x S40'
Amur Cork Tree	<i>Phellodendron amurense</i>	6 cm caliper	H40' x S50'
Serbian Spruce	<i>Picea omorika</i>	3.5 m height	M35' x S12"
Western White Pine	<i>Pinus monticola</i>	3.5 m height	H50' x S30'
Austrian Pine	<i>Pinus nigra</i>	3.5 m height	H40' x S25'
Ponderosa Pine	<i>Pinus ponderosa</i>	3.5 m height	H50' x S30'
Himalayan White Pine	<i>Pinus wallichiana</i>	3.5 m height	H40' x S30'
Chinese Pistache	<i>Pistacia chinensis</i>	6 cm caliper	H30' x S20'
Sargent Flowering Cherry	<i>Prunus sargentii</i>	6 cm caliper	H40' x S30'
Holly Oak	<i>Quercus ilex</i>	6 cm caliper	H40' x S40'
Pin Oak	<i>Quercus palustris</i>	6 cm caliper	H50' x S35'
Pink Locust	<i>Robinia ambigua</i> 'Idahoensis'	6 cm caliper	H40' x S20'
Frisia Black Locust	<i>Robinia pseudoacacia</i> 'frisia'	6 cm caliper	H40' x S30'
Corkscrew Willow	<i>Salix matsudana</i> 'Tortuosa'	6 cm caliper	H40' x S20'
Umbrella Pine	<i>Sciadopitys verticillata</i>	3.5 m height	H40' x S25'
Pink Pagoda Mountain Ash	<i>Sorbus huphensis</i> 'Pink Pagoda'	6 cm caliper	H50' x S30'
Pacific Yew	<i>Taxus brevifolia</i>	3.5 m height	H50' x S25"
Redmond Linden	<i>Tilia americana</i> 'Redmond'	6 cm caliper	H50' x S30'
Little Leaf Linden	<i>Tilia cordata</i>	6 cm caliper	H35' x S15'
Chancellor Little Leaf Linden	<i>Tilia cordata</i> 'Chancellor'	6 cm caliper	H35' x S15'
Greenspire Little Leaf Linden	<i>Tilia cordata</i> 'Greenspire'	6 cm caliper	H35' x S20'
Siberian Elm	<i>Ulmus pumila</i>	6 cm caliper	H50' x S30'
Japanese Zelkova	<i>Zelkova serrata</i>	6 cm caliper	H50' x S25'



**Large Trees Over 50'**

<b>Common Name</b>	<b>Botanical Name</b>	<b>Replanting Size Requirements</b>	<b>Height and Spread at Maturity</b>
Balsam Fir	<i>Abies balsamea</i>	3.5 m height	H60' x S35'
White Fir	<i>Abies concolor</i>	3.5 m height	H60' x S35'
Fraser's Fir	<i>Abies fraseri</i>	3.5 m height	H50' x S25'
Grand Fir	<i>Abies grandis</i>	3.5 m height	H100' x S50'
Alpine Fir	<i>Abies lasiocarpa</i>	3.5 m height	H75' x S25'
Noble Fir	<i>Abies procera</i>	3.5 m height	H125' x S45'
Bigleaf Maple	<i>Acer macrophyllum</i>	6 cm caliper	H95' x S40'
Silver Maple	<i>Acer saccharinum</i>	6 cm caliper	H80' x S80'
Sugar Maple	<i>Acer saccharum</i>	6 cm caliper	H60' x S50'
Common Horsechestnut	<i>Aesculus hippocastanum</i>	6 cm caliper	H60' x S40'
Monkey Puzzle Tree	<i>Araucaria araucana</i>	3.5 m height	H70' x S30'
California Incense Cedar	<i>Calocedrus decurrens</i>	3.5 m height	H75' x S35'
Western Catalpa	<i>Catalpa speciosa</i>	6 cm caliper	H70' x S30'
Atlas Cedar	<i>Cedrus atlantica</i>	3.5 m height	H60' x S35'
Blue Atlas Cedar	<i>Cedrus atlantica</i> 'Glaucua'	3.5 m height	H60' x S35'
Cedar of Lebanon	<i>Cedrus Libani</i>	3.5 m height	H80' x S45'
American Beech	<i>Fagus grandiflora</i>	6 cm caliper	H70' x S120'
European Beech	<i>Fagus sylvatica</i>	6 cm caliper	H70' x S30'
Copper Beech	<i>Fagus sylvatica</i> 'Autopurpurea'	6 cm caliper	H70' x S30'
White Ash	<i>Fraxinus americana</i>	6 cm caliper	H80' x S45'
European Ash	<i>Fraxinus excelsior</i>	6 cm caliper	H60' x S50'
Thornless Honeylocust	<i>Gleditsia tricanthos inermis</i>	6 cm caliper	H60' x S35'
Sunburst Honeylocust	<i>Gleditsia tricanthos inermis</i> 'Sunburst'	6 cm caliper	H60' x S35'
Kentucky Coffee Tree	<i>Gymnocladus dioicus</i>	6 cm caliper	H60' x S40'
Black Walnut	<i>Juglans nigra</i>	6 cm caliper	H100' x S45'
English Walnut	<i>Juglans regia</i>	6 cm caliper	H60' x S40'
Sweetgum	<i>Liquidambar styraciflua</i>	6 cm caliper	H60' x S25'
Tuliptree	<i>Liriodendron tulipifera</i>	6 cm caliper	H60' x S40'
Southern Magnolia	<i>Magnolia grandiflora</i>	3.5 m height	H80' x S40'
Dawn Redwood	<i>Metasequoia glyptostroboides</i>	3.5 m height	H80' x S35'

## Large Trees Over 50'

Common Name	Botanical Name	Replanting Size Requirements	Height and Spread at Maturity
Tanoak	<i>Notholithocarpus densiflorus</i>	6 cm caliper	H60' x S40'
Oriental Spruce	<i>Picea orientalis</i>	6 cm caliper	H60' x S40'
White Spruce	<i>Picea glauca</i>	3.5 m height	H70' x S40'
Serbian Spruce	<i>Picea omorika</i>	3.5 m height	H60' x S20'
Colorado Spruce	<i>Picea pungens</i>	3.5 m height	H80' x 40'
Colorado Blue Spruce	<i>Picea pungens</i> 'Glauca'	3.5 m height	H80' x S40'
Hoop's Blue Spruce	<i>Picea pungens</i> 'Hoopsii'	3.5 m height	H80' x S40'
Koster Blue Spruce	<i>Picea pungens</i> 'Koster'	3.5 m height	H80' x S40'
Sitka Spruce	<i>Picea sitchensis</i>	3.5 m height	H100' x S45'
Monterey Pine	<i>Pinus radiata</i>	3.5 m height	H65' x S35'
Red Pine	<i>Pinus resinosa</i>	3.5 m height	H65' x S40'
Eastern White Pine	<i>Pinus strobus</i>	3.5 m height	H80' x S45"
Scotch Pine	<i>Pinus sylvestris</i>	3.5 m height	H70' x S45'
Japanese Black Pine	<i>Pinus thunbergii</i>	3.5 m height	H80' x S40'
London Plane Tree	<i>Platanus acerifolia</i>	6 cm caliper	H60' x S45'
Douglas Fir	<i>Pseudotsuga menziesii</i>	3.5 m height	H70' x S45'
Sawtooth Oak	<i>Quercus acutissima</i>	6 cm caliper	H60' x S40'
Scarlet Oak	<i>Quercus coccinea</i>	6 cm caliper	H60' x S45'
Garry Oak	<i>Quercus garryana</i>	6 cm caliper	H60' x S40'
Burr Oak	<i>Quercus macrocarp</i>	6 cm caliper	H60' x S40'
English Oak	<i>Quercus robur</i>	6 cm caliper	H90' x S40'
Red Oak	<i>Quercus rubra</i>	6 cm caliper	H90' x S50'
Black Locust	<i>Robinia pseudoacacia</i>	6 cm caliper	H75' x S35'
Yellow Leaf Black Locust	<i>Robinia pseudoacacia</i> 'Frisia'	6 cm caliper	H75' x S35'
Bristly Locust	<i>Robinia pseudoacacia</i> 'histpida'	6 cm caliper	H75' x S35'
Idaho Locust	<i>Robinia pseudoacacia</i> 'Idaho'	6 cm caliper	H55' x S35'
Coast Redwood	<i>Sequoia sempervirens</i>	3.5 m height	H150' x S50'
Giant Redwood	<i>Sequoiadendron giganteum</i>	3.5 m height	H150' x S50'
Bald Cypress	<i>Taxodium distichum</i>	3.5 m height	H60' x S25'
Western Red Cedar	<i>Thuja plicata</i>	3.5 m height	H100' x S45'

**Large Trees Over 50'**

Common Name	Botanical Name	Replanting Size Requirements	Height and Spread at Maturity
Golden Cedar	<i>Thuja plicata</i> 'Aurea'	3.5 m height	H70' x S40'
Basswood	<i>Tilia americana</i>	6 cm caliper	H60' x S25'
Canadian Hemlock	<i>Tsuga canadensis</i>	3.5 m height	H90' x S35'
Western Hemlock	<i>Tsuga heterophylla</i>	3.5 m height	H125' x S40'
Mountain Hemlock	<i>Tsuga mertensiana</i>	3.5 m height	H60' x S30'
American Elm	<i>Ulmus americana</i>	6 cm caliper	H100' x S80'
Scotch Elm	<i>Ulmus glabra</i>	6 cm caliper	H120' x S50'

**Fastigiated or Columnar Trees**

Common Name	Botanical Name	Replanting Size Requirements	Height and Spread at Maturity
Armstrong Maple	<i>Acer rubrum</i> 'Armstrong'	6 cm caliper	H40' x S15'
Bowhall Maple	<i>Acer rubrum</i> 'Bowhall'	6 cm caliper	H40' x S15'
Columnar Red Maple	<i>Acer rubrum</i> 'Columnaire'	6 cm caliper	H40' x S12'
Scarlet Sentinel Maple	<i>Acer rubrum</i> 'Scarlet Sentinel'	6 cm caliper	H40' x S15'
Pyramidal European Hornbeam	<i>Carpinus betulus</i> 'Fastigiata'	6 cm caliper	H40' x S12'
Franz Fontaine Hornbeam	<i>Carpinus betulus</i> 'Franz Fontaine'	6 cm caliper	H40' x S12'
Weeping Nootka Cypress	<i>Chamaecyparis nootkatensis</i>	3.5m high	H25' x S12'
Dawyck Beech	<i>Fagus sylvatica</i> 'Dawyckii'	6 cm caliper	H35' x S8'
Purple Dawyck Beech	<i>Fagus sylvatica</i> 'Dawyckii Purple'	6 cm caliper	H35' x S8'
Princeton Sentry Maidenhair Tree	<i>Ginkgo biloba</i> 'Princeton Sentry'	6 cm caliper	H30' x S10'
Serbain Spruce	<i>Picea Omorika</i>	3.5m high	H50' x S20'
Vanderwolf Pyramid Pine	<i>Pinus flexis</i> Vanderwolf	3.5m high	H20' x S10'
Swedish Aspen	<i>Populus tremula</i> "erecta"	6 cm caliper	H30' x S8'
Chanticleer Pear	<i>Pyrus calleryana</i> 'Chanticleer'	6 cm caliper	H40' x S15'
Upright English Oak	<i>Quercus robur</i> 'Fastigiata'	6 cm caliper	H35' x S12'
Upright Japanese Pagoda Tree	<i>Sophora japonica</i> 'Regent'	6 cm caliper	H20' x S10'

## Native BC Trees

British Columbia has one of the richest eco-systems and varied climatic zones in the world. The result is an enormous amount of plant diversity. Some of the trees that are native to British Columbia include the following:

### Native BC Deciduous Trees (6 cm caliper)

Botanical Name	Common Name
<i>Acer circinatum</i>	Vine Maple
<i>Acer glabrum var douglasii</i>	Douglas Maple
<i>Acer macrophyllum</i>	Bigleaf Maple
<i>Alnus rubra</i>	Red Alder
<i>Alnus tenuifolia</i>	Mountain Alder
<i>Amelanchier x grandiflora</i>	Serviceberry
<i>Betula occidentalis</i>	Interior Western Birch
<i>Cornus nuttallii</i>	Pacific Dogwood
<i>Crataegus columbiana</i>	Columbia Hawthorn
<i>Crataegus douglasii</i>	Black Hawthorn
<i>Fraxinus latifolia</i>	Oregon Ash
<i>Larix laricina</i>	Tamarack
<i>Larix occidentalis</i>	Western Larch
<i>Malus fusca</i>	Pacific Crab Apple
<i>Populus tremuloides</i>	Quaking Aspen
<i>Prunus emarginata</i>	Bitter Cherry
<i>Prunus pensylvanica</i>	Bird Cherry
<i>Prunus virginiana</i>	Choke Cherry
<i>Quercus garryana</i>	Garry Oak, Oregon Oak
<i>Salix discolor</i>	Pussy Willow
<i>Salix lasiandra</i>	Pacific Willow
<i>Sorbus scopulina cascadiensis</i>	Cascades Western Mountain Ash

**Native BC Evergreen Trees (3.5 m height)**

Botanical Name	Common Name
<i>Arbutus menziesii</i>	Arbutus, Madrone

**Native BC Conifers (3.5 m height)**

Botanical Name	Common Name
<i>Abies amabilis</i>	Pacific Silver Fir
<i>Abies grandis</i>	Grand Fir
<i>Abies lasiocarpa</i>	Subalpine Fir
<i>Abies procera</i>	Noble Fir
<i>Chamaecyparis nootkatensis</i>	Yellow Cedar, Alaskan Cedar
<i>Picea glauca</i>	White Spruce
<i>Picea mariana</i>	Black Spruce
<i>Picea sitchensis</i>	Sitka Spruce
<i>Pinus banksiana</i>	Jack Pine
<i>Pinus contorta subsp contorta</i>	Shore Pine
<i>Pinus contorta subsp latifolia</i>	Lodgepole Pine
<i>Pinus flexilis</i>	Limber Pine
<i>Pinus monticola</i>	Western White Pine
<i>Pinus ponderosa</i>	Ponderosa Pine, Western Yellow Pine
<i>Pseudotsuga menziesii</i>	Douglas Fir
<i>Pseudotsuga menziesii Glauca</i>	Blue Douglas Fir
<i>Taxus brevifolia</i>	Pacific Yew
<i>Thuja plicata</i>	Western Red Cedar
<i>Tsuga heterophylla</i>	Western Hemlock
<i>Tsuga mertensiana</i>	Mountain Hemlock

This document has been edited as of 2021 to reflect the Urban Forest Climate Adaptation Framework for Metro Vancouver: Tree Species Selection, Planting and Management.

For Tree Planting Guidelines, please refer to Information Bulletin Tree-10 “Replacement Tree Guideline”.



## Replacement Tree Guideline

**No.: TREE-10**

**Date: 2012-12-18**

**Revised: 2021-04-21**

### Purpose:

To assist property owners and builders in providing and planting appropriate replacement trees required as a condition of tree removal permit approval under **Tree Protection Bylaw 8057**.

Where replacement tree requirements are identified as a condition of a valid **development related** tree removal permit, **planting must be completed prior to final building inspection/occupancy**.

**Note:** Non-development Tree Permit issued on adjacent/adjoining properties due to construction on neighbouring property: same requirements.

Where replacement tree requirements are identified as a condition of a valid non-development tree removal permit, planting must be completed within one year of obtaining the permit.

*Inspection of the replacement tree is required and the applicant must contact a Tree Preservation Official for an inspection of the tree (call 604-247-4684 or 604-276-4158).*

### Requirements (unless otherwise noted on the permit):

- To be planted on the same lot as the tree removal. If replacement trees cannot be accommodated on site, permission may be granted to plant trees on City property.

When replacement trees are required as a condition of a **Non-Development tree removal permit**, the following minimum size (at the time of planting) is required:

- Minimum 6cm (2.5 in.) caliper (diameter) for a deciduous tree.
- Minimum height of 3.5m (11.5 ft.) for a coniferous tree.

When replacement trees are required as a condition of a **Building related tree removal permit or Development permit**, the following minimum size (at the time of planting) is required:

- Minimum 8cm (3 in.) caliper (diameter) for a deciduous tree.
- Minimum height of 4m (13 ft.) for a coniferous tree.
- Should be located a minimum 1.5m (5 ft.) from a property line.
- Not planted directly under BC Hydro power lines.

*Every replacement tree shall be spaced from existing trees and other replacement trees in accordance with the current BCLNA (British Columbia Society of Landscape and Nursery Association) standards.*

For a list of acceptable replacement trees, see **Suitable Trees for Replanting (PL-17)** on our website: [www.richmond.ca/sustainability/environment/treeremoval](http://www.richmond.ca/sustainability/environment/treeremoval)

We **DO NOT** accept the following as replacement trees:

- Hedging Cedars
- Palm Trees
- Banana Plants
- Dwarf species or Topiaries

### Penalties:

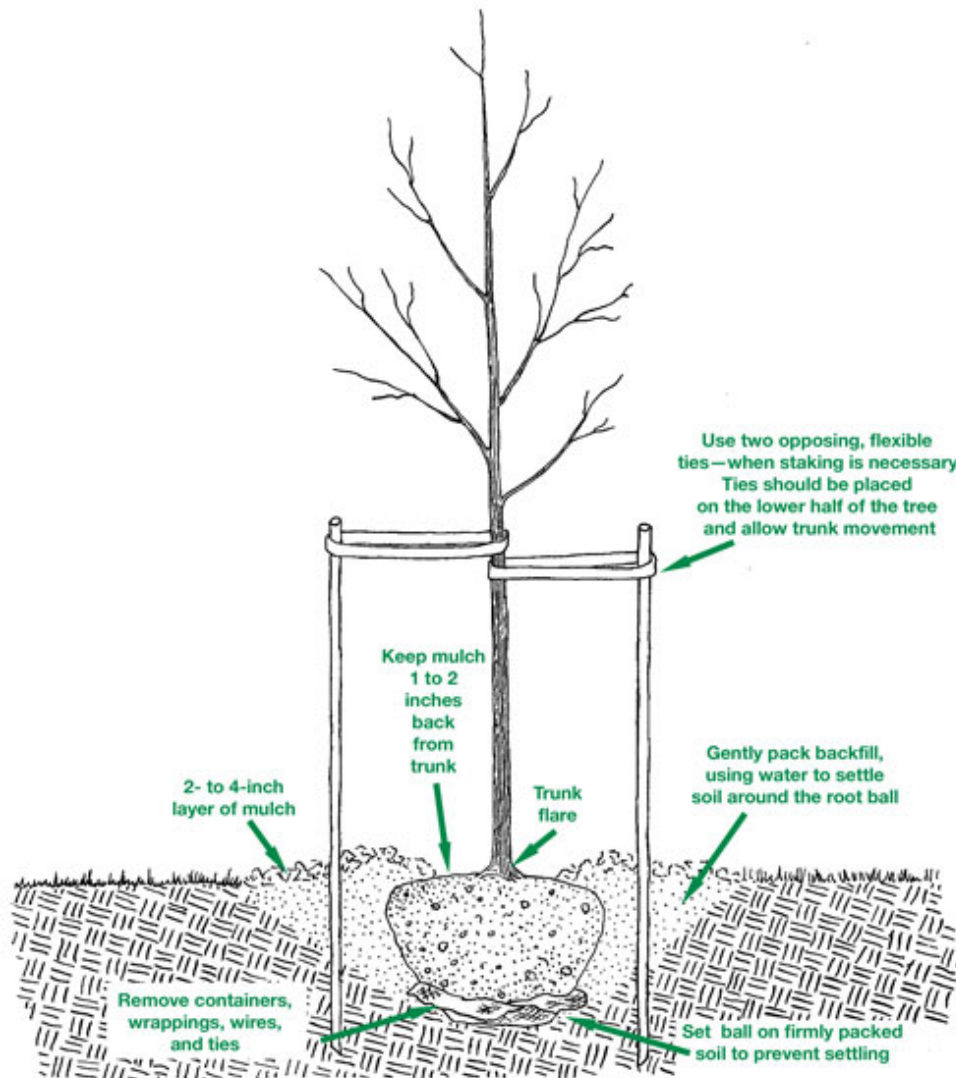
Any person who contravenes or violates any provision of this bylaw can face fines of up to \$750 per tree.

Offences include:

- Failure to comply with the terms and conditions of a valid permit.
- Failure to plant and maintain trees in accordance with sound horticultural and arboriculture practices.

For a complete list see Bylaw 7321 Schedule B13.

## Tree Planting Guideline:



## Additional Sources of Tree Information:

- [www.treesaregood.com/treeowner/plantingatree.aspx](http://www.treesaregood.com/treeowner/plantingatree.aspx)
- BC Hydro Planting Near Power Lines (pamphlet)

## Questions:

Should you have any questions, comments or suggestions concerning this bulletin, please reference the bulletin number and email [treeprotection@richmond.ca](mailto:treeprotection@richmond.ca) or call 604-247-4684.

*The Tree Protection Bylaw 8057 is available in its entirety at the City of Richmond website, [www.richmond.ca](http://www.richmond.ca) or for a fee from Richmond City Hall.*