

TREE LIST

Recommended replacement trees for locations within the *Wildfire Hazard Development Permit Area*

This document contains a list of recommended replacement trees assessed for their suitability to the current and projected future climate of West Vancouver. This list is intended to be used by both residents and the District when determining the most appropriate tree species for a property or public area. Consideration should be given to the size, habit leaf or fruit shedding, and ongoing water and maintenance requirements of each tree considered for replanting. There are a variety of micro-climates with elevation changes and influence from the ocean, across the District—while a species may thrive at one location, it may struggle at another location.

For locations within the Wildfire Development Permit Area, the BC FireSmart Landscaping guidelines should also be adhered to, to minimize wildfire risk. Generally, coniferous trees are highly flammable and should not be planted in areas of greater wildfire risk. All trees on the contained list have a firewise flammability rating of low.

SMALL TREES mature height is under 10 metres (33 feet)

TREE TYPE	canopy density	shade tolerance	drought tolerance	high-wind tolerance	future climate suitability	size typically <7 m (23 ft)
Japanese maple <i>Acer palmatum</i>	L	H	L	M	M	Y*
Amur maple <i>Acer tataricum</i>	M	M	M	M	H	Y*
Autumn Brilliance Serviceberry <i>Amelanchier x grandiflora</i>	M	M	M	H	H	Y
Chitalpa <i>Chitalpa x tashkentensis</i>	M	L	M	M	H	Y
Flowering dogwood <i>Cornus florida</i>	M	H	M	H	H	Y
Kousa dogwood <i>Cornus kousa</i>	M	M	L	H	M	Y
Cornelian cherry <i>Cornus mas</i>	M	M	M	H	H	Y
Black hawthorn <i>Crataegus douglasii</i>	M	M	M	H	H	N
Japanese privet <i>Ligustrum japonicum</i>	H	M	M	H	H	Y*
Common apple <i>Malus domestica</i>	M	L	M	M	H	N
Japanese Emperor oak <i>Quercus dentata</i>	M	L	M	H	H	N
Orange-bark stewartia <i>Stewartia monadelph</i>	M	M	M	M	H	N
Japanese snowbell <i>Styrax japonicus</i>	M	M	M	M	H	Y
Fragrant snowbell <i>Styrax obassia</i>	M	M	L	M	M	Y

DEFINITIONS & RATINGS

Canopy density: describes shade density

L = low; M = moderate; H = high

Shade tolerance: Shade tolerance based on minimum light availability tolerated by the species and modified to include professional forester opinions on species biology

L = low: needs >25% full sunlight;
M = moderate: needs 10-25% full sunlight;
H = high: needs <10% full sunlight

Drought tolerance: The length of drought tolerance expected for the species based on annual precipitation, potential evapotranspiration, duration of dry periods and minimum soil water potential tolerated long term with <50% foliage damage or dieback

L = low: tolerant of no more than a few weeks of drought;
M = moderate: tolerant of approx. 1 month of drought;
H = high: tolerant of more than 2 months of drought

Flammability: All trees on this list are rated:

L = low flammability, based on reported Firewise ratings

High-wind tolerance: Estimated likelihood of a tree species withstanding large diameter branches breaking or failing at the root plate under wind loading

L = low; M = moderate; H = high

Future climate suitability: Future climate suitability based on USDA hardiness zone, AHS heat zone and drought tolerance

H+ = species anticipated to tolerate a broad range of sites under future climate;
H = species anticipated to tolerate all but the driest sites under future climate;
M = species anticipated to be restricted to moist sites under future climate (e.g., near watercourses)

Size typically <7 m: Whether a tree is likely to stay smaller than 7 m, or can easily be maintained to do so. These trees will help to minimize view impacts and could be considered under utility lines to minimize ongoing maintenance requirements.

Y = Yes; N = No; Y* = Yes, but capable of self-seeding so avoid planting in locations where seeds can disperse



MEDIUM TREES mature height is 10-15 metres (33-49 feet)

TREE TYPE	canopy density	shade tolerance	drought tolerance	high-wind tolerance	future climate suitability
Caucasian maple <i>Acer cappadocicum</i>	H	M	M	M	H
Miyabe's maple <i>Acer miyabei</i>	-	M	M	-	H
Italian alder <i>Alnus cordata</i>	H	L	M	M	H
Pacific madrone/arbutus <i>Arbutus menziesii</i>	M	M	H	L	H+
European hornbeam <i>Carpinus betulus</i>	H	H	M	H	H
Japanese hornbeam <i>Carpinus japonica</i>	H	M	M	-	H
Common catalpa <i>Catalpa bignonioides</i>	M	M	M	M	H
Western catalpa <i>Catalpa speciosa</i>	M	L	H	M	H+
Handkerchief tree <i>Davidia involucrata</i>	M	M	M	M	H
Narrow leaved ash <i>Fraxinus angustifolia</i>	M	L	M	L	H
European ash <i>Fraxinus excelsior</i>	M	M	M	M	H
Manna ash <i>Fraxinus ornus</i>	M	M	H	M	H+
Golden rain tree <i>Koelreuteria paniculata</i>	L	L	H	M	H+
White mulberry <i>Morus alba</i>	H	L	M	L	H
Chinese pistacio <i>Pistacia chinensis</i>	H	L	H	H	H+
Sargents cherry <i>Prunus sargentii</i>	M	L	M	M	H
Japanese cherry <i>Prunus serrulata</i>	L	L	M	M	H
Yoshino cherry <i>Prunus x yedoensis</i>	M	L	M	M	H
Sawtooth oak <i>Quercus acutissima</i>	H	L	H	M	H+
Pacific willow <i>Salix lucida</i>	H	L	M	L	H
Oakleaf mountain ash <i>Sorbus x thuringiaca</i>	-	L	M	-	H



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LARGE TREES mature height is greater than 20 metres (65 feet)

TREE TYPE	canopy density	shade tolerance	drought tolerance	high-wind tolerance	future climate suitability
Silver maple <i>Acer saccharinum</i>	M	H	M	L	H
Red alder <i>Alnus rubra</i>	M	L	M	L	H
Common hackberry <i>Celtis occidentalis</i>	H	M	H	M	H+
Giant dogwood <i>Cornus controversa</i>	M	L	M	H	H
Ginkgo <i>Ginkgo biloba</i>	M	L	H	H	H+
Kentucky coffeetree <i>Gymnocladus dioica</i>	M	M	H	H	H+
English walnut <i>Juglans regia</i>	M	L	M	H	H
Sweet gum <i>Liquidambar styraciflua</i>	M	L	M	M	H
Tulip tree <i>Liriodendron tulipifera</i>	L	L	M	L	H
Sourwood <i>Oxydendrum arboreum</i>	M	M	M	M	H
Scarlet oak <i>Quercus coccinea</i>	M	L	H	H	H+
Hungarian oak <i>Quercus frainetto</i>	H	L	M	M	H
Burr oak <i>Quercus macrocarpa</i>	H	M	H	H	H+
Red oak <i>Quercus rubra</i>	H	M	M	H	H
Japanese pagoda tree <i>Sophora japonica</i>	H	M	M	M	H
American basswood <i>Tilia americana</i>	H	H	M	M	H
Little-leaf linden <i>Tilia cordata</i>	H	H	M	M	H
Silver linden <i>Tilia tomentosa</i>	H	M	M	M	H
Caucasian lime <i>Tilia x euchlora</i>	H	M	M	M	H
Japanese zelkova <i>Zelkova serrata</i>	H	L	M	M	H



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