

# URBAN TREE SPECIES LIST

FOR A  
CHANGING  
CLIMATE

The tree species included in this list have been assessed for their suitability to the current and projected future climate in North Vancouver

This list is intended to assist in selecting tree species that are suitable for the changing climate in North Vancouver. It is a guide to inform decision-making rather than a prescriptive planting list.

## DROUGHT TOLERANCE

Drought tolerance in this document refers to the tree's ability to survive drought. High drought tolerance means that the tree species is very suitable to withstand dry conditions and hotter temperatures. All trees on this list require regular watering for the first two years for establishment.

## SITE-SPECIFIC TREE SELECTION

Mature heights in this document are approximate and depend on site-specific growing conditions. Tree species should be chosen based on planting site conditions and intended after-care. It is recommended to further research the tree's specific growing requirements, attributes, and availability at your local nurseries before finalizing the tree selection for your site.



## TREE SPECIES

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# CLIMATE ADAPTIVE TREE SPECIES LIST

## CONIFEROUS TREES

Sometimes called evergreens, most coniferous trees keep their foliage year-round. Conifers are a large group of resinous, cone-bearing trees and shrubs. Conifers provide year-round ecological benefits and habitat. The coniferous tree species on this list have been selected for their suitability to drier and hotter summer conditions for a changing climate in North Vancouver.



| SCIENTIFIC NAME                         | COMMON NAME            | MATURE HEIGHT | DROUGHT TOLERANCE | EXPOSURE             |
|---|------------------------|---------------|-------------------|----------------------|
| <i>Abies concolor</i>                   | White fir              | 12-21m        | medium            | full sun             |
| <i>Abies pinsapo</i>                    | Spanish fir            | 15-25m        | medium            | full sun, part shade |
| <i>Abies procera</i>                    | Noble fir              | 15-30m        | medium            | full sun, part shade |
| <i>Abies nordmanniana</i>               | Nordmann fir           | 9-15m         | medium            | full sun             |
| <i>Calocedrus decurrens</i>             | Incense cedar          | 9-15m         | high              | full sun, part shade |
| <i>Cedrus atlantica</i>                 | Blue atlas cedar       | 12-18m        | medium            | full sun             |
| <i>Cedrus deodara</i>                   | Deodar cedar           | 12-21m        | medium            | full sun             |
| <i>Cupressus x leylandii</i>            | Leyland cypress        | 18-21m        | medium            | full sun             |
| <i>Cryptomeria japonica</i>             | Japanese cedar         | 15-18m        | medium            | full sun             |
| <i>Chamaecyparis obtusa</i>             | Hinoki cypress         | 15-23m        | medium            | full sun             |
| <i>Chamaecyparis pisifera</i>           | Sawara cypress         | 15-21m        | medium            | full sun, part sun   |
| <i>Juniperus chinensis</i>              | Chinese juniper        | 12-15m        | medium            | full sun             |
| <i>Juniperus virginiana</i>             | Virginia juniper       | 9-20m         | high              | full sun             |
| <i>Juniperus scopulorum</i>             | Rocky mountain juniper | 6-9m          | medium            | full sun             |
| <b><i>Juniperus maritima*</i></b>       | Seaside juniper        | 4m            | high              | full sun             |
| <b><i>Pinus contorta contorta*</i></b>  | Shore pine             | 9-14m         | high              | full sun             |
| <i>Pinus densiflora</i> 'Umbraculifera' | Tanyosho pine          | 9m            | medium            | full sun             |
| <i>Pinus heldreichii</i>                | Bosnian pine           | 20-30m        | medium            | full sun             |

\*Native to British Columbia    ♦ Suitable for Rain Gardens

# CLIMATE ADAPTIVE TREE SPECIES LIST



## CONIFEROUS TREES

| SCIENTIFIC NAME                      | COMMON NAME         | MATURE HEIGHT | DROUGHT TOLERANCE | EXPOSURE                |
|--------------------------------------|---------------------|---------------|-------------------|-------------------------|
| <i>Pinus nigra</i>                   | Austrian pine       | 12-18m        | high              | full sun                |
| <b><i>Pinus ponderosa*</i></b>       | Ponderosa pine      | 18-38m        | high              | full sun                |
| <i>Pinus sylvestris</i>              | Scots pine          | 9-18m         | high              | full sun                |
| <i>Pinus thunbergii</i>              | Japanese black pine | 6-18m         | high              | full sun                |
| <i>Picea breweriana</i>              | Brewer spruce       | 9-15m         | medium            | full sun                |
| <i>Picea glauca</i>                  | White spruce        | 12-18m        | medium            | full sun,<br>part sun   |
| <i>Picea omorika</i>                 | Serbian spruce      | 12-18m        | low-medium        | full sun,<br>part shade |
| <i>Picea orientalis</i>              | Caucasian spruce    | 15-18m        | medium            | full sun,<br>part shade |
| <i>Picea pungens</i>                 | Colorado spruce     | 9-18m         | medium            | full sun,<br>part shade |
| <b><i>Pseudotsuga menziesii*</i></b> | Douglas fir         | 12-24m        | low-medium        | full sun,<br>part shade |
| <i>Sequoiadendron giganteum</i>      | Giant sequoia       | 18-82m        | high              | full sun                |
| <i>Taxus baccata</i>                 | English yew         | 9-18m         | medium            | full sun,<br>part shade |
| <b><i>Taxus brevifolia*</i></b>      | Pacific yew         | 12-15m        | medium            | part sun,<br>full shade |
| <i>Thuja occidentalis</i>            | American arborvitae | 12-15m        | low-medium        | full sun,<br>part shade |

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# CLIMATE ADAPTIVE TREE SPECIES LIST

## DECIDUOUS TREES

Deciduous trees shed their leaves for a part of every year and remain bare until they grow new leaves each spring. Deciduous trees can provide great visual interest through fall colours, flowers and fruits, which also provide habitat benefits. The deciduous tree species on this list have been selected for their suitability to drier and hotter summer conditions for a changing climate in North Vancouver.



| SCIENTIFIC NAME                       | COMMON NAME            | MATURE HEIGHT | DROUGHT TOLERANCE | EXPOSURE             |
|---------------------------------------|------------------------|---------------|-------------------|----------------------|
| <i>Acer campestre</i>                 | Hedge maple            | 8-10m         | medium            | full sun, part shade |
| <i>Acer cappadocicum</i>              | Cappadocian maple      | 9-10m         | medium            | full sun, part shade |
| <i>Acer griseum</i>                   | Paperbark maple        | 6-9m          | low-medium        | full sun, part shade |
| <i>Acer japonicum</i>                 | Full moon maple        | 6-9m          | medium            | full sun, part shade |
| <i>Acer miyabei</i>                   | State Street maple     | 9-12m         | medium            | full sun, part shade |
| <i>Acer rubrum</i> ◆                  | Red maple              | 9-15m         | low-medium        | full sun, part shade |
| <i>Acer triflorum</i>                 | Three flowered maple   | 9-10m         | medium            | full sun, part shade |
| <i>Acer x freemanii</i> ◆             | Freeman maple          | 12-18m        | low-medium        | full sun, part shade |
| <i>Albizia julibrissin</i>            | Persian silk tree      | 6-12m         | high              | full sun, part shade |
| <i>Aesculus x carnea</i>              | Red horse chestnut     | 8-10m         | medium            | full sun, part shade |
| <i>Alnus cordata</i>                  | Italian alder          | 9-15m         | medium            | full sun, part shade |
| <b><i>Alnus rubra</i>*</b>            | Red alder              | 12-15m        | medium            | full sun, part shade |
| <b><i>Amelanchier canadensis</i>*</b> | Canadian serviceberry  | 8-10m         | medium            | full sun, part shade |
| <i>Amelanchier laevis</i> ◆           | Allegheny serviceberry | 5-8m          | medium            | full sun, part shade |
| <i>Catalpa speciosa</i>               | Northern catalpa       | 12-21m        | medium            | full sun, part shade |
| <i>Carpinus betulus</i>               | Common hornbeam        | 12-18m        | medium            | full sun, part shade |
| <i>Carpinus japonica</i>              | Japanese hornbeam      | 6-9m          | medium            | part shade, shade    |
| <i>Celtis occidentalis</i>            | Common hackberry       | 12-18m        | high              | full sun, part shade |

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# CLIMATE ADAPTIVE TREE SPECIES LIST



## DECIDUOUS TREES

| SCIENTIFIC NAME                         | COMMON NAME              | MATURE HEIGHT | DROUGHT TOLERANCE | EXPOSURE             |
|---|--------------------------|---------------|-------------------|----------------------|
| <i>Cercis canadensis</i>                | Eastern redbud           | 6-9m          | high              | full sun, part shade |
| <i>Cornus controversa</i>               | Giant dogwood            | 6-9m          | medium            | full sun, part shade |
| <i>Cornus mas</i>                       | Cornelian cherry dogwood | 6-8m          | medium            | full sun, part shade |
| <i>Corylus avellana</i>                 | European hazelnut        | 3m            | medium            | full sun, part shade |
| <i>Crataegus crus-galli var.inermis</i> | Cockspur hawthorn        | 8-10m         | high              | full sun             |
| <b><i>Crataegus douglasii</i>*◆</b>     | Black hawthorn           | 5-8m          | medium            | full sun, part shade |
| <i>Crataegus x lavalleyi</i>            | Lavalle hawthorn         | 6-9m          | medium-high       | full sun             |
| <i>Crataegus x mordenensis</i>          | Morden hawthorn          | 5-6m          | high              | full sun             |
| <i>Eucommia ulmoides</i>                | Hardy rubber tree        | 12-18m        | high              | full sun             |
| <i>Ginkgo biloba</i> ◆                  | Maidenhair tree          | 12-15m        | medium-high       | full sun             |
| <i>Gleditsia triacanthos</i> ◆          | Honey locust             | 18-24m        | high              | full sun             |
| <i>Gymnocladus dioicus</i> ◆            | Kentucky coffee tree     | 18-24m        | high              | full sun             |
| <i>Juglans major</i>                    | Arizona walnut           | 12-15m        | high              | full sun             |
| <i>Koelreuteria paniculata</i> ◆        | Golden raintree          | 9-12m         | high              | full sun             |
| <i>Liquidambar styraciflua</i> ◆        | Sweetgum                 | 18-24m        | medium            | full sun             |
| <i>Liriodendron tulipifera</i>          | Tulip tree               | 18-27m        | medium            | full sun             |
| <i>Magnolia grandiflora</i>             | Southern magnolia        | 18-24m        | medium            | full sun, part shade |
| <i>Malus x zumi calocarpa</i>           | Redbud crabapple         | 5-6m          | medium            | full sun             |
| <i>Nyssa sinensis</i> ◆                 | Chinese tupelo           | 10-15m        | medium            | full sun, part shade |
| <i>Oxydendrum arboreum</i>              | Sourwood                 | 6-9m          | medium            | full sun, part shade |

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# CLIMATE ADAPTIVE TREE SPECIES LIST



## DECIDUOUS TREES

| SCIENTIFIC NAME                      | COMMON NAME          | MATURE HEIGHT | DROUGHT TOLERANCE | EXPOSURE             |
|--------------------------------------|----------------------|---------------|-------------------|----------------------|
| <i>Parrotia persica</i>              | Persian ironwood     | 6-12m         | medium            | full sun             |
| <b><i>Prunus emarginata</i>*</b>     | Bitter cherry        | 2-15m         | medium            | full sun, part shade |
| <i>Prunus sargentii</i>              | Sargent's cherry     | 6-9m          | medium            | full sun, part shade |
| <i>Prunus x yedoensis</i>            | Yoshino cherry       | 6-9m          | medium            | full sun, part shade |
| <i>Quercus acutissima</i>            | Sawtooth oak         | 12-18m        | high              | full sun             |
| <i>Quercus alba</i> ♣                | White oak            | 15-24m        | high              | full sun             |
| <i>Quercus coccinea</i>              | Scarlet oak          | 15-21m        | high              | full sun             |
| <b><i>Quercus garryana</i>*</b>      | Garry oak            | 12-24m        | high              | full sun             |
| <i>Quercus macrocarpa</i>            | Burr oak             | 18-24m        | high              | full sun             |
| <i>Quercus shumardii</i>             | Shumard oak          | 12-18m        | high              | Full sun             |
| <i>Quercus bicolor</i> ♣             | Swamp white oak      | 15-18m        | medium            | Full sun             |
| <i>Quercus robur</i>                 | English oak          | 12-21m        | medium            | full sun             |
| <i>Sorbus aria</i>                   | Whitebeam            | 8-9m          | medium            | full sun             |
| <i>Sorbus x thuringiaca</i>          | Oakleaf mountain ash | 8-12m         | medium            | full sun, part shade |
| <i>Stewartia pseudocamellia</i>      | Japanese stewartia   | 6-12m         | medium            | full sun, part shade |
| <i>Tilia cordata</i>                 | Little leaf linden   | 15-21m        | medium            | full sun, part shade |
| <i>Tilia tomentosa</i>               | Silver linden        | 15-21m        | medium            | full sun, part shade |
| <i>Ulmus wilsoniana</i> 'Prospector' | Prospector elm       | 12-15m        | medium            | full sun             |
| <i>Zelkova serrata</i>               | Japanese zelkova     | 15-24m        | medium            | full sun             |

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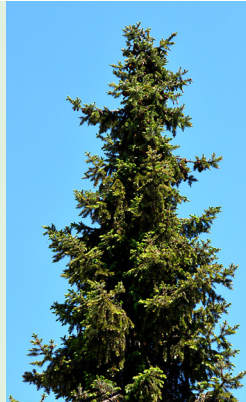


# CLIMATE ADAPTIVE TREE SPECIES LIST

## COLUMNAR TREES

Columnar trees are narrower than most trees and are often a good solution for privacy, smaller spaces, and locations close to structures that cannot accommodate wider canopy trees. Columnar trees stay slender without requiring much pruning but are more prone to storm and snow damage. The columnar species on this list have been selected for their suitability to drier and hotter summer conditions for a changing climate in North Vancouver.

The trees on this list are cultivars, meaning they have been bred to be compact and narrow. When selecting a tree from this list, ensure you include the name in 'quotation', which refers to the cultivar of the species.



| SCIENTIFIC NAME                                      | COMMON NAME                      | MATURE HEIGHT | MATURE WIDTH | DROUGHT TOLERANCE | EXPOSURE             |
|--|----------------------------------|---------------|--------------|-------------------|----------------------|
| <i>Acer rubrum</i> 'Armstrong'♣                      | Armstrong maple                  | 15-21m        | 3.5-4.5m     | medium            | full sun, part shade |
| <i>Chamaecyparis nootkatensis</i> 'Van den Akker'    | Narrow Alaskan cedar (weeping)   | 6-9m          | 1.8m         | medium            | full sun, part shade |
| <i>Fagus sylvatica</i> 'Dawyck'                      | Dawyck European beech            | 15-18m        | 4.5m         | low               | full sun, part shade |
| <i>Ginkgo biloba</i> 'Princeton Sentry'♣             | Princeton maidenhair             | 12-15m        | 6m           | medium            | full sun             |
| <i>Liquidambar styraciflua</i> 'Slender Silhouette'♣ | Slender silhouette sweet gum     | 12-15m        | 1.8m         | medium            | full sun             |
| <i>Picea omorika</i> 'Bruns'                         | Bruns Serbian spruce             | 9-10m         | 3m           | medium            | full sun, part shade |
| <i>Pinus flexilis</i> 'Vanderwolf's Pyramid'         | Vanderwolf's pyramid limber pine | 15m           | 6m           | medium            | full sun, part shade |
| <i>Quercus robur</i> 'Fastigiata'                    | Columnar English oak             | 15-18m        | 3-3.5m       | medium            | full sun             |
| <i>Quercus x warei</i> 'Kindred Spirit'®             | Kindred Spirit® oak              | 6-12m         | 1.8m         | medium            | full sun             |

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# CLIMATE ADAPTIVE TREE SPECIES LIST



## TREES FOR WET OR IRRIGATED SITES

Tree species included on this list should only be considered if the planting site is wet or irrigated. Many of these species are commonly available and used in landscapes, but struggle during periods of drought without regular access to water. Before selecting a tree from this list, consider the future climate conditions of your site to ensure the tree will have access to adequate water over the long term.



| SCIENTIFIC NAME                     | COMMON NAME                 | MATURE HEIGHT | DROUGHT TOLERANCE | EXPOSURE                 |
|-------------------------------------|-----------------------------|---------------|-------------------|--------------------------|
| <b><i>Abies grandis</i>*</b>        | Grand fir                   | 15-30m        | low               | full sun, part shade     |
| <b><i>Acer macrophyllum</i>*</b>    | Bigleaf maple               | 12-23m        | low-medium        | full sun, part shade     |
| <b><i>Acer circinatum</i>*</b>      | Vine maple                  | 6-8m          | low-medium        | full sun, part shade     |
| <i>Betula nigra</i> ◆               | River birch                 | 15-21m        | low-medium        | full sun, part shade     |
| <i>Cornus kousa</i>                 | Kousa dogwood               | 6-9m          | low-medium        | full sun, part shade     |
| <i>Cornus</i> 'Eddies White Wonder' | Eddies white wonder dogwood | 6-10m         | low-medium        | full sun, part shade     |
| <i>Fagus sylvatica</i>              | Dawyck European beech       | 15-18m        | low               | full sun, part shade     |
| <i>Magnolia</i> 'Galaxy'            | Galaxy magnolia             | 12m           | low               | full sun, part shade     |
| <i>Magnolia virginiana</i> ◆        | Sweetbay magnolia           | 5-10m         | low-medium        | full sun, part shade     |
| <i>Metasequoia glyptostroboides</i> | Dawn redwood                | 21-30m        | low-medium        | full sun                 |
| <i>Styrax japonicus</i>             | Japanese snowbell           | 5-8m          | low-medium        | full sun, part shade     |
| <i>Syringa reticulata</i>           | Japanese tree lilac         | 6-9m          | low-medium        | full sun                 |
| <b><i>Thuja plicata</i>*</b>        | Western redcedar            | 15-21m        | low               | part shade<br>full shade |

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