CLIMATE-READY WOODLANDS

UNIVERSITY OF MINNESOTA EXTENSION

Recommended trees for the Northern Superior Uplands

Common name	Scientific name	Height	Soil preference	Shade tolerance	New to region
Box elder	*Acer negundo*	50 ft	Adaptable	Part shade	
Silver maple	*Acer saccharinum*	80 ft	Adaptable	Full sun	
Yellow birch	*Betula alleghaniensis*	45 ft	Medium to coarse, well-drained	Adaptable	
Sweet birch	*Betula lenta*	50 ft	Coarse to medium, well-drained	Full sun	yes
American hornbeam	*Carpinus carolina*	30 ft	Medium-textured, well-drained	Shade	yes
Bitternut hickory	*Carya cordiformis*	100 ft	Medium-textured, well-drained	Full sun	yes
Shagbark hickory	*Carya ovata*	80 ft	Fine to medium, well-drained	Full sun	yes
Hackberry	*Celtis occidentalis*	75 ft	Adaptable	Full sun	yes
Eastern redbud	*Cercis canadensis*	30 ft	Medium-textured, well-drained	Full sun	yes
Honeylocust	*Gleditsia triacanthos*	60 ft	Medium-textured, well-drained	Full sun	yes
Black walnut	*Juglans nigra*	60 ft	Medium-textured, well-drained	Full sun	yes
Sweetgum	*Liquidambar styraciflua*	80 ft	Medium-textured, well-drained	Part shade	yes
Bigleaf magnolia	*Magnolia macrophylla*	35 ft	Medium-textured, well-drained	Part shade	yes
Ironwood	*Ostrya virginana*	65 ft	Medium-textured, well-drained	Adaptable	
Sycamore	*Platanus occidentalis*	85 ft	Adaptable	Full sun	yes
Eastern cottonwood	*Populus deltoides*	90 ft	Medium-textured, well-drained	Full sun	yes

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Common name	Scientific name	Height	Soil preference	Shade tolerance	New to region
White oak	*Quercus alba*	100 ft	Adaptable	Full sun	yes
Swamp white oak	*Quercus bicolor*	60 ft	Medium to coarse, well-drained	Part shade	yes
Chinkapin oak	*Quercus muehlenbergii*	50 ft	Adaptable	Full sun	yes
Chestnut oak	*Quercus prinus*	65 ft	Adaptable	Full sun	yes
Northern red oak	*Quercus rubra*	80 ft	Medium to coarse, well-drained	Full sun	
Live oak	*Quercus virginiana*	60 ft	Adaptable	Part shade	yes
Eastern hemlock	*Tsuga canadensis*	70 ft	Medium-textured, well-drained	Full sun	yes
American elm	*Ulmus americana*	80 ft	Fine to medium, well-drained	Part shade	

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Recommended plants for the Northern Superior Uplands

Common name	Scientific name	Height	Soil preference	Shade tolerance	Plant type
Bunchberry	*Cornus canadensis*	12 in	Acidic, evenly-moist	Part shade	Forb
Large-leaved aster	*Eurybia macrophylla*	60 in	Adaptable	Shade	Forb
Canada mayflower	*Maianthemum canadense*	6 in	Acidic, high organic matter	Shade	Forb
Mountain rice grass	*Oryzopsis asperifolia*	10-26 in	Average to dry rocky soil	Part shade	Grass
Large-flowered bellwort	*Uvularia grandiflora*	12-24 in	Moist	Shade	Forb
Beaked hazelnut	*Corylus cornuta*	12 ft	Moist, medium textured	Full sun	Shrub
Bush honeysuckle	*Diervilla lonicera*	3 ft	Adaptable	Part shade	Shrub

[1] The Arrowhead region of Minnesota, known as the Northern Superior Uplands subsection, includes all or parts of Carlton, Cook, Itasca, Koochiching, Lake, and St. Louis counties.

This area is characterized by bedrock terrain peppered with many lakes and thin deposits of coarse loamy soil. The region receives more of its precipitation as snow than any section in the state, has the longest period of snow cover, and the shortest growing season.

Forests with red and white pine were widespread in the past, mixed with aspen, paper birch, spruce, and balsam fir. Much of the pine was cut in the late 1800s and early 1900s, leaving forests dominated mostly by aspen and paper birch. Jack pine forests are present on droughty ridges and bedrock exposures, as well as on local sandy outwash deposits. The highlands along Lake Superior have a local climate moderated by the lake that favors forests dominated by sugar maple with some white pine, yellow birch and northern white cedar.

Some species not native to Minnesota are expected to thrive in the future climate of the Northern Superior Uplands. These species may arrive in Minnesota either by natural range expansion due to climate change, or by human-assisted migration as land owners and managers plan for climate change.