



Section 212M

EcoMap 2007  
Climate Change Atlas Tree Species

USDA Forest Service  
Northern Research Station  
Landscape Change Research Group  
Iverson, Peters, Prasad, Matthews

Current and Potential Future Habitat, Capability, and Migration

Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
quaking aspen	Populus tremuloides	WDH	High	83.2	2381.6	20.5	Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair			0	1
black spruce	Picea mariana	NSH	High	68.3	1677.8	19.8	Lg. dec.	Lg. dec.	Medium	Abundant	Fair	Fair			0	2
tamarack (native)	Larix laricina	NSH	High	70.4	1573.7	18.9	No change	No change	Low	Abundant	Fair	Fair			0	3
balsam poplar	Populus balsamifera	NSH	Medium	73.5	925.3	9.1	Lg. dec.	Lg. dec.	Medium	Abundant	Fair	Fair			0	4
northern white-cedar	Thuja occidentalis	WSH	High	50.2	814.8	13.2	No change	No change	Medium	Abundant	Good	Good			1	5
black ash	Fraxinus nigra	WSH	Medium	68.3	710.1	7.5	Sm. inc.	No change	Low	Abundant	Good	Fair			1	6
balsam fir	Abies balsamea	NDH	High	62.5	583.5	6.7	No change	No change	Low	Abundant	Fair	Fair			0	7
paper birch	Betula papyrifera	WDH	High	72.8	423.3	4.1	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	8
white spruce	Picea glauca	NSL	Medium	45.1	203.3	3.4	Sm. dec.	No change	Medium	Common	Poor	Fair			1	9
jack pine	Pinus banksiana	NSH	Medium	16.7	168.1	8.2	Sm. dec.	No change	High	Common	Fair	Good			1	10
red pine	Pinus resinosa	NSH	Medium	12.6	164.0	7.1	Sm. inc.	Lg. inc.	Low	Common	Fair	Good	Infill +	Infill ++	1	11
bur oak	Quercus macrocarpa	NDH	Medium	23.5	156.7	3.0	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	12
green ash	Fraxinus pennsylvanica	WSH	Low	32.5	122.5	2.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	13
American elm	Ulmus americana	WDH	Medium	41.9	93.8	1.6	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	14
red maple	Acer rubrum	WDH	High	21.5	93.3	1.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	15
American basswood	Tilia americana	WSL	Medium	18.9	83.4	3.4	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	16
eastern white pine	Pinus strobus	WDH	High	8.8	45.4	2.6	Sm. inc.	Sm. inc.	Low	Rare	Poor	Poor	Infill +	Infill +	2	17
sugar maple	Acer saccharum	WDH	High	5.2	44.1	3.8	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	18
boxelder	Acer negundo	WSH	Low	13.8	37.1	2.5	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	19
chokecherry	Prunus virginiana	NSLX	FIA	20.9	20.3	0.7	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	20
northern red oak	Quercus rubra	WDH	Medium	2.6	14.3	2.0	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	21
mountain maple	Acer spicatum	NSL	Low	15.4	13.5	0.5	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	22
peachleaf willow	Salix amygdaloides	NSLX	FIA	2.3	11.8	3.3	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	23
bigtooth aspen	Populus grandidentata	NSL	Medium	4.2	10.3	0.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	24
serviceberry	Amelanchier spp.	NSL	Low	12.7	6.6	0.5	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	25
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	2.3	5.7	1.2	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	26
yellow birch	Betula alleghaniensis	NDL	High	1.1	5.3	1.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	27
silver maple	Acer saccharinum	NSH	Low	0.7	3.3	2.3	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	28
pin cherry	Prunus pensylvanica	NSL	Low	3.1	1.4	0.2	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			2	29
black cherry	Prunus serotina	WDL	Medium	1.4	0.8	0.4	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	30
slippery elm	Ulmus rubra	WSL	Low	0.2	0.3	0.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	31
northern pin oak	Quercus ellipsoidalis	NSH	Medium	0.5	0.2	0.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	32
American mountain-ash	Sorbus americana	NSL	Low	0.5	0.2	0.5	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	33
hackberry	Celtis occidentalis	WDH	Medium	1.9	0.1	1.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	34
black willow	Salix nigra	NSH	Low	0.7	0.1	0.1	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	35
wild plum	Prunus americana	NSLX	FIA	0.5	0.1	0.2	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	36
eastern redcedar	Juniperus virginiana	WDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	37
eastern hemlock	Tsuga canadensis	NSH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	38
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	39
yellow buckeye	Aesculus flava	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	40
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Likely +	3	41
bitternut hickory	Carya cordiformis	WSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	42
shagbark hickory	Carya ovata	WSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	43
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	44
white ash	Fraxinus americana	WDL	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	45
blue ash	Fraxinus quadrangulata	NSL	Low	0	0	0	Unknown	Unknown	Low	Modeled	Unknown	Unknown			0	46
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	47



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black walnut	Juglans nigra	WDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	48
red mulberry	Morus rubra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	49
eastern cottonwood	Populus deltoides	NSH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	50
white oak	Quercus alba	WDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	51
swamp white oak	Quercus bicolor	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	52
black oak	Quercus velutina	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	53
black locust	Robinia pseudoacacia	NDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	54