S42 E72

One x One Degree

Climate Change Atlas Tree Species

Current and Potential Future Habitat, Capability, and Migration

Landscape Change Research Group
Iverson, Peters, Prasad, Matthews
USFS Northern Research Station
Delaware, OH

Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
red maple	Acer rubrum	WDH	High	98.5	2149.63	15.79	No change	Sm. dec.	High	Abundant	Very Good	Good			1	1
eastern hemlock	Tsuga canadensis	NSH	High	84.4	1665.56	14.71	Lg. dec.	Lg. dec.	Low	Abundant	Poor	Poor			0	2
eastern white pine	Pinus strobus	WDH	High	86.1	1608.26	13.77	Sm. dec.	Lg. dec.	Low	Abundant	Fair	Poor			0	3
northern red oak	Quercus rubra	WDH	Medium	80.4	1091.54	10.09	No change	No change	High	Abundant	Very Good	Very Good			1	4
sugar maple	Acer saccharum	WDH	High	65.7	716.91	7.1	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good			1	5
sweet birch	Betula lenta	NDH	High	75.7	622.38	6.15	No change	Sm. dec.	Low	Abundant	Fair	Fair			0	6
American beech	Fagus grandifolia	WDH	High	65.4	609.27	6.5	No change	No change	Medium	Abundant	Good	Good			1	7
yellow birch	Betula alleghaniensis	NDL	High	66.6	471.1	4.59	No change	Sm. dec.	Medium	Common	Fair	Poor			1	8
white ash	Fraxinus americana	WDL	Medium	67.4	369	4	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	9
black cherry	Prunus serotina	WDL	Medium	69.4	325.75	3.31	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	10
paper birch	Betula papyrifera	WDH	High	68.6	265.73	2.87	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	11
white oak	Quercus alba	WDH	Medium	45.2	257.42	4.02	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	12
black oak	Quercus velutina	WDH	High	39.6	226.22	4.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	13
red spruce	Picea rubens	NDH	High	23.5	217.36	5.44	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	14
quaking aspen	Populus tremuloides	WDH	High	22.3	125.54	4.54	No change	No change	Medium	Common	Fair	Fair			1	15
scarlet oak	Quercus coccinea	WDL	Medium	17.8	121.1	5.38	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	16
American elm	Ulmus americana	WDH	Medium	23.2	98.82	3.13	Sm. dec.	No change	Medium	Common	Poor	Fair			1	17
balsam fir	Abies balsamea	NDH	High	12.8	89.31	3.68	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	18
bigtooth aspen	Populus grandidentata	NSL	Medium	14	87.93	5.32	Sm. inc.	No change	Medium	Common	Good	Fair			1	19
pignut hickory	Carya glabra	WDL	Medium	20.9	82.75	3.22	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	20
shagbark hickory	Carya ovata	WSL	Medium	13.7	52.03	2.66	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	21
chestnut oak	Quercus prinus	NDH	High	10.6	51.3	4.54	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	22
silver maple	Acer saccharinum	NSH	Low	1.8	49.65	16.63	Sm. dec.	No change	High	Rare	Poor	Fair		Infill +	2	23
gray birch	Betula populifolia	NSL	Low	15.4	37.17	2.05	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			1	24
striped maple	Acer pensylvanicum	NSL	Medium	20.3	35.97	1.26	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	25
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	25.2	35.64	1.24	No change	Lg. inc.	High	Rare	Fair	Good			1	26
red pine	Pinus resinosa	NSH	Medium	6	23.27	2.74	Very Lg. dec.	Very Lg. dec.	Low	Rare	Lost	Lost			0	27
Norway spruce	Picea abies	NSH	FIA	2.3	22.85	6.73	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	28
pin cherry	Prunus pensylvanica	NSL	Low	7.9	17.19	1.48	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	29
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	11.8	13.72	1.1	Sm. dec.	Lg. inc.	Medium	Rare	Very Poor	Good			1	30
eastern redcedar	Juniperus virginiana	WDH	Medium	2.9	13.23	3.55	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	31
American chestnut	Castanea dentata	NSLX	FIA	6.1	12.98	1.19	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	32
American basswood	Tilia americana	WSL	Medium	6.2	10.52	1.19	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	33
serviceberry	Amelanchier spp.	NSL	Low	4.5	10.23	0.73	No change	No change	Medium	Rare	Poor	Poor			1	34
black locust	Robinia pseudoacacia	NDH	Low	2.2	9.5	4.33	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	35
yellow-poplar	Liriodendron tulipifera	WDH	High	1.1	9.09	8.3	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	36
blackgum	Nyssa sylvatica	WDL	Medium	5.9	8.9	1.14	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	37
eastern cottonwood	Populus deltoides	NSH	Low	3.1	8.65	2.56	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	38
black walnut	Juglans nigra	WDH	Low	1.1	7.04	6.43	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	39
sassafras	Sassafras albidum	WSL	Low	1.7	6.68	2.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	40
ailanthus	Ailanthus altissima	NSL	FIA	1.1	6.52	5.95	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	41
green ash	Fraxinus pennsylvanica	WSH	Low	2.2	6.3	2.88	No change	Lg. inc.	Medium	Rare	Poor	Good	Infill +	Infill ++	2	42
pitch pine	Pinus rigida	NSH	High	3.3	5.53	1.68	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	43
bitternut hickory	Carya cordiformis	WSL	Low	2.8	5.11	1.36	No change	Lg. inc.	High	Rare	Fair	Good	Infill +	Infill ++	2	44
slippery elm	Ulmus rubra	WSL	Low	2.2	4.71	2.15	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	45
mockernut hickory	Carya alba	WDL	Medium	2.2	3.03	1.39	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	46
mountain maple	Acer spicatum	NSL	Low	2.3	2.32	0.65	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	47
swamp chestnut oak	Quercus michauxii	NSL	Low	1.1	2.27	2.07	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	48
black ash	Fraxinus nigra	WSH	Medium	1.1	2.11	1.93	Sm. dec.	Very Lg. dec.	Low	Rare	Very Poor	Lost			2	49
white spruce	Picea glauca	NSL	Medium	1.1	1.13	1.03	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	50
Norway maple	Acer platanoides	NSL	FIA	0.9	0.99	0.77	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	51
swamp white oak	Quercus bicolor	NSL	Low	1.1	0.99	0.9	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +		2	52
boxelder	Acer negundo	WSH	Low	1.1	0.82	0.75	Very Lg. dec.	No change	High	Rare	Lost	Fair		Infill +	2	53

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black spruce	Picea mariana	NSH	High	1.1	0.8	0.73	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	54
tamarack (native)	Larix laricina	NSH	High	0.2	0.38	0.07	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	55
American mountain-ash	Sorbus americana	NSL	Low	0.2	0.31	0.06	Lg. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	56
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	57
loblolly pine	Pinus taeda	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	58
Virginia pine	Pinus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	59
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	60
pecan	Carya illinoinensis	NSH	Low	0	0	0	Unknown	New Habitat	Low	Absent	Unknown	New Habitat			0	61
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	62
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			0	63
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	64
flowering dogwood	Cornus florida	WDL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Likely +	3	65
common persimmon	Diospyros virginiana	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	66
American holly	Ilex opaca	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	67
sweetgum	Liquidambar styraciflua	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	68
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	69
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	70
sycamore	Platanus occidentalis	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	71
southern red oak	Quercus falcata	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	72
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	73
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	74
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +	3	75
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	76
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate ++	3	77
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	78