S36 E93

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
black oak	Quercus velutina	WDH	High	85.2	1391.24	13.49	No change	Sm. dec.	Medium	Abundant	Good	Fair			1	1
eastern redcedar	Juniperus virginiana	WDH	Medium	73.1	1378.9	14.58	No change	No change	Medium	Abundant	Good	Good			1	2
white oak	Quercus alba	WDH	Medium	76.2	1119	11.48	No change	No change	High	Abundant	Very Good	Very Good			1	3
post oak	Quercus stellata	WDH	High	82.5	996.31	10	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good			1	4
northern red oak	Quercus rubra	WDH	Medium	72.1	818.14	8.63	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	5
black hickory	Carya texana	NDL	High	68.3	469.74	4.84	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	6
shortleaf pine	Pinus echinata	WDH	High	21	313.33	10.83	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	7
mockernut hickory	Carya alba	WDL	Medium	58	293	3.84	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	8
black walnut	Juglans nigra	WDH	Low	42.3	229.03	4.17	No change	Sm. inc.	Medium	Common	Fair	Good			1	9
chinkapin oak	Quercus muehlenbergii	NSL	Medium	49.3	224.1	3.83	No change	No change	Medium	Common	Fair	Fair			1	10
winged elm	Ulmus alata	WDL	Medium	66.1	213	2.72	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	11
bitternut hickory	Carya cordiformis	WSL	Low	27.7	195.63	5.45	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	12
white ash	Fraxinus americana	WDL	Medium	49.9	168.72	2.77	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	13
hackberry	Celtis occidentalis	WDH	Medium	33.9	168.34	4.33	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	14
American elm	Ulmus americana	WDH	Medium	47.1	163.88	3	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	15
blackgum	Nyssa sylvatica	WDL	Medium	33.8	142.83	2.45	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	16
flowering dogwood	Cornus florida	WDL	Medium	60.3	139.75	1.89	No change	No change	Medium	Common	Fair	Fair			1	17
slippery elm	Ulmus rubra	WSL	Low	41.6	126.66	2.42	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	18
sassafras	Sassafras albidum	WSL	Low	42.5	126.53	2.55	No change	Sm. inc.	Medium	Common	Fair	Good			1	19
sycamore	Platanus occidentalis	NSL	Low	16.7	120.97	6.02	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	20
blackjack oak	Quercus marilandica	NSL	Medium	30.8	120.75	3.19	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	21
sugar maple	Acer saccharum	WDH	High	29.5	108.59	3.35	Lg. dec.	Sm. dec.	High	Common	Fair	Fair			1	22
shagbark hickory	Carya ovata	WSL	Medium	33.2	103.27	2.89	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	23
southern red oak	Quercus falcata	WDL	Medium	11.4	97.11	4.43	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	24
florida maple	Acer barbatum	NSL	Low	17.2	87.62	2.93	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	25
Shumard oak	Quercus shumardii	NSL	Low	17.3	70.16	3.07	No change	Sm. inc.	High	Common	Good	Very Good			1	26
red maple	Acer rubrum	WDH	High	19.4	66.4	2.09	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	27
black cherry	Prunus serotina	WDL	Medium	33.7	66.12	1.65	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	28
black locust	Robinia pseudoacacia	NDH	Low	9.1	64.61	4.22	No change	No change	Medium	Common	Fair	Fair			1	29
common persimmon	Diospyros virginiana	NSL	Low	21.1	54.53	2.13	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	30
pecan	Carya illinoinensis	NSH	Low	1	50.29	50	Sm. inc.	Lg. inc.	Low	Rare	Poor	Fair	Infill +	Infill +	2	31
honeylocust	Gleditsia triacanthos	NSH	Low	10.9	43.09	2.69	Sm. inc.	Lg. inc.	High	Rare	Good	Good			1	32
blue ash	Fraxinus quadrangulata	NSL	Low	10.5	39.54	4.45	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	33
eastern redbud	Cercis canadensis	NSL	Low	26.4	38.79	1.06	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	34
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	27.5	28.96	0.78	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	35
boxelder	Acer negundo	WSH	Low	4.2	27.43	4.42	No change	Sm. inc.	High	Rare	Fair	Good	Infill +	Infill ++	1	36
green ash	Fraxinus pennsylvanica	WSH	Low	10.7	27.09	3.43	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	37
red mulberry	Morus rubra	NSL	Low	22.3	25.74	1.04	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1	38
serviceberry	Amelanchier spp.	NSL	Low	21.4	17.45	0.72	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	39
sweetgum	Liquidambar styraciflua	WDH	High	1.5	16.07	2.98	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	40
Osage-orange	Maclura pomifera	NDH	Medium	4	13.14	3.62	No change	Lg. inc.	High	Rare	Fair	Good	Infill +	Infill ++	1	41
American basswood	Tilia americana	WSL	Medium	10.4	12.72	0.94	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	42
wild plum	Prunus americana	NSLX	FIA	3.6	9.83	2.29	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	43
pignut hickory	Carya glabra	WDL	Medium	4.6	8.28	0.87	No change	Lg. inc.	Medium	Rare	Poor	Good	Infill +	Infill ++	2	44
ashe juniper	Juniperus ashei	NDH	High	1	7.09	7.05	Lg. inc.	Lg. inc.	NA	Rare	Unknown	Unknown			0	45
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp	NSL	Low	9.7	6.48	0.51	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	46
northern catalpa	Catalpa speciosa	NSHX	FIA	1	6.04	6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	47
ailanthus	Ailanthus altissima	NSL	FIA	2.7	5.55	1.74	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	48
paulownia	Paulownia tomentosa	NSL	FIA	1	5.28	5.25	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	49
loblolly pine	Pinus taeda	WDH	High	1	5.1	5.07	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	50
pawpaw	Asimina triloba	NSL	Low	2.9	4.95	0.83	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	51
butternut	Juglans cinerea	NSLX	FIA	2	4.36	2.17	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	52
Ohio buckeye	Aesculus glabra	NSL	Low	3.2	3.86	0.91	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	53

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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
sugarberry	Celtis laevigata	NDH	Medium	5.4	3.18	0.49	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	54
white mulberry	Morus alba	NSL	FIA	1	2.21	2.2	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	55
scarlet oak	Quercus coccinea	WDL	Medium	1	1.84	1.83	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	56
shellbark hickory	Carya laciniosa	NSL	Low	0.3	1.61	0.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	57
swamp chestnut oak	Quercus michauxii	NSL	Low	0.1	1.36	0.12	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	58
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	0.1	0.42	0.06	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			2	59
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	60
Virginia pine	Pinus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	61
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	62
silver maple	Acer saccharinum	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	63
yellow birch	Betula alleghaniensis	NDL	High	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	64
American beech	Fagus grandifolia	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	65
black ash	Fraxinus nigra	WSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	66
American holly	Ilex opaca	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	67
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	68
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	69
bur oak	Quercus macrocarpa	NDH	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	70
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	71
chestnut oak	Quercus prinus	NDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	72
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	73
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +	3	74