

National Park  
Climate Change Atlas Tree Species  
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	
red maple	Acer rubrum	WDH	High	55.9	559.31	19.43	Sm. dec.	Sm. dec.	High	Abundant	Good	Good				1	1
pitch pine	Pinus rigida	NSH	High	21.6	282.09	24.16	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor				0	2
sweetgum	Liquidambar styraciflua	WDH	High	18.4	188	21.39	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++		1	3
white ash	Fraxinus americana	WDL	Medium	32.3	181.7	13.1	Sm. dec.	Lg. dec.	Low	Common	Poor	Very Poor				0	4
black oak	Quercus velutina	WDH	High	35.2	164.75	10.11	Sm. inc.	No change	Medium	Common	Good	Fair				1	5
yellow-poplar	Liriodendron tulipifera	WDH	High	25.6	159.54	13.98	Sm. inc.	No change	High	Common	Very Good	Good				1	6
white oak	Quercus alba	WDH	Medium	50.1	154.96	8.26	Sm. inc.	No change	High	Common	Very Good	Good				1	7
blackgum	Nyssa sylvatica	WDL	Medium	42.4	151.38	8.79	Sm. dec.	Sm. dec.	High	Common	Fair	Fair				1	8
black cherry	Prunus serotina	WDL	Medium	51.8	132.91	13.47	No change	No change	Low	Common	Poor	Poor				0	9
chestnut oak	Quercus prinus	NDH	High	32	132.76	9.43	No change	Lg. dec.	High	Common	Good	Fair				1	10
northern red oak	Quercus rubra	WDH	Medium	43.9	97.44	7.31	No change	No change	High	Common	Good	Good				1	11
sassafras	Sassafras albidum	WSL	Low	26.7	89.95	5.23	Sm. dec.	Lg. dec.	Medium	Common	Poor	Poor				0	12
pin oak	Quercus palustris	NSH	Low	13.6	88.01	15.23	Sm. dec.	Lg. dec.	Low	Common	Poor	Very Poor	Infill +			0	13
black locust	Robinia pseudoacacia	NDH	Low	19.4	87.98	14.66	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +		0	14
scarlet oak	Quercus coccinea	WDL	Medium	38	86.5	6.84	No change	Sm. dec.	Medium	Common	Fair	Poor				1	15
flowering dogwood	Cornus florida	WDL	Medium	11.8	61.89	13.34	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			Infill +	0	16
green ash	Fraxinus pennsylvanica	WSH	Low	3.6	57.41	16.16	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +		2	17
eastern redcedar	Juniperus virginiana	WDH	Medium	28.8	54.05	6.61	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++		1	18
sweet birch	Betula lenta	NDH	High	30.2	51.5	7.1	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor				0	19
American elm	Ulmus americana	WDH	Medium	18.9	45.66	6.97	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +		1	20
eastern white pine	Pinus strobus	WDH	High	18.6	36.56	11.84	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor				0	21
American beech	Fagus grandifolia	WDH	High	20.8	35.44	4.99	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++		1	22
sugar maple	Acer saccharum	WDH	High	17.8	30.34	6.49	Lg. inc.	Sm. inc.	High	Rare	Good	Good	Infill ++	Infill ++		1	23
black walnut	Juglans nigra	WDH	Low	14.6	23.67	5.94	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +		1	24
swamp white oak	Quercus bicolor	NSL	Low	3.6	19.81	5.58	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				2	25
ailanthus	Ailanthus altissima	NSL	FIA	14.2	17.3	9.98	Unknown	Unknown	NA	Rare	NNIS	NNIS				0	26
shagbark hickory	Carya ovata	WSL	Medium	10.7	14.32	6.68	Sm. inc.	No change	Medium	Rare	Fair	Poor	Infill +	Infill +		1	27
mockernut hickory	Carya alba	WDL	Medium	18.2	13.61	2.47	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++		1	28
bigtooth aspen	Populus grandidentata	NSL	Medium	10.1	11.94	5.15	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor				0	29
sycamore	Platanus occidentalis	NSL	Low	1.2	11.72	9.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +		2	30
pignut hickory	Carya glabra	WDL	Medium	19.2	11.71	4.07	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++		1	31
shortleaf pine	Pinus echinata	WDH	High	2.3	11.66	4.91	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +		2	32
slippery elm	Ulmus rubra	WSL	Low	8.3	8.34	1.94	No change	No change	Medium	Rare	Poor	Poor			Infill +	2	33
American holly	Ilex opaca	NSL	Medium	2.2	7.5	12	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++		2	34
Norway maple	Acer platanoides	NSL	FIA	15.1	7.27	3.24	Unknown	Unknown	NA	Rare	NNIS	NNIS				0	35
river birch	Betula nigra	NSL	Low	10.7	4.76	3.12	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				0	36
gray birch	Betula populifolia	NSL	Low	9.5	4.2	2.42	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				0	37
black willow	Salix nigra	NSH	Low	1.2	4.14	3.5	Sm. dec.	Sm. inc.	Low	Rare	Very Poor	Poor			Infill +	2	38
sweetbay	Magnolia virginiana	NSL	Medium	5.9	4	1.88	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++		2	39
boxelder	Acer negundo	WSH	Low	9.5	3.92	6.62	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +		2	40
American basswood	Tilia americana	WSL	Medium	1.2	3.11	2.63	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +		2	41
Virginia pine	Pinus virginiana	NDH	High	1.2	2.37	2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good				2	42
Osage-orange	Maclura pomifera	NDH	Medium	1.2	2.37	2	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor				0	43
white mulberry	Morus alba	NSL	FIA	4.7	2.14	7.26	Unknown	Unknown	NA	Rare	NNIS	NNIS				0	44
bitternut hickory	Carya cordiformis	WSL	Low	11.6	1.84	1.71	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++		2	45
bear oak; scrub oak	Quercus ilicifolia	NSLX	FIA	7.1	1.73	0.74	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only				0	46
striped maple	Acer pensylvanicum	NSL	Medium	1.2	0.98	0.83	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor				0	47
post oak	Quercus stellata	WDH	High	8.6	0.78	1.17	Lg. inc.	Lg. inc.	High	Rare	Good	Good				2	48
quaking aspen	Populus tremuloides	WDH	High	4.7	0.76	2.54	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor				0	49
silver maple	Acer saccharinum	NSH	Low	4.7	0.58	1.98	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++		2	50
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	9.5	0.34	0.57	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++		2	51
Norway spruce	Picea abies	NSH	FIA	4.7	0.31	1.04	Unknown	Unknown	NA	Rare	NNIS	NNIS				0	52
eastern hemlock	Tsuga canadensis	NSH	High	4.7	0.21	0.72	Lg. inc.	Sm. inc.	Low	Rare	Fair	Poor	Infill +			2	53

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serviceberry	Amelanchier spp.	NSL	Low	4.7	0.18	0.62	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	54
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	4.7	0.15	0.53	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	55
yellow birch	Betula alleghaniensis	NDL	High	4.7	0.13	0.44	Sm. inc.	Lg. dec.	Medium	Rare	Fair	Very Poor	Infill +		2	56
slash pine	Pinus elliotii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	57
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	58
pond pine	Pinus serotina	NSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate ++	Migrate +	3	59
loblolly pine	Pinus taeda	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	60
bald cypress	Taxodium distichum	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	61
florida maple	Acer barbatum	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	62
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	63
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp	NSL	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			0	64
water hickory	Carya aquatica	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	65
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	66
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	67
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	68
common persimmon	Diospyros virginiana	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	69
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Modeled	Unknown	Unknown			0	70
loblolly-bay	Gordonia lasianthus	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	71
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	0	0	0	Unknown	Unknown	NA	Absent	Unknown	Unknown			0	72
water tupelo	Nyssa aquatica	NSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	73
swamp tupelo	Nyssa biflora	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	74
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	75
redbay	Persea borbonia	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	76
eastern cottonwood	Populus deltoides	NSH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	77
southern red oak	Quercus falcata	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	78
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	79
turkey oak	Quercus laevis	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	80
laurel oak	Quercus laurifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	81
overcup oak	Quercus lyrata	NSL	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	82
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	83
swamp chestnut oak	Quercus michauxii	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	84
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	85
willow oak	Quercus phellos	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	86
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	87
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	88
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	89