

U.S. Census Bureau Urban Areas
Climate Change Atlas Tree Species
Current and Potential Future Habitat, Capability, and Migration

Table with 4 columns: Area of Region, sq. km, sq. mi, FIA Plots. Values: 8,800.0, 3,397.7, 177.

Species Information

The columns below provide brief summaries of the species associated with the region and described in the table on the next pages. Definitions are provided in the Excel file for this region.

Table with columns: Genus, Species, Abundance, Model Reliability, Adaptability, Potential Change in Habitat Suitability (Scenario RCP45, RCP85), Capability to Cope or Persist (Scenario RCP45, RCP85), Migration Potential (SHIFT RCP45, RCP85).

Potential Changes in Climate Variables

Temperature (°F)

Table with columns: Scenario, 2009, 2039, 2069, 2099. Rows include Annual, Average, Growing Season, May-Sep, Coldest Month, Average, Warmest Month.

Precipitation (in)

Table with columns: Scenario, 2009, 2039, 2069, 2099. Rows include Annual, Total, Growing Season, May-Sep.

NOTE: For the six climate variables, four 30-year periods are used to indicate six potential future trajectories. The period ending in 2009 is based on modeled observations from the PRISM Climate Group and the three future periods were obtained from the NASA NEX-DCP30 dataset.

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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	85.2	896.1	15.7	Sm. dec.	Sm. dec.	High	Abundant	Good	Good	Infill ++	Infill ++	2	1
white ash	Fraxinus americana	WDL	Medium	79.5	699.4	16.5	Sm. dec.	Lg. dec.	Low	Abundant	Fair	Poor	Infill +	Infill +	2	2
chestnut oak	Quercus prinus	NDH	High	63.6	437.0	10.7	Sm. inc.	No change	High	Common	Very Good	Good	Infill ++	Infill ++	2	3
northern red oak	Quercus rubra	WDH	Medium	77.3	412.1	8.6	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	2	4
yellow-poplar	Liriodendron tulipifera	WDH	High	55.7	377.6	13.0	Sm. inc.	No change	High	Common	Very Good	Good	Infill ++	Infill ++	2	5
black cherry	Prunus serotina	WDL	Medium	69.3	304.5	8.6	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	2	6
sweet birch	Betula lenta	NDH	High	54.5	271.5	8.0	Sm. dec.	Lg. dec.	Low	Common	Poor	Very Poor	Infill +		2	7
white oak	Quercus alba	WDH	Medium	37.5	227.2	8.6	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	2	8
black walnut	Juglans nigra	WDH	Low	44.3	214.3	11.3	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	2	9
black oak	Quercus velutina	WDH	High	50	197.9	7.2	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	2	10
sugar maple	Acer saccharum	WDH	High	30.7	184.0	9.2	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	2	11
sassafras	Sassafras albidum	WSL	Low	65.9	162.9	4.5	Sm. inc.	No change	Medium	Common	Good	Fair	Infill ++	Infill +	2	12
eastern redcedar	Juniperus virginiana	WDH	Medium	25	156.0	10.9	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	2	13
blackgum	Nyssa sylvatica	WDL	Medium	33	125.6	5.5	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	2	14
eastern hemlock	Tsuga canadensis	NSH	High	23.9	96.0	5.4	No change	Sm. dec.	Low	Common	Poor	Poor	Infill +	Infill +	2	15
mockernut hickory	Carya alba	WDL	Medium	23.9	95.5	7.3	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	2	16
pignut hickory	Carya glabra	WDL	Medium	35.2	88.7	4.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	2	17
scarlet oak	Quercus coccinea	WDL	Medium	25	85.8	4.9	Lg. inc.	Sm. inc.	Medium	Common	Very Good	Good	Infill ++	Infill ++	2	18
shagbark hickory	Carya ovata	WSL	Medium	39.8	85.1	3.9	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	2	19
Norway maple	Acer platanoides	NSL	FIA	17	79.6	8.3	Unknown	Unknown	NA	Common	NNIS	NNIS			0	20
black locust	Robinia pseudoacacia	NDH	Low	13.6	79.2	11.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	2	21
eastern white pine	Pinus strobus	WDH	High	25	70.9	5.6	Sm. inc.	No change	Low	Common	Fair	Poor	Infill +	Infill +	2	22
red pine	Pinus resinosa	NSH	Medium	5.7	59.7	25.2	Very Lg. dec.	Very Lg. dec.	Low	Common	Lost	Lost			0	23
hackberry	Celtis occidentalis	WDH	Medium	2.3	54.7	23.0	Sm. dec.	No change	High	Common	Fair	Good		Infill ++	2	24
American beech	Fagus grandifolia	WDH	High	39.8	49.2	2.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	25
pin oak	Quercus palustris	NSH	Low	18.2	39.1	7.0	Sm. inc.	Sm. inc.	Low	Rare	Poor	Poor	Infill +	Infill +	2	26
green ash	Fraxinus pennsylvanica	WSH	Low	18.2	35.1	4.7	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	27
flowering dogwood	Cornus florida	WDL	Medium	23.9	34.3	2.5	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	2	28
ailanthus	Ailanthus altissima	NSL	FIA	14.8	31.1	5.4	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	29
American elm	Ulmus americana	WDH	Medium	22.7	30.2	3.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	30
bigtooth aspen	Populus grandidentata	NSL	Medium	20.5	29.6	2.4	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			2	31
swamp white oak	Quercus bicolor	NSL	Low	2.3	24.7	10.4	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	32
serviceberry	Amelanchier spp.	NSL	Low	28.4	24.0	1.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	33
American basswood	Tilia americana	WSL	Medium	11.4	21.6	2.7	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	34
gray birch	Betula populifolia	NSL	Low	8	20.9	2.5	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	35
pitch pine	Pinus rigida	NSH	High	13.6	20.1	1.9	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	36
boxelder	Acer negundo	WSH	Low	21.6	20.0	5.8	Sm. inc.	Lg. inc.	High	Rare	Good	Good		Infill ++	2	37
black willow	Salix nigra	NSH	Low	1.1	17.8	15.0	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			0	38
tamarack (native)	Larix laricina	NSH	High	5.7	15.0	7.4	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	39
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	20.5	14.5	1.5	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	40
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	8	8.8	2.0	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	2	41
quaking aspen	Populus tremuloides	WDH	High	1.1	8.3	7.0	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	42
silver maple	Acer saccharinum	NSH	Low	1.1	7.7	6.5	Sm. inc.	Sm. inc.	High	Rare	Good	Good			2	43
slippery elm	Ulmus rubra	WSL	Low	6.8	7.7	3.5	No change	No change	Medium	Rare	Poor	Poor		Infill +	2	44
white spruce	Picea glauca	NSL	Medium	1.1	7.3	6.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	45
striped maple	Acer pensylvanicum	NSL	Medium	2.3	7.3	3.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	46
yellow birch	Betula alleghaniensis	NDL	High	12.5	6.2	2.0	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	47

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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
red mulberry	Morus rubra	NSL	Low	5.7	5.6	3.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	48
Scots pine	Pinus sylvestris	NSH	FIA	5.7	5.1	2.4	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	49
bitternut hickory	Carya cordiformis	WSL	Low	14.8	4.4	3.0	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	50
white mulberry	Morus alba	NSL	FIA	1.1	3.8	3.2	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	51
Virginia pine	Pinus virginiana	NDH	High	2.3	3.4	1.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	52
red spruce	Picea rubens	NDH	High	2.3	3.2	1.3	Very Lg. dec.	Very Lg. dec.	Low	Rare	Lost	Lost			0	53
Osage-orange	Maclura pomifera	NDH	Medium	4.5	2.8	9.3	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	54
black ash	Fraxinus nigra	WSH	Medium	1.1	2.7	2.3	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	55
jack pine	Pinus banksiana	NSH	Medium	1.1	2.4	2.1	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	56
Norway spruce	Picea abies	NSH	FIA	5.7	2.2	1.7	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	57
sycamore	Platanus occidentalis	NSL	Low	14.8	2.1	1.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	58
American chestnut	Castanea dentata	NSLX	FIA	6.8	1.8	0.5	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	59
chokecherry	Prunus virginiana	NSLX	FIA	1.1	1.6	1.3	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	60
bear oak; scrub oak	Quercus ilicifolia	NSLX	FIA	1.1	1.2	1.0	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	61
butternut	Juglans cinerea	NSLX	FIA	4.5	0.7	2.4	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	62
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	63
loblolly pine	Pinus taeda	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	64
bald cypress	Taxodium distichum	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	65
florida maple	Acer barbatum	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	66
mountain maple	Acer spicatum	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	67
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			0	68
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	69
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	70
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	71
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	72
common persimmon	Diospyros virginiana	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	73
sweetgum	Liquidambar styraciflua	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	74
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +		3	75
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	76
southern red oak	Quercus falcata	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	77
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	78
shingle oak	Quercus imbricaria	NDH	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	79
overcup oak	Quercus lyrata	NSL	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	80
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	81
swamp chestnut oak	Quercus michauxii	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	82
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	83
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	84
willow oak	Quercus phellos	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	85
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	86
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	87
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	88