One x One Degree

Climate Change Atlas Tree Species Current and Potential Future Habitat, Capability, and Migration

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

sq. km sq. mi FIA Plots Area of Region 10,306 3,979.1 339

Species Information

The columns below provide breif 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.

Genus	Species						Potential Change in Habitat Suitability			Capability	Migration Potential				
Ash	2				Model			Scenario	Scenario		Scenario	Scenario		SHIFT	SHIFT
Hickory	8	Abu	ndance		Reliability	Adaptability		RCP45	RCP85		RCP45	RCP85		RCP45	RCP85
Maple	3	Abundant	4	High	17	20	Increase	32	36	Very Good	14	14	Likely	1	1
Oak	16	Common	22	Medium	34	54	No Change	17	18	Good	16	21	Infill	14	17
Pine	6	Rare	46	Low	34	12	Decrease	20	15	Fair	12	8	Migrate	1	1
Other	37	Absent	14	FIA	3		New	8	9	Poor	8	10	·	16	19
•	72		86		88	86	Unknown	11	10	Very Poor	19	15			
							-	88	88	FIA Only	2	2			
										Unknown	8	7			
Potentia	I Change	es in Climate Var	iahles							•	70	77			

Potential Changes in Climate Variables

Temperatu	ıre (°F)				
	Scenario	2009	2039	2069	2099
Annual	CCSM45	63.6	65.3	67.3	67.4
Average	CCSM85	63.6	65.6	68.0	70.7
	GFDL45	63.6	66.3	68.3	69.1
	GFDL85	63.6	66.3	69.4	73.0
	HAD45	63.6	65.8	68.5	70.0
	HAD85	63.6	66.0	69.8	73.8
Growing	CCSM45	76.9	78.4	80.1	80.6
Season	CCSM85	76.9	78.5	81.0	84.5
May—Sep	GFDL45	76.9	79.6	81.6	82.9
	GFDL85	76.9	79.8	83.0	87.1
	HAD45	76.9	79.8	82.2	84.0
	HAD85	76.9	79.7	85.0	88.9
Coldest	CCSM45	43.9	46.3	47.0	46.9
Month	CCSM85	43.9	46.1	47.3	48.4
Average	GFDL45	43.9	46.8	47.1	47.6
	GFDL85	43.9	45.9	46.9	47.6
	HAD45	43.9	44.2	45.8	46.4
	HAD85	43.9	45.0	45.9	47.6
Warmest	CCSM45	81.3	83.1	84.0	84.2
Month	CCSM85	81.3	83.3	84.8	86.5
Average	GFDL45	81.3	83.6	84.4	85.4
	GFDL85	81.3	83.9	85.5	87.7
	HAD45	81.3	84.8	86.1	86.8
	HAD85	81.3	85.1	88.3	90.3

Precipitati	on (in)				
	Scenario	2009	2039	2069	2099
Annual	CCSM45	45.2	48.7	51.1	52.5
Total	CCSM85	45.2	49.0	52.6	58.1
	GFDL45	45.2	50.8	54.6	57.1
	GFDL85	45.2	50.4	56.4	56.1
	HAD45	45.2	44.8	47.8	49.1
	HAD85	45.2	49.0	44.9	46.7
Growing	CCSM45	20.7	23.9	25.8	26.1
Season	CCSM85	20.7	23.2	25.5	27.8
May—Sep	GFDL45	20.7	26.0	28.6	29.3
	GFDL85	20.7	25.2	29.9	30.5
	HAD45	20.7	20.7	21.2	21.3
	HAD85	20.7	22.5	18.5	18.3

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. Future climate projections from three models under two emission scenarios show estimates of each climate variable within the region. The three models are CCSM4, GFDL CM3, and HadGEM2-ES and the emission scenarios are the 4.5 and 8.5 RCP. The average value for the region is reported, even though locations within the region may vary substantially based on latitude, elevation, land-use, or other factors.

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Current and Potential Future Habitat, Capability, and Migration

Seed Seed Seed Seed Seed Seed Seed See	Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO N
waster oals Querous piggral WDH High 82.8 88.0 81.5 mic. Sm. inc. Medium Abundant Very Good Very Good Very Good 1.3 4 Ineglandipine Ascrubrum WDH High 6.23 88.0 21.5 min. Sm. inc. High Common Very Good Very Good 1.3 1.6 burd oak Querous Darcotina NDH Medium 7.3 89.8 6.5 ig. im. 8.5 im. Medium Common Very Good Very Good 1.3 1.5 bush cherry Privas Schorostina NDH Medium 7.3 28.3 8.0 Bish. Medium No. 1.8 1.3 1.6 1.8 1.3 1.6 1.8 1.3	loblolly pine	Pinus taeda	WDH	High	95	4414.5	34.6 Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair			0 1
Ingelapripme Phus palastris N5H Medium Asp	sweetgum	Liquidambar styraciflua	WDH	High	71.9	1027.7	9.5 No change	No change	Medium	Abundant	Good	Good			1 2
Internation More	water oak	Quercus nigra	WDH	High	82.8	882.0	8.1 Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1 3
Summar S	longleaf pine	Pinus palustris	NSH	Medium	45.9	860.2	17.4 Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1 4
Swamp tuple Swam	red maple	Acer rubrum	WDH	High	62.3	380.5	4.1 Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1 5
Medium M	laurel oak	Quercus laurifolia	NDH	Medium	37.9	359.8	6.5 Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1 6
Starb pine Pinus of Pinus	swamp tupelo	Nyssa biflora	NDH	Medium	40.3	319.6	5.4 Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1 7
Sah pine Pinus elliotti NDH High 22.4 23.7 8.0 Eg. inc. Eg. inc. Medium Common Very Good Very Good	black cherry	Prunus serotina	WDL	Medium	69.7	263.0	3.0 Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1 8
	turkey oak	Quercus laevis	NSH	Medium	27.4	251.6	8.5 No change	No change	High	Common	Good	Good			1 9
Southerned oak Quercus ficiatian WDL Medium 359 32, 343, 32 8, inc. Eg. inc. High Common Very Good Very Good 1 12	slash pine	Pinus elliottii	NDH	High	22.4	237.1	8.0 Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1 10
Decision	yellow-poplar	Liriodendron tulipifera	WDH	High	34.6	184.2	3.9 No change	No change	High	Common	Good	Good			1 11
American holly llex opaca NSL Medium April 12.1 2.3 Lg. inc. Lg. inc. High Common For Good Common For For Good Common For	southern red oak	Quercus falcata	WDL	Medium	38.2	134.5	2.8 Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1 12
American holly lex opace NSL Medium 32.3 94.2 2.3 No change Sm. inc. Medium Common Fair Good Good Good Food Fair Fa	mockernut hickory	Carya alba	WDL	Medium	35.9	133.7	3.0 Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1 13
American holly lex opace NSL Medium 32.3 94.2 2.3 No change Sm. inc. Medium Common Fair Good Good Good Food Fair Fa	post oak	Quercus stellata	WDH	High	40	121.2	2.3 Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1 14
Indicates Persea borthonia NSL Low 24.2 74.9 2.3 Lg. dec. Sm. dec. High Common Fair Fair Fair Sm. december Sm	American holly	Ilex opaca	NSL	Medium	32.3	94.2	2.3 No change	Sm. inc.	Medium	Common	Fair	Good			1 15
white oak Quercus alba WDH Medium 21.8 72.7 2.0 Lg. inc. Lg. inc. High Common Very Good Very Good 1 1 18 winged elm Ulmus alata WDL Medium 20.5 71.3 2.2 Lg. inc. Lg. inc. Medium Common Very Good Very Good 1 1 19 sand hickory Carya pallida NSL FIA 14.6 70.3 4.8 Unknown Unknown NA Common FIA Only FIA Only 1 0 20 green ash Fraxinus pennsylvanica WSH Low 19.5 66.2 2.3 Lg. inc. Lg. inc. Medium Common Very Good Very Good Very Good 1 1 21 blacksjack oak Quercus phellos NSL Low 16.7 56.3 2.0 Sm. inc. Sm. inc. Medium Common Very Good Very Good Very Good 1 1 22 blacksjach Common Very Good	bluejack oak	Quercus incana	NSL	Low	11.8	76.7	6.0 Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1 16
Wings alem Umus alata WDL Medium 20,5 71,3 2.2 Lg. inc. Lg. inc. Lg. inc. Medium Common Very Good Very Good 20 20 20 20 20 20 20 2	redbay	Persea borbonia	NSL	Low	24.2	74.9	2.3 Lg. dec.	Sm. dec.	High	Common	Fair	Fair			1 17
Sand hickory Carya pallida NSL FIA 14.6 70.3 48. Unknown Unknown NA Common FIA Only FIA Only Green ash Frakinus pennsylvanica WSH Low 19.5 66.2 2.3 Lg. inc. Lg. inc. High Common Very Good Very Good 1 21 22 22 22 23 23 23	white oak	Quercus alba	WDH	Medium	21.8	72.7	2.0 Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1 18
green ash	winged elm	Ulmus alata	WDL	Medium	20.5	71.3	2.2 Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1 19
Blackjack oak Quercus marilandica NSL Medium 20 59,0 2.5 Lg. inc. Lg. inc. High Common Very Good Very Good 1 22 23 23 23 23 23 23	sand hickory	Carya pallida	NSL	FIA	14.6	70.3	4.8 Unknown	Unknown	NA	Common	FIA Only	FIA Only			0 20
Willow oak Quercus phellos NSL Low 16.7 56.3 2.0 Sm. inc. Sm. inc. Medium Common Good Good 12 23	green ash	Fraxinus pennsylvanica	WSH	Low	19.5	66.2	2.3 Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1 21
blackgum Nyssa sylvatica WDL Medium 28 55.3 1.3 Lg. inc. Lg. inc. High Common Very Good Very Good 1 24	blackjack oak	Quercus marilandica	NSL	Medium	20	59.0	2.5 Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1 22
Delicated prince Taxodium distichum NSH Medium 11.5 52.9 3.8 No change Sm. inc. Medium Common Fair Good Infill + Infill + 1 1 25	willow oak	Quercus phellos	NSL	Low	16.7	56.3	2.0 Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1 23
Shortleaf pine Pinus echinata WDH High 16 51.8 2.3 Lg. inc. Lg. inc. Medium Common Very Good Very Good Very Good Water tupelo Nyssa aquatica NSH Medium 4.9 44.6 6.0 Sm. dec. No change Low Rare Very Poor Very Poor 2.2 72 72 73 74 74 74 74 74 74 74	blackgum	Nyssa sylvatica	WDL	Medium	28	55.3	1.3 Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1 24
water tupelo Nyssa aquatica NSH Medium 4.9 44.6 6.0 Sm. dec. No change Low Rare Very Poor Very Poor 2 2 27 pignut hickory Carya glabra WDL Medium 13.8 42.4 1.8 Sm. inc. Lg. inc. Medium Rare Fair Good 1 28 Sw. growth Medium Rare Pair Good 1 29 Sw. garberry Celtis laevigata NDH Medium 8.3 40.0 3.1 Sm. inc. Sm. inc. Medium Rare Fair Good 1 29 Sw. garberry Celtis laevigata NDH Medium 8.3 40.0 3.1 Sm. inc. Sm. inc. Medium Rare Fair Fair Infill+ Infill+ 1 30 black oak Quercus velutina WDH High 10.1 35.1 2.0 Lg. dec. Lg. dec. Medium Rare Very Poor Very Poor Poor 1 31 Dlack oak Quercus velutina WDH High 10.1 35.1 2.0 Lg. dec. Medium Rare Very Poor Very Poor Poor 1 33 Cherrybark oak; swamp red o Quercus pagoda NSL Low 23 33.2 No change No change Medium Rare Poor Good 1 33 Cherrybark oak; swamp red o Quercus pagoda NSL Medium 9.8 31.4 2.0 No change No change Medium Rare Poor Poor Infill+ Infill+ Infill+ 1 34 American hornbeam; muscle: Carpinus caroliniana WSL Low 15.3 30.1 1.4 Lg. inc. Lg. inc. Medium Rare Good Good 1 37 Sassafras Sassafras alibium WSL Low 14.9 29.4 1.7 Lg. inc. Lg. inc. Medium Rare Good Good 1 37 Sasafras Sassafras NDH High 6.8 25.6 3.8 Lg. inc. Medium Rare Good Good 1 37 Sasafras Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill+ Infill+ 1 40 Overcup oak Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill+ Infill+ 1 40 Overcup oak Quercus lyrata NSL Medium 1 2.1 30.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill+ Infill+ 1 40 Overcup oak Quercus lyrata NSL Medium 1 2.2 4.0 No change No change No change Low Rare Very Poor Very	bald cypress	Taxodium distichum	NSH	Medium	11.5	52.9	3.8 No change	Sm. inc.	Medium	Common	Fair	Good	Infill +	Infill ++	1 25
Pignut hickory Carya glabra WDL Medium 13.8 42.4 1.8 Sm. inc. Lg. inc. Medium Rare Fair Good 1 28	shortleaf pine	Pinus echinata	WDH	High	16	51.8	2.3 Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1 26
Flowering dogwood Cornus florida WDL Medium 23.4 42.0 1.4 Sm. inc. Lg. inc. Medium Rare Fair Good 1 29	water tupelo	Nyssa aquatica	NSH	Medium	4.9	44.6	6.0 Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			2 27
sugarberry Celtis laevigata NDH Medium 8.3 40.0 3.1 Sm. inc. Sm. inc. Medium Rare Fair Fair Infill III Infill III 1 30 black willow Salix nigra NSH Low 7.9 39.6 3.2 No change Sm. inc. Low Rare Very Poor Poor Poor 1 31 31 black oak Quercus velutina WDH High 10.1 35.1 2.0 Lg. dec. Lg. dec. Medium Rare Very Poor Very Poor Very Poor O 32 common persimmon Diospyros virginiana NSL Low 23 33.2 1.0 Sm. dec. Sm. inc. High Rare Poor Good Infill III Infill III 1 34 American hornbeam; muscle: Carpinus caroliniana WSL Low 15.3 30.1 1.4 Lg. inc. Lg. inc. Medium Rare Good Good Infill III Infill III 1 35 sasafras Sassafras albidum WSL Low 6.3 29.6 2.7 Sm. dec. Sm. dec. Medium Rare Good Good Infill III Infill III 1 37 scarlet oak Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill III III Infill III III Infill III In	pignut hickory	Carya glabra	WDL	Medium	13.8	42.4	1.8 Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1 28
black willow Salix nigra NSH Low 7.9 39.6 3.2 No change Sm. inc. Low Rare Very Poor Poor Poor 1 31 black oak Quercus velutina WDH High 10.1 35.1 2.0 Lg. dec. Lg. dec. Medium Rare Very Poor Very Poor Very Poor 0 32 common persimmon Diospyros virginiana NSL Low 23 33.2 1.0 Sm. dec. Sm. inc. High Rare Poor Good 1 33 chery parks oak; swamp red o Quercus pagoda NSL Medium 9.8 31.4 2.0 No change No change Medium Rare Poor Poor Infill 1 1 34 American hornbeam; musclev Carpinus caroliniana WSL Low 15.3 30.1 1.4 Lg. inc. Lg. inc. Medium Rare Good Good 1 35 sycamore Platanus occidentalis NSL Low 6.3 29.6 2.7 Sm. dec. Sm. dec. Medium Rare Good Good 1 37 scarlet oak Quercus coccinea WDL Medium 6.6 28.6 2.3 Sm. dec. Sm. dec. Medium Rare Good Good 5 1 37 scarlet oak Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 40 sweetbay Magnolia virginiana NDH Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 40 sweetbay Magnolia virginiana NSL Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 40 overcup oak Quercus lyrata NSL Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 40 overcup oak Quercus lyrata NSL Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 40 overcup oak Poercus lyrata NSL Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 40 overcup oak Poercus lyrata NSL Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 43 overcup oak Poercus lyrata NSL Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 43 overcup oak Poercus lyrata NSL Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 43 overcup oak Poercus lyrata NSL Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 43 overcup oak Poercus lyrata NSL Medium 15.3 15.8 0.7 Lg. inc. No change N	flowering dogwood	Cornus florida	WDL	Medium	23.4	42.0	1.4 Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1 29
black oak Quercus velutina WDH High 10.1 35.1 2.0 Lg. dec. Lg. dec. Medium Rare Very Poor Very Poor 0 32 common persimmon Diospyros virginiana NSL Low 23 33.2 1.0 Sm. dec. Sm. inc. High Rare Poor Good 1 33 cherrybark oak; swamp red o. Quercus pagoda NSL Medium 9.8 31.4 2.0 No change No change Medium Rare Poor Poor Infill + Infill + 1 34 American hornbeam; muscle Carpinus caroliniana WSL Low 15.3 30.1 1.4 Lg. inc. Lg. inc. Medium Rare Good Good 5 36 sassafras Sassafras albidum WSL Low 14.9 29.4 1.7 Lg. inc. Lg. inc. Medium Rare Good Good 5 37 Scarlet oak Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 2 39 eastern redcedar Juniperus virginiana WDH Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 40 sweetbay Magnolia virginiana NSL Medium 4 17.2 2.4 No change No change No change Low Rare Good Good Infill + Infill + 1 40 American elm Ulmus americana WDH Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill + Infill + 1 44 White ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor Very Poor 2 4 56 Decan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor Very Poor Very Poor 2 4 66 Decan No change Low Rare Very Poor Very Poor Very Poor Very Poor 2 4 66 Decan Very Poor	sugarberry	Celtis laevigata	NDH	Medium	8.3	40.0	3.1 Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1 30
common persimmon Diospyros virginiana NSL Low 23 33.2 1.0 Sm. dec. Sm. inc. High Rare Poor Good 1 33 cherrybark oak; swamp red o. Quercus pagoda NSL Medium 9.8 31.4 2.0 No change No change Medium Rare Poor Poor Infill III Infill III 1 34 American hornbeam; musclev Carpinus caroliniana WSL Low 15.3 30.1 1.4 Lg. inc. Lg. inc. Medium Rare Good Good 1 35 sycamore Platanus occidentalis NSL Low 6.3 29.6 2.7 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 36 Sassafras Sassafras albidum WSL Low 14.9 29.4 1.7 Lg. inc. Lg. inc. Medium Rare Good Good 1 37 scarlet oak Quercus coccinea WDL Medium 6.6 28.6 2.3 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 38 live oak Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill III Infill Infill III Infill III Infill III Infill III	black willow	Salix nigra	NSH	Low	7.9	39.6	3.2 No change	Sm. inc.	Low	Rare	Very Poor	Poor			1 31
cherrybark oak; swamp red o Quercus pagoda NSL Medium 9.8 31.4 2.0 No change No change Medium Rare Poor Poor Infill III Infill III 1 34 American hornbeam; muscle Carpinus caroliniana WSL Low 15.3 30.1 1.4 Lg. inc. Lg. inc. Medium Rare Good Good 1 35 sycamore Platanus occidentalis NSL Low 6.3 29.6 2.7 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 36 sassafras Sassafras albidum WSL Low 14.9 29.4 1.7 Lg. inc. Lg. inc. Medium Rare Good Good 1 37 scarlet oak Quercus coccinea WDL Medium 6.6 28.6 2.3 Sm. dec. Sm. dec. Medium Rare Good Good Infill III III III III III III III III III	black oak	Quercus velutina	WDH	High	10.1	35.1	2.0 Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0 32
American hornbeam; musclev Carpinus caroliniana WSL Low 15.3 30.1 1.4 Lg. inc. Lg. inc. Medium Rare Good Good 1 35 sycamore Platanus occidentalis NSL Low 6.3 29.6 2.7 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 36 sassafras Sassafras albidum WSL Low 14.9 29.4 1.7 Lg. inc. Lg. inc. Medium Rare Good Good 1 37 scarlet oak Quercus coccinea WDL Medium 6.6 28.6 2.3 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 38 live oak Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 39 eastern redcedar Juniperus virginiana WDH Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 40 sweetbay Magnolia virginiana NSL Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 41 overcup oak Quercus lyrata NSL Medium 4 17.2 2.4 No change No change Low Rare Very Poor Very Poor 2 2 42 American elm Ulmus americana WDH Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 43 water hickory Carya aquatica NSL Medium 2 9.6 2.0 Sm. dec. No change No change Low Rare Very Poor Very Poor Poor Infill + 2 44 white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor Very Poor 2 45 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor	common persimmon	Diospyros virginiana	NSL	Low	23	33.2	1.0 Sm. dec.	Sm. inc.	High	Rare	Poor	Good			1 33
sycamore Platanus occidentalis NSL Low 6.3 29.6 2.7 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor O 36 sassafras Sassafras Sassafras Sassafras WSL Low 14.9 29.4 1.7 Lg. inc. Lg. inc. Medium Rare Good Good 1 37 scarlet oak Quercus coccinea WDL Medium 6.6 28.6 2.3 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor O 38 live oak Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 39 eastern redcedar Juniperus virginiana WDH Medium 14 21.3 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 40 sweetbay Magnolia virginiana NSL Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 40 overcup oak Quercus lyrata NSL Medium 4 17.2 2.4 No change No change Low Rare Very Poor Very Poor 2 42 American elm Ulmus americana WDH Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 43 water hickory Carya aquatica NSL Medium 2 9.6 2.0 Sm. dec. No change No change Low Rare Very Poor Poor Infill + 2 44 white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor Very Poor 2 45 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor Very Poor Very Poor 2 46	cherrybark oak; swamp red	o Quercus pagoda	NSL	Medium	9.8	31.4	2.0 No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1 34
Sassafras Sassafras albidum WSL Low 14.9 29.4 1.7 Lg. inc. Lg. inc. Medium Rare Good Good 1 37 scarlet oak Quercus coccinea WDL Medium 6.6 28.6 2.3 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 38 live oak Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 39 eastern redcedar Juniperus virginiana WDH Medium 14 21.3 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 40 sweetbay Magnolia virginiana NSL Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 40 overcup oak Quercus lyrata NSL Medium 4 17.2 2.4 No change No change Low Rare Very Poor Very Poor 2 42 American elm Ulmus americana WDH Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 43 water hickory Carya aquatica NSL Medium 2 9.6 2.0 Sm. dec. No change Medium Rare Very Poor Poor Infill + 2 44 white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor Very Poor 2 46 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor Very Poor 2 46	American hornbeam; musc	e\ Carpinus caroliniana	WSL	Low	15.3	30.1	1.4 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1 35
scarlet oak Quercus coccinea WDL Medium 6.6 28.6 2.3 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 38 live oak Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 39 eastern redcedar Juniperus virginiana WDH Medium 14 21.3 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 40 sweetbay Magnolia virginiana NSL Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 40 overcup oak Quercus lyrata NSL Medium 4 17.2 2.4 No change No change Low Rare Very Poor Very Poor 2 42 American elm Ulmus americana WDH Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 43 water hickory Carya aquatica NSL Medium 2 9.6 2.0 Sm. dec. No change Medium Rare Very Poor Poor Infill + 2 44 white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor Very Poor 2 2 45 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor Very Poor 2 2 46	sycamore	Platanus occidentalis	NSL	Low	6.3	29.6	2.7 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 36
live oak Quercus virginiana NDH High 6.8 25.6 3.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 39 eastern redcedar Juniperus virginiana WDH Medium 14 21.3 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 40 sweetbay Magnolia virginiana NSL Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 40 overcup oak Quercus lyrata NSL Medium 4 17.2 2.4 No change No change Low Rare Very Poor Very Poor 2 42 American elm Ulmus americana WDH Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 43 water hickory Carya aquatica NSL Medium 2 9.6 2.0 Sm. dec. No change Medium Rare Very Poor Poor Infill + 2 44 white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor Very Poor 2 2 45 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor Very Poor 2 2 46	sassafras	Sassafras albidum	WSL	Low	14.9	29.4	1.7 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1 37
eastern redcedar Juniperus virginiana WDH Medium 14 21.3 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 40 sweetbay Magnolia virginiana NSL Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good 1 41 overcup oak Quercus lyrata NSL Medium 4 17.2 2.4 No change Low Rare Very Poor Very Poor 2 42 American elm Ulmus americana WDH Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 43 water hickory Carya aquatica NSL Medium 2 9.6 2.0 Sm. dec. No change Medium Rare Very Poor Poor Infill + 2 44 white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor Very Poor 2 45 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor Very Poor 2 46	scarlet oak	Quercus coccinea	WDL	Medium	6.6	28.6	2.3 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 38
sweetbay Magnolia virginiana NSL Medium 9.5 19.0 1.2 Lg. inc. Lg. inc. Medium Rare Good Good 1 41 overcup oak Quercus lyrata NSL Medium 4 17.2 2.4 No change No change Low Rare Very Poor Very Poor 2 42 American elm Ulmus americana WDH Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 43 water hickory Carya aquatica NSL Medium 2 9.6 2.0 Sm. dec. No change Medium Rare Very Poor Poor Infill + 2 44 white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor 2 45 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor 2 46	live oak	Quercus virginiana	NDH	High	6.8	25.6	3.8 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2 39
overcup oak Quercus lyrata NSL Medium 4 17.2 2.4 No change No change Low Rare Very Poor Very Poor 2 42 American elm Ulmus americana WDH Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 43 water hickory Carya aquatica NSL Medium 2 9.6 2.0 Sm. dec. No change Medium Rare Very Poor Poor Infill + 2 44 white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor 2 45 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor Very Poor 2 46	eastern redcedar	Juniperus virginiana	WDH	Medium	14	21.3	0.8 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1 40
American elm Ulmus americana WDH Medium 15.3 15.8 0.7 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 1 43 water hickory Carya aquatica NSL Medium 2 9.6 2.0 Sm. dec. No change Medium Rare Very Poor Poor Infill + 2 44 white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor 2 45 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor 2 46	sweetbay	Magnolia virginiana	NSL	Medium	9.5	19.0	1.2 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1 41
water hickory Carya aquatica NSL Medium 2 9.6 2.0 Sm. dec. No change Medium Rare Very Poor Poor Infill + 2 44 white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor 2 45 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor 2 46	overcup oak	Quercus lyrata	NSL	Medium	4	17.2	2.4 No change	No change	Low	Rare	Very Poor	Very Poor			2 42
white ash Fraxinus americana WDL Medium 2.2 8.8 1.4 No change No change Low Rare Very Poor Very Poor 2 45 pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor 2 46	American elm	Ulmus americana	WDH	Medium	15.3	15.8	0.7 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1 43
pecan Carya illinoinensis NSH Low 1.3 8.7 2.1 Sm. dec. No change Low Rare Very Poor Very Poor 2 46	water hickory	Carya aquatica	NSL	Medium	2	9.6	2.0 Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2 44
	white ash	Fraxinus americana	WDL	Medium	2.2	8.8	1.4 No change	No change	Low	Rare	Very Poor	Very Poor			2 45
swamp chestnut oak Quercus michauxii NSL Low 3.3 7.7 1.5 No change No change Medium Rare Poor Poor Infill + Infill + 2 47	pecan	Carya illinoinensis	NSH	Low	1.3	8.7	2.1 Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			2 46
	swamp chestnut oak	Quercus michauxii	NSL	Low	3.3	7.7	1.5 No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2 47



One x One Degree

Climate Change Atlas Tree Species

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

pond cypress Taxodium ascendens NSH Medium 2.4 6.4 2.1 Lg. inc. Lg. inc. Medium Rare Good Good 2 50 eastern hophornbeam; ironw Ostrya virginiana WSL Low 5.1 6.4 0.7 Lg. inc. Lg. inc. High Rare Good Good Infill ++ Infill ++ 2 51 pawpaw Asimina triloba NSL Low 2.8 5.9 1.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 52 sourwood Oxydendrum arboreum NDL High 3.2 4.9 1.1 No change No change High Rare Fair Fair Infill + 2 53 black walnut Juglans nigra WDH Low 3.1 4.7 0.6 Lg. dec. Lg. dec. Medium Rare Very Poor Very Poor 0 54 southern magnolia Magnolia grandiflora NSL Low 2.9 4.5 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 55 water elm Planera aquatica NSL Low 1.9 4.3 2.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 56	Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO N
pond cypress Taxodium ascendens NSH Medium 2.4 6.4 2.1 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 51 pawpaw Asimina triloba NSL Low 2.8 5.9 1.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 52 sourwood Oxydendrum arboreum NDL High 3.2 4.9 1.1 No change No change High Rare Fair Fair Infill + 2 53 black walnut Juglans nigra WDH Low 3.1 4.7 0.6 Lg. dec. Lg. dec. Medium Rare Very Poor Very Poor 0 54 southern magnolia Magnolia grandiflora NSL Low 2.9 4.5 0.8 Lg. inc. Lg. inc. Medium Rare Very Poor Very Poor 0 56 red mulberry Morus rubra NSL Low 4.3 4.2 0.6 No change No change Medium Rare Poor Poor Infill + 1 57	boxelder	Acer negundo	WSH	Low	4.7	7.7	1.0	0 No change	No change	High	Rare	Fair	Fair		Infill +	2 48
eastern hophornbeam; ironw Ostrya virginiana WSL Low 5.1 6.4 0.7 Lg. inc. Lg. inc. High Rare Good Good Infill ++ Infill ++ 2 51 pawpaw Asimina triloba NSL Low 2.8 5.9 1.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 52 sourwood Oxydendrum arboreum NDL High 3.2 4.9 1.1 No change No change High Rare Fair Fair Infill + 2 53 black walnut Juglans nigra WDH Low 3.1 4.7 0.6 Lg. dec. Lg. dec. Medium Rare Very Poor Very Poor 0 54 southern magnolia Magnolia grandiflora NSL Low 2.9 4.5 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 55 water elm Planera aquatica NSL Low 1.9 4.3 2.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 56 red mulberry Morus rubra NSL Low 4.3 4.2 0.6 No change No change Medium Rare Poor Poor Infill + 1 57	shagbark hickory	Carya ovata	WSL	Medium	1.1	6.8	1.	6 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2 49
pawpaw Asimina triloba NSL Low 2.8 5.9 1.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 52 sourwood Oxydendrum arboreum NDL High 3.2 4.9 1.1 No change No change High Rare Fair Fair Infill + 2 53 black walnut Juglans nigra WDH Low 3.1 4.7 0.6 Lg. dec. Lg. dec. Medium Rare Very Poor Very Poor 0 54 southern magnolia Magnolia grandiflora NSL Low 2.9 4.5 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 55 water elm Planera aquatica NSL Low 1.9 4.3 2.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 56 red mulberry Morus rubra NSL Low 4.3 4.2 0.6 No change No change Medium Rare Poor Poor Infill + 1 57	pond cypress	Taxodium ascendens	NSH	Medium	2.4	6.4	2.	1 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2 50
sourwood Oxydendrum arboreum NDL High 3.2 4.9 1.1 No change No change High Rare Fair Fair Infill + 2 53 black walnut Juglans nigra WDH Low 3.1 4.7 0.6 Lg. dec. Lg. dec. Medium Rare Very Poor Very Poor 0 54 southern magnolia Magnolia grandiflora NSL Low 2.9 4.5 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 55 water elm Planera aquatica NSL Low 1.9 4.3 2.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 56 red mulberry Morus rubra NSL Low 4.3 4.2 0.6 No change No change Medium Rare Poor Poor Infill + 1 57	eastern hophornbeam; iron	w Ostrya virginiana	WSL	Low	5.1	6.4	0.	7 Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2 51
black walnut Juglans nigra WDH Low 3.1 4.7 0.6 Lg. dec. Lg. dec. Medium Rare Very Poor Very Poor 0 54 southern magnolia Magnolia grandiflora NSL Low 2.9 4.5 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 55 water elm Planera aquatica NSL Low 1.9 4.3 2.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 56 red mulberry Morus rubra NSL Low 4.3 4.2 0.6 No change No change Medium Rare Poor Poor Infill + 1 57	pawpaw	Asimina triloba	NSL	Low	2.8	5.9	1.	2 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 52
southern magnolia Magnolia grandiflora NSL Low 2.9 4.5 0.8 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 55 water elm Planera aquatica NSL Low 1.9 4.3 2.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 56 red mulberry Morus rubra NSL Low 4.3 4.2 0.6 No change No change Medium Rare Poor Poor Infill + 1 57	sourwood	Oxydendrum arboreum	NDL	High	3.2	4.9	1.	1 No change	No change	High	Rare	Fair	Fair	Infill +		2 53
water elm Planera aquatica NSL Low 1.9 4.3 2.2 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 56 red mulberry Morus rubra NSL Low 4.3 4.2 0.6 No change No change Medium Rare Poor Poor Infill + 1 57	black walnut	Juglans nigra	WDH	Low	3.1	4.7	0.	6 Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0 54
red mulberry Morus rubra NSL Low 4.3 4.2 0.6 No change No change Medium Rare Poor Poor Infill + 1 57	southern magnolia	Magnolia grandiflora	NSL	Low	2.9	4.5	0.	8 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2 55
	water elm	Planera aquatica	NSL	Low	1.9	4.3	2.:	2 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 56
northern red oak Quercus rubra WDH <mark>Medium 2.2</mark> 4.0 0.9 Sm. dec. Sm. dec. High Rare Poor Poor Infill + 2 58	red mulberry	Morus rubra	NSL	Low	4.3	4.2	0.	6 No change	No change	Medium	Rare	Poor	Poor		Infill +	1 57
	northern red oak	Quercus rubra	WDH	Medium	2.2	4.0	0.	9 Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	2 58
pond pine Pinus serotina NSH <mark>Medium</mark> 2.3 3.9 1.2 No change No change Low Rare Very Poor Very Poor 2 59	pond pine	Pinus serotina	NSH	Medium	2.3	3.9	1.	2 No change	No change	Low	Rare	Very Poor	Very Poor			2 59
loblolly-bay Gordonia lasianthus NSH <mark>Medium 0.4</mark> 3.6 1.5 <mark>No change No change Medium R</mark> are Poor Poor Infill + 2 60	loblolly-bay	Gordonia lasianthus	NSH	Medium	0.4	3.6	1.	5 No change	No change	Medium	Rare	Poor	Poor	Infill +		2 60
florida maple Acer barbatum NSL Low <mark>2</mark> 3.5 0.8 <mark>No change No change H</mark> igh Rare <mark>Fair Fair I</mark> nfill + Infill + 2 61	florida maple	Acer barbatum	NSL	Low	2	3.5	0.	8 No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2 61
slippery elm Ulmus rubra WSL Low <mark>2.5</mark> 3.5 1.1 <mark>No change No change Medium R</mark> are Poor Poor Infill + Infill + 2 62	slippery elm	Ulmus rubra	WSL	Low	2.5	3.5	1.	1 No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2 62
river birch Betula nigra NSL Low 1 3.2 3.3 Lg. inc. Lg. inc. Medium Rare Good Good Infill ++ Infill ++ 2 63	river birch	Betula nigra	NSL	Low	1	3.2	3.:	3 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2 63
eastern redbud Cercis canadensis NSL Low 1.6 2.4 0.5 Sm. dec. No change Medium Rare Very Poor Poor Infill + 2 64	eastern redbud	Cercis canadensis	NSL	Low	1.6	2.4	0.	5 Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2 64
eastern cottonwood Populus deltoides NSH Low 0.4 2.3 1.0 Sm. dec. Very Lg. dec. Medium Rare Very Poor Lost 0 65	eastern cottonwood	Populus deltoides	NSH	Low	0.4	2.3	1.0	0 Sm. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0 65
American beech Fagus grandifolia WDH High <mark>2.3</mark> 2.1 0.5 Lg. inc. Lg. inc. <mark>Medium R</mark> are Good Good 2 66	American beech	Fagus grandifolia	WDH	High	2.3	2.1	0.	5 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2 66
shellbark hickory Carya laciniosa NSL Low 0.6 1.7 1.1 Sm. dec. Sm. dec. Medium Rare Very Poor Very Poor 0 67	shellbark hickory	Carya laciniosa	NSL	Low	0.6	1.7	1.	1 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 67
Virginia pine Pinus virginiana NDH High 1 1.5 1.5 Sm. dec. Sm. dec. <mark>Medium</mark> Rare <mark>Very Poor Very Poor</mark> 0 68	Virginia pine	Pinus virginiana	NDH	High	1	1.5	1.	5 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 68
wild plum Prunus americana NSLX FIA 1.3 1.1 0.3 Unknown Unknown <mark>Medium</mark> Rare FIA Only FIA Only 0 69	wild plum	Prunus americana	NSLX	FIA	1.3	1.1	0.	3 Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0 69
ailanthus Ailanthus altissima NSL FIA 1.5 0.7 0.3 Unknown Unknown NA Rare NNIS NNIS 0 70	ailanthus	Ailanthus altissima	NSL	FIA	1.5	0.7	0.	3 Unknown	Unknown	NA	Rare	NNIS	NNIS			0 70
yellow buckeye Aesculus flava NSL Low 0.6 0.4 0.3 Sm. dec. Sm. dec. Low Rare Very Poor Very Poor 0 71	yellow buckeye	Aesculus flava	NSL	Low	0.6	0.4	0.	3 Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0 71
bitternut hickory Carya cordiformis WSL Low 1 0.3 0.3 Lg. dec. Lg. dec. High Rare Poor Poor 0 72	bitternut hickory	Carya cordiformis	WSL	Low	1	0.3	0.	3 Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0 72
ashe juniper Juniperus ashei NDH High 0 0 0 New Habitat New Habitat <mark>Medium</mark> Absent New Habitat New Habitat 0 73	ashe juniper	Juniperus ashei	NDH	High	0	0	(0 New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0 73
sand pine Pinus clausa NDH High 0 0 0 New Habitat New Habitat Low Absent New Habitat New Habitat Migrate ++ Migrate + 3 74	sand pine	Pinus clausa	NDH	High	0	0		0 New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate ++	Migrate +	3 74
spruce pine Pinus glabra NSL Low 0 0 0 New Habitat New Habitat Medium Absent New Habitat New Habitat Likely + Likely + 3 75	spruce pine	Pinus glabra	NSL	Low	0	0	(0 New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3 75
serviceberry Amelanchier spp. NSL <mark>Low</mark> 0 0 0 New Habitat New Habitat Medium Absent New Habitat New Habitat 3 76	serviceberry	Amelanchier spp.	NSL	Low	0	0	(0 New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3 76
cittamwood/gum bumelia Sideroxylon lanuginosum ssp. NSL Low 0 0 0 New Habitat	cittamwood/gum bumelia	Sideroxylon lanuginosum ssp	. NSL	Low	0	0	(0 New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3 77
black hickory Carya texana NDL <mark>High</mark> 0 0 0 New Habitat New Habitat <mark>Medium Absent New Habitat New Habitat 3 78</mark>	black hickory	Carya texana	NDL	High	0	0		0 New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3 78
black ash Fraxinus nigra WSH <mark>Medium</mark> 0 0 0 Unknown New Habitat Low Absent Unknown New Habitat 0 79	black ash	Fraxinus nigra	WSH	Medium	0	0	(0 Unknown	New Habitat	Low	Absent	Unknown	New Habitat			0 79
silverbell Halesia spp. NSL Low 0 0 0 Unknown Unknown <mark>Medium</mark> Absent Unknown Unknown 0 80	silverbell	Halesia spp.	NSL	Low	0	0	(0 Unknown	Unknown	Medium	Absent	Unknown	Unknown			0 80
Osage-orange Maclura pomifera NDH <mark>Medium</mark> 0 0 0 Unknown Unknown High Modeled Unknown Unknown 0 81	Osage-orange	Maclura pomifera	NDH	Medium	0	0	(0 Unknown	Unknown	High	Modeled	Unknown	Unknown			0 81
cucumbertree Magnolia acuminata NSL Low 0 0 0 Unknown Unknown Medium Absent Unknown Unknown 0 82	cucumbertree	Magnolia acuminata	NSL	Low	0	0	(0 Unknown	Unknown	Medium	Absent	Unknown	Unknown			0 82
bigleaf magnolia Magnolia macrophylla NSL Low 0 0 0 New Habitat New Habitat Medium Absent New Habitat New Habitat 3 83	bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	(0 New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3 83
pin cherry Prunus pensylvanica NSL Low 0 0 0 Unknown Unknown Medium Absent Unknown Unknown 0 84	pin cherry	Prunus pensylvanica	NSL	Low	0	0		0 Unknown	Unknown	Medium	Absent	Unknown	Unknown			0 84
swamp white oak Quercus bicolor NSL Low 0 0 0 Unknown Unknown Medium Modeled Unknown Unknown 0 85	swamp white oak	Quercus bicolor	NSL	Low	0	0	(0 Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0 85
chestnut oak Quercus prinus NDH <mark>High</mark> 0 0 0 Unknown Unknown High Absent Unknown Unknown 0 86	chestnut oak	Quercus prinus	NDH	High	0	0		0 Unknown	Unknown	High	Absent	Unknown	Unknown			0 86
American basswood Tilia americana WSL Medium 0 0 0 Unknown Unknown Medium Absent Unknown Unknown 0 87	American basswood	Tilia americana	WSL	Medium	0	0	(0 Unknown	Unknown	Medium	Absent	Unknown	Unknown			0 87
cedar elm Ulmus crassifolia NDH Medium 0 0 0 New Habitat New Habitat Low Absent New Habitat New Habitat 3 88	cedar elm	Ulmus crassifolia	NDH	Medium	0	0		0 New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3 88

