## HUC 111402 Red-Saline

#### HUC 6 Watershed

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 19,942 7,699.5 614

#### **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								Potentia	al Change i	in Habitat S	uitability	Capability	to Cope o	r Persist	Migratio	n Poten	tial
Ash	4					Model				Scenario	Scenario			Scenario	Scenario		SHIFT	SHIFT
Hickory	7		Abu	ndance		Reliability	Adaptabili	ty		RCP45	RCP85			RCP45	RCP85		RCP45	RCP85
Maple	4	Ab	oundant	2	Hi	gh 15	24		Increase	35	36		Very Good	12	12	Likely	0	0
Oak	20	C	ommon	24	Mediu	m 34	53	No	o Change	16	17		Good	15	21	Infill	18	20
Pine	4		Rare	57	Lo	w 35	10	I	Decrease	28	26		Fair	14	11	Migrate	0	0
Other	44		Absent	5	F	IA 4			New	3	3		Poor	19	16	-	18	20
	83			88		88	87	- ι	Jnknown	6	6		Very Poor	17	17			
									-	88	88		FIA Only	4	4			
													Unknown	2	2			
Potentia	al Chang	ges in Clim	ate Var	iables										83	83			
Temperatu	ire (°F)						Precipitati	ion (in)										
	Scenario	2009	2039	2069	2099			Scenario	2009	2039	2069	2099						
Annual	CCSM45	57.7	59.0	60.4	60.6 🛶 🔶	•	Annual	CCSM45	42.6	42.9	47.4	46.2 🛶 😽	•					
Average	CCSM85	57.7	59.3	61.2	63.2		Total	CCSM85	42.6	44.3	47.5	48.4	•					
	GFDL45	57.7	60.0	61.0	61.9			GFDL45	42.6	45.4	52.7	46.7	•					
	GFDL85	57.7	59.8	62.1	64.7			GFDL85	42.6	45.1	47.7	48.4	•					
	HAD45	57.7	59.6	61.9	62.7			HAD45	42.6	42.0	42.7	46.0 ++++	•					
	HAD85	57.7	59.8	63.0	66.0	*		HAD85	42.6	44.4	38.9	41.9 🛶	•					
Growing	CCSM45	68.5	69.7	70.9	71.2	•	Growing	CCSM45	15.6	15.8	16.5	16.2 🔸 🔶 🕇	•					
Season	CCSM85	68.5	70.0	71.8	74.3 🛶 🔶		Season	CCSM85	15.6	15.0	15.2	15.2 ++++						
May—Sep	GFDL45	68.5	71.1	72.0	73.9	•	May—Sep	GFDL45	15.6	17.4	21.6	18.0 +++++	•					
	GFDL85	68.5	71.1	73.5	76.9			GFDL85	15.6	17.7	19.1	19.6 🔶 🔶 🔶	•					
	HAD45	68.5	70.9	73.1	73.5			HAD45	15.6	15.0	14.9	15.0 + + + +	•					
	HAD85	68.5	71.1	75.3	77.8	•		HAD85	15.6	15.4	11.8	12.1 + + + +	•					
						•												

**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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Coldest CCSM45

Average GFDL45

Warmest CCSM45

Average GFDL45

CCSM85

GFDL85

HAD45

HAD85

CCSM85

GFDL85

HAD45

HAD85

Month

Month

41.7

41.7

41.7

41.7

41.7

41.7

72.2

72.2

72.2

72.2

72.2

72.2

43.7

43.7

44.6

42.5

42.4

43.4

73.3

73.6

75.7

75.3

75.3

75.7

44.5

44.7

44.7

43.4

43.8

44.7

73.6

74.2

75.6

76.4

76.3

78.0

44.5

44.6

43.9

44.4

46.1

73.7

75.5

76.9

78.7

76.3

78.7

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Common Name	Scientific Name	Range	MR	%Coll	Flasum	FIAiv ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFTAS	SHIFT85	SSO N
loblolly pine	Pinus taeda	WDH	High	91.1	4540.0		Sm. dec.		Abundant	Good	Fair	5111 145	5111105	1 1
sweetgum	Liquidambar styraciflua	WDH	High	88.8	4540.0 1134.4	9.7 No change	No change	Medium		Good	Good			1 2
water oak	Quercus nigra	WDH	High	76.6	499.3	5.2 Lg. inc.	Lg. inc.		Common	Very Good	Very Good			1 3
southern red oak	Quercus falcata	WDL	Medium	70	368.3	4.0 Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1 4
shortleaf pine	Pinus echinata	WDL	High	52.6	358.3	5.1 Sm. inc.	Sm. inc.	-	Common	Good	Good			1 5
willow oak	Quercus phellos	NSL	Low	40.8	265.2	5.8 Sm. inc.	Sm. inc.	Medium		Good	Good			1 6
white oak	Quercus alba	WDH	Medium	58.3	252.9	3.4 No change	No change	High	Common	Good	Good			1 7
post oak	Quercus stellata	WDH	High	58.1	239.6	3.7 Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1 8
winged elm	Ulmus alata	WDL	Medium	65.5	230.9	2.9 Lg. inc.	Lg. inc.		Common	Very Good	Very Good			1 9
red maple	Acer rubrum	WDL	High	62.6	229.2	2.7 Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1 10
cherrybark oak; swamp re		NSL	Medium	48.9	209.8	3.6 Sm. inc.	Sm. inc.		Common	Good	Good			1 10
green ash	Fraxinus pennsylvanica	WSH	Low	46.9	205.8	3.8 Sm. inc.	Sm. inc.		Common	Good	Good			1 11
blackgum	Nyssa sylvatica	WDL	Medium	58.8	200.1	2.3 Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1 12
sugarberry	Celtis laevigata	NDH	Medium	19.6	149.9	7.7 Lg. inc.	Lg. inc.		Common	Very Good	Very Good			1 14
longleaf pine	Pinus palustris	NSH	Medium	9.3	136.6		No change	Medium		Fair	Fair	Infill +	Infill +	1 14
bald cypress	Taxodium distichum	NSH	Medium	11.6	127.5	9.3 No change	Sm. inc.		Common	Fair	Good			1 15
pecan	Carya illinoinensis	NSH	Low	9.8	111.7	10.2 No change	No change	Low	Common	Poor	Poor			0 17
•	iscles Carpinus caroliniana	WSL	Low	34.6	97.0	2.1 Lg. inc.	Lg. inc.		Common	Very Good	Very Good			1 18
mockernut hickory	Carya alba	WDL	Medium	37.3	87.9	1.9 Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1 19
American elm	Ulmus americana	WDL	Medium	24.6	80.1	3.2 Lg. inc.	Lg. inc.		Common	Very Good	Very Good			1 20
black willow	Salix nigra	NSH	Low	7.1	73.9	11.1 No change	No change	Low	Common	Poor	Poor			0 21
overcup oak	Quercus lyrata	NSL	Medium	15.7	63.1	4.4 Sm. inc.	Lg. inc.	Low	Common	Fair	Good			1 22
slash pine	Pinus elliottii	NDH	High	3.8	60.4	7.7 Sm. inc.	Lg. inc.	Medium		Fair	Good	Infill +	Infill ++	2 23
water hickory	Carya aquatica	NSL	Medium	10.7	59.7	6.2 No change	No change	Medium		Fair	Fair	Infill +	Infill +	1 24
eastern hophornbeam; ir		WSL	Low	28.7	58.5	1.5 Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1 25
honeylocust	Gleditsia triacanthos	NSH	Low	10.5	55.7	4.5 Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1 26
flowering dogwood	Cornus florida	WDL	Medium	35.9	54.2	1.1 Sm. inc.	Sm. inc.	Medium		Good	Good			1 27
eastern cottonwood	Populus deltoides	NSH	Low	2.7	50.0		Sm. dec.	Medium		Very Poor	Very Poor			0 28
Osage-orange	Maclura pomifera	NDH	Medium	4.9	43.2		No change	High	Rare	Fair	Fair	Infill +	Infill +	2 29
American holly	llex opaca	NSL	Medium	24	43.2	1.4 Lg. inc.	Lg. inc.	Medium		Good	Good			1 30
American beech	Fagus grandifolia	WDH	High	13.5	43.0	2.1 Lg. inc.	Lg. inc.	Medium		Good	Good	Infill ++	Infill ++	1 31
black cherry	Prunus serotina	WDL	Medium	33.1	36.6	0.7 Sm. inc.	Lg. inc.	Low	Rare	Poor	Fair			1 32
Nuttall oak	Quercus texana	NSH	Medium	7.4	33.5	5.2 Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0 33
boxelder	Acer negundo	WSH	Low	7.2	28.9	3.8 Sm. dec.	No change	High	Rare	Poor	Fair	Infill +	Infill +	1 34
sycamore	Platanus occidentalis	NSL	Low	9.4	26.8	4.1 Sm. dec.	No change	Medium		Very Poor	Poor		Infill +	1 35
slippery elm	Ulmus rubra	WSL	Low	11.7	26.7	1.7 Lg. inc.	Lg. inc.	Medium		Good	Good	Infill ++		1 36
white ash	Fraxinus americana	WDL	Medium	22.6	25.5	1.0 Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1 37
sweetbay	Magnolia virginiana	NSL	Medium	9	25.4	2.1 No change	No change	Medium		Poor	Poor	Infill +	Infill +	1 38
common persimmon	Diospyros virginiana	NSL	Low	18	25.2	1.2 Sm. dec.	Sm. inc.	High	Rare	Poor	Good			1 39
sassafras	Sassafras albidum	WSL	Low	21.9	22.9	0.8 Sm. inc.	Lg. inc.	Medium		Fair	Good			1 40
water tupelo	Nyssa aquatica	NSH	Medium	4	22.9	4.4 Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			2 41
blackjack oak	Quercus marilandica	NSL	Medium	12	22.5	1.4 Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1 42
Shumard oak	Quercus shumardii	NSL	Low	4.9	20.5	3.6 Sm. dec.	Sm. dec.	High	Rare	Poor	Poor	Infill +	Infill +	2 43
pignut hickory	Carya glabra	WDL	Medium	12.5	19.3	1.2 Sm. dec.	Sm. dec.	Medium		Very Poor	Very Poor			0 44
black oak	Quercus velutina	WDL	High	9.5	19.5	1.2 Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0 44
eastern redcedar	Juniperus virginiana	WDH	Medium	9.5	16.6	1.8 Sin. dec.	Lg. uec.	Medium		Good	Good	Infill ++	Infill ++	1 46
florida maple	Acer barbatum	NSL	Low	5.7	16.3	1.9 Sm. dec.	Sm. dec.	High	Rare	Poor	Poor	11111 77	Infill +	1 40
nonua mapie	Acer barbatum	INSL	LOW	5.7	10.3	1.9 Jill. uec.	Sin. dec.	ingii	Nale	1001	1001		111111 <del>+</del>	1 4/



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wamp destruir alsNum <th< th=""><th>Common Name</th><th>Scientific Name</th><th>Range</th><th>MR</th><th>%Cell</th><th>FIAsum</th><th>FIAiv ChngCl45</th><th>ChngCl85</th><th>Adap</th><th>Abund</th><th>Capabil45</th><th>Capabil85</th><th>SHIFT45</th><th>SHIFT85</th><th>SSO N</th></th<>	Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO N
cadar of main matrixNPM	shagbark hickory	Carya ovata	WSL	Medium	9	13.9	1.2 Lg. dec.		Medium	Rare	Very Poor	Very Poor			0 48
swame pulpeloNysa kiffiraNys <td>swamp chestnut oak</td> <td>Quercus michauxii</td> <td>NSL</td> <td>Low</td> <td>7.4</td> <td>12.9</td> <td>1.5 No change</td> <td>No change</td> <td>Medium</td> <td>Rare</td> <td>Poor</td> <td>Poor</td> <td>Infill +</td> <td>Infill +</td> <td>1 49</td>	swamp chestnut oak	Quercus michauxii	NSL	Low	7.4	12.9	1.5 No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1 49
witchSinceSinceSinceSinceSinceMetionNettorNettorNoPictor <th< td=""><td>cedar elm</td><td>Ulmus crassifolia</td><td>NDH</td><td>Medium</td><td>6</td><td>12.5</td><td>2.7 Lg. inc.</td><td>Lg. inc.</td><td>Low</td><td>Rare</td><td>Fair</td><td>Fair</td><td>Infill +</td><td>Infill +</td><td>2 50</td></th<>	cedar elm	Ulmus crassifolia	NDH	Medium	6	12.5	2.7 Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2 50
barel oak     Quercus Jaurifolia     NN     Medium     S     10.0     1.6 Sm. inc.     Medium     Rare     Fair     God     Infill +	swamp tupelo	Nyssa biflora	NDH	Medium	1.9	12.1	3.7 No change	No change	Low	Rare	Very Poor	Very Poor			2 51
waterPinera aquaticaNSowd9.73.4 No changeMeduaRareMeduaRareParParInfillInfill1.5 dsoutherm agnoliaMagnolig grandifioraNSLIow1.5S.0 Sn. dec.Sn. dec.MeduaRarePar <td>waterlocust</td> <td>Gleditsia aquatica</td> <td>NSLX</td> <td>FIA</td> <td>2.5</td> <td>11.1</td> <td>4.4 Unknown</td> <td>Unknown</td> <td>Medium</td> <td>Rare</td> <td>FIA Only</td> <td>FIA Only</td> <td></td> <td></td> <td>0 52</td>	waterlocust	Gleditsia aquatica	NSLX	FIA	2.5	11.1	4.4 Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0 52
Southern magnola     Magnola grandifora     N.S.     Low     4     8.0     1.1 Sm.inc.     Sm.inc.     Medium     Rare     Fair     Fair     Infill +     Infill +     1.0 St       black locust     Robinia pseudoacacia     NML     Low     1.5     7.5     5.0 Sm.dec.     Sm.dec.     Medium     Rare     Very Poor     Ve	laurel oak	Quercus laurifolia	NDH	Medium	5	10.0	1.6 Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1 53
black black   Rohnin pseudoaccia   NM   Low   1.5   0.5   0.5 m. dec.   Mm. dec.   High   Ref   Very Poor	water elm	Planera aquatica	NSL	Low	4	9.7	3.4 No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1 54
bitternut hickory     Carya conditormis     WSL     Low     S.2     6.6     1.3     Sm. dec.     Sm. dec.     Mello     Rare     Poor	southern magnolia	Magnolia grandiflora	NSL	Low	4	8.0	1.1 Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2 55
eastern redbud   Circls canadensis   NSL   Norm   52   5.0   0.10 Sm. dec.   Sm. dec.   Medium   Rare   Poor   Very Poor   Norm   0.5     black hickory   Carya texana   NDL   High   4.9   0.5   Sm. inc.   Ligu.   Medium   Rare   Para   Good   Infil +   Infil +   Infil +   1   1.6   0.5   Sm. inc.   Medium   Rare   Para   Good   Infil +   Infil +   1   1.6   0.5   Sm. inc.   Sm. inc.   Medium   Rare   Para   Carya   Para   Mort para   ND   0.6   2   0.7   Sm. dec.   Sm. dec.   Medium   Rare   Very Poor   <	black locust	Robinia pseudoacacia	NDH	Low	1.5	7.5	5.0 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 56
northern red oak     Quercus rubra     WDH     Medium     2.5     5.0     0.6 lg, dec.     lg, dec.     High     Rare     Poor     Poor     Poor     Intil +     Intil	bitternut hickory	Carya cordiformis	WSL	Low	2.1	6.6	1.3 Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0 57
black hickory     Grage taxna     NDL     High     4.9     0.5     Sm. nc.     Line     Medium     Rate     Fair     Gain     Infill     Infill     Infill     1     2     0       river birch     Punus pensylvarica     NSL     Low     4.6     0.6     Sm. ncc.     Sm. ncc.     Medium     Rate     Very Poor     Very Poor    <	eastern redbud	Cercis canadensis	NSL	Low	5.2	6.0	1.0 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 58
niver birch     Betula nigra     NSL     Low     1     4.6     0.6 Sm. inc.     Sm. inc.     Medium     Rare     Fair     Fair     Infill+     Infill+     1     2     6       pin cherry     Prunus penylvanica     NSL     Low     4.7     4.6     0.8 Sm. dec.     Sm. dec.     Medium     Rare     Very Poor     Very Poor<	northern red oak	Quercus rubra	WDH	Medium	2.5	5.0	0.6 Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0 59
pin cherry     Prunus pensylvanica     NSL     Low     4.6     0.8     Sm. dec.     Medium     Rare     Very Poor     Very Poor <	black hickory	Carya texana	NDL	High	4.9	4.9	0.6 Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2 60
red mulberry   Morus rubra   NSL   Low   2   4.0   0.7 Sm. dec.   Sm. dec.   Medium   Rare   Very Poor   Very Poor   Very Poor   63     redbay   Persea borbonia   NSL   Low   2.3   2.5   0.7 Sm. dec.   No change   High   Rare   Very Poor   Very Poor   63     swamp white oak   Quercus bicolor   NSL   Low   0.9   2.2   2.2 Sm. dec.   Sm. dec.   Medium   Rare   Very Poor   Very Poor   Very Poor   0   66     sourwood   Oxydendrum arboreum   NDL   High   1.8   2.1   0.9 Sm. dec.   Sm. dec.   High   Rare   FIA Ohly   FIA Ohly   FIA Ohly   66     vild plum   Pruus americana   NSL   Low   0.8   1.2   1.1   Lg.inc.   Lg.inc.   High   Rare   Good   Good   Good   Co   0.70     Sugar maple   Acer saccharum   WDH   High   1.1   O.9   0.4   Very Lg.dec.   High   Rare   Low   Dor   Poor   Poor   Poor	river birch	Betula nigra	NSL	Low	1	4.6	0.6 Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2 61
redbayPersea borboniaNSLLow2.32.50.7Sm. dec.No changeHighRevPoorFairPoorFair00 <th< td=""><td>pin cherry</td><td>Prunus pensylvanica</td><td>NSL</td><td>Low</td><td>4.7</td><td>4.6</td><td>0.8 Sm. dec.</td><td>Sm. dec.</td><td>Medium</td><td>Rare</td><td>Very Poor</td><td>Very Poor</td><td></td><td></td><td>0 62</td></th<>	pin cherry	Prunus pensylvanica	NSL	Low	4.7	4.6	0.8 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 62
black walnutJuglans nigraWDHLow1.52.41.6Sm. dec.MediumRareVery PoorVery PoorVery Poor065swamp white oakQuercus bicolorNSLLow0.92.22.22.2Sm. dec.Sm. dec.MediumRareVery PoorVery PoorVery Poor065wild plumPrunus americanaNSLFIA0.71.30.2UnknownMediumRareFIA OnlyFIA OnlyFIA OnlyFIA OnlyFIA OnlyFIA OnlyFIA Only70070	red mulberry	Morus rubra	NSL	Low	8	4.0	0.7 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 63
swamp white oak     Quercus bicolor     NSL     Low     0.9     2.2     2.2     Sm. dec.     Sm. dec.     Hedium     Rare     Poor     Very	redbay	Persea borbonia	NSL	Low	2.3	2.5	0.7 Sm. dec.	No change	High	Rare	Poor	Fair			0 64
sourwoodOxydendrum arboreumNDLHigh1.82.10.9Sm. dec.HighRarePoorPoorPoorPoor067wild plumPrunus americanaNSLFIA0.71.30.2UnknownMediumRareFIA OnlyFIA OnlyFIA OnlyFIA OnlyFIA OnlyFIA Only6868cittarmwood/gum bumeliaSideroxylon lanuginosum ssp. NSLLow0.81.1Lg. inc.Lg. inc.HighRareGoodGood0070bluejack oakQuercus incanaNSLMedium1.31.00.5Lg. dec.HighRareLostLost070black shFraxinus nigraWSHMedium0.10.90.4Very Lg. dec.Very Lg. dec.HighRarePoorPoorPoor070black shFraxinus nigraWSHMedium0.10.30.1Very Lg. dec.Very Lg. dec.HighRarePoorPoorPoor073serviceberryAmelanchier spp.NSLLow0.50.30.3UnknownLowNo hangeMediumRareFiA OnlyFIA Only74serviceberryAmelanchier spp.NSLLow0.50.30.3UnknownLowRareFiA OnlyFIA <only< td="">77serviceberryAmelanchier spp.NSLLow0.50.30.5Lg. inc.HighRarePoor<t< td=""><td>black walnut</td><td>Juglans nigra</td><td>WDH</td><td>Low</td><td>1.5</td><td>2.4</td><td>1.6 Sm. dec.</td><td>Sm. dec.</td><td>Medium</td><td>Rare</td><td>Very Poor</td><td>Very Poor</td><td></td><td></td><td>0 65</td></t<></only<>	black walnut	Juglans nigra	WDH	Low	1.5	2.4	1.6 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 65
Wild plumPrinus americanaNSLXFIA0.71.30.2UnknownMediumRareFIA OnlyFIA OnlyFIA OnlyFIA Only0.68cittarwood/gum buneliaSideroxylon lanuginosum ssp. NSLLow0.81.21.1Lg. inc.Lg. inc.HighRareGoodGood2.69American basswoodTilia americanaWSLMedium1.30.00.5Lg. dec.Lg. dec.MediumRareVery PoorVery Poor0.70Sugar mapleAcer saccharumWDHHigh10.90.8Sm. dec.Sm. dec.HighRarePoorPoorPoor0.72black ashFraxinus nigraWSHMedium0.50.40.8No changeNo changeNoRareVery PoorVery PoorVery Poor0.73hackberryCeltis occidentalisWDHMedium0.10.30.1Very Lg. dec.Very Lg. dec.HighRareFairPoor0.73ogeechee tupeloNyssa ogecheNSLLow0.30.1Very Lg. dec.Lg. inc.MediumRareFiarPoor0.77silve oakQuercus wuehlenbergiiNSLMedium0.30.30.3No hangeMediumRareFiarPoorVery Poor0.77silve balQuercus wuehlenbergiiNSLMedium0.50.30.5Lg. inc.Hg. inc.MediumRareFiarPoorVery Poor <td>swamp white oak</td> <td>Quercus bicolor</td> <td>NSL</td> <td>Low</td> <td>0.9</td> <td>2.2</td> <td>2.2 Sm. dec.</td> <td>Sm. dec.</td> <td>Medium</td> <td>Rare</td> <td>Very Poor</td> <td>Very Poor</td> <td></td> <td></td> <td>0 66</td>	swamp white oak	Quercus bicolor	NSL	Low	0.9	2.2	2.2 Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0 66
cittamwood/gum bumeliaSideroxylon lanuginosum ssp. NSLLow0.81.21.1 Lg. inc.Lg. inc.HighRareGoodGood269American basswoodTilia americanaWSLMedium1.31.00.5 Lg. dec.Lg. dec.MediumRareVery PoorVery PoorVery Poor0.70bluejack oakQuercus incanaNSLLow1.40.90.4 Very Lg. dec.Very Lg. dec.MediumRareLostLost0.71sugar mapleAcer saccharumWDHHigh10.90.8 Sm. dec.Sm. dec.HighRarePoorPoor0.720.73black ashFraxinus nigraWDHMedium0.50.40.8 No changeNoRareVery PoorVery Poor0.73hackberryCeltis occidentalisWDHMedium0.10.30.1 Very Lg. dec.Very Lg. dec.HighRareLostLost0.74serviceberryAmelanchier spp.NSLLow0.50.30.6 Sm. inc.No changeMediumRareFiA OnlyFiA OnlyFiA Only77live oakQuercus wuehlenbergiiNSLMedium0.40.20.4 No changeSm. dec.MediumRarePoorVery Poor0.72live oakQuercus wuehlenbergiiNSLHigh0.50.30.5 Lg. inc.Lg. dec.MediumRarePoorVery Poor0.77live oakQuercus wuehlenbergiiN	sourwood	Oxydendrum arboreum	NDL	High	1.8	2.1	0.9 Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0 67
American basswoodTilia americanaWSLMedium1.31.00.5Lg. dec.Lg. dec.MediumRareVery PoorVery PoorVery Poor070bluejack oakQuercus incanaNSLLow1.40.90.4Very Lg. dec.Very Lg. dec.MediumRareLost0.510.71sugar mapleAcer saccharumWDHHigh10.90.8Sm. dec.Sm. dec.HighRarePoorPoor0.72hackberryCeltis occidentalisWDHMedium0.50.40.8No changeNo changeNa RareVery PoorVery Poor0.73hackberryCeltis occidentalisWDHMedium0.10.30.1Very Lg. dec.HighRareLostLost0.74ogeechee tupeloNysas ogecheNSLFIA0.30.30.3UnknownLowRareFiA OnlyFIA Only76live oakQuercus virginianaNDHHigh0.50.30.5Lg. dec.Lg. dec.MediumRareFoor0.720.75scarlet oakQuercus virginianaNDHHigh0.50.30.5Lg. dec.Lg. dec.HediumRareFoor0.720.75scarlet oakQuercus virginianaNDHHigh0.50.30.5Lg. dec.Lg. dec.MediumRareFoorVery Poor0.72silve bellHalesia spp.NSLKedum	wild plum	Prunus americana	NSLX	FIA	0.7	1.3	0.2 Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0 68
bluejack oakQuercus incanaNSLLow1.40.90.4Very Lg. dec.Very Lg. dec.MediumRareLostLost0.71sugar mapleAcer saccharumWDHHigh10.90.8Sm. dec.Sm. dec.HighRarePoorPoorPoor0.72black ashFraxinus nigraWSHMedium0.50.40.8Nc hangeNc hangeNc mageLostLost0.73hackberryCeltis occidentalisWDHMedium0.50.30.1Very Lg. dec.Very Lg. dec.HighRareLostLost0.73ogeechee tupeloNysa ogecheNSLLow0.50.30.6Sm. inc.No changeMediumRareFIA OnlyFIA OnlyFIA Only076chinkapin oakQuercus virginianaNDHHigh0.50.30.5Lg. dec.Lg. dec.MediumRareFIA OnlyFIA Only71075live oakQuercus virginianaNDHHigh0.50.30.5Lg. dec.MediumRarePoorVery PoorVery Poor077silverbellHaleia spp.NSLMedium00.30.5Lg. dec.MediumRarePoorPoor073silverbellHaleia spp.NSLLow0.50.20.4No changeMediumRarePoorPoor073silverbellHaleia sp	cittamwood/gum bumelia	Sideroxylon lanuginosum ssp	. NSL	Low	0.8	1.2	1.1 Lg. inc.	Lg. inc.	High	Rare	Good	Good			2 69
sugar mapleAcer saccharumWDHHigh10.90.8Sm. dec.Sm. dec.HighRarePoorPoorPoorPoor0.72black ashFraxinus nigraWSHMedium0.50.40.8No changeNo changeLowRareVery PoorVery PoorVery Poor073hackberryCeltis occidentalisWDHMedium0.10.30.1Very Lg. dec.HighRareLostLost074serviceberryAmelanchier spp.NSLLow0.50.30.6Sm. inc.No changeMediumRareFairPoorVery Poor075geeche tupeloNyssa ogecheNSLKIKI.40.30.30.3UnknownLowNaknownLow076chinkapin oakQuercus virginianaNDHHigh0.50.30.5Lg. inc.MediumRareYeny PoorVery Poor077live oakQuercus virginianaNDHHigh0.50.30.5Lg. inc.MediumRarePoorVery PoorVery Poor077silverbellHalesia spp.NSLLow0.50.20.4No changeSm. dec.MediumRarePoorVery PoorVery Poor078geavpawAsimina trilobaNSLLow0.50.20.4No changeSm. dec.MediumRarePoorVery PoorVe	American basswood	Tilia americana	WSL	Medium	1.3	1.0	0.5 Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0 70
black ashFraxinus nigraWSHMedium0.50.40.8No changeNo changeLowRareVery PoorVery PoorVery Poor0073hackberryCeltis occidentalisWDHMedium0.10.30.1Very Lg. dec.Very Lg. dec.HighRareLost0.50.74serviceberryAmelanchier spp.NSLLow0.50.30.5Sm. inc.No changeMediumRareFairPoor0.75ogeechee tupeloNyssa ogecheNSLFIA0.30.30.3UnknownLowRareFIA OnlyFIA Only0.76chinkapin oakQuercus muehlenbergiiNSLMedium0.30.1Lg. dec.Lg. dec.MediumRareFoorVery PoorVery Poor0.77live oakQuercus coccineaWDHHigh0.50.30.5Lg. inc.Lg. dec.MediumRareGoodGood278scarlet oakQuercus coccineaWDLMedium0.40.20.4No changeMediumRarePoorVery PoorVery Poor0080pawpawAsimia trilobaNSLLow0.50.20.4No changeMediumRareFIA OnlyFIA Only0082chestnut oakQuercus prinusNDHHigh0.50.10.2UnknownMkeiumNARareFIA OnlyFIA Only00 <td>bluejack oak</td> <td>Quercus incana</td> <td>NSL</td> <td>Low</td> <td>1.4</td> <td>0.9</td> <td>0.4 Very Lg. dec.</td> <td>Very Lg. dec.</td> <td>Medium</td> <td>Rare</td> <td>Lost</td> <td>Lost</td> <td></td> <td></td> <td>0 71</td>	bluejack oak	Quercus incana	NSL	Low	1.4	0.9	0.4 Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0 71
hackberryCeltis occidentalisWDHMedium0.10.30.1Very Lg. dec.Very Lg. dec.HighRareLostLost0.10.74serviceberryAmelanchier spp.NSLLow0.50.30.6Sm. inc.No changeMediumRareFairPoor0.750.75ogeechee tupeloNyssa ogecheNSLFIA0.30.30.30.4Very Lg. dec.MediumRareFairPoor0.760.76chinkapin oakQuercus muehlenbergiiNSLMedium00.30.1Lg. dec.Lg. dec.MediumRareGoodGood2.78live oakQuercus coccineaWDLMedium0.40.20.4No changeMediumRarePoorVery Poor0.707.7silverbellHalesia spp.NSLLow0.50.30.5Lg. inc.MediumRarePoorVery Poor0.700.79pawpawAsimina trilobaNSLLow0.50.20.4No changeMediumRarePoorVery Poor0.700.81Carolina ashFraxinus carolinianaNSLLow0.50.10.2M. changeMediumNaRarePoorVery Poor0.81Carolina ashFraxinus carolinianaNSLLow0.50.10.2LnknownUnknownNARarePoorPoor0.900.81Carolina ashFrax	sugar maple	Acer saccharum	WDH	High	1	0.9	0.8 Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0 72
serviceberryAmelanchier spp.NSLLow0.50.30.6Sm. inc.No changeMediumRareFairPoor0075ogeechee tupeloNyssa ogecheNSLXFIA0.30.30.3UnknownUnknownLowRareFIA OnlyFIA OnlyFIA Only076chinkapin oakQuercus muehlenbergiiNSLMedium00.30.1Lg. dec.Lg. dec.MediumRareVery PoorVery Poor0077live oakQuercus virginianaNDHHigh0.50.30.5Lg. inc.Lg. inc.MediumRareGoodGood278scarlet oakQuercus coccineaWDLMedium0.40.20.4No changeMediumRarePoorVery PoorVery Poor0098pawpawAsimina trilobaNSLLow0.50.20.4No changeMediumRarePoorVery PoorVery Poor0081Carolina ashFraxinus carolinianaNSLLow0.50.10.2UnknownUnknownNARarePiorPoorPoor0082chestnut oakQuercus prinusNDHHigh0.50.10.2Lg. dec.HighAbsentNew HabitatNew HabitatNew HabitatMediumAbsentNew HabitatNew HabitatSaSaSaSaSaSaSa <t< td=""><td>black ash</td><td>Fraxinus nigra</td><td>WSH</td><td>Medium</td><td>0.5</td><td>0.4</td><td>0.8 No change</td><td>No change</td><td>Low</td><td>Rare</td><td>Very Poor</td><td>Very Poor</td><td></td><td></td><td>0 73</td></t<>	black ash	Fraxinus nigra	WSH	Medium	0.5	0.4	0.8 No change	No change	Low	Rare	Very Poor	Very Poor			0 73
ogechee tupeloNyssa ogecheNSLXFIA0.30.30.3UnknownUnknownLowRareFIA OnlyFIA OnlyFIA Only0076chinkapin oakQuercus muehlenbergiiNSLMedium00.30.1Lg. dec.Lg. dec.MediumRareVery PoorVery PoorVery Poor0077live oakQuercus virginianaNDHHigh0.50.30.5Lg. inc.Lg. dec.MediumRareGoodGood278scarlet oakQuercus coccineaWDLMedium0.40.20.4No changeSm. dec.MediumRarePoorVery PoorVery Poor0079silverbellHalesia spp.NSLLow0.50.20.4No changeSm. dec.MediumRarePoorPoorPoor0080pawpawAsimina trilobaNSLLow0.50.10.2Sm. dec.Lg. dec.MediumRarePoorPoorPoor0081Carolina ashFraxinus carolinianaNSLFIA0.50.10.2Lg. dec.Lg. dec.HighRarePoorPoorPoor0082chestnut oakQuercus prinusNDHHigh0.50.10.2Lg. dec.Lg. dec.HighRarePoorPoorPoor0083striped mapleAcer pensylvanicumN	hackberry	Celtis occidentalis	WDH	Medium	0.1	0.3	0.1 Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0 74
Chinkapin oakQuercus muehlenbergiiNSLMedium00.30.1 Lg. dec.Lg. dec.MediumRareVery PoorVery Poor0077live oakQuercus virginianaNDHHigh0.50.30.5 Lg. inc.Lg. inc.MediumRareGoodGood278scarlet oakQuercus coccineaWDLMedium0.40.20.4 No changeSm. dec.MediumRarePoorVery PoorVery Poor079silverbellHalesia spp.NSLLow0.50.20.4 No changeNo changeMediumRarePoorPoorPoor0080pawpawAsimina trilobaNSLLow0.50.10.2 Sm. dec.Lg. dec.Ig. dec.HighRarePoorVery PoorVery Poor0080Carolina ashFraxinus carolinianaNSLFIA0.50.10.2 UnknownUnknownNARareFIA OnlyFIA Only082chestnut oakQuercus prinusNDHHigh0.50.10.2 Lg. dec.Lg. dec.HighRarePoorPoorPoor0083striped mapleAcer pensylvanicumNSLLow000New HabitatMediumAbsentNew HabitatNew Habitat384yellow-poplarLiriodendron tulipiferaWDHHigh000New HabitatNew HabitatNew Habi	serviceberry	Amelanchier spp.	NSL	Low	0.5	0.3	0.6 Sm. inc.	No change	Medium	Rare	Fair	Poor			0 75
Ive oakQuercus virginianaNDHHigh0.50.30.5 Lg. inc.Lg. inc.MediumRareGoodGood278scarlet oakQuercus coccineaWDLMedium0.40.20.4 No changeSm. dec.MediumRarePoorVery Poor0079silverbellHalesia spp.NSLLow0.50.20.4 No changeNo changeMediumRarePoorPoorPoor0080pawpawAsimina trilobaNSLLow0.40.10.2 Sm. dec.Lg. dec.MediumRareVery PoorVery Poor0081Carolina ashFraxinus carolinianaNSLFIA0.50.10.2 Lg. dec.Lg. dec.HighRarePoorPoor0082chestnut oakQuercus prinusNDHHigh0.50.10.2 Lg. dec.Lg. dec.HighRarePoorPoor0083striped mapleAcer pensylvanicumNSLMedium000New HabitatMediumAbsentNew HabitatNew Habitat384shellbark hickoryCarya laciniosaNSLLow000New HabitatNew HabitatNew HabitatNew Habitat386yellow-poplarLiriodendron tulipiferaWDHHigh000NenwMediumAbsentNew HabitatNew Habitat386yello	ogeechee tupelo	Nyssa ogeche	NSLX	FIA	0.3	0.3	0.3 Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0 76
Scarlet oakQuercus occineaWDLMedium0.40.20.4 No changeSm. dec.MediumRarePoorVery Poor0079silverbellHalesia spp.NSLLow0.50.20.4 No changeNo changeMediumRarePoorPoorPoor0080pawpawAsimina trilobaNSLLow0.40.10.2 Sm. dec.Lg. dec.MediumRareVery PoorVery Poor0081Carolina ashFraxinus carolinianaNSLFIA0.50.10.2 Lg. dec.Lg. dec.HighRarePoorPoorPoor0082chestnut oakQuercus prinusNDHHigh0.50.10.2 Lg. dec.Lg. dec.HighRarePoorPoorPoor0083striped mapleAcer pensylvanicumNSLLow000New HabitatMediumAbsentNew HabitatNew Habitat384shellbark hickoryCarya laciniosaNSLLow000New HabitatNew HabitatNew HabitatNew HabitatNew HabitatNew HabitatNew Habitat386yellow-poplarLiriodendron tulipiferaWDHHigh000New HabitatNew HabitatNew HabitatNew HabitatNew Habitat386cucumbertreeMagnolia acuminataNSLLow000UnknownMe	chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0.3	0.1 Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0 77
SilverbellHalesia spp.NSLLow0.50.20.4 No changeNo changeMediumRarePoorPoorPoor00081pawpawAsimina trilobaNSLLow0.40.10.2 Sm. dec.Lg. dec.MediumRareVery PoorVery PoorVery Poor081Carolina ashFraxinus carolinianaNSLFIA0.50.10.2 UnknownUnknownNARareFIA OnlyFIA Only082chestnut oakQuercus prinusNDHHigh0.50.10.2 Lg. dec.Lg. dec.HighRarePoorPoor083striped mapleAcer pensylvanicumNSLMedium000 New HabitatNew HabitatNew HabitatNew HabitatNew HabitatNew HabitatNew Habitat84shellbark hickoryCarya laciniosaNSLLow000 New HabitatNew HabitatNew HabitatNew HabitatNew HabitatNew Habitat384yellow-poplarLiriodendron tulipiferaWDHHigh000 New HabitatNew HabitatNew HabitatNew HabitatNew HabitatNew HabitatNew HabitatNew Habitat386cucumbertreeMagnolia acuminataNSLLow00NuknownUnknownMediumAbsentUnknownUnknown087vertreeMagnolia acuminataNSLLow00Nuknown <td< td=""><td>live oak</td><td>Quercus virginiana</td><td>NDH</td><td>High</td><td>0.5</td><td>0.3</td><td>0.5 Lg. inc.</td><td>Lg. inc.</td><td>Medium</td><td>Rare</td><td>Good</td><td>Good</td><td></td><td></td><td>2 78</td></td<>	live oak	Quercus virginiana	NDH	High	0.5	0.3	0.5 Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2 78
pawpawAsimina trilobaNSLLow0.40.10.2 Sm. dec.Lg. dec.MediumRareVery PoorVery Poor0081Carolina ashFraxinus carolinianaNSLFIA0.50.10.2 UnknownUnknownNARareFIA OnlyFIA Only6882chestnut oakQuercus prinusNDHHigh0.50.10.2 Lg. dec.Lg. dec.HighRarePoorPoor083striped mapleAcer pensylvanicumNSLMedium000 New HabitatNew HabitatNew HabitatNew HabitatNew HabitatNew Habitat84shellbark hickoryCarya laciniosaNSLLow000 UnknownUnknownMediumAbsentUnknownUnknown085yellow-poplarLiriodendron tulipiferaWDHHigh000 UnknownUnknownMediumAbsentNew HabitatNew Habitat386cucumbertreeMagnolia acuminataNSLLow00UnknownUnknownMediumAbsentUnknownUnknown087	scarlet oak	Quercus coccinea	WDL	Medium	0.4	0.2	0.4 No change	Sm. dec.	Medium	Rare	Poor	Very Poor			0 79
Carolina ashFraxinus carolinianaNSLFIA0.50.10.2 UnknownNARareFIA OnlyFIA OnlyFIA Only0082chestnut oakQuercus prinusNDHHigh0.50.10.2 Lg. dec.Lg. dec.HighRarePoorPoor0083striped mapleAcer pensylvanicumNSLMedium000 New HabitatNew Habitat	silverbell	Halesia spp.	NSL	Low	0.5	0.2	0.4 No change	No change	Medium	Rare	Poor	Poor			0 80
Chestnut oakQuercus prinusNDHHigh0.50.10.2 Lg. dec.Lg. dec.HighRarePoorPoorPoorPoor0083striped mapleAcer pensylvanicumNSLMedium000 New HabitatNew	pawpaw	Asimina triloba	NSL	Low	0.4	0.1	0.2 Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0 81
Acer pensylvanicumNSLMedium000New HabitatNew Ha	Carolina ash	Fraxinus caroliniana	NSL	FIA	0.5	0.1	0.2 Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0 82
shellbark hickory Carya laciniosa NSL Low 0 0 0 Unknown Unknown Medium Absent Unknown Unknown 0 85 yellow-poplar Liriodendron tulipifera WDH High 0 0 0 New Habitat New Habitat High Absent New Habitat New Habitat 0 3 86 cucumbertree Magnolia acuminata NSL Low 0 0 0 Unknown Unknown Medium Absent Unknown Unknown 0 87	chestnut oak	Quercus prinus	NDH	High	0.5	0.1	0.2 Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0 83
yellow-poplar Liriodendron tulipifera WDH High 0 0 0 New Habitat New Habitat High Absent New Habitat New Habitat 0 3 86 cucumbertree Magnolia acuminata NSL Low 0 0 0 Unknown Unknown Medium Absent Unknown Unknown 0 87	striped maple	Acer pensylvanicum	NSL	Medium	0	0	0 New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3 84
cucumbertree Magnolia acuminata NSL Low 0 0 0 Unknown Unknown Medium Absent Unknown Unknown 0 87	shellbark hickory	Carya laciniosa	NSL	Low	0	0	0 Unknown	Unknown	Medium	Absent	Unknown	Unknown			0 85
	yellow-poplar	Liriodendron tulipifera	WDH	High	0	0	0 New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3 86
bigleaf magnolia Magnolia macrophylla NSL Low 0 0 0 New Habitat New Habitat Medium Absent New Habitat New Habitat 3 88	cucumbertree	Magnolia acuminata	NSL	Low	0	0	0 Unknown	Unknown	Medium	Absent	Unknown	Unknown			0 87
	bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0 New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3 88

