

sq. km sq. mi FIA Plots
 Area of Region 8,200.0 3,166.0 178

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.

| Genus | Species | Abundance | Model | | Potential Change in Habitat Suitability | | Capability to Cope or Persist | | Migration Potential | | | | |
|---------|-----------|------------|-------------|--------------|---|----------------|-------------------------------|----------------|---------------------|-------------|---------|-----------|-----------|
| | | | Reliability | Adaptability | Scenario RCP45 | Scenario RCP85 | Scenario RCP45 | Scenario RCP85 | SHIFT RCP45 | SHIFT RCP85 | | | |
| Ash | 2 | | High | 20 | Increase | 20 | 23 | Very Good | 7 | 10 | Likely | 0 | 0 |
| Hickory | 5 | | Medium | 27 | No Change | 10 | 10 | Good | 16 | 18 | Infill | 38 | 39 |
| Maple | 6 | Abundant 6 | Low | 31 | Decrease | 27 | 24 | Fair | 11 | 8 | Migrate | 7 | 6 |
| Oak | 11 | Common 27 | FIA | 2 | New | 12 | 13 | Poor | 13 | 10 | | | |
| Pine | 5 | Rare 26 | | | Unknown | 11 | 10 | Very Poor | 7 | 7 | | | |
| Other | 30 | Absent 19 | | | | | | FIA Only | 1 | 1 | | | |
| | 59 | 78 | | 80 | 79 | | 80 | 80 | 64 | 62 | | 45 | 45 |

Potential Changes in Climate Variables

Temperature (°F)

| | Scenario | 2009 | 2039 | 2069 | 2099 | |
|--------------------------|----------|------|------|------|------|--|
| Annual Average | CCSM45 | 59.6 | 61.4 | 63.5 | 63.6 | |
| | CCSM85 | 59.6 | 61.8 | 64.2 | 67.1 | |
| | GFDL45 | 59.6 | 62.8 | 64.7 | 65.5 | |
| | GFDL85 | 59.6 | 62.6 | 65.8 | 69.6 | |
| | HAD45 | 59.6 | 61.9 | 64.9 | 66.3 | |
| HAD85 | 59.6 | 62.2 | 66.2 | 70.4 | | |
| Growing Season (May—Sep) | CCSM45 | 73.9 | 75.7 | 77.5 | 78.0 | |
| | CCSM85 | 73.9 | 75.9 | 78.4 | 82.1 | |
| | GFDL45 | 73.9 | 77.5 | 79.5 | 80.8 | |
| | GFDL85 | 73.9 | 77.3 | 80.9 | 85.2 | |
| | HAD45 | 73.9 | 76.9 | 79.7 | 81.4 | |
| HAD85 | 73.9 | 76.9 | 82.3 | 86.8 | | |
| Coldest Month (Average) | CCSM45 | 38.6 | 40.9 | 41.7 | 41.8 | |
| | CCSM85 | 38.6 | 41.0 | 42.0 | 43.1 | |
| | GFDL45 | 38.6 | 41.9 | 42.1 | 42.8 | |
| | GFDL85 | 38.6 | 40.7 | 41.6 | 42.6 | |
| | HAD45 | 38.6 | 39.1 | 40.9 | 41.2 | |
| HAD85 | 38.6 | 39.7 | 40.9 | 42.5 | | |
| Warmest Month (Average) | CCSM45 | 79.1 | 81.1 | 82.2 | 82.2 | |
| | CCSM85 | 79.1 | 81.3 | 82.9 | 84.6 | |
| | GFDL45 | 79.1 | 82.1 | 83.1 | 84.1 | |
| | GFDL85 | 79.1 | 82.6 | 84.6 | 87.1 | |
| | HAD45 | 79.1 | 82.5 | 84.3 | 85.0 | |
| HAD85 | 79.1 | 83.2 | 86.5 | 89.1 | | |

Precipitation (in)

| | Scenario | 2009 | 2039 | 2069 | 2099 | |
|--------------------------|----------|------|------|------|------|--|
| Annual Total | CCSM45 | 44.2 | 48.2 | 50.6 | 52.1 | |
| | CCSM85 | 44.2 | 48.9 | 51.7 | 57.1 | |
| | GFDL45 | 44.2 | 49.2 | 53.0 | 55.8 | |
| | GFDL85 | 44.2 | 48.3 | 54.5 | 54.8 | |
| | HAD45 | 44.2 | 46.4 | 47.9 | 48.1 | |
| HAD85 | 44.2 | 48.5 | 45.1 | 47.1 | | |
| Growing Season (May—Sep) | CCSM45 | 19.6 | 22.7 | 24.2 | 25.5 | |
| | CCSM85 | 19.6 | 22.3 | 23.2 | 25.9 | |
| | GFDL45 | 19.6 | 23.2 | 25.8 | 26.8 | |
| | GFDL85 | 19.6 | 22.1 | 26.9 | 27.0 | |
| | HAD45 | 19.6 | 20.2 | 20.3 | 21.2 | |
| HAD85 | 19.6 | 22.2 | 19.3 | 19.0 | | |

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

| Common Name | Scientific Name | Range | MR | %Cell | FIAsum | FIAiv | ChngCl45 | ChngCl85 | Adap | Abund | Capabil45 | Capabil85 | SHIFT45 | SHIFT85 | SSO | N |
|----------------------------|-------------------------|-------|--------|-------|--------|-------|---------------|---------------|--------|----------|-----------|-----------|-----------|-----------|-----|----|
| sweetgum | Liquidambar styraciflua | WDH | High | 84.1 | 1066.2 | 14.4 | No change | No change | Medium | Abundant | Good | Good | Infill ++ | Infill ++ | 1 | 1 |
| loblolly pine | Pinus taeda | WDH | High | 37.8 | 765.9 | 21.5 | Lg. inc. | Lg. inc. | Medium | Abundant | Very Good | Very Good | Infill ++ | Infill ++ | 1 | 2 |
| yellow-poplar | Liriodendron tulipifera | WDH | High | 73.2 | 690.7 | 11.1 | Lg. dec. | Lg. dec. | High | Abundant | Good | Good | Infill ++ | Infill ++ | 1 | 3 |
| shortleaf pine | Pinus echinata | WDH | High | 62.2 | 689.7 | 13.3 | Sm. inc. | Sm. inc. | Medium | Abundant | Very Good | Very Good | Infill ++ | Infill ++ | 1 | 4 |
| white oak | Quercus alba | WDH | Medium | 74.4 | 642.5 | 10.2 | Sm. dec. | Sm. dec. | High | Abundant | Good | Good | Infill ++ | Infill ++ | 1 | 5 |
| red maple | Acer rubrum | WDH | High | 79.3 | 589.4 | 8.5 | Sm. dec. | Sm. dec. | High | Abundant | Good | Good | Infill ++ | Infill ++ | 1 | 6 |
| eastern redcedar | Juniperus virginiana | WDH | Medium | 70.7 | 466.8 | 7.7 | No change | Sm. inc. | Medium | Common | Fair | Good | Infill + | Infill ++ | 1 | 7 |
| Virginia pine | Pinus virginiana | NDH | High | 59.8 | 409.5 | 8.2 | Lg. dec. | Lg. dec. | Medium | Common | Poor | Poor | Infill + | Infill + | 0 | 8 |
| southern red oak | Quercus falcata | WDL | Medium | 61 | 246.0 | 4.8 | Sm. inc. | Lg. inc. | High | Common | Very Good | Very Good | Infill ++ | Infill ++ | 1 | 9 |
| black cherry | Prunus serotina | WDL | Medium | 73.2 | 219.0 | 3.4 | No change | No change | Low | Common | Poor | Poor | Infill + | Infill + | 0 | 10 |
| white ash | Fraxinus americana | WDL | Medium | 41.5 | 218.5 | 6.9 | Sm. dec. | Sm. dec. | Low | Common | Poor | Poor | Infill + | Infill + | 0 | 11 |
| winged elm | Ulmus alata | WDL | Medium | 52.4 | 186.8 | 4.0 | Lg. inc. | Lg. inc. | Medium | Common | Very Good | Very Good | Infill ++ | Infill ++ | 1 | 12 |
| northern red oak | Quercus rubra | WDH | Medium | 53.7 | 178.5 | 4.1 | Sm. dec. | Sm. dec. | High | Common | Fair | Fair | Infill + | Infill + | 1 | 13 |
| pignut hickory | Carya glabra | WDL | Medium | 57.3 | 152.4 | 3.3 | No change | No change | Medium | Common | Fair | Fair | Infill + | Infill + | 1 | 14 |
| flowering dogwood | Cornus florida | WDL | Medium | 68.3 | 133.8 | 2.4 | No change | No change | Medium | Common | Fair | Fair | Infill + | Infill + | 1 | 15 |
| American beech | Fagus grandifolia | WDH | High | 42.7 | 124.4 | 3.9 | Sm. dec. | No change | Medium | Common | Poor | Fair | Infill + | Infill + | 2 | 16 |
| green ash | Fraxinus pennsylvanica | WSH | Low | 20.7 | 123.5 | 5.7 | Sm. inc. | Lg. inc. | Medium | Common | Good | Very Good | Infill ++ | Infill ++ | 1 | 17 |
| sourwood | Oxydendrum arboreum | NDL | High | 51.2 | 119.6 | 3.0 | Sm. dec. | Sm. dec. | High | Common | Fair | Fair | Infill + | Infill + | 1 | 18 |
| shagbark hickory | Carya ovata | WSL | Medium | 14.6 | 118.1 | 7.7 | Lg. dec. | Lg. dec. | Medium | Common | Poor | Poor | Infill + | Infill + | 2 | 19 |
| mockernut hickory | Carya alba | WDL | Medium | 45.1 | 113.7 | 3.0 | Lg. inc. | Lg. inc. | High | Common | Very Good | Very Good | Infill ++ | Infill ++ | 1 | 20 |
| post oak | Quercus stellata | WDH | High | 35.4 | 99.2 | 3.5 | Lg. inc. | Lg. inc. | High | Common | Very Good | Very Good | Infill ++ | Infill ++ | 2 | 21 |
| American elm | Ulmus americana | WDH | Medium | 45.1 | 94.2 | 2.8 | Sm. inc. | Lg. inc. | Medium | Common | Good | Very Good | Infill ++ | Infill ++ | 2 | 22 |
| ailanthus | Ailanthus altissima | NSL | FIA | 12.2 | 80.7 | 9.0 | Unknown | Unknown | NA | Common | NNIS | NNIS | | | 0 | 23 |
| scarlet oak | Quercus coccinea | WDL | Medium | 24.4 | 77.0 | 4.4 | Lg. dec. | Lg. dec. | Medium | Common | Poor | Poor | Infill + | Infill + | 2 | 24 |
| blackgum | Nyssa sylvatica | WDL | Medium | 48.8 | 71.3 | 1.7 | Lg. inc. | Lg. inc. | High | Common | Very Good | Very Good | Infill ++ | Infill ++ | 1 | 25 |
| willow oak | Quercus phellos | NSL | Low | 25.6 | 69.1 | 3.7 | No change | Sm. inc. | Medium | Common | Fair | Good | Infill + | Infill ++ | 1 | 26 |
| sycamore | Platanus occidentalis | NSL | Low | 13.4 | 67.1 | 4.8 | Sm. dec. | Sm. inc. | Medium | Common | Poor | Good | Infill + | Infill ++ | 2 | 27 |
| black walnut | Juglans nigra | WDL | Low | 14.6 | 66.7 | 6.0 | Lg. dec. | Lg. dec. | Medium | Common | Poor | Poor | | | 0 | 28 |
| American hornbeam; musclev | Carpinus caroliniana | WSH | Low | 22 | 66.6 | 2.9 | Sm. inc. | Lg. inc. | Medium | Common | Good | Very Good | Infill ++ | Infill ++ | 1 | 29 |
| chestnut oak | Quercus prinus | NDH | High | 14.6 | 64.7 | 6.0 | Sm. dec. | Sm. dec. | High | Common | Fair | Fair | Infill + | Infill + | 2 | 30 |
| florida maple | Acer barbatum | NSL | Low | 13.4 | 64.3 | 4.6 | Lg. dec. | Sm. dec. | High | Common | Fair | Fair | | Infill + | 2 | 31 |
| hackberry | Celtis occidentalis | WDH | Medium | 19.5 | 59.9 | 3.9 | Sm. dec. | No change | High | Common | Fair | Good | Infill + | Infill ++ | 2 | 32 |
| boxelder | Acer negundo | WSH | Low | 9.8 | 56.5 | 5.5 | No change | No change | High | Common | Good | Good | Infill ++ | Infill ++ | 2 | 33 |
| slippery elm | Ulmus rubra | WSL | Low | 12.2 | 48.5 | 5.7 | Lg. dec. | Sm. dec. | Medium | Rare | Very Poor | Very Poor | | | 2 | 34 |
| black oak | Quercus velutina | WDH | High | 20.7 | 45.6 | 3.6 | Lg. inc. | Lg. inc. | Medium | Rare | Good | Good | Infill ++ | Infill ++ | 2 | 35 |
| common persimmon | Diospyros virginiana | NSL | Low | 19.5 | 42.6 | 2.6 | Lg. dec. | Lg. dec. | High | Rare | Poor | Poor | | Infill + | 1 | 36 |
| black willow | Salix nigra | NSH | Low | 3.7 | 38.0 | 9.9 | Sm. dec. | No change | Low | Rare | Very Poor | Very Poor | | | 2 | 37 |
| sugarberry | Celtis laevigata | NDH | Medium | 2.4 | 34.7 | 13.5 | Sm. inc. | Lg. inc. | Medium | Rare | Fair | Good | Infill + | Infill ++ | 2 | 38 |
| eastern redbud | Cercis canadensis | NSL | Low | 13.4 | 25.2 | 1.8 | Lg. dec. | Sm. dec. | Medium | Rare | Very Poor | Very Poor | | | 0 | 39 |
| black locust | Robinia pseudoacacia | NDH | Low | 9.8 | 18.8 | 3.3 | Very Lg. dec. | Very Lg. dec. | Medium | Rare | Lost | Lost | | | 0 | 40 |
| red mulberry | Morus rubra | NSL | Low | 9.8 | 17.1 | 1.7 | No change | No change | Medium | Rare | Poor | Poor | Infill + | Infill + | 1 | 41 |
| water oak | Quercus nigra | WDH | High | 4.9 | 16.5 | 3.2 | Lg. inc. | Lg. inc. | Medium | Rare | Good | Good | Infill ++ | Infill ++ | 2 | 42 |
| sugar maple | Acer saccharum | WDH | High | 3.7 | 14.4 | 3.7 | Lg. dec. | Lg. dec. | High | Rare | Poor | Poor | | | 0 | 43 |
| river birch | Betula nigra | NSL | Low | 4.9 | 12.0 | 2.4 | Lg. inc. | Lg. inc. | Medium | Rare | Good | Good | | | 2 | 44 |
| pitch pine | Pinus rigida | NSH | High | 1.2 | 7.0 | 5.4 | No change | Sm. dec. | Medium | Rare | Poor | Very Poor | Infill + | | 2 | 45 |
| American holly | Ilex opaca | NSL | Medium | 8.5 | 6.9 | 1.4 | No change | No change | Medium | Rare | Poor | Poor | Infill + | Infill + | 1 | 46 |
| eastern hophornbeam; ironw | Ostrya virginiana | WSL | Low | 12.2 | 6.6 | 0.8 | Lg. inc. | Lg. inc. | High | Rare | Good | Good | Infill ++ | Infill ++ | 2 | 47 |

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 |
|-----------------------------|------------------------------|-------|--------|-------|--------|-------|---------------|---------------|--------|---------|-------------|-------------|------------|------------|-----|------|
| sassafras | Sassafras albidum | WSL | Low | 2.4 | 4.9 | 1.9 | Lg. inc. | Lg. inc. | Medium | Rare | Good | Good | | | | 2 48 |
| laurel oak | Quercus laurifolia | NDH | Medium | 2.4 | 4.2 | 1.6 | Lg. inc. | Lg. inc. | Medium | Rare | Good | Good | Infill ++ | | | 2 49 |
| eastern white pine | Pinus strobus | WDH | High | 1.2 | 3.2 | 2.5 | Very Lg. dec. | Very Lg. dec. | Low | Rare | Lost | Lost | | | | 0 50 |
| pawpaw | Asimina triloba | NSL | Low | 1.2 | 2.3 | 1.8 | Lg. dec. | Lg. dec. | Medium | Rare | Very Poor | Very Poor | | | | 0 51 |
| butternut | Juglans cinerea | NSLX | FIA | 1.2 | 1.4 | 1.1 | Unknown | Unknown | Low | Rare | FIA Only | FIA Only | | | | 0 52 |
| shellbark hickory | Carya laciniosa | NSL | Low | 1.2 | 1.1 | 0.9 | Lg. dec. | Lg. dec. | Medium | Rare | Very Poor | Very Poor | | | | 0 53 |
| honeylocust | Gleditsia triacanthos | NSH | Low | 1.2 | 1.0 | 0.8 | Lg. inc. | Lg. inc. | High | Rare | Good | Good | | | | 2 54 |
| blackjack oak | Quercus marilandica | NSL | Medium | 1.2 | 0.9 | 0.7 | Lg. inc. | Lg. inc. | High | Rare | Good | Good | | | | 2 55 |
| silver maple | Acer saccharinum | NSH | Low | 1.2 | 0.8 | 0.6 | Very Lg. dec. | Very Lg. dec. | High | Rare | Lost | Lost | | | | 0 56 |
| pecan | Carya illinoensis | NSH | Low | 1.2 | 0.8 | 0.6 | Lg. inc. | Lg. inc. | Low | Rare | Fair | Fair | Infill + | | | 2 57 |
| cucumbertree | Magnolia acuminata | NSL | Low | 1.2 | 0.7 | 0.5 | Lg. dec. | Very Lg. dec. | Medium | Rare | Very Poor | Lost | | | | 0 58 |
| striped maple | Acer pensylvanicum | NSL | Medium | 1.2 | 0.4 | 0.3 | Sm. dec. | Sm. dec. | Medium | Rare | Very Poor | Very Poor | | | | 0 59 |
| ashe juniper | Juniperus ashei | NDH | High | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | | | | 0 60 |
| slash pine | Pinus elliotii | NDH | High | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate + | Migrate + | | 3 61 |
| longleaf pine | Pinus palustris | NSH | Medium | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate ++ | Migrate ++ | | 3 62 |
| mountain maple | Acer spicatum | NSL | Low | 0 | 0 | 0 | Unknown | Unknown | High | Absent | Unknown | Unknown | | | | 0 63 |
| yellow buckeye | Aesculus flava | NSL | Low | 0 | 0 | 0 | Unknown | Unknown | Low | Absent | Unknown | Unknown | | | | 0 64 |
| serviceberry | Amelanchier spp. | NSL | Low | 0 | 0 | 0 | Unknown | Unknown | Medium | Absent | Unknown | Unknown | | | | 0 65 |
| yellow birch | Betula alleghaniensis | NDL | High | 0 | 0 | 0 | Unknown | Unknown | Medium | Absent | Unknown | Unknown | | | | 0 66 |
| cittamwood/gum bumelia | Sideroxylon lanuginosum ssp. | NSL | Low | 0 | 0 | 0 | New Habitat | New Habitat | High | Absent | New Habitat | New Habitat | | | | 0 67 |
| black hickory | Carya texana | NDL | High | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | | | | 0 68 |
| black ash | Fraxinus nigra | WSH | Medium | 0 | 0 | 0 | Unknown | New Habitat | Low | Absent | Unknown | New Habitat | | | | 3 69 |
| blue ash | Fraxinus quadrangulata | NSL | Low | 0 | 0 | 0 | Unknown | Unknown | Low | Absent | Unknown | Unknown | | | | 0 70 |
| silverbell | Halesia spp. | NSL | Low | 0 | 0 | 0 | Unknown | Unknown | Medium | Modeled | Unknown | Unknown | | | | 0 71 |
| southern magnolia | Magnolia grandiflora | NSL | Low | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate + | | | 3 72 |
| sweetbay | Magnolia virginiana | NSL | Medium | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate ++ | Migrate ++ | | 3 73 |
| swamp tupelo | Nyssa biflora | NDH | Medium | 0 | 0 | 0 | New Habitat | New Habitat | Low | Absent | New Habitat | New Habitat | Migrate ++ | | | 3 74 |
| pin cherry | Prunus pensylvanica | NSL | Low | 0 | 0 | 0 | Unknown | Unknown | Medium | Absent | Unknown | Unknown | | | | 0 75 |
| cherrybark oak; swamp red o | Quercus pagoda | NSL | Medium | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate ++ | Migrate ++ | | 3 76 |
| live oak | Quercus virginiana | NDH | High | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate + | Migrate ++ | | 3 77 |
| bluejack oak | Quercus incana | NSL | Low | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | | Migrate + | | 3 78 |
| American basswood | Tilia americana | WSL | Medium | 0 | 0 | 0 | Unknown | Unknown | Medium | Modeled | Unknown | Unknown | | | | 0 79 |
| cedar elm | Ulmus crassifolia | NDH | Medium | 0 | 0 | 0 | New Habitat | New Habitat | Low | Absent | New Habitat | New Habitat | | | | 0 80 |