

HUC 040103 Southwestern Lake Superior

HUC 6 Watershed Climate Change Atlas Tree Species

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Northern Research Station
Landscape Change Research Group
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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 |
|----------------------------|------------------------|-------|--------|-------|--------|-------|-------------|---------------|--------|----------|-------------|-------------|-----------|------------|-----|------|
| quaking aspen | Populus tremuloides | WDH | High | 97.5 | 2799.5 | 18.4 | Lg. dec. | Lg. dec. | Medium | Abundant | Fair | Fair | | | | 0 1 |
| red maple | Acer rubrum | WDH | High | 94.8 | 1323.5 | 9.0 | No change | No change | High | Abundant | Very Good | Very Good | | | | 1 2 |
| sugar maple | Acer saccharum | WDH | High | 72.2 | 1178.0 | 9.5 | No change | No change | High | Abundant | Very Good | Very Good | | | | 1 3 |
| balsam fir | Abies balsamea | NDH | High | 90.6 | 1117.0 | 8.1 | Lg. dec. | Lg. dec. | Low | Abundant | Poor | Poor | | | | 0 4 |
| black ash | Fraxinus nigra | WSH | Medium | 78.9 | 821.9 | 6.7 | Sm. dec. | Sm. dec. | Low | Abundant | Fair | Fair | | | | 0 5 |
| paper birch | Betula papyrifera | WDH | High | 83 | 664.2 | 5.1 | Sm. dec. | Sm. dec. | Medium | Abundant | Fair | Fair | | | | 0 6 |
| red pine | Pinus resinosa | NSH | Medium | 44.7 | 609.7 | 8.5 | Sm. dec. | Sm. dec. | Low | Abundant | Fair | Fair | | | | 0 7 |
| northern red oak | Quercus rubra | WDH | Medium | 63.4 | 381.3 | 4.0 | Lg. inc. | Sm. inc. | High | Common | Very Good | Very Good | | | | 1 8 |
| bigtooth aspen | Populus grandidentata | NSL | Medium | 52 | 360.2 | 5.0 | No change | No change | Medium | Common | Fair | Fair | | | | 1 9 |
| northern white-cedar | Thuja occidentalis | WSH | High | 39.6 | 338.9 | 4.8 | Sm. inc. | Sm. inc. | Medium | Common | Good | Good | | | | 1 10 |
| eastern white pine | Pinus strobus | WDH | High | 53.8 | 325.7 | 3.9 | Sm. inc. | Sm. inc. | Low | Common | Fair | Fair | | | | 1 11 |
| black spruce | Picea mariana | NSH | High | 35.7 | 277.3 | 4.4 | Lg. dec. | Lg. dec. | Medium | Common | Poor | Poor | | | | 0 12 |
| American basswood | Tilia americana | WSL | Medium | 54.6 | 273.7 | 3.4 | Sm. inc. | Sm. inc. | Medium | Common | Good | Good | | | | 1 13 |
| white spruce | Picea glauca | NSL | Medium | 63.7 | 247.7 | 2.1 | Sm. dec. | Sm. dec. | Medium | Common | Poor | Poor | | | | 0 14 |
| jack pine | Pinus banksiana | NSH | Medium | 15.7 | 236.8 | 9.9 | Sm. dec. | Sm. dec. | High | Common | Fair | Fair | | | | 1 15 |
| yellow birch | Betula alleghaniensis | NDL | High | 52.1 | 233.5 | 2.7 | Sm. dec. | Sm. dec. | Medium | Common | Poor | Poor | | | | 0 16 |
| tamarack (native) | Larix laricina | NSH | High | 29.6 | 189.1 | 3.7 | Sm. inc. | Sm. inc. | Low | Common | Fair | Fair | | | | 1 17 |
| eastern hemlock | Tsuga canadensis | NSH | High | 28.7 | 134.8 | 3.1 | Sm. inc. | Sm. inc. | Low | Common | Fair | Fair | | | | 1 18 |
| balsam poplar | Populus balsamifera | NSH | Medium | 18.4 | 127.9 | 3.0 | Lg. dec. | Lg. dec. | Medium | Common | Poor | Poor | | | | 0 19 |
| northern pin oak | Quercus ellipsoidalis | NSH | Medium | 20.5 | 126.4 | 4.1 | Lg. inc. | Sm. inc. | High | Common | Very Good | Very Good | Infill ++ | Infill ++ | | 1 20 |
| black cherry | Prunus serotina | WDL | Medium | 48.2 | 97.0 | 1.5 | Lg. inc. | Lg. inc. | Low | Common | Good | Good | | | | 1 21 |
| eastern hophornbeam; ironw | Ostrya virginiana | WDL | Low | 47.9 | 81.7 | 0.9 | Lg. inc. | Lg. inc. | High | Common | Very Good | Very Good | | | | 1 22 |
| American elm | Ulmus americana | WDL | Medium | 32 | 67.0 | 1.8 | Lg. inc. | Lg. inc. | Medium | Common | Very Good | Very Good | | | | 1 23 |
| white ash | Fraxinus americana | WDL | Medium | 26.1 | 61.3 | 1.7 | Lg. inc. | Lg. inc. | Low | Common | Good | Good | | | | 1 24 |
| green ash | Fraxinus pennsylvanica | WSH | Low | 35.3 | 52.3 | 1.1 | Lg. inc. | Lg. inc. | Medium | Common | Very Good | Very Good | | | | 1 25 |
| chokecherry | Prunus virginiana | NSLX | FIA | 25.4 | 33.6 | 1.1 | Unknown | Unknown | Medium | Rare | FIA Only | FIA Only | | | | 0 26 |
| serviceberry | Amelanchier spp. | NSL | Low | 32.1 | 27.4 | 0.6 | Lg. dec. | Very Lg. dec. | Medium | Rare | Very Poor | Lost | | | | 0 27 |
| bur oak | Quercus macrocarpa | NDH | Medium | 11.2 | 25.0 | 1.2 | Lg. inc. | Lg. inc. | High | Rare | Good | Good | Infill ++ | Infill ++ | | 2 28 |
| mountain maple | Acer spicatum | NSL | Low | 10 | 8.8 | 0.3 | Lg. dec. | Lg. dec. | High | Rare | Poor | Poor | | | | 1 29 |
| pin cherry | Prunus pensylvanica | NSL | Low | 10.7 | 6.6 | 0.5 | Lg. dec. | Very Lg. dec. | Medium | Rare | Very Poor | Lost | | | | 0 30 |
| Norway spruce | Picea abies | NSH | FIA | 1.2 | 5.2 | 4.4 | Unknown | Unknown | NA | Rare | NNIS | NNIS | | | | 0 31 |
| American hornbeam; musclev | Carpinus caroliniana | WSL | Low | 4.6 | 4.1 | 0.8 | No change | No change | Medium | Rare | Poor | Poor | Infill + | Infill + | | 1 32 |
| black willow | Salix nigra | NSH | Low | 1.9 | 2.6 | 0.9 | No change | Lg. inc. | Low | Rare | Very Poor | Fair | | Infill + | | 2 33 |
| boxelder | Acer negundo | WSH | Low | 1.7 | 1.8 | 0.5 | Lg. inc. | Lg. inc. | High | Rare | Good | Good | | | | 2 34 |
| peachleaf willow | Salix amygdaloides | NSLX | FIA | 1.2 | 0.4 | 0.4 | Unknown | Unknown | Medium | Rare | FIA Only | FIA Only | | | | 0 35 |
| silver maple | Acer saccharinum | NSH | Low | 1.2 | 0.4 | 0.3 | Lg. inc. | Lg. inc. | High | Rare | Good | Good | | | | 2 36 |
| eastern redcedar | Juniperus virginiana | WDH | Medium | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate + | Migrate ++ | | 3 37 |
| red spruce | Picea rubens | NDH | High | 0 | 0 | 0 | New Habitat | New Habitat | Low | Absent | New Habitat | New Habitat | | | | 0 38 |
| black maple | Acer nigrum | NSH | Low | 0 | 0 | 0 | Unknown | Unknown | High | Modeled | Unknown | Unknown | | | | 0 39 |
| Ohio buckeye | Aesculus glabra | NSL | Low | 0 | 0 | 0 | Unknown | Unknown | Medium | Modeled | Unknown | Unknown | | | | 0 40 |
| sweet birch | Betula lenta | NDH | High | 0 | 0 | 0 | New Habitat | New Habitat | Low | Absent | New Habitat | New Habitat | | | | 0 41 |
| bitternut hickory | Carya cordiformis | WDL | Low | 0 | 0 | 0 | New Habitat | New Habitat | High | Absent | New Habitat | New Habitat | Migrate + | Migrate + | | 3 42 |
| pignut hickory | Carya glabra | WDL | Medium | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | | | | 0 43 |
| shagbark hickory | Carya ovata | WSL | Medium | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate + | Migrate ++ | | 3 44 |
| sugarberry | Celtis laevigata | NDH | Medium | 0 | 0 | 0 | Unknown | New Habitat | Medium | Absent | Unknown | New Habitat | | | | 0 45 |
| hackberry | Celtis occidentalis | WDH | Medium | 0 | 0 | 0 | New Habitat | New Habitat | High | Absent | New Habitat | New Habitat | | Migrate + | | 3 46 |
| flowering dogwood | Cornus florida | WDL | Medium | 0 | 0 | 0 | Unknown | New Habitat | Medium | Absent | Unknown | New Habitat | | | | 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 |
|-----------------------|-------------------------|-------|--------|-------|--------|-------|-------------|-------------|--------|--------|-------------|-------------|------------|------------|-----|----|
| American beech | Fagus grandifolia | WDH | High | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate + | Migrate + | 3 | 48 |
| blue ash | Fraxinus quadrangulata | NSL | Low | 0 | 0 | 0 | Unknown | Unknown | Low | Absent | Unknown | Unknown | | | 0 | 49 |
| black walnut | Juglans nigra | WDH | Low | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | | Migrate + | 3 | 50 |
| sweetgum | Liquidambar styraciflua | WDH | High | 0 | 0 | 0 | Unknown | New Habitat | Medium | Absent | Unknown | New Habitat | | | 0 | 51 |
| yellow-poplar | Liriodendron tulipifera | WDH | High | 0 | 0 | 0 | New Habitat | New Habitat | High | Absent | New Habitat | New Habitat | | | 0 | 52 |
| bigleaf magnolia | Magnolia macrophylla | NSL | Low | 0 | 0 | 0 | Unknown | Unknown | Medium | Absent | Unknown | Unknown | | | 0 | 53 |
| blackgum | Nyssa sylvatica | WDL | Medium | 0 | 0 | 0 | New Habitat | New Habitat | High | Absent | New Habitat | New Habitat | | | 0 | 54 |
| sycamore | Platanus occidentalis | NSL | Low | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | | | 0 | 55 |
| eastern cottonwood | Populus deltoides | NSH | Low | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate + | Migrate + | 3 | 56 |
| white oak | Quercus alba | WDH | Medium | 0 | 0 | 0 | New Habitat | New Habitat | High | Absent | New Habitat | New Habitat | Migrate ++ | Migrate ++ | 3 | 57 |
| swamp white oak | Quercus bicolor | NSL | Low | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate + | Migrate + | 3 | 58 |
| scarlet oak | Quercus coccinea | WDL | Medium | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | | | 0 | 59 |
| pin oak | Quercus palustris | NSH | Low | 0 | 0 | 0 | New Habitat | New Habitat | Low | Absent | New Habitat | New Habitat | | | 0 | 60 |
| chestnut oak | Quercus prinus | NDH | High | 0 | 0 | 0 | New Habitat | New Habitat | High | Absent | New Habitat | New Habitat | | | 0 | 61 |
| black oak | Quercus velutina | WDH | High | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate ++ | Migrate ++ | 3 | 62 |
| black locust | Robinia pseudoacacia | NDH | Low | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | Migrate + | Migrate + | 3 | 63 |
| American mountain-ash | Sorbus americana | NSL | Low | 0 | 0 | 0 | Unknown | Unknown | Low | Absent | Unknown | Unknown | | | 0 | 64 |
| slippery elm | Ulmus rubra | WSL | Low | 0 | 0 | 0 | New Habitat | New Habitat | Medium | Absent | New Habitat | New Habitat | | Migrate + | 3 | 65 |