FOREST WINNERS AND LOSERS – LOWER EMISSION SCENARIO (B1 Scenario)

WINNERS

Substantial Increases
American beech
Bitternut hickory
Black ash
Black locust
Black oak
Black walnut
Black willow
Eastern cottonwood
Hackberry
Red mulberry
River birch
Shagbark hickory
Silver maple
Slippery elm

Smaller Increases
American elm
American hornbeam
Boxelder
Bur oak
Butternut
Eastern hemlock
White ash

LOSERS

Substantial Declines
Black spruce
Mountain maple
Eastern Redbud

Smaller Declines
Balsam fir
Paper birch
Quaking aspen
Rock elm
White spruce
Wild plum

LITTLE CHANGE

Bigtooth aspen
Chokecherry
Eastern hophornbeam
Eastern white pine
Jack pine
Northern red oak
Northern white-cedar
Pin cherry
Red maple
Red pine
Sugar maple
Swamp white oak
Tamarack
Yellow birch

NOT SURE

American basswood
Balsam poplar
Black cherry
Green ash
Northern pin oak

NEW COMERS

Chinkapin oak
Eastern redcedar
Flowering dogwood
Gray birch
Honeylocust
Mockernut hickory
Ohio buckeye
Osage-orange
Pignut hickory
Pin oak
Post oak
Sassafras
Scarlet oak
Shingle oak
Sweet birch
Sycamore
Yellow-poplar

Source: Janowiak, M.K.; et al. 2014. **Forest ecosystem vulnerability assessment and synthesis for northern Wisconsin and western Upper Michigan: a report from the Northwoods Climate Change Response Framework**. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station . GTR-NRS-136. http://www.nrs.fs.fed.us/pubs/46393