American Hornbeam *Carpinus caroliniana*

**Description**
This shade-tolerant understory tree is small, slow-growing, and short-lived. It can be found in Michigan’s Lower Peninsula. The American hornbeam prefers wet and mesic habitats where the soil is moist with sufficient drainage to prevent poor aeration during the growing season. Due to its small stature it is not used commercially but is a food source to wildlife; the seeds, buds and catkins are eaten by birds and mammals.

**Change Maps for American Hornbeam**

**Implications of Climate Change**
Under most climate scenarios, American hornbeam will decline in importance in southeast Michigan. Some populations will remain primarily in areas maintaining wet-mesic soils. The increased heat index is considered to be the limiting factor for the American hornbeam as it will cause drier soil conditions. Fire is an additional threat. Protecting alluvial soils and large canopy trees will help maintain this tree’s habitat.

**Natural Communities Associations**
Canopy tree in inundated shrub swamps. Understory in hardwood-conifer and southern hardwood swamps, floodplain forest, wet-mesic flatwoods and mesic southern forest.

**Vulnerability of Natural Communities**
Inundated shrub swamps are vulnerable to climate change as it is likely groundwater hydrology will change in response to drier climates. Low dispersal potential and expected alterations to hydrology make floodplain forest, southern hardwood swamp, and wet-mesic flatwoods highly vulnerable. Mesic southern forest is widespread and therefore less vulnerable to predicted changes but is still vulnerable to threats like invasive species and deer herbivory which are likely to increase as a result of climate change.

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2. Michigan Natural Features Inventory. www.mnfi.anr.msu.edu/communities


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