



**Forest Health Monitoring in the Northeastern United States:
Disturbances and Conditions during 1993-2002
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Highlights

Forest Cover and Fragmentation

The Northeastern United States is the most densely populated region in the country and yet is 41% forested. Much of the forest resource is configured on the landscape as fragmented parcels interspersed with urban and agricultural land uses.

Drought

Droughty soil conditions have been observed in most parts of the region during the past five years, but droughts have not been as severe as those during the 1930s and 1960s. Tree mortality from drought was noticeable when coinciding with problems from insect and disease pests.

Fire

The incidence of wildfires has been much less common compared to the frequency and size of wildfires in the western U.S. The absence of fire in much of the region has partly resulted in current forest types that are different from historical types maintained by wildfires.

Insects and Diseases

A variety of insects and diseases cause growth reduction and mortality to many tree species in the region. Invasive species from other countries threaten the sustainability of American beech, eastern hemlock, butternut, flowering dogwood, and other tree species.

Air Pollutants

A consequence of people living in proximity to forests is the exposure of vegetation to air pollutants emitted by power generation plants, industries, and automobiles. Monitoring efforts suggest some detrimental effects on forest lichens and ozone-sensitive plants.

Soil Erosion

Monitoring efforts show little evidence of forest soil erosion in the region. Isolated locations of erosion occur on steep slopes where forest cover is sparse.

Tree Health

Various indicators of tree health show that forest species in the region are generally healthy. Exceptions include aspen, birch, and fir which have high mortality rates feasibly due to recent insect and disease problems. Crown conditions of these tree species also suggest ongoing problems. Decay is the most frequent type of damage observed on most tree species and is most likely related to the maturation of forests throughout much of the region.

