USDA United States Department of Agriculture

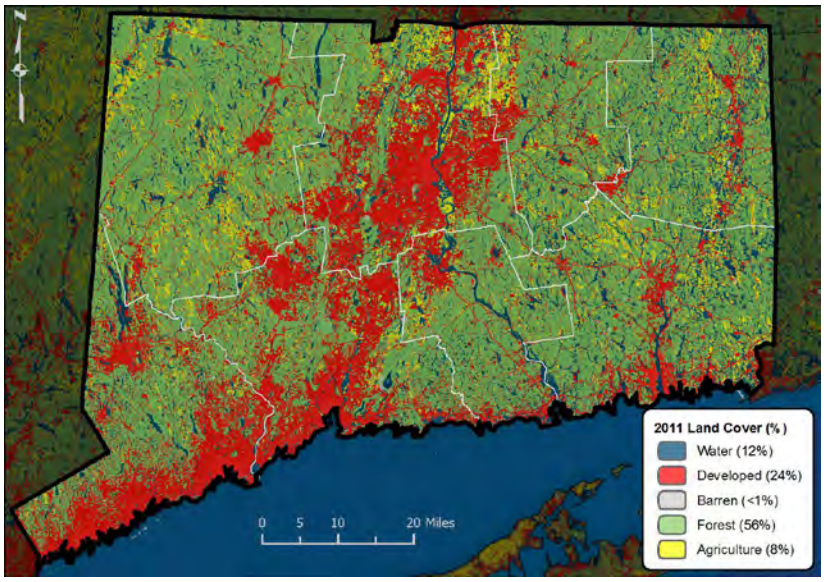
2016 Forest Health highlights

CONNECTICUT

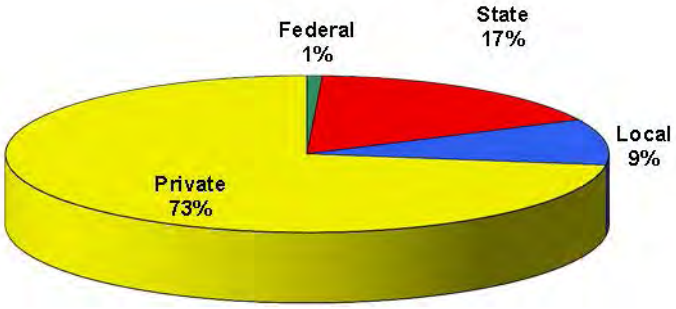
Forest Resource Summary

Connecticut's forests are 73 percent privately owned, predominantly by families and individuals, but also by corporations, tribes, conservation groups, and clubs. The other 27 percent of Connecticut's forest land is in Federal, State, or local town or county ownership. These forests provide clean water and air; wildlife habitat; and sources of recreation, timber, and fuel. Forested parks and shade trees aesthetically enhance communities and provide energy savings, habitat for wildlife, and recreation opportunities. Connecticut has approximately 1.8 million acres of forest according to the U.S. Forest Service 2015 forest inventory, a figure that has slightly increased since 2010.

The forest resource is made up of many forest types and tree species. Oak/hickory is the predominant forest type group and covers about 71 percent of the State. This group is dominated by oak species but also includes maple, birch, white ash, hemlock, and beech. On plots inventoried between 2010 and 2015, 58 species were recorded—most commonly red maple and sweet birch, along with sugar maple, beech, oaks, yellow birch, eastern hemlock, and white pine.



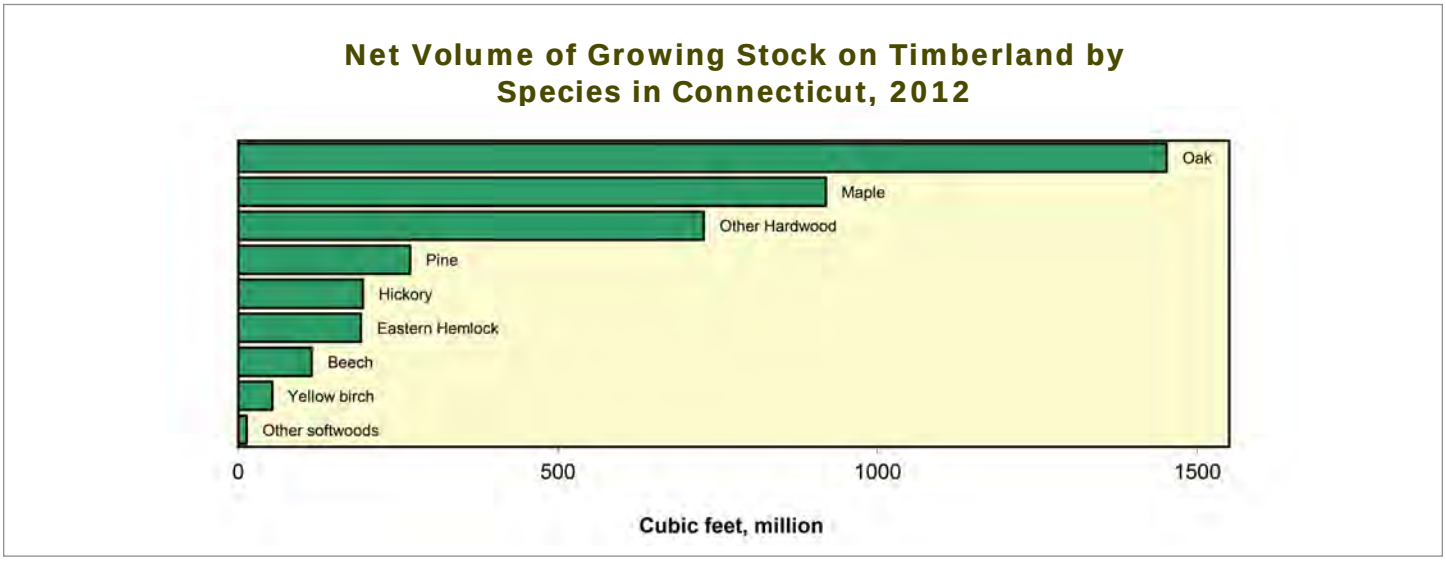
Forest Land Ownership in Connecticut, 2012



Forest Service
Northeastern Area
State and Private Forestry

Connecticut Department of Environmental Protection

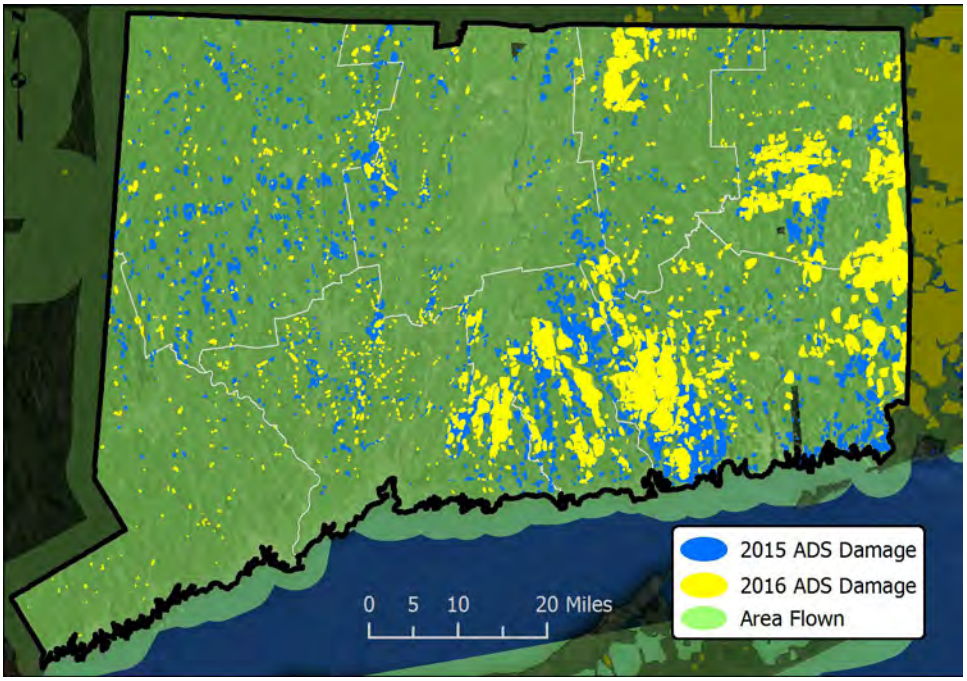
June 2017



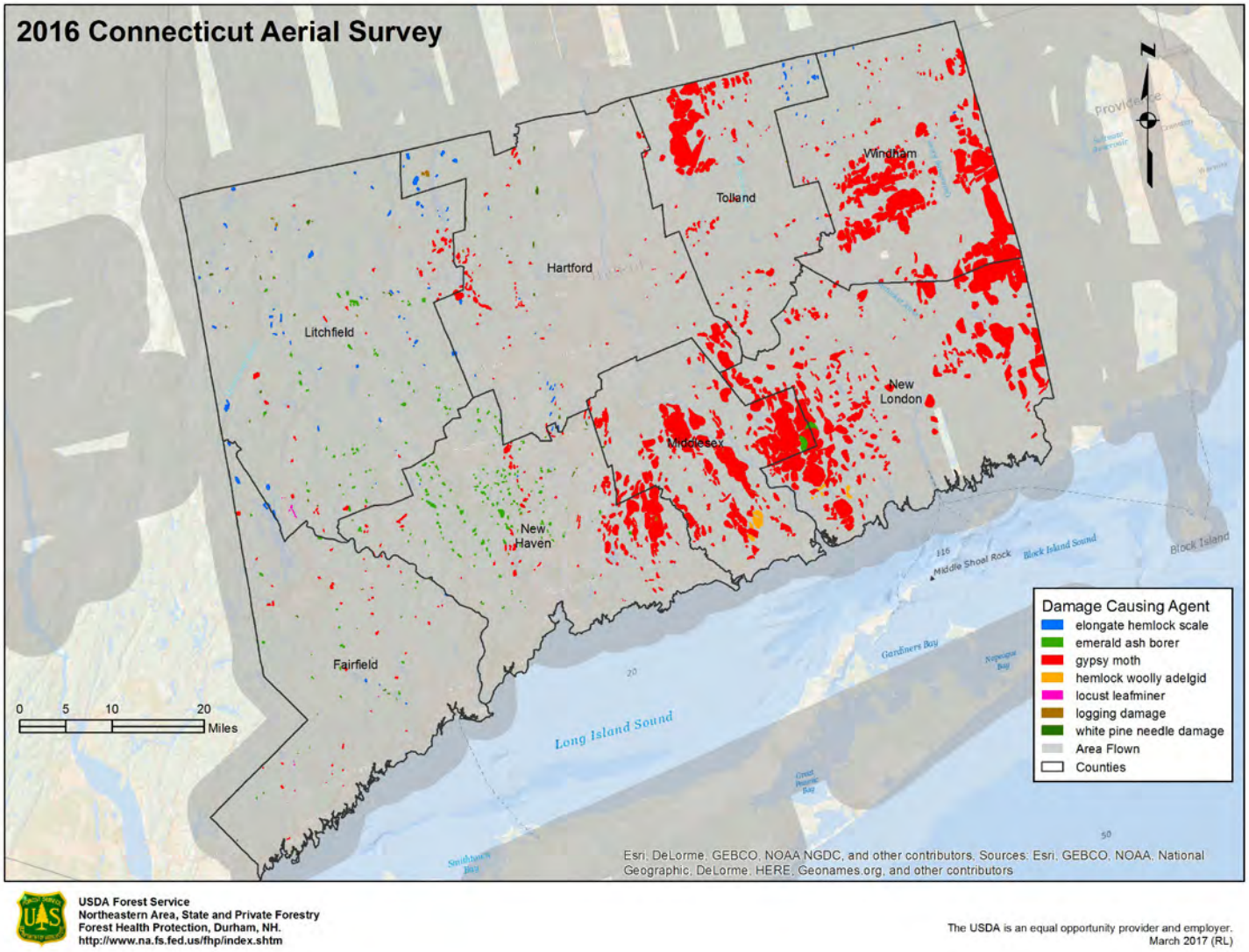
Aerial Surveys

Over 215,000 acres of damage were mapped by aerial survey in Connecticut in 2016, a slight increase over 2015. Defoliation from gypsy moth was significant and covered over 200,000 acres. Heavy gypsy moth feeding made it difficult to estimate damage due to other defoliators such as winter moth, forest tent caterpillar, and orange striped oak worm.

About 6,000 acres of mortality were attributed to emerald ash borer, mostly in New Haven and Litchfield Counties. Over 3,000 acres of mortality and crown discoloration from elongate hemlock scale were mapped, and almost 1,700 acres of discoloration occurred from hemlock woolly adelgid. Some small amounts of damage (under 1,000 acres) were recorded for forest tent caterpillar, locust leafminer, white pine needle damage, logging, and fire.



Comparison of aerial detection survey (ADS) results for Connecticut in 2015 and 2016. (Map: U.S. Forest Service, Durham, NH)



Areas of damage mapped in the 2016 Connecticut aerial detection survey. (Map: U.S. Forest Service, Durham, NH)

Forest Damage

Insects

Emerald ash borer was found in New Haven County in July 2012 in a colony of *Cerceris* wasps. Since then, the insect has been found in all eight counties of the State. Monitoring of *Cerceris* colonies continued in 2016, primarily to detect other exotic beetles. Trapping was discontinued as Connecticut became part of the contiguous emerald ash borer quarantine when the Federal quarantine was expanded to include the entire State. In the areas of New Haven County where the infestation was first detected, there is considerable mortality due to emerald ash borer. Almost 6,200 acres of damage, mostly mortality, were mapped in Fairfield, Hartford, Litchfield, Middlesex, New Haven, and New London Counties.

Due to drought conditions in spring and summer 2016, the fungus that usually keeps **gypsy moth** larvae in check did not “kick in”, and damage due to larval feeding was considerable across the State. A gypsy moth egg mass survey was conducted on 80 to 95 percent of favorable host sites on a 7-mile grid (102 sites) throughout Connecticut. Egg mass counts were very high, which indicates the

potential for another severe outbreak in 2017 if drought conditions persist.

Due to the heavy and widespread defoliation from **gypsy moth** feeding, it was impossible to estimate damage due to other defoliators such as **winter moth**, **forest tent caterpillar**, and **orange striped oak worm**. And due to prolonged drought, trees did not refoliate later in the summer. It is anticipated that mortality due to drought and defoliation will become evident in 2017. Parasitoids of winter moth have been released in New London County, but their effectiveness in reducing populations has not been significant as yet; a lag time of up to 5 years is expected.

Gypsy moth egg masses in Connecticut. (Photo: Connecticut Agricultural Experiment Station)

The following pests were surveyed for, and not found, in 2016: **Asian longhorned beetle**, **light brown apple moth**, and **Sirex wood wasp**. Sirex wood wasp was detected in another trapping effort. **Brown marmorated stink bug** causes sporadic damage to fruit crops and is increasingly becoming an indoor pest, especially in the late summer and autumn when the insects move into homes in search of an overwintering site.

Hemlock woolly adelgid and **elongate hemlock scale** have been present in Connecticut for many years; they continue to cause patchy damage and decline among the remaining population of hemlocks. **Elongate hemlock scale** is probably a more significant damage agent than previously thought; over 3,400 acres of damage were mapped by aerial survey in 2016. **Circular scale** is found sporadically.

Black oak gall wasp, or the crypt gall wasp, was observed on black oak in New London County in 2016. This insect has been reported to cause mortality on black and other related oaks, especially in coastal areas.

Southern pine beetle was recently detected in Connecticut on red pine, white pine, Scots pine, pitch pine, and Norway spruce in Litchfield, New Haven, and New London Counties. Some trees were killed by the beetle and the accompanying fungal infection.

Pathogens

Beech bark disease is endemic statewide and is causing mortality on stressed trees.

Due to the limited number of walnut in Connecticut, there is no monitoring program for **thousand cankers disease**, even though this disease is the subject of a number of newly enacted quarantine regulations for many States.

References

Land Cover Map:

Jin, S.; Yang, L.; Danielson, P.; Homer, C.; Fry, J.; Xian, G. 2013. A comprehensive change detection method for updating the National Land Cover Database to circa 2011. Remote Sensing of Environment, 132: 159 – 175. http://www.sciencedirect.com/science/article/pii/S0034425713000242. (1 March 2016).

Forest Land Ownership:

Oswalt, Sonja N.; Smith, W. Brad; Miles, Patrick D.; Pugh, Scott A. 2014. Forest resources of the United States, 2012: a technical document supporting the Forest Service 2015 update of the RPA Assessment. Gen. Tech. Rep. WO-91. Washington, DC: U.S. Department of Agriculture, Forest Service, Washington Office. Table 2. http://www.fs.fed.us/sites/default/files/media/types/publication/field_pdf/GTR-WO-91.pdf. (1 March 2016).

Net Volume of Growing Stock on Timberland Species:

Oswalt, Sonja N.; Smith, W. Brad; Miles, Patrick D.; Pugh, Scott A. 2014. Forest resources of the United States, 2012: a technical document supporting the Forest Service 2015 update of the RPA Assessment. Gen. Tech. Rep. WO-91. Washington, DC: U.S. Department of Agriculture, Forest Service, Washington Office. Tables 23 & 24. http://www.fs.fed.us/sites/default/files/media/types/publication/field_pdf/GTR-WO-91.pdf. (1 March 2016).

Connecticut Forest Inventory:

Butler, Brett J. 2016. Forests of Connecticut, 2015. Resource Update FS-83. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 4 p. https://www.nrs.fs.fed.us/pubs/50897. (14 April 2017).

Forest Health Programs

State forestry agencies work in partnership with the U.S. Forest Service to monitor forest conditions and trends in their State and respond to pest outbreaks to protect the forest resource.

U.S. Department of Agriculture
Forest Service
Northeastern Area
State and Private Forestry
11 Campus Blvd., Suite 200
Newtown Square, PA 19073
https://www.na.fs.fed.us

Forest Health Protection
Northeastern Area
State and Private Forestry
271 Mast Road
Durham, NH 03824
603–868–7714

Connecticut Agricultural Experiment Station
123 Huntington Street
P.O. Box 1106
New Haven, CT 06504-1106
203–974–8474
http://www.ct.gov/caes/site/default.asp