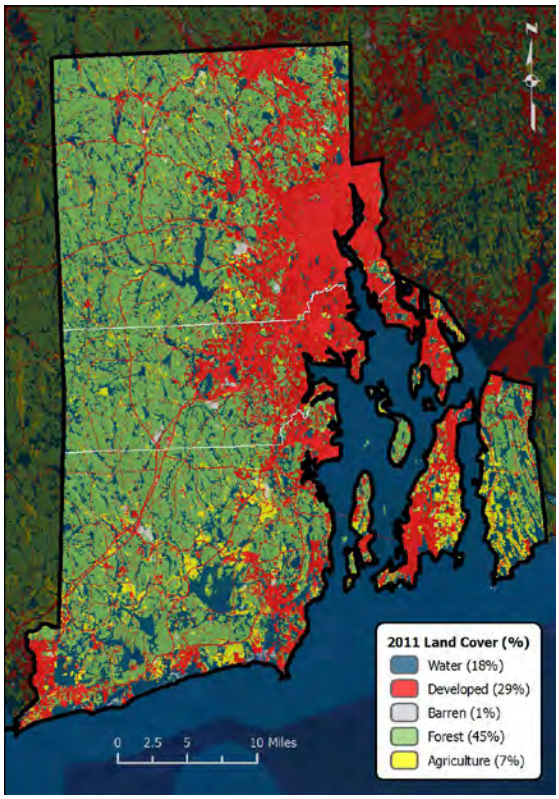
USDA United States Department of Agriculture

2016 Forest Health highlights

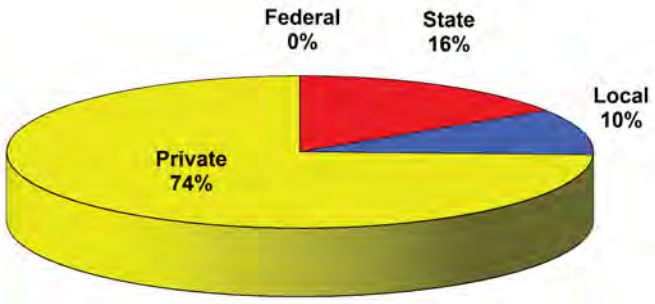
RHODE ISLAND

Forest Resource Summary

Rhode Island's forests are 74 percent privately owned, largely by families and individuals who view their land as a source of enjoyment and a resource to be protected. Other private ownerships include corporate, tribal, conservation groups, and clubs. The remainder of the forest land is in State or local town ownership. These forests are valued for clean air, protection of ground and surface water, wildlife habitat, wood fiber, and recreational opportunities. The 2015 Rhode Island forest inventory estimated that there are approximately 370,000 forested acres in the State. This area is less than the estimated 434,000 acres in the first forest inventory in 1952, but is an increase from the 2010 estimate of 352,000 acres. The forest resource is made up of many species, primarily oak, but also maple, pine, hemlock, birch, and other hardwoods. The predominant forest type group is oak-hickory.



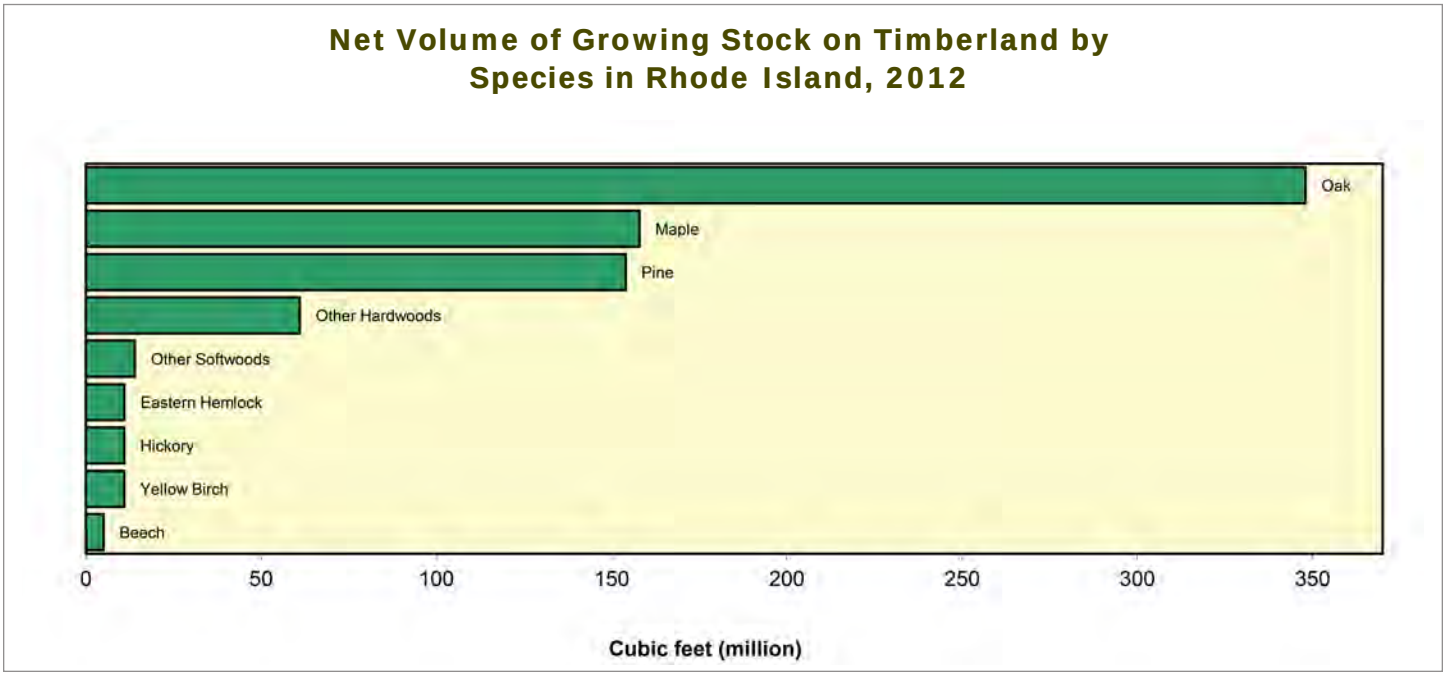
Forest Land Ownership in Rhode Island, 2012



Forest Service
Northeastern Area
State and Private Forestry

Rhode Island
Department of Environmental Management
Division of Forest Environment

May 2017

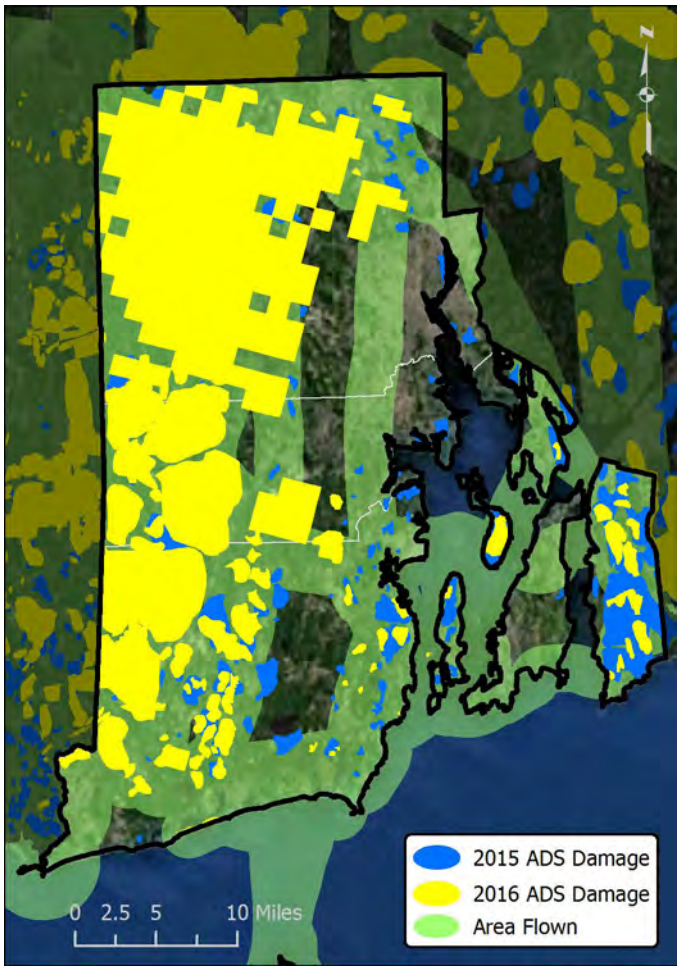


Aerial Surveys

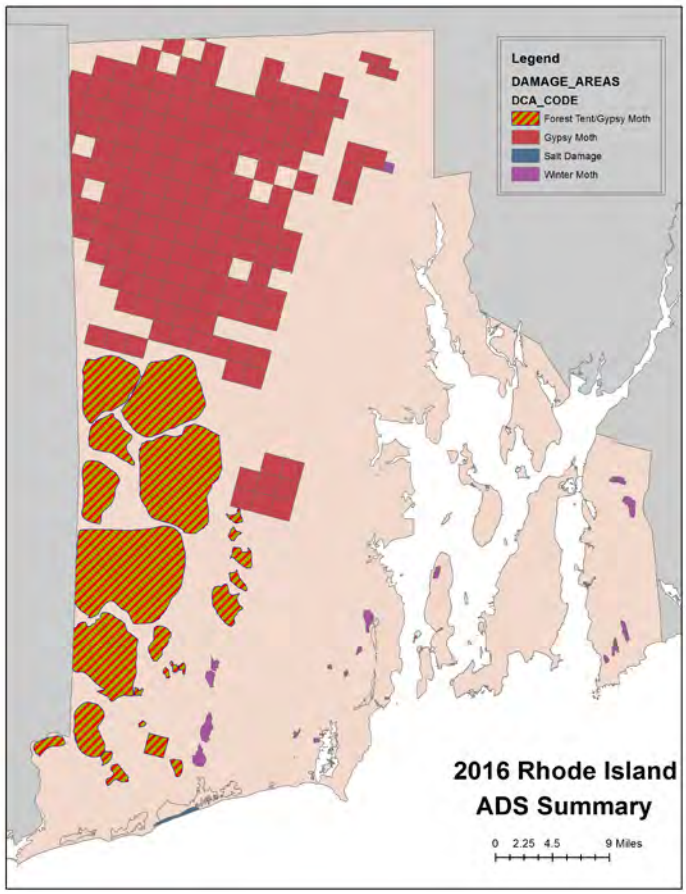
Aerial detection surveys of damage caused by spring defoliating insects were flown in early and late June. There were 670,660 forested acres surveyed using digital aerial sketchmapping. Data of the acreage defoliated by damage causing agent was submitted to the U.S. Forest Service Field Office in Durham, NH.

There was a dramatic increase in defoliation in 2016, predominantly from gypsy moth. The gypsy moth caterpillar defoliated twice as many acres in 2016 as the high number of acres defoliated in 2015. There were 228,000 acres of defoliation recorded in Kent, Newport, Providence, and Washington Counties. Gypsy moth affected more than 50 percent of the State's forest land, and the majority of the affected canopy experienced significant (>75 percent) loss of foliage.

Forest tent caterpillar defoliation was unexpectedly widespread in 2016. Caterpillars emerged predominantly in the south-central part of the State, just prior to gypsy moth emergence; both larval species were feeding concurrently. There were about 75,000



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



Areas of damage mapped in the 2016 Rhode Island aerial detection survey. (Map: Rhode Island Department of Environmental Management)

acres in Kent, Providence, and Washington Counties that were verified as having been defoliated by both gypsy moth and forest tent caterpillars. An additional 6,000 acres in Washington County were defoliated by forest tent caterpillar alone.

Winter moth defoliation decreased from 2015, possibly because of the short duration of below-freezing temperatures in early April. Defoliation that did occur was in historically densely infested areas in the coastal region. Winter moth defoliated about 11,500 acres in Bristol, Kent, Newport, Providence, and Washington Counties.

There were 272 acres of pine mortality due to salt damage mapped in Washington County.

Drier than normal conditions existed from March through June, which played a significant role in delaying natural biological control agents for gypsy moth and contributed to the exponential increase in acres defoliated by this insect. Drought conditions continued to add stress to already stressed trees. The total precipitation deficit as of September 1, 2016, was -11.48 inches.

Gypsy moth defoliation in central Rhode Island. (Photo: Paul Ricard, Rhode Island Department of Environmental Management)

Forest Health Special Projects

Cerceris fumipennis Biosurveillance Survey for Emerald Ash Borer

The **Emerald Ash Borer Biosurveillance Project** continued to provide a multipronged approach to detecting emerald ash borer in Rhode Island. Surveys for active colonies and beetle collection were cooperatively conducted by the Rhode Island Department of Environmental Management (RIDEM) and the University of Rhode Island. Twenty-two sites were sampled and 589 Buprestid beetles were collected for identification. All were negative for emerald ash borer.

Emerald Ash Borer Trap Program

RIDEM Division of Agriculture contractors set 120 panel traps in high-risk areas throughout the State, including urban environments. No emerald ash borers were collected.

Firewood Vector Analysis

As part of the invasive insect survey work in Rhode Island for emerald ash borer and Asian longhorned beetle, RIDEM Division of Forest Environment visited 21 campgrounds, RV resorts, and other facilities where the movement of firewood was a concern. Posters and information about Asian longhorned beetle and emerald ash borer were supplied, including information about the “Don’t Move Firewood” program.

Southern Pine Beetle

In late winter, two RIDEM Division of Forest Environment staff surveyed 40 acres of a pitch pine stand flagged for clear cutting as part of a Fish & Wildlife Pitch Pine Restoration program. No evidence of southern pine beetle was found.

In the spring, University of Rhode Island staff set nine Lindgren funnel traps for southern pine beetle in appropriate sites in western Rhode Island (Providence, Kent, and Washington Counties). RIDEM Division of Forest Environment set three traps in Providence, Kent, and Washington Counties. The combined trap effort yielded one suspect beetle, which was positively identified as southern pine beetle (*Dendroctonus frontalis*).

Lindgren funnel trap for southern pine beetle. (Photo: Paul Ricard, Rhode Island Department of Environmental Management)

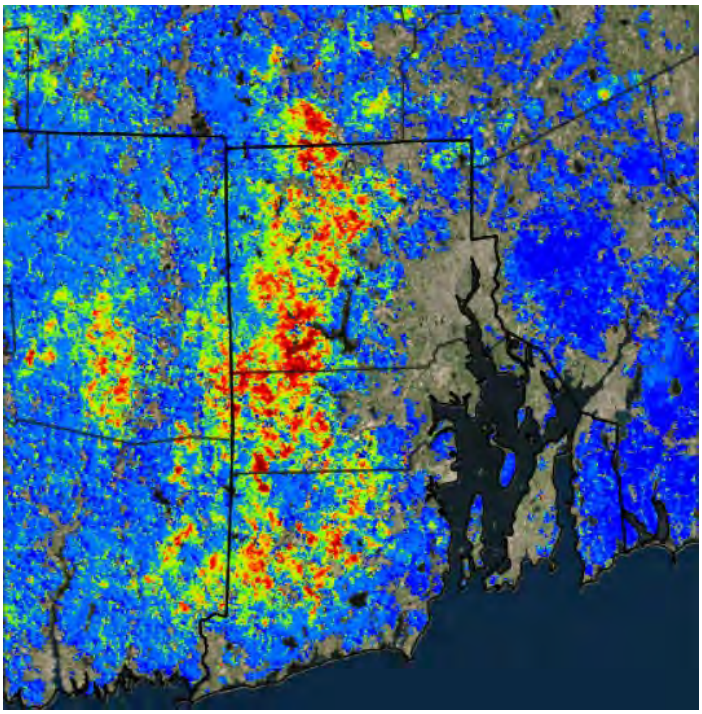
White Pine Decline/White Pine Blister Rust

Each of these complexes was identified as present in Rhode Island. The State applied for funding through an Environmental Monitoring Grant to study the impact and extent of white pine decline.

University of Rhode Island Plant Pathologist Heather Faubert examines needle damage on eastern white pine. (Photo: Rhode Island Department of Environmental Management)

ForWarn Program

ForWarn is a U.S. Forest Service program that uses satellite imagery to identify areas where trees have been damaged by fires, storms, droughts, pests, flood, invasive species, or any other type of natural or human activity.



U.S. Forest Service ForWarn satellite imagery of detected forest disturbance in Rhode Island.

References

Land Cover Map

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Net Volume of Growing Stock on Timberland by Species

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Butler, Brett J. 2016. Forests of Rhode Island, 2015. Resource Update FS-90. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 4 p. https://www.nrs.fs.fed.us/pubs/52013. (10 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.

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