

2011

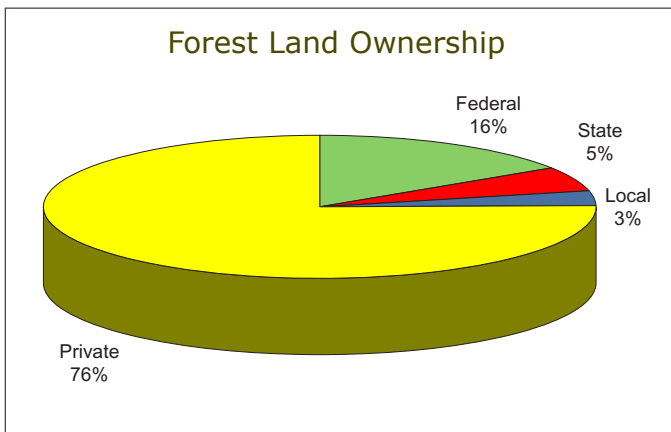
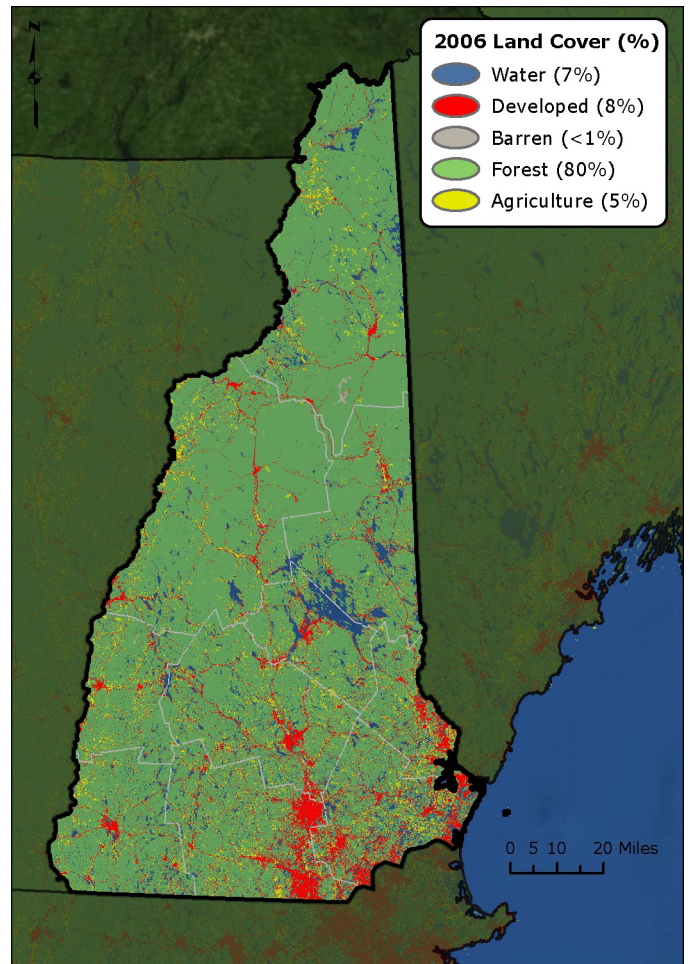
Forest Health

NEW HAMPSHIRE *highlights*



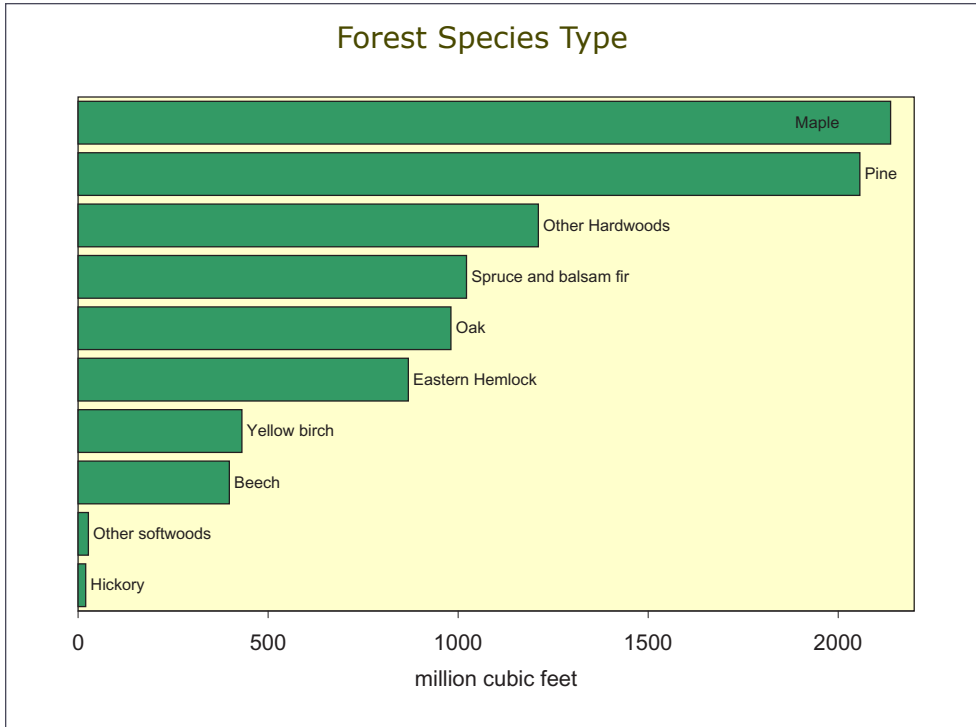
Forest Resource Summary

Approximately three-quarters of the forest land in New Hampshire is privately owned. Only 16 percent is in Federal ownership, which includes the White Mountain National Forest. The latest New Hampshire forest inventory estimates that there are approximately 4.8 million acres in the State that are forested. The forest resource is made up of a variety of forest types mostly comprised of maples, pine, other hardwoods, spruce and balsam fir, oaks, and hemlock. These forests provide a variety of goods including recreational opportunities, clean water, and wildlife habitat as well as paper and wood products. Keeping New Hampshire forests healthy enhances the quality of life for those who live, work, and recreate in the State.



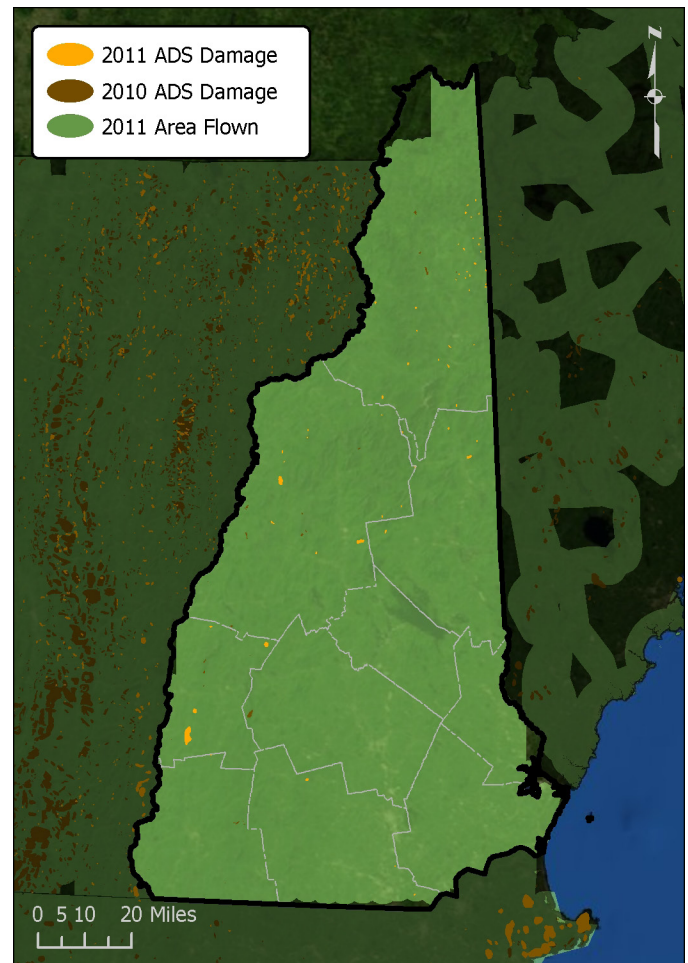
Forest Health Programs in the Northeast

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.



Aerial Surveys

Over 6,000 acres of forest damage were mapped. Most of the damage was caused by anthracnose foliar diseases after the extremely wet weather in the spring. Defoliation of oaks by the oak leaftier and skeletonizer was also significant. Forest tent caterpillar defoliation, balsam woolly adelgid damage, and mortality from spruce beetle were also observed. Some areas were affected by wind or heavy snow and ice.



This map delineates aerial detection survey (ADS) results for New Hampshire in 2011 and 2010.

Forest Damage

Damage observed in the State in 2011 included hardwood defoliation due to anthracnose, white pine mortality caused by Ips bark beetles, and defoliation of white oak by oak skeletonizer. Defoliation of red oaks by oak leaftier was observed again and has resulted in some dieback and mortality.

Forest Insect Trapping

In 2011, pheromone traps were put out for oak leaftier, spruce budworm, and forest tent caterpillar. No spruce budworms were caught; however, high numbers of oak leaftiers were found (figure 1). Forest tent caterpillars remain at endemic levels, and their trap catch is down.

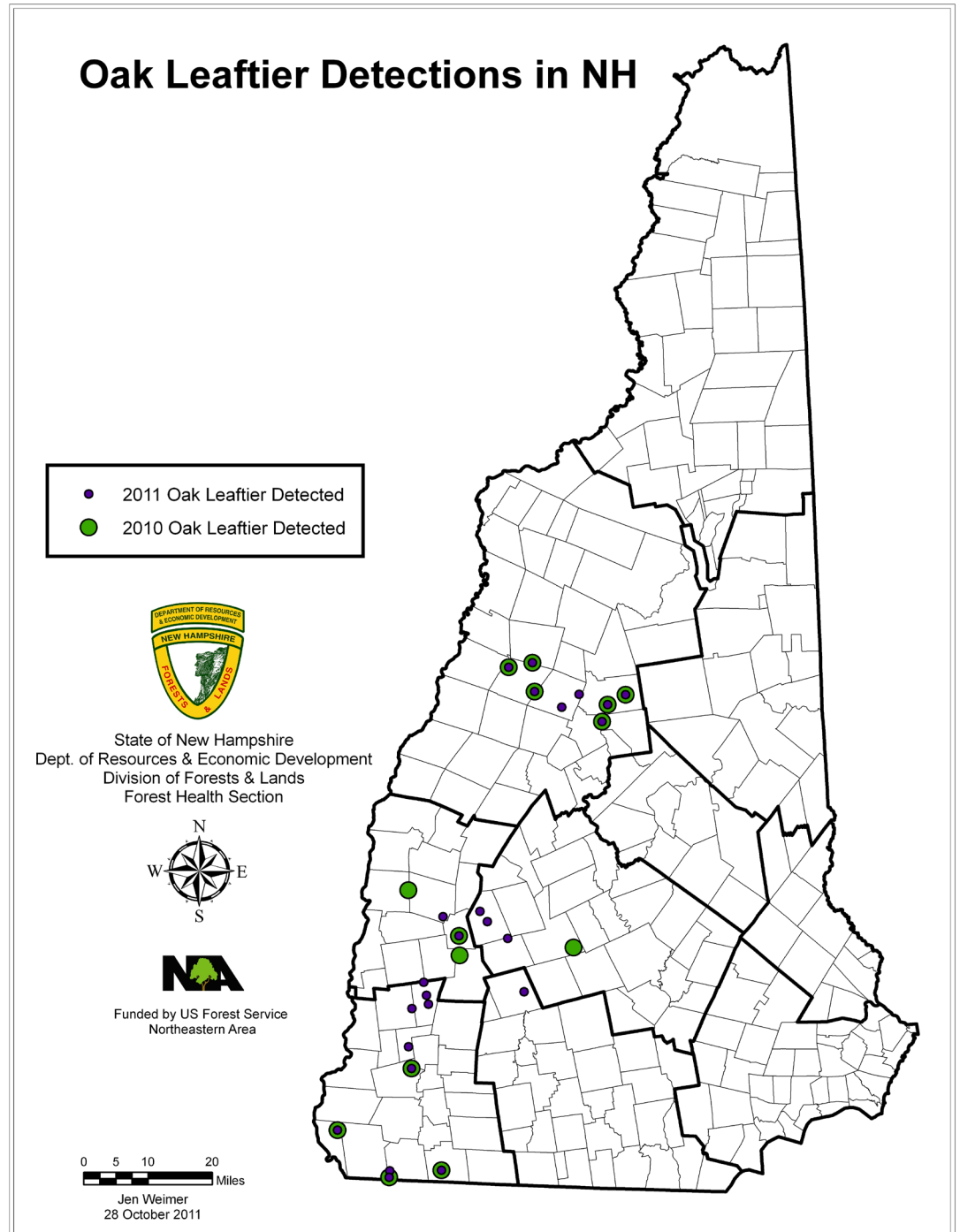


Figure 1.—Oak leaftier detections in New Hampshire.

Exotic Forest Pests

Surveys for **hemlock woolly adelgid** in 2011 were a continuation of town inspections in cooperation with Vermont and Maine as outlined in the Multi-State Redesign Project. Project personnel looked at a minimum of 200 branches per site at 5 high-risk sites per town. All towns that bordered towns with known infestations of the adelgid were surveyed. A total of 62 towns were visited in 2011 (figure 2). New infestations were found in 12 of those towns. These include Swanzey, Temple, New Ipswich, Greenville, Wilton, Brookline, Derry, Rollinsford, Greenland, Hampton, Sandown, and Danville. Other new infestations were found after the surveys in Dublin and Exeter. **Elongate hemlock scale** was also reported in Exeter and South Hampton.

Due to the increasing threat of **emerald ash borer** spreading into New England, 50 traps were placed in Cheshire County in cooperation with the New Hampshire Department of Agriculture, Markets & Food (figure 3). An invasive insect preparedness and action plan was prepared for the city of Keene, which is the largest city in New Hampshire closest to the known infestation in New York. Colonies of *Cerceris fumipennis*, a predatory wasp used to monitor the emerald ash borer, were surveyed at 25 sites (figure 4). Ten trap trees were also girdled around the State and are in the process of being felled and peeled as another way to monitor the emerald ash borer. No emerald ash borers have been found in any of the surveys.

Over 3,000 host trees were surveyed in Laconia, Walpole, and Rochester for **Asian longhorned beetle**, a significant invasive insect found in the Worcester, MA, area (figure 5). In addition, personnel continue to survey private and State campgrounds, as well as second homes owned by Worcester residents, for this pest. The second year of the pool filter survey in cooperation with UNH Cooperative Extension was completed with

25 volunteer pool owners participating in 2011. Five insect traps were also monitored in cooperation with the U.S. Forest Service. Asian longhorned beetle has not been found in New Hampshire.

Firewood Quarantine

Stopping the **movement of camper firewood** during long-distance travel is a way to minimize the risk of accidentally carrying invasive pests to new forest regions not yet infested. As of July 2011, New Hampshire has banned the importation of untreated firewood without a commercial or home heating compliance agreement (figure 6). Homeowners who want to transport firewood from approved counties outside of New Hampshire can fill out and submit a Firewood Quarantine Homeowner Compliance Agreement online at nhdf.org. Commercial operations that transport firewood from approved counties outside of New Hampshire should contact Kyle Lombard, Forest Health Program Coordinator, New Hampshire Division of Forests and Lands, at 603-464-3016 or Piera Siegert, State Entomologist, New Hampshire Department of Agriculture, at 603-271-2561 for a compliance agreement.

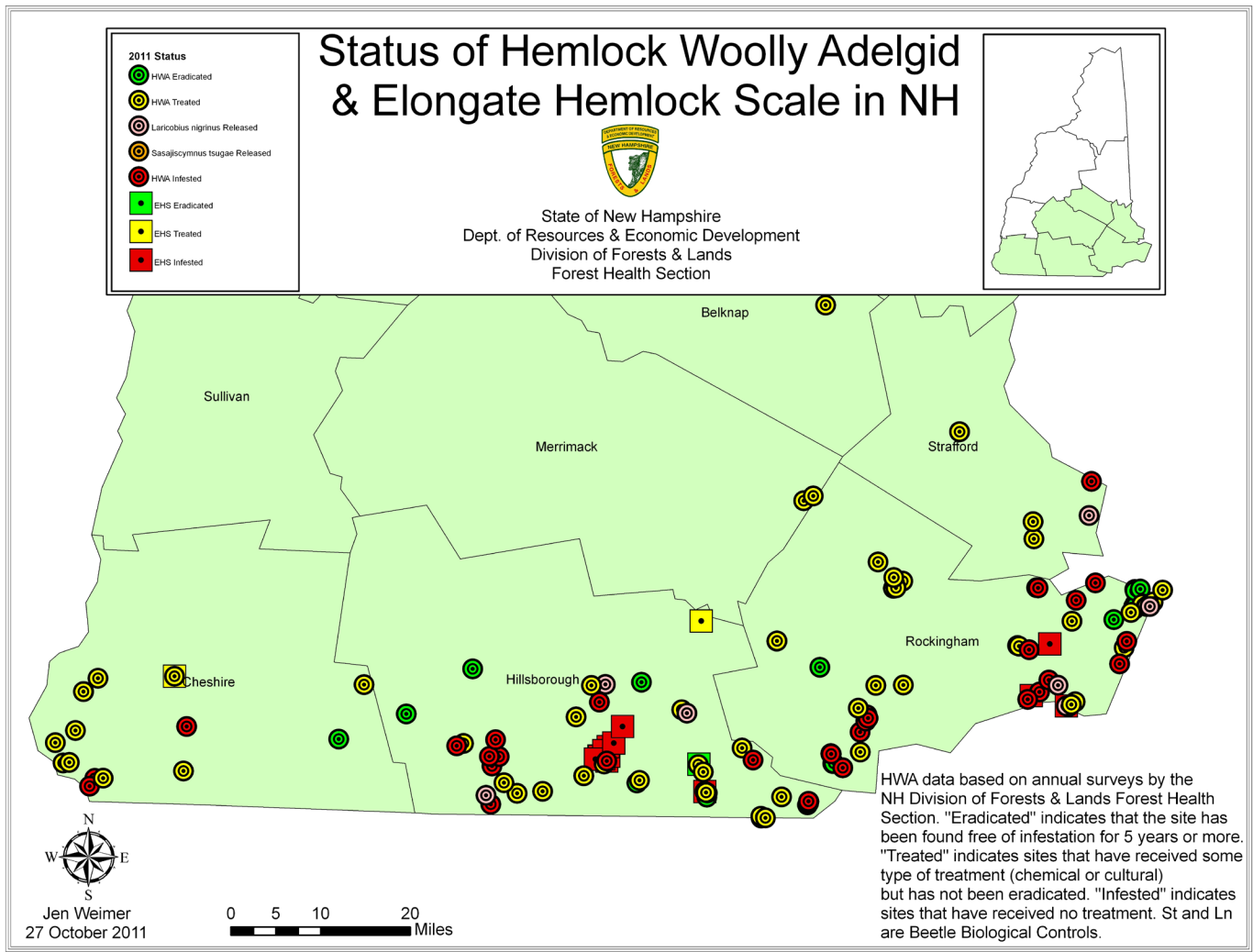


Figure 2.—Status of hemlock woolly adelgid and elongate hemlock scale in the State.

2011 Emerald Ash Borer Surveillance



Prism Trap Survey funded by USDA APHIS Cooperative Agreement. Cooperators: NH DAFM Division of Plant Industry and NH DRED Division of Forests and Lands.

Cerceris Surveys & Trap Trees funded by USDA Forest Service. Cooperators: USDA Forest Service Northeastern Area and NH DRED Division of Forests and Lands.



-  Trap Trees
-  Prism Traps
-  Cerceris Colonies

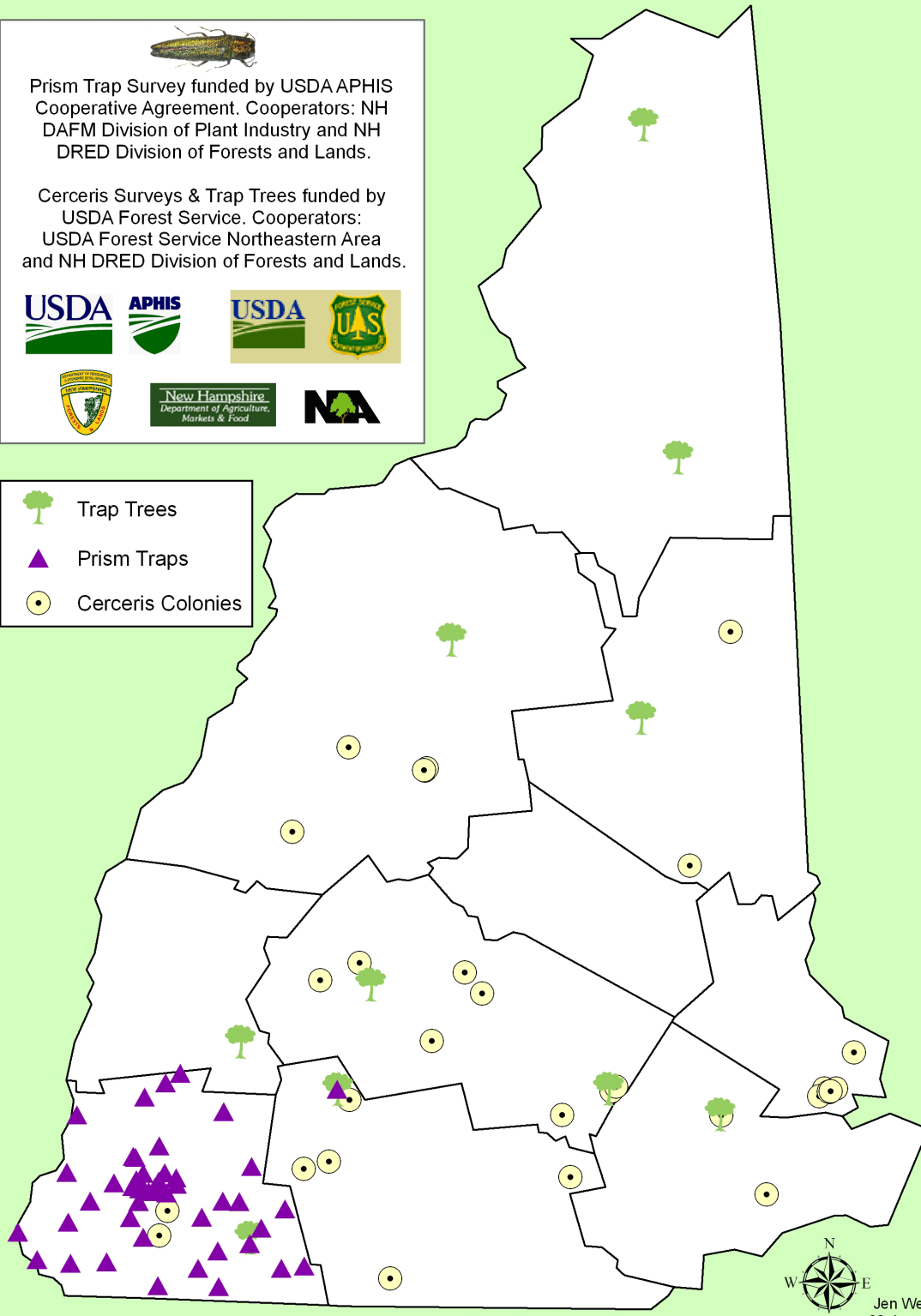


Figure 3.—Emerald ash borer surveillance in 2011.

NH Cerceris Colonies

Cercheris Colonies Survey Years

- 2008
- 2009
- 2010
- 2011
- Not Surveyed

State of New Hampshire
Dept. of Resources & Economic Development
Division of Forests & Lands
Forest Protection Bureau
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Surveys funded by USDA Forest Service Northeastern Area

Jen Weimer
13 September 2011



Figure 4.—*Cercheris* colonies surveyed in the State.

2011 ALB Surveillance

-  Traps
-  Second Home & Campground Survey
-  Pool Filter Survey
-  City Street Tree Surveys



State of New Hampshire
Dept. of Resources & Economic Development
Division of Forests & Lands
Forest Health Section



Funded by US Forest Service
Northeastern Area



UNIVERSITY of NEW HAMPSHIRE
Cooperative Extension

Pool Filter Survey done in Cooperation
with UNH Cooperative Extension



Jen Weimer
27 October 2011

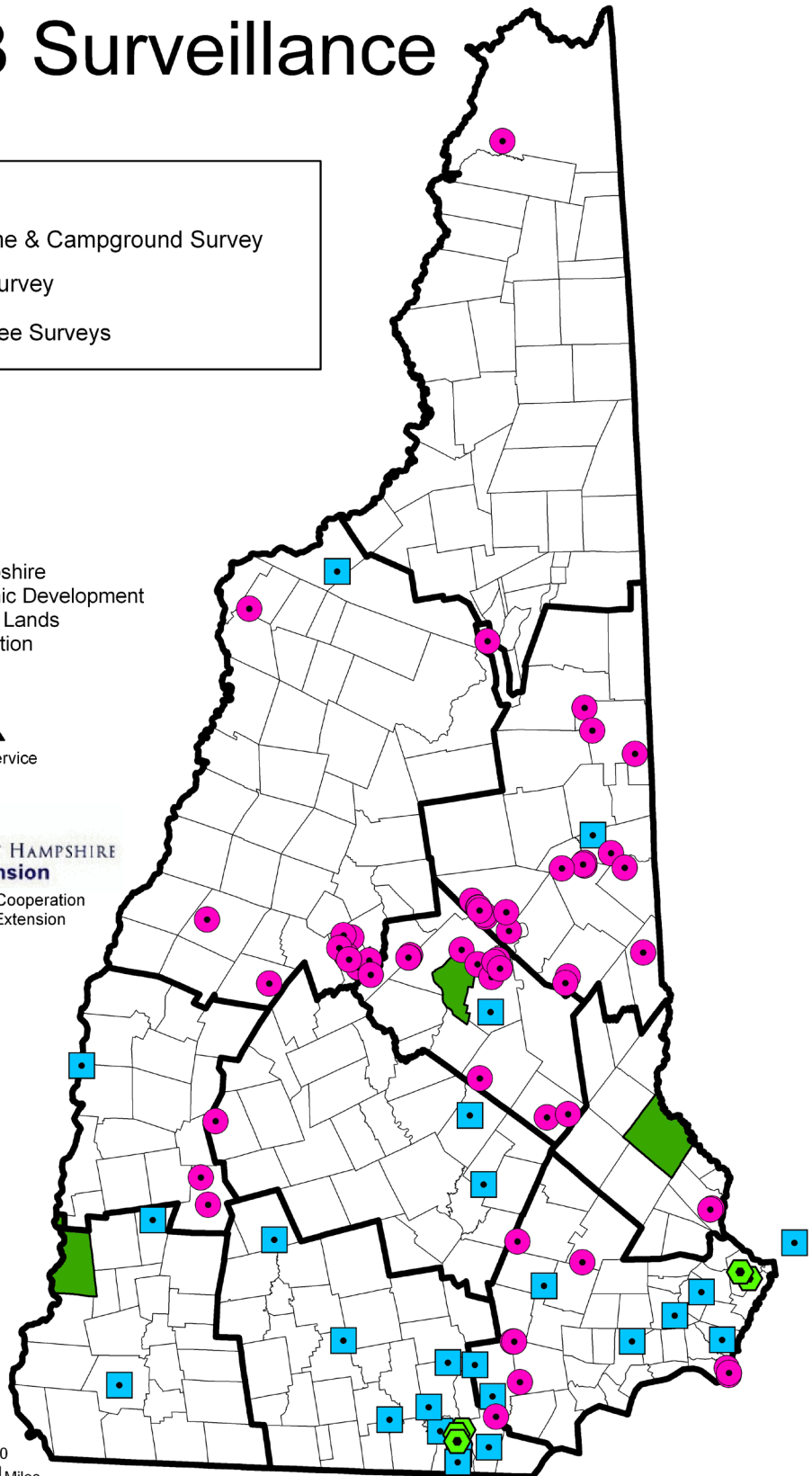
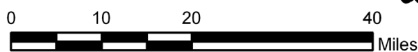



Figure 5.—Asian longhorned beetle surveillance in 2011.

NH Firewood Quarantine

New Hampshire has banned the importation of untreated firewood without a commercial or home heating compliance agreement.

Homeowners who want to transport firewood from approved counties outside of New Hampshire can fill out and submit a Firewood Quarantine Homeowner Compliance Agreement online at nhdfi.org

Commercial operations transporting firewood from approved counties outside of New Hampshire should contact Kyle Lombard, Forest Health Program Coordinator, NH Division of Forests and Lands at 603-464-3016 or Piera Siegert, State Entomologist, NH Department of Agriculture at 271-2561 for a compliance agreement.

 Counties Approved with Compliance Agreement

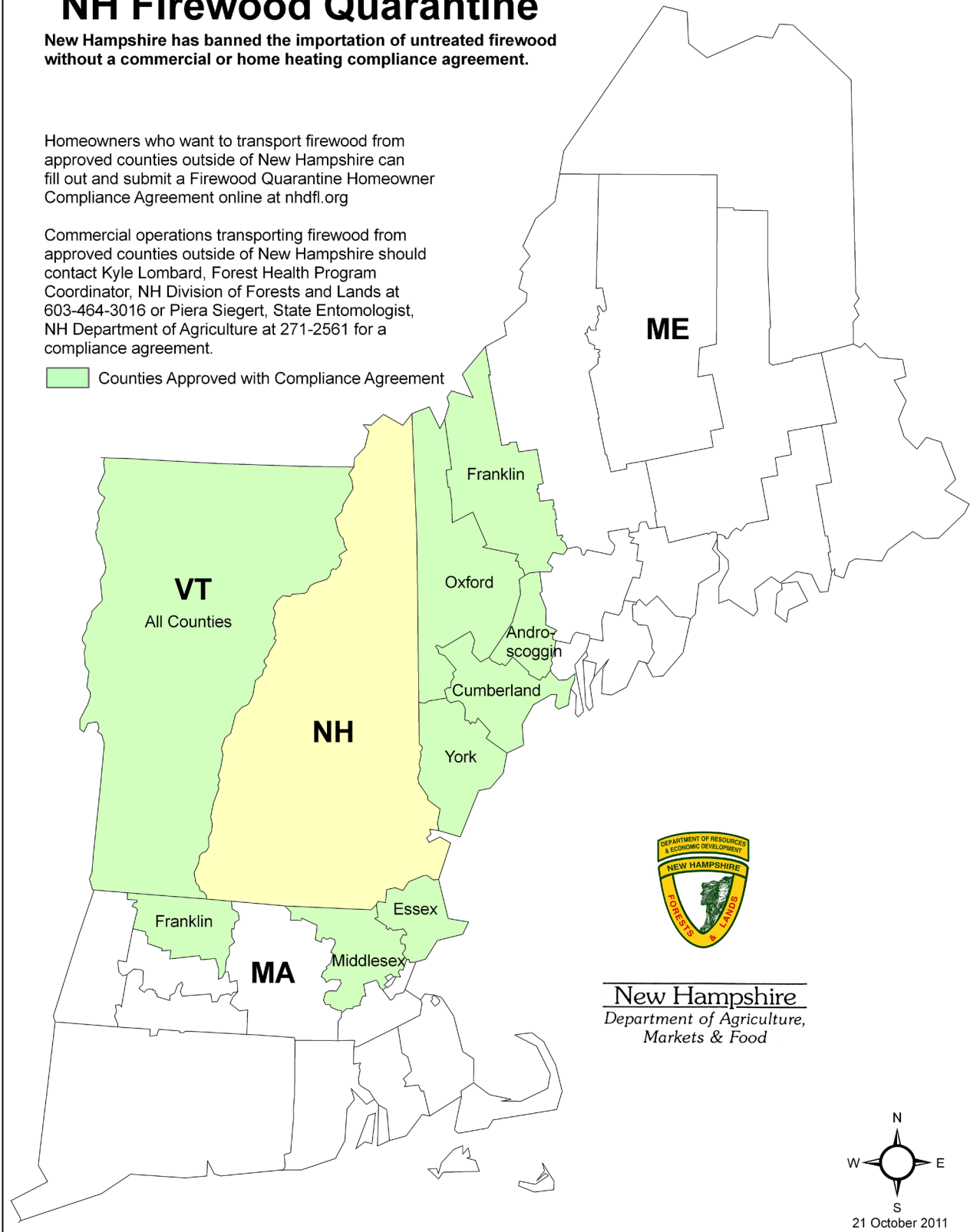


Figure 6.—New Hampshire Firewood Quarantine.

References

Land Cover Map:

U.S. Geological Survey. 2011. 2006 National land cover dataset. Sioux Falls, SD.

Forest Land Ownership, Forest Species Type:

U.S. Department of Agriculture, Forest Service. 2009. Forest resources of the United States, 2007. Gen. Tech. Rep. WO-78. Washington, DC. 336 p.



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