

Finding Solutions to Complex Forest Management Issues

Predicting Forest Health on the Green Mountain National Forest

The Challenge

The Green Mountain National Forest (GMNF) is a working landscape of scenic valleys, waterways, and hillsides. Over the years, it has grown to almost 400,000 acres stretching across nearly two-thirds the length of Vermont. It is one of more than 150 national forests established to provide watershed protection and continual forest resources for the Nation. The USDA Forest Service protects and manages national forests for future generations, and forest resources are conserved through a balance of activities and uses.

Forests continually face a variety of stressors, such as insect infestation, drought, and timber harvesting, that can impact their overall health. Forest land managers weigh a variety of complex factors in an arena of uncertain risk to make management decisions. This was the case recently on the Green Mountain National Forest. Resource managers needed to gauge current forest tent caterpillar infestations in several special use areas to determine whether maple tapping could be implemented safely for the trees.

The Solution

The GMNF requested technical assistance from the Northeastern Area State and Private Forestry. Maple trees on the GMNF had been defoliated by forest tent caterpillar, and forest managers feared additional tapping might place more stress on the trees and lead to early mortality. The experts were asked to survey five special use areas on the forest where the public was traditionally allowed to tap maple trees. The surveys would be used to determine whether maple tree tapping for syrup production should be permitted the following winter.

The Northeastern Area Durham, NH, Field Office sent a forester and an entomologist to evaluate the situation and make management recommendations. The experts conducted surveys of local forest health, root starch content, forest tent caterpillar infestation, and other factors for consideration in their analysis.



The Green Mountain National Forest exhibits amazing color each fall.

Resulting Benefits

After conducting surveys and analyzing the situation, the Durham experts recommended that the GMNF allow tapping in all but one special use area. Their recommendation was based on the trees' current and predicted future health in each special use area. The concrete, practical recommendations, which were adopted by the GMNF, struck a healthy compromise between forest resources management and forest health while considering long-term sustainability and the best interests of the public.

Sharing Success

The surveys conducted in 2006 marked the second time that the GMNF requested expert advice on this issue. A Durham survey in 2005 predicted future forest health at the GMNF sites and provided recommendations on maple tree tapping. The 2006 surveys, using both an entomologist and a forester, covered a wider range of environmental factors than before. They also served to improve predictions of forest health while optimizing forest productivity.

Northeastern Area technical assistance and analysis help forest managers utilize resources while maintaining forest health.



USDA Forest Service
Northeastern Area
State and Private Forestry

For more information, contact:

Kathryn P. Maloney, Area Director
11 Campus Blvd., Suite 200
Newtown Square, PA 19073
Phone: 610-557-4103
Email: kmaloney@fs.fed.us

Bob Cooke, Forester
271 Mast Road
Durham, NH 03824
Phone: 603-868-7705
Email: rcooke@fs.fed.us

December 2006

The USDA is an equal opportunity provider and employer.