

Forest Health Highlights

Vermont



April 1998

The Resource

The landscape of Vermont is dominated by its forests. They form the basis for its culture and economy. Covering nearly 80 percent of the state, forests provide many opportunities for use by humans. Yet recent concerns have focused on forests as a limited resource. Balancing the economic, social and ecological uses of forests has brought into question our current and future plans for sustainable forests.

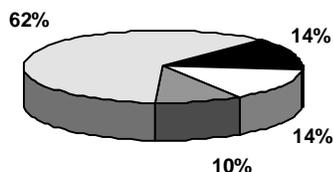
In 1996, the Forest Resource Advisory Council determined that the rate of heavy cutting was increasing across the state. A study was conducted and concluded that the rate of heavy cutting had increased significantly in the last 20 years. A new law to limit heavy cutting was added to the books in 1997. Its purpose is to work toward sustaining the forest environment.

- 77% of the state is forested (4,544,400 acres)

Out of the forested area:

- 97.3% timberland
- 2.7% non commercial

Major Forest Types



- spruce/fir (14%)
- white/red pine/hemlock (14%)
- other (10%)
- northern hardwoods (62%)

Special Issues

Much of Vermont is privately owned, with each individual landowner determining appropriate uses for their forest land. Public input into land management is maintained through planning efforts on state owned property. The State of Vermont currently owns nearly 290,000 acres of land, which is managed for recreation, wildlife, timber, and research, among other uses. Over the past 12 years there has been a 35% increase in the acres acquired as State Forests, as the people of Vermont have sought ways to protect natural resource values. Currently State Forests include 18,500 acres of State Natural Areas, with 180 acres of old growth forests. With an eye towards future land conservation in Vermont a **Land Conservation Plan** is presently being developed to direct land acquisition efforts by the state.

A **Forest Resource Plan** for Vermont is currently being developed by the Department of Forests, Parks and Recreation. This plan will shape our future forests by developing a vision of desired future conditions. The desired conditions focus on the following topics: a society that values forests, forest-based/sustained economic prosperity, forest ecosystem health, forest stewardship, planning and policy, land ownership and conservation, recreation, education and outreach, and research.

Forest Health

A statewide survey of **hardwood tree health** has shown a general improvement over the last 10 years. There has been a reduction in the number of acres showing significant numbers of dead trees, from 14,000 acres in 1986 to 1,000 acres in 1996. Likewise, individual tree health has improved from 78% of trees healthy 10 years ago, to 89% of trees healthy in 1996. One reason for

improved health has been a generally low stress period for trees; with weather conditions favoring good growth and a low incidence of major insect or disease outbreaks.

Sugar maples were generally healthy in 1997, as they have been for the past nine years, according to Vermont data collected for the North American Maple Project. Occasionally there are sites where sugar maple is not vigorous. This year some woodlots were diagnosed with sapstreak, a disease affecting trees through root wounds or recently cut stump surfaces, causing rapid tree decline.

Maintaining healthy and sustainable forests begins with maintaining a **diverse tree species** population. While the major proportion of species that make up our forests are generally healthy, some species, often the less abundant species, are suffering from species-specific declines. Butternut trees are being infected with butternut canker disease, of which there are no known cures. Flowering dogwood, which is a rare species in Vermont, has been infected with dogwood anthracnose. White ash has a variety of maladies, including ash yellows. Black cherry has been showing signs of a current decline.

In urban and community forests tree health problems are generally due to planting the wrong type of tree for a given site or the use of improper planting techniques. Planting the right tree in the right place, planting it correctly, and providing a mulch ring to prevent injury from mowing greatly improves shade tree survival and long-term health.

Special Issues cont.

High elevation forest health continues to be of concern. Tree health monitoring of high elevation forests shows above normal numbers of dead and dying trees. Adverse weather conditions and shallow soils susceptible to drought predispose these forests to attack by secondary organisms. Data sharing through the Vermont Forest Ecosystem Monitoring Program allows further evaluation of possible causes for poor health.

Forest Stressors

Many of the major forest insect pests caused little to no defoliation in 1997. **Birch leaf miner** damage was much lighter than in recent years, with substantial damage observed only in Addison County. **Gypsy moth** populations remain depressed. **Maple leaf cutter** caused isolated spots of severe damage in southwestern Bennington County, and some heavy damage in Caledonia and Orange Counties. **Pear thrips** numbers in emerging buds were higher than seen in many years, but only light to moderate damage was seen, mostly in the understory. **Saddled Prominent** was more common last summer than in recent past, although no significant defoliation was observed. **Spruce budworm** populations were lower than in the last few years, and no defoliation was reported.

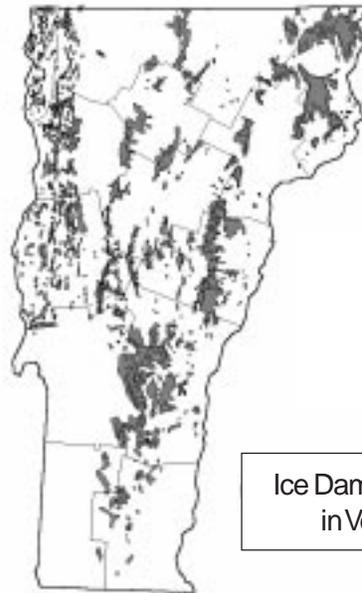
Foliage diseases of fir were more common in 1997, caused by moist summer weather. **Delphinella tip blight** of fir was widespread and caused heavy damage to one Christmas tree plantation. It also caused symptoms on naturally growing balsam of all sizes. **Rhizosphaera needle blight** of fir was also found to be much more widespread than previously known. It was found in over 20 plantations, nearly 75% of those locations surveyed, mostly in northern Vermont. This disease was first recognized as a serious problem in Vermont in 1996, and has been identified as a problem on naturally growing firs of all sizes as well as plantation trees.

Beech bark disease has been increasing, and dying trees were observed throughout the state. **Poplar leaf blight** was heavy and widespread again last year on balsam poplar. Some damage was also observed on quaking aspen, but injury was only light. An unusual **ash defoliation** problem was detected on over twenty sites in southern Vermont. The cause is unknown. Further evaluations will be made in 1998. **White pine weevil** damage was very prominent in 1997, causing the terminal twig to be girdled on many conifer species. While this is not a serious health problem to trees, it can greatly devalue trees for future log quality.

Surveys are conducted annually at 16 locations around the state to detect evidence of ground level **ozone injury** to sensitive plants. Ozone injury was found at eight locations, mainly in the southern and western counties. No symptoms of ozone injury were found during other ground or aerial surveys.

Two regionally significant **exotic insects** are not currently found in Vermont, the **Hemlock Woolly Adelgid** and the **Asian Long Horned Beetle**. Hemlock woolly adelgid is currently attacking, and in some cases causing serious declines of hemlock, as near as northern Massachusetts. The Asian long horned beetle is being eradicated from parts of Long Island New York.

The January **1998 ice storm** severely impacted the hardwood forests of the state. Aerial sketch mapping surveys of damage estimated the total affected area to be 943,000 acres, with an estimated 344,000 acres of severe damage. Impact assessment and recovery assistance to communities and private landowners is currently underway.



Ice Damage Areas
in Vermont

For More Information

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