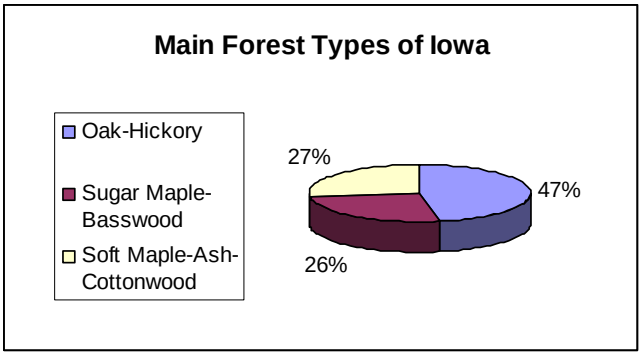
Iowa's Forest Health Report 2002

Why worry about Iowa's forest health?

Between 2-2½ million acres of Iowa is covered by trees and forests (6 percent of the land cover). Iowa's forests and trees are largely controlled by private ownership (92%). Our forests have significant impacts on Iowa's agricultural based economy by protecting water quality, providing wildlife habitat and numerous outdoor recreational opportunities. Wood/forest products industries in Iowa employ over 7,000 people, producing lumber and high quality wood products. Trees in our small and large communities or "urban forests" increase property values and conserve cooling and heating energy. Our forests are vital to our state's environmental future.



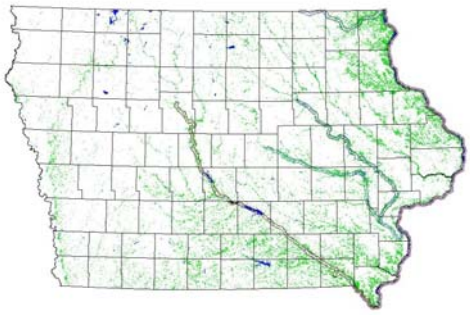
Forest health monitoring efforts are cooperative efforts with the DNR through the USDA Forest Service, USDA Plant Protection Quarantine, State Entomologist of the Iowa Department of Agriculture and Land Stewardship and Iowa State University, along with private/public foresters and private landowners. This cooperative effort encourages efficient monitoring efforts and fosters communication with those involved in Iowa's forests and their future health.

Monitoring Efforts for 2002

Estimates of serious forest and tree insect and disease damage and severe weather impacts were determined by aerial surveys of over 282,000 acres of upland forests (142,500 acres) and bottomland or floodplain forests (139,500 acres). DNR foresters and trained master woodland managers and community tree stewards provided visual ground checks on forest health problems and locations. The "gypsy moth" *Lymantria dispar* a potentially serious, exotic defoliator of Iowa's native trees and shrubs was monitored in 2002 through a partnership with IDALS State Entomologist, USDA APHIS and the DNR Bureau of Forestry, placing approximately 5,805 pheromone survey traps across the state. The purpose of the trap setting was twofold: to determine possible infestations and locate sites in need of control efforts. The DNR coordinated gypsy moth survey efforts at 38 western Iowa counties (800 traps), Yellow River

State Forest (50 traps over 8,000 acres) and a statewide volunteer monitoring effort with over 500 trained community tree stewards.

Aerial Forest Surveys Flight Paths 2002

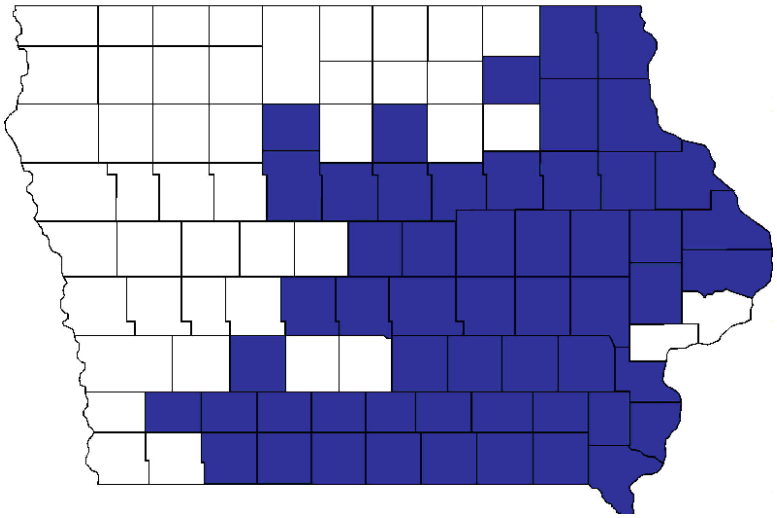


During the summer of 2002, DNR foresters conducted aerial surveys of 282,000 forested acres of the major river valleys of Iowa: Des Moines River, Cedar River, Iowa River, Mississippi River and the Upper Iowa River. Surveys were conducted at this time to determine the extent of oak wilt, Dutch elm disease and impacts of severe weather. Visual and verbal reports from community tree stewards and foresters were also used during the growing season to determine areas of significant impact.

Weather Impacts

Iowa's winter was somewhat mild. Rainfall amounts were near normal throughout the summer for most of the state. However, the extreme Southwest corner of Iowa experienced drought like conditions. The entire State was extremely dry throughout the fall.

Oak Wilt 2002



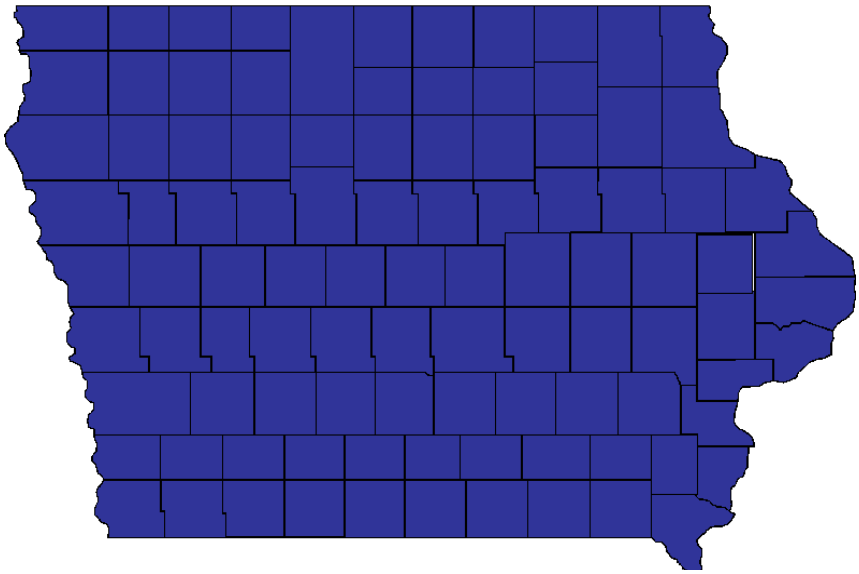
Tree and Forest Disease Issues

Oak wilt caused by the fungus *Ceratocystis fagacearum* invades the water conducting tissues (xylem) of oak trees and causes the foliage to wilt and die.

During 2002, using a tree count rather than area count, DNR foresters reported 100 new acres of oak wilt infections. Although all species of oaks are susceptible, the red oak group, especially black oak *(Quercus veluntina)*, northern red oak *(Quercus rubra)* and pin oak *(Quercus ellipsoidalis*) often die within weeks of infection. Bur oak *(Quercus marcocarpa*) was also observed with oak wilt symptoms. Oak wilt is spread via root grafts and sap-feeding nittidulid beetles. Although there is no cure for oak wilt, control strategies such as preventing tree wounds during high infection periods (March 1 to June 1), disease containment by cutting or killing roots of infected trees, and killing oak trees surrounding the infected trees all appear to have some use in management and prevention. Sanitation of dying and dead oaks before oak wilt fruiting bodies appear in the following spring reduces the risk of overland spread. Oak wilt was reported in 54 Iowa counties. High-valued oaks can be protected through systematic injections of a fungicide, which has become more available through local tree care companies.

Dutch elm disease (DED) caused by the fungus *Ophiostoma umli/novo-umli* was reported statewide in 2002. Approximately 198 acres of American elms *Ulmus Americana* across the state were infected. DED occurred in small and scattered drainage areas in rural areas and in isolated urban trees across the state. Continued lack of sanitation spreads the disease over land by providing breeding grounds for disease carrying bark beetles.

Dutch Elm Disease 2002



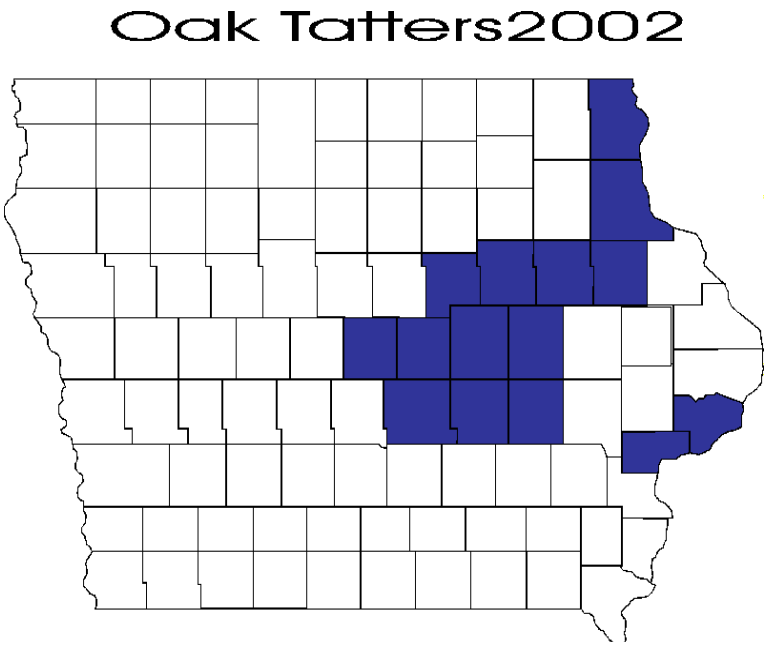
Tree Species Decline Issues

DNR field foresters continue to observe scattered ash dieback/decline of native white and green ash *Fraxinus americana* and *pennsylvanica.* In 2002, this ash decline was reported in 33 Iowa counties. Although the exact cause of this dieback/decline of native trees is still under investigation at Iowa State University,

DNR field foresters are recommending early removal of white ash during commercial and pre-commercial thinnings of forests and increasing species diversity in heavily green ash planted urban areas.

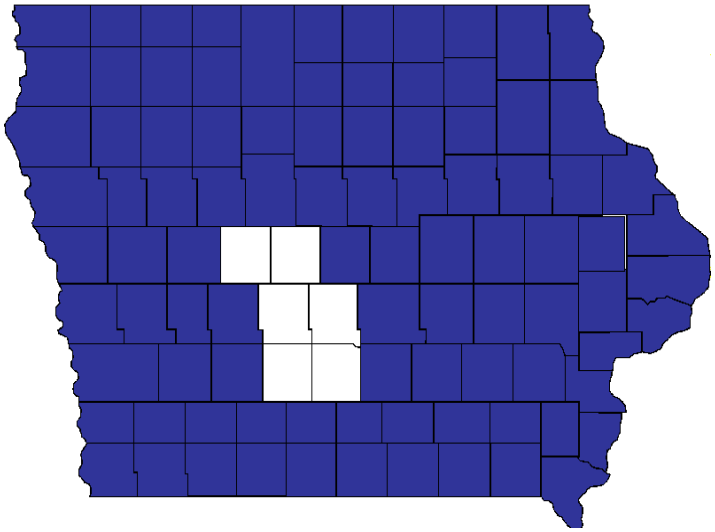
Other Tree Health Concern

Oak tatters have been reported in 15 Iowa counties in 2002. Oak tatters affects primarily the white oak group including white, bur, and swamp white oaks. Damage from oak tatters appears at the time of leaf emergence to late May. Newly emerged leaves of affected trees will have reduced interveinal tissues, which give the leaves a lacy or tattered appearance. Trees will often reflush with new leaves in 2 to 3 weeks. This new flush of leaves can reduce a trees stored energy reserves. Repeated tattering could make a tree more susceptible to attacks from other insect and disease pathogens. It is theorized that oak tatters is caused by herbicide drift.



Because of the scattered nature of deer damage reports, only a visual estimate from field staff is possible. It is estimated that approximately 1,900 acres were somewhat damaged by deer browse in 2002. Moderate to heavy deer browse damage was observed in 93 out of Iowa's 99 counties.

Deer damage 2002



Rabbit or eastern cottontail damage was also reported to be moderate to severe throughout the state. Rabbits can easily girdled young trees and plants in urban and rural settings.

Invasive Species Efforts Established

State agencies and universities have been working to increase awareness of invasive animal and plant issues related to urban and rural forest areas. A standing working group is leading the efforts to conduct workshop and training sessions for natural resource professionals. An annual "Invasive Species Tour" is sponsored by the IDNR Bureau of Forestry. The DNR has produced and distributed an invasive species poster for statewide distribution. Currently, a woodland invasive species survey is underway in Iowa to map the location and severity of garlic mustard, buckthorn, bush honeysuckle, and multiflora rose. These four plants are currently Iowa's primary woodland invaders. The invasive species survey is being conducted through the cooperative efforts of Iowa State University Department of Forestry and IDNR Bureau of Forestry. The project is funded through a grant from the United States Forest Service. The survey's objective is to determine the extent and severity of invasive species in Iowa's woodlands.

For more information contact:
John Walkowiak, Bureau Chief
Bureau of Forestry
Iowa Department of Natural Resources,
Wallace State Office Building,
Des Moines, Iowa 50319
(515) 242-5966
john.walkowiak@dnr.state.ia.us.