



Forest Policy Bulletin

MAINE FOREST PRODUCTS COUNCIL

"Maine forests should be adequately monitored & managed to minimize damage by fire, insects, disease, theft and criminal trespass."

From the Maine Forest Products Council's Forest Policy Guidelines



Forest Protection

Covering nearly 18 million acres across 95% of the state's area, the Maine Woods are both literally and figuratively the jewel in the crown when it comes to Maine's abundant natural resources.

Like any precious belonging, the forests of Maine require protection from a range of threats. Fires can destroy the woods. Insects and disease can weaken them. And human carelessness or malice can undermine the successful balance between private rights and public access that has been a tradition in the North Woods for several generations.

In view of these threats, the state government, the forest products community, and researchers at the University of Maine and elsewhere are constantly looking for ways to sustain and enhance the web of protective measures that have been put in place over the years.

Fire- Preventing the Ultimate Disaster

Of all the threats to Maine's forests, the threat of fire will always be the most dramatic and potentially damaging. On the other hand, nowhere has Maine seen greater success in its forest protection efforts than in its prevention of major fires. In the early days of the last century, fires could destroy sev-

eral hundred thousand acres in a matter of days. By the end of the century, however, average losses to fire had dropped to, on average, less than a thousand acres per year. A number of developments have contributed to this success, including a strong emphasis on fire prevention, public information campaigns, a thorough aerial fire detection network, and effective planning by, and cooperation between, local, state and private authorities.

Fire Protection by the MFS

In Maine, the primary responsibility for protecting the forests from fire falls to the Forest Protection Division of the Department of Conservation's Maine Forest Service. The effort is broken down into five different categories. Nearly a third of the Division's time and funds are dedicated to **Prevention**. The Division's **Detection** efforts revolve around the use of 12 contracted detection aircraft. In preparation for possible fires, the Division's **Presuppression** program is dedicated to training municipal and Division employees, maintaining and developing specialized equipment, and developing plans for use in the event of a fire. The Division's **Suppression** program is responsible for extinguishing fires that do occur, and the remainder of its efforts are devoted to **Enforcement** of all forestry statutes.

Because of the potential devastation that fires can cause, state law has been designed to provide every possible protection against accidental fire. For

example, the use of fire to clear land, or the burning of logs, stumps, brush, or slash, is prohibited without a permit from the director of the Maine Forest Service. Furthermore, a permit from either a town forest fire warden or a state forest ranger is required for any prescribed burning for timberland management. No obstructions are allowed to block an improved woods road that runs through forest land if that road may be used for preventing or suppressing forest fires. And no equipment using an internal combustion engine may be used within 1000 feet of forestlands unless it is equipped with a specifically approved spark arrestor.

Arson- A Special Case

It is estimated that arsonists cause 1 out of every 5 wildfires in Maine, costing taxpayers thousands of dollars each year, as well as endangering human lives and property. Given the gravity of the crime, the Maine Forest Service has set up a special hotline for information regarding possible arson-related fires. Anyone with possible information should call 1-800-987-0257. Calls are held in strict confidence, and anyone who reveals information leading to the arrest or conviction of an arsonist will receive a cash reward from the MFS up to \$2000.

Government Support

Every year, federal funds are appropriated to assist towns with the purchase of forest fire equipment or to provide forest fire training. Grants

require that towns match the grant funds dollar for dollar. The Maine Forest Service, working under the authority of the “1990 Farm Bill”, also helps localities by acquiring Federal Excess Property at little or no cost, then loaning it to municipalities for help in fighting forest fires.

The Forest Protection Division of the Maine Forest Service is charged with providing forest fire and forest resource protection to Maine’s 17,749,000 acres of forested land. Information on fire permits, fire conditions throughout the state, an arson report hot line, and other resource protection programs can be found at <http://www.state.me.us/doc/mfs/ffchome.htm>.



A Role for Pesticides

Keeping the Forests Healthy . . .

According to a draft report of the Maine Forest Service’s Biennial Report on the State of the Forest, “Maine’s forests are relatively healthy, and on average are younger and more vigorous than those of neighboring states.” The report notes, however, that “the population dynamics and consequent impacts of native and established exotic pests appear to be less predictable than in the past.” Warmer winters and extended droughts are resulting in the return of insect species such as the browntail moth, the balsam woolly adelgid, and the gypsy moth, all of which have been brought under control in recent years.

The same conditions which are allowing these pests to return to Maine’s forests are also allowing them to have a greater impact. For example, trees that are starved for water are less resistant to pests and slower to recover from their impact. Climate changes are also contributing to the problems associated with new, exotic pests such as the Pine Shoot Beetle, the Brown Spruce Longhorned Beetle, and the Asian Longhorned Beetle.

With the return of old pests and the arrival of new ones, there is little doubt that protecting Maine’s forests from insects and disease is among the most difficult challenges facing those who work in the Maine woods. Nowhere else are the potentially conflicting desires to protect public health, maintain a thriving forest, and sustain efficient forest management more closely tied together. For decades, government, research, and industry forces have worked to test and develop the best, safest,

most economical way of keeping the forest free from the scourge of insects, weeds, and disease.

In 1921, the Maine Forest Service’s Division of Forest Health & Monitoring was established with the goal of protecting Maine’s forest resources from significant insect and disease damage, as well as to assist homeowners, municipalities, and members of the forest products community with pest management and damage prevention.

The Division functions in a number of ways. First, it maintains a watchful eye over current and potential insect, disease, and various other environmental threats to Maine’s forests. Next, it provides technical assistance to forest landowners, municipalities and individuals who are seeking to identify and control forest insects and diseases. The Division also designs and oversees large- and small-scale pest management and remediation projects, enforces state and federal quarantine laws, and conducts studies on the sources of, and solutions to, forest environmental stress.

. . . And Keeping the Forests Productive

Given the scope of Maine’s forests, and given their importance to Maine’s economy, the fight against pests and disease often involves the use of chemicals. Chemicals, however, are not used only in the battle against the forest’s enemies. They are also an important silvicultural tool used by foresters to maintain and enhance a healthy forest’s productivity.

When considering the role in Maine’s forests of pesticides – which is typically the umbrella phrase used in reference to chemicals used to control undesirable plants, insects or fungi — it helps to bear in mind that chemicals have been a part of Maine’s forest management for over 50 years. In fact, chemicals were used in the forests before chain saws. The first applications of herbicides in Maine’s forest were in 1947. In the early years, much of the chemistry and delivery technology was adapted from the agricultural sector, but research throughout the 1960’s led to the development of chemicals designed specifically for silvicultural applications. At the same time as more efficient chemicals were being developed, application technologies evolved to the point that applying herbicides and pesticides from the air became safer, more efficient, and more economical than applying them by humans on the ground.



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How Pesticides Work

Glyphosate is the herbicide that is most commonly used on timber stands in Maine. The active ingredient in such commercial products as Accord and Roundup, glyphosate's primary function is to control the growth of those types of vegetation that compete with young softwood trees for nutrition, water and sunlight. Specifically, when applied to the leaves of actively growing plants, such as young hardwood trees, glyphosate-based herbicides are absorbed into the above-ground parts of the plants such as the green leaves or green stems. Once on the leaves, glyphosate moves throughout the plant. As glyphosate works only on plants that have emerged from the soil, wilting them within a matter of days, it has no impact on any seeds that have not yet sprouted.

As with any chemical substance, glyphosate has been studied, and those studies have been reviewed, by a broad range of private, state and federal agencies. According to a fact sheet provided by the Environmental Protection Agency (EPA), "glyphosate is a non-selective herbicide registered for use on many food and nonfood field crops as well as non-crop areas where total vegetation control is desired. The report goes on to note that nationally "the largest use sites include hay/pasture, soybeans and field corn."

Glyphosate's widespread use as an herbicide stems from a number of reassuring facts. First, according to the EPA, "glyphosate is of relatively low oral and dermal acute toxicity." For this reason, "it has been placed in Toxicity Category III . . . (Toxicity Category I indicates the highest degree of acute toxicity, and Category IV the lowest)." Moreover, studies indicate that glyphosate does not bioaccumulate, so even repeated ingestion by animals results in extremely low to no residues in meat and fat tissue. Studies also indicate that glyphosate adheres firmly to soil molecules, so the risk of recent applications leaching into groundwater supplies is essentially nonexistent.

Finally, because competing vegetation is of

concern only to young trees, glyphosate is usually applied only once or twice over the 40-80 year rotation of a managed site.

Most herbicide applications are carried out in late August into early September under tightly controlled conditions. Applications typically involve low rates of active ingredient per acre treated. Most applications are delivered by rotary winged aircraft that can deliver a uniform coverage of an accurately delivered spray pattern. Modern application technologies allow for high levels of precision in delivering silvicultural herbicides.

For example, using state-of-the-art booms and nozzles, application widths as narrow as 3 to 4 feet have been achieved while flying 50 mph at altitudes of 40 to 50 feet above the tops of trees. Throughout the 1990's, Maine timber areas treated by aerial application of herbicides have ranged from 45,000 to 60,000 acres.

The Regulatory Safety Net

Given both the gravity of pesticide use and their importance to much of Maine's natural resource economy, virtually no element of commercial pesticide use goes without close oversight by state regulators. In Maine, the Board of Pesticides Control (BPC) is the lead agency for pesticide regulation. The BPC is attached to the Maine Department of Agriculture, Food and Rural Resources (DAFRR), operates within the purview of two broad state statutes, and has been granted enforcement primacy by the EPA to enforce federal pesticide law in Maine. All policy decisions are made by a seven-member board selected by the governor from the state's academic, public policy, and private industry communities.

According to the DAFRR, "by statute the seven-member, volunteer Board must include three persons knowledgeable about pesticides in agriculture, forestry or commercial applications. One person must have a medical background and another must hold a faculty position in either agronomy or entomology at the University of Maine. The remaining two members are selected to represent expertise in environmental issues." All members serve for four-year terms and are eligible for renomination and approval.

The BPC is responsible for the registration of all pesticides, the certification of all commercial, private, and government pesticide applicators, and the licensing of all pesticide dealers within Maine. It can also designate critical areas where pesticide use might jeopardize critical wildlife habitat or present a serious risk to water supply quality. Finally, the DAFRR notes that "every pesticide distributed in the State must be registered annually with the DAFRR", and that "the BPC may, at any time, make further inquiry regarding a registered pesticide, refuse

reregistration, suspend or revoke registration, or otherwise restrict or condition the use of pesticides to protect public health and the environment.”

In short, everything from the registration, to the distribution and use, to the disposal of pesticides in Maine is regulated by the Board of Pesticide Control. Meanwhile, further studies are ongoing at the University of Maine regarding the long-term effects of herbicides on young spruce and fir stands, as well as on the tolerance for herbicide application of such commercial species as the red spruce and the balsam fir.



The Maine Board of Pesticides Control is comprised of seven, volunteer members representing a range of backgrounds from the public, academic, and private sectors. For more information about the BPC, including a List of programs and regulations, recent publications, calendar of meetings, pesticide registration and license applications, go to <http://www.state.me.us/agriculture/pesticides/homepage.htm>.

Protecting Against Theft and Criminal Trespass

The final link in the armor protecting Maine’s forests involves protecting the prevention of theft and criminal trespass. According to the Maine Forest Service, “the number of complaints related to timber theft and trespass increased from 85 in 1993 to 325 in 1995. Since that time, the Legislature has changed the laws and strengthened penalties, giving MFS and District Attorneys the tools to address the issue more effectively. Since then, the number of cases has declined to 263 cases in 2000.”

There are also incidences of forestlands being damaged for purposes of making a political statement, as well as an increase in recent years of environmental damage committed by people who are using private forestland for recreational purposes. The recent session of the Maine Legislature saw bills proposed to stiffen the penalties for both kinds of vandalism. Although only one of those bills, L.D. 273, “AN ACT TO CLARIFY THAT POLLUTERS WHO VIOLATE THE ENVIRONMENTAL LAWS ON PRIVATE LAND ARE LIABLE FOR THEIR ACTIONS,” was passed into law, Maine law allows landowners to recover the value of property lost due to acts of vandalism or theft.

The Maine Woods: Looking Ahead

Although there is always room for improvement, much of the protective screen needed to keep Maine’s forests healthy and productive is already in place. Consequently, what is needed moving ahead might be summed up quite simply as “more of the same.” Specifically, Maine’s policy makers should see that the state’s annual protection and monitoring programs are adequately funded and remain comprehensive in scope.

Maine should also work to keep the number of acres damaged by disease or insects to their lowest possible level. Some citizens have voiced concern over the use of pesticides in the fight against insects, as well as in the effort to increase forest productivity, but in its recent draft Report on the State of Maine’s Forest, the Maine Forest Service noted that proposals to eliminate the use of pesticides “would seriously weaken Maine’s ability to improve forest growth rates or ameliorate the impacts of the forest pests” which are currently threatening to stage a comeback.

Finally, as is the case with so much of forest policy, effective protection of the Maine Woods relies heavily on keeping the public informed about the importance of the full range of forest protection efforts, as well as about the complex interplay of state, academic, and private programs that are working toward keeping Maine’s forest resource healthy and productive for both current and future generations.



**This Forest Policy
Bulletin
can also be found at
www.maineforest.org.**