JOINT LEGISLATIVE AIR AND WATER POLLUTION CONTROL AND CONSERVATION COMMITTEE

House of Representatives
PO Box 202254
Harrisburg, Pennsylvania 17120
717-787-7570

REPORT OF THE FORESTRY TASK FORCE

PURSUANT TO SENATE RESOLUTION 137 of 2005

December, 2007

TO: **All Members of the General Assembly**

FROM: **Representative Scott E. Hutchinson, Chairman**
Senator Raphael J. Musto, Vice Chairman

SUBJECT: **Report of the Legislative Forestry Task Force**

DATE: **December, 2007**

Pursuant to Senate Resolution 137 of 2005, the Joint Legislative Air and Water Pollution Control and Conservation Committee submits the report of the Forestry Task Force. The recommendations adopted and presented in this report are the culmination of efforts on the part of the Forestry Task Force and its Advisory Committee. Senator Roger Madigan, Bradford County, served as chairman of the Forestry Task Force.

MEMBERS OF THE FORESTRY TASK FORCE

Senator Roger A. Madigan, Chairman

Senator Raphael J. Musto

Representative Gary Haluska

Representative Scott E. Hutchinson

Representative Kathy Rapp

MEMBERS OF THE FORESTRY TASK FORCE ADVISORY COMMITTEE

Dr. Theodore R. Alter
Director of Cooperative Extension
Pennsylvania State University

Mr. Thomas Buzby
Director, Governmental Affairs
Weaber, Inc.

Mr. John Byerly
Chief Forester
Pennsylvania Game Commission

Mr. Keith Craig
Executive Director
Pa. Hardwoods Development Council

Dr. James R. Grace, State Forester
Department of Conservation and Natural Resources
Bureau of Forestry

Mr. Gregory L. Hornsby
Wheeland Lumber Co., Inc.

Mr. Jon Howard
Howard & Associates

Mr. Kenneth C. Kane
Pennsylvania Division of the Society of American Foresters

Mr. Marc Lewis
Vice President
Dwight Lewis Lumber Co., Inc.

Mr. Paul Lyskava
Executive Director
Pa. Forest Products Association

Mr. Ken Manno
Sustainable Forestry Initiative of Pennsylvania

Mr. Dave Miller
Allegheny Forestry, Inc.

Mr. Ron Ramsey
Senior Policy Analyst
The Nature Conservancy

Mr. Kevin Stout
Area Procurement Manager
Allegheny Wood Products, Inc.

Dr. Charles Strauss
The Pennsylvania State University
School of Forest Resources

Mr. Harry V. Wiant, Jr.
PFA Vice President
Joseph E. Ibberson Chair

Mr. Peter Yaffe
Senior Vice President for Government Affairs
Triad Strategies

INTRODUCTION

When driving through Pennsylvania it is easy to realize that the state is home to an abundance of trees and forests. About six of every ten acres of land (some 17 million acres) are forested. Despite significant losses due to development, the forestland areas in Pennsylvania continue to increase. It is truly one of the largest expanses of forested lands in the nation, and is an invaluable resource in many ways to the people who work within its boundaries, use its natural resources, and harvest its timber. There are more forested acres in Pennsylvania today than in the last 150 years.

But what will our forests look like in the next 150 years? Will they resemble today's forests or will multiple threats, such as the pressure of development and the proliferation of invasive species, alter the Commonwealth's forest beyond recognition?

Such threats may seem surprising, since a generation of forest management policies have benefited the state's forest ecosystem. Pennsylvania is home to the greatest volume of select hardwood species in the country. The finest maple, black cherry and red oak come from Pennsylvania. The forest products industry is a vital component of the economy for most of the state's rural counties. The sawmills, paper mills, and manufacturers of wood products employ nearly 92,000 individuals or about one of every nine Pennsylvanians. There are more than 3,000 forest product companies statewide, many of which are family-owned businesses. Pennsylvania's forest products industry has combined annual sales of $16 billion and an overall annual economic impact estimated to be approximately $27 billion.

Forests also produce large amounts of oxygen, cool landscapes, and filter air and water pollutants. They act as vast sponges, storing rainwater so it can flow into aquifers instead of quickly running out to streams. And through photosynthesis the forests absorb carbon, locking it up and taking it out of atmospheric circulation.

Most forests are owned, not by federal, state and local government, but by private landowners. Seventy percent of Pennsylvania's forested land, roughly 12 million acres, is privately owned by over a half-million private landowners. Approximately 30 percent of the forests of Pennsylvania are publicly owned, including four million acres of public forestland composed of 2.1 million acres of state forestland, 1.4 million acres of Pennsylvania Game Commission land, and 513,000 acres in northwest Pennsylvania in the Allegheny National Forest.

As Pennsylvania's newer suburbs and outer townships dominate the state's sprawling population growth, so grows the pressure of people and their demands on the state's forest resources, creating new challenges on their use. Land use planning and certain types of local ordinances are major challenges to the future of forestry in Pennsylvania. Private landowners, forest resource managers, and the forest products industry will need to identify and implement new strategies to meet those challenges.

During the 2005 session of the Pennsylvania General Assembly, Senator Roger A. Madigan, Bradford County, introduced Senate Resolution 137, Printer's Number 968 (Appendix A). The resolution called for a legislative study on "issues concerning the renewal and management of this Commonwealth's forests" and charged the Legislative Forestry Task Force and Advisory Committee, with staff assistance from the Joint Legislative Air and Water Pollution Control and Conservation Committee.

The Task Force is composed of four members of the Pennsylvania General Assembly, two members of the Senate and two members of the House of Representatives. The role of the Task Force with regard to this legislative report was to examine various issues impacting the condition of public and private forests and their long-term sustainable management for timber production, recreation and other values. The Advisory Committee is composed of a diverse array of individuals who approach the issue of forest management from many different perspectives. A coalition of conservation, forestry, academic, wildlife and industry groups, the Advisory Committee's main purpose is to offer guidance on pertinent issues relating to the management of Pennsylvania's forests. The Advisory Committee's members all have a stake in the future of Pennsylvania's forests and have volunteered their time to the Task Force for the past two years.

The Task Force has no regulatory or legislative authority. Its role was to offer its best advice on the management of the Commonwealth's forests to the Pennsylvania General Assembly and others.

Senate Resolution 137 set an ambitious agenda for the work of the Task Force. Pursuant to the resolution, the Task Force focused on five priority issues that are most pressing for Pennsylvania forests in the coming years:

1. **The growing threat of forest pests and diseases.**
2. **The impact of municipal ordinances on accessing private forests.**
3. **The United States Forest Service's survey of private forest landowners in Pennsylvania.**
4. **Prescribed burning as a forest regeneration management tool.**

5. **The impact of government's increasing acquisition of private forest land.**

The Task Force conducted four meetings between January 2006 and April 2007. At each meeting a variety of individuals, each with a special expertise on Pennsylvania's forests, were invited to make presentations on a specific issue.

The following organizations presented information to the Task Force:

- **Allegheny National Forest**
- **Natural Lands Trust**
- **The Nature Conservancy**
- **Pennsylvania Department of Conservation and Natural Resources Bureau of Forestry**
- **Pennsylvania Forest Products Association**
- **Penn State University, School of Forest Resources**
- **USDA Forest Service, Northeast Research Station**
- **Weaber, Inc.**

These organizations provided the Task Force with a wealth of thought provoking ideas and perspectives. Their input was extremely important in setting the tone for the work of the Task Force, and refining its recommendations. The Task Force meetings were characterized by diverse discussions and a high level of cooperation. Based on this, a set of recommendations was developed for each of the five priority issues. However, because of the complexity of the issues, it was not possible to reach total agreement on all aspects of every issue. Nevertheless, this report represents the consensus of the Task Force and Advisory Committee on each of the five issues.

THE GROWING THREAT OF FOREST PESTS AND DISEASES IN PENNSYLVANIA

Although Pennsylvania's forested resources are generally resistant to damage imposed by native pests, disease agents (pathogens), and adverse weather conditions, sustainability issues have emerged in recent years. Some sustainability issues reflect over-maturity of existing stands and suppression of natural disturbances essential to regenerate forests, whereas others are a consequence of damage imposed by invasive insects and pathogens. Such pressures coupled with periodic outbreaks of native forest pests may hasten the decline of susceptible forest and tree resources.

Invasive insects and pathogens are among the most serious threats to forest ecosystems of Pennsylvania. From a Pennsylvania Bureau of Forestry survey of public and private forestlands in Pennsylvania, 32 insects and five pathogens were reported. In 2005, over 420,000 acres were damaged by insects with an additional 32,000 acres reported to be damaged by weather related events, totaling over 452,000 acres. The 2005 total was considered to be an average year for acres damaged as compared to the late 1980s when millions of acres were damaged by Gypsy Moths.

In addition to current pressures, the state's forested resources are at risk to new pests not yet established within the state. The recent expansion of the Emerald Ash Borer within western Pennsylvania has generated great concern among natural resource professionals. Slowing the spread and preventing invasive insects from becoming established in new areas will be major challenges for forestry and regulatory agencies in the immediate future.

A number of federal and state agencies are charged with fighting the spread and impacts of invasive forest pests. The U.S. Department of Agriculture (USDA) is the federal agency responsible for protecting the health of the nation's forests from harmful pests. The USDA's Animal and Plant Health Inspection Service (APHIS) division and the U.S. Forest Service are its lead agencies. and often work with other federal, state, and local agencies to prevent the entry of potentially invasive pests and pathogens via nursery plants and other pathways. In Pennsylvania, the state Departments of Agriculture (PDA) and Conservation and Natural Resources (Department) are responsible for managing and eradicating invasive species infestations.

In Pennsylvania, the Governor's Invasive Species Council was created in 2004 to develop and implement a comprehensive invasive species management plan for the state. One of the priority objectives identified by the council is to work with the governor, legislature and other key partners to establish permanent funding for invasive species management activities.

The Department's Bureau of Forestry has monitored the health of the state's public and private forests for over a century. Since the early 1900s, the Bureau of Forestry has been responsible for the protection of state forest lands from "insects, and other enemies." The Bureau of Forestry's Division of Forest Pest Management promotes programs designed to improve or maintain the health and biodiversity of the forest ecosystems and limit the economic losses brought about by forest pests and diseases.

There are many invasive forest insects impacting the forest resources of Pennsylvania each year, and they have been the focus of the Bureau of Forestry's pest management efforts. During one of its meetings, the Task Force heard an

overview of different types of invasive insect species and their impacts on the Commonwealth. Among the invasive forest insects that are currently of concern and/or impacting Pennsylvania's forest resources are the Gypsy Moth, Hemlock Wooly Adelgid, Elongate Hemlock Scale, Emerald Ash Borer, Asian Long-Horned Beetle and the Sirex Wood Wasp.

Gypsy Moth - The leaf-eating Gypsy Moth caterpillar feeds on valuable trees such as oak, apple and other hardwoods. In recent decades, the Gypsy Moth has inflicted devastation on Pennsylvania's hardwood forests with acute epidemic breakouts in the eighties and early nineties. In 2006, at least 700,000 acres of forests, primarily in the Poconos and central Pennsylvania, were defoliated by the Gypsy Moth. An aerial suppression program was conducted in 2006 on 81,160 acres of land. In the 2007-2008 state budget, over $5 million was appropriated to the Department for its Gypsy Moth Suppression Program.

Hemlock Wooly Adelgid – Pennsylvania's state tree, the hemlock, is under attack from Hemlock Wooly Adelgid, an aphid-like insect native to China and Japan. This pest poses a catastrophic risk to all 290,000 acres of hemlock forest in Pennsylvania. Attempts to control this pest have had limited success. Adelgids have few natural enemies in the United States. Chemical control options for this pest may be effective. Several insecticides have the potential to be effective when injected into the soil on an individual tree basis. However, because of the cost, this option is viable only in certain high value areas.

Elongate Hemlock Scale – The Hemlock Scale, which is very similar to the Adelgid, is a very serious threat to hemlocks in southeastern Pennsylvania. Throughout 2006, a specialized beetle species (Cybocephalus nipponicus) that is a predator of the Hemlock Scale was introduced to aid in the control of this pest. Because hemlocks grow in environmentally sensitive areas, spraying topical pesticides is impractical.

Emerald Ash Borer – The Emerald Ash Borer (EAB) is an invasive Asian beetle that has been responsible for the destruction of approximately 20 million trees in the Midwest. The EAB is thought to have arrived in wood packing material commonly used to ship consumer and other goods. Infestation of an ash tree by the EAB is usually fatal within a few years. It was first detected in July 2002 in southeastern Michigan. In June 2007 the EAB was detected in western Pennsylvania by USDA surveyors. State officials surmise the infestation has been there since 2002 and possibly as early as 2000. Officials ordered a quarantine in four counties (Allegheny, Butler, Beaver and Lawrence) and state and federal officials have asked campers not to transport ash tree products or hardwood firewood from anywhere near the affected area. The Bureau of Forestry estimates the four ash species (green, blue, black, and white) make up about 3.6 percent of the state's woodlands and total about 308 million trees. The hardwood trees, which are usually

found in stream corridors, are primarily used for furniture and baseball bats. Commercial value of white ash alone is estimated at $768 million. Pennsylvania landowners who own marketable ash timber are considering the risks presented by the EAB in determining when to harvest their trees. There are no known native diseases or predators to control the EAB. Sprays and traps have proved ineffective. Pennsylvania will receive $3 million from the USDA to conduct surveys and public awareness programs.

Asian Long-Horned Beetle – The Asian Long-Horned Beetle threatens the potential loss of every maple (Norway, silver, red, and sugar) plus nine other tree species across the United States. Thought to have migrated in wooden crates from China, North America's first Asian Long-Horned Beetles were discovered in 1996 in Brooklyn, New York. Since then they have been found sporadically across the United States. Females chew through the bark to lay their eggs. When the larvae hatch, they feed inside the tree for more than a year. Eventually they tunnel out, boring dime-sized holes in the trunks, and then restart the cycle. The damage is usually fatal. If they continue to spread, they could wreak havoc on the timber industry, harm maple syrup production, and hurt regional economies that depend on fall coloration.

Sirex Wood Wasp – The Sirex Wood Wasp was first discovered in New York state in September 2004. The invasive species, native to Europe and a significant pine tree pest in Australia, Africa and South America, is suspected of arriving in wood packing material and has now spread into areas of New York state and northern tier counties of Pennsylvania. Sirex is considered to be a major pest to native red and white pines, as well as non-native Scot's and Austrian pines. The female wasp carries a fungus which it deposits in a host tree as it lays its eggs. The fungus weakens the host tree and can lead to mortality in as little as a few weeks.

Tree diseases can be chronic and pervasive in the forests of Pennsylvania. They may often go unnoticed, yet diseases can cause fundamental ecosystem change and huge economic loss to timber resources. Dutch Elm Disease and Chestnut Blight are examples of causes of large scale tree mortality to native tree species. For Pennsylvania's forests, two diseases of concern are Sudden Oak Death and Beech Bark Disease.

Sudden Oak Death - The Bureau of Forestry is cooperating with the U.S. Forest Service and the PDA in the national Sudden Oak Death survey and detection program. Sudden Oak Death is a disease caused by a new pathogen that has the potential to cause significant damage and mortality to various tree and shrub species throughout Pennsylvania.

Beech Bark Disease – Beech Bark Disease has been in North America for over a century. It is a forest health problem that has not received the same attention as Chestnut Blight or Gypsy Moth. Beech is not generally valued as highly as some other species of timber.

In addition to invasive insect and diseases, weather plays an important role in the health of the forest. Weather events can cause significant damage and can create conditions conducive to widespread disease epidemics. Damage from heavy snow, ice and wind is relatively common. For example, during the July 2003 windstorm in Pennsylvania, over 12,500 acres of forestland experienced moderate or severe blow down. When wind damage occurs, foresters need to salvage the trees quickly to recover as much timber value as possible, and to start the restoration of the forest.

RECOMMENDATIONS

The Task Force recommends the following:

- **Congress should fund the USDA's APHIS and Emerging Plant Pest programs consistently and adequately to make them more effective tools for managing and eradicating invasive species.**

- **The Pennsylvania General Assembly should adopt a resolution that urges Pennsylvania's congressional delegation to support increased appropriations for the USDA and its forest pest, disease and invasive species programs**.

- **The Pennsylvania General Assembly should appropriate adequate funds so that state agencies, such as PDA, DCNR and the Department of Environmental Protection (DEP), have the resources to address invasive species problems promptly and comprehensively over the long-term.**

- **The Bureau of Forestry should continue to work with the PDA, the Governor's Invasive Species Council, Penn State's College of Agricultural Sciences and other appropriate parties in developing cost-effective ways to manage emerging diseases and invasive species. Increased and continued cooperation between stakeholders is essential for effective implementation of a response for any invasive species incursion.**

- **Pennsylvania should establish a policy for dealing with emergency situations that often occur with invasive species incursions. The major hindrance associated with implementation of a rapid response is the availability of resources, particularly emergency funds, for immediate incursion response. The Task Force strongly encourages the Governor's Invasive Species Council to work with the General Assembly and various state agencies in establishing a source of emergency funds that could be readily**

available to assist in responding to emergency situations for which no previous funding has been available.

- **The Bureau of Forestry should continue to prevent the introduction of known harmful invasive insects, plants or diseases through monitoring, detection and public outreach efforts such as leaflets, brochures, and education and training sessions. This outreach should target both the public and natural resource managers and focus on the risks and dangers associated with introduced invasive insect pests.**

- **Given the pace of invasive species introductions and their inevitable impact on Pennsylvania's forests, the Bureau of Forestry should be provided with adequate resources and staffing levels to implement monitoring, mitigation and timber salvage programs needed to ensure long-term forest health and productivity.**

- **The Bureau of Forestry and Penn State University should focus attention on understanding successional processes and barriers to natural recovery to determine if the forests can be restored after an invasive species incursion, and if so, how. Pennsylvania's forests will undergo fundamental changes in composition and character driven by invasive incursions in the near future. Long-term measures will be needed to restore degraded forests that have been negatively altered by invasive species.**

THE IMPACT OF MUNICIPAL ORDINANCES ON ACCESSING PRIVATE FORESTS AND CONDUCTING SUSTAINABLE FORESTRY

Pennsylvania's 17 million acres of forests have been subject to forest management for the last 200 years. Now this vast forest landscape is changing. It is becoming urbanized in certain areas of the state. In every part of the Commonwealth, an increasing number of people choose to move to the country in search of an enhanced quality of life, often unintentionally spurring the conversion of forestland into subdivisions for residential developments.

These newcomers bring with them an urban perception of the forest world that often clashes with that of the traditional residents. On the one hand, traditional forest landowners in Pennsylvania tend to value their independence, lifestyle and right to manage their forestland. The forest products industry wants to sustain both the forests and economic viability of its business over the long-term. On the other hand, new homeowners often have concerns regarding the real and perceived visual and environmental impacts of both traditional rural activities and new development in rural areas.

The new homeowners frequently see traditional timber harvesting operations, the sound of heavy logging equipment and the sight of trees being cut down,

as despoiling the very scenery that attracted them to the area. Local officials often find themselves between the proverbial rock and a hard place. In response, many communities adopt tree ordinances to regulate, or even prevent, those operations.

The Task Force had the opportunity to hear from two presenters regarding the impact of local ordinances on timber production and harvesting. Mr. Paul Lyskava, Executive Director of the Pennsylvania Forest Products Association, provided an overview of timber harvesting ordinances. Similarly, Mr. Dennis Brehm, Chief Forester with Weaber, Inc., expressed his concerns about local ordinances that, in his opinion, can unnecessarily hamper traditional forest management practices by being inflexible, bureaucratic, wasteful and expensive. The following is a summary of their presentations.

There are 5,148 individual units of local government (counties, townships and boroughs) in Pennsylvania. The Pennsylvania Municipalities Planning Code (MPC) authorizes individual municipalities to administer local land use planning. In 1992, the Pennsylvania General Assembly enacted the first MPC forestry-related provision, referred to as "the right to practice forestry" provision, which prohibits municipalities from unreasonably restricting forestry activities. Additionally, MPC amendments in 2000 make it illegal for a municipality to zone an area within the municipality to prohibit forestry activities and timber harvest. Timber harvesting is now a permitted use by right in all zones of a municipality.

In spite of the existing forestry provision within the MPC, a number of municipalities have enacted local ordinances that, according to the presenters, tend to unreasonably restrict timber harvesting by causing delays, increasing operators' expenses and creating requirements that duplicate state regulatory standards. A 2006 Penn State study looked at the number of timber harvesting ordinances in the state and identified common ordinance provisions. The study examined 625 townships in 22 counties. It found that 17 percent of townships surveyed had standalone timber harvesting ordinances. The study, however, did not include restrictions imbedded within land development and sub-division and other type ordinances.

The Penn State study did show that most, but not all, townships have made timber harvesting a permitted use activity in compliance with the MPC. The study also showed that there is a great variety of permit requirements, including acreage required for permit, time the permit is valid, and fees. Many required a timber harvest or forestry plan in addition to Erosion and Sedimentation Control (E&S) plans.

These ordinances often contain unreasonable technical considerations, including diameter limits, cutting restrictions and artificial regeneration. The most commonly proposed restriction requires that a mandatory forest no-cut "buffer" of

specified width be maintained along roadways, adjacent properties or other sensitive areas. This regulation can impact the economics of the forestland. For example, a 100-foot roadside or property line forest buffer can cost the affected landowner thousands of dollars in lost timber revenue. Requirements for bonds, specifically performance and regeneration bonds, may also be considered unreasonably restrictive, as are the imposition of restrictive deed covenants that restrict any further use of the land following a harvest.

A number of other issues were raised by the presenters. One is the general tendency for a municipality developing an ordinance to look toward other municipalities for ordinances already in place. This can perpetuate the adoption of unreasonable, overly restrictive, or even unlawful ordinances among municipalities. Jump starting the forest management ordinance development process by cloning an existing ordinance is seldom reflective of each community's individual needs. In some situations, this has even lengthened the tree ordinance development process.

Every logging operation, regardless of the amount of earth disturbance, requires an E&S plan. Under state law, this E&S plan does not need regulatory approval, but must be onsite at all times so that the County Conservation District or DEP can review it if necessary. Controlling erosion on logging jobs is done by applying state-approved best management practices because roads have to be cut across the forest floor to get the harvesting equipment to the trees, and then to provide a pathway for skidding out the logs. According to one Pennsylvania Conservation District, the number of timber-harvesting plans it receives each year for review has been steadily increasing, a rise that is due in part to the fact that more municipalities in the county have adopted ordinances that require this review before harvesting can begin.

Both presenters concluded that if private forest landowners encounter excessive forest management restrictions that reduce the economic return from their forest land investment, they may be more likely to develop the property or convert it to other uses rather than maintain it as forest.

RECOMMENDATIONS

The Task Force recommends the following:

- **The Bureau of Forestry should work with PDA, Penn State University, forester and landowner stakeholders and local governments to develop educational products and messages that instruct local governments on the appropriate use of ordinances to support sustainable forest management and traditional uses.**

- **The Bureau of Forestry and related stakeholders involved in forestry management and land use planning should regularly share successes and failures of their various programs. Such cooperation would facilitate the flow of information to local officials to ensure compliance with the MPC and stimulate more effective planning at all levels. Because rural areas often lack the resources to conduct such planning activities, the Commonwealth should provide money and technical assistance to further these efforts.**

- **The General Assembly should amend the MPC or the PA Clean Streams Law to prohibit redundant municipal reviews of E&S plans already subject to the regulatory jurisdiction of DEP and County Conservation Districts.**

- **The General Assembly or State Conservation Commission should place reasonable limits on the fees charged for the review of E&S plans.**

UNITED STATES FOREST SERVICE: SURVEY OF PRIVATE FOREST LAND OWNERS IN PENNSYLVANIA

Private ownerships dominate Pennsylvania forests. Seventy percent of Pennsylvania's forested land, roughly 12 million acres, is privately owned by over a half-million landowners. Many of these forest lots are small, covering several acres. However, approximately one of every five forest landowners owns 20 acres or more. Their management decisions affect the present and future condition of the Commonwealth's forest-based economy, including wood supply, as well as the quality of life in rural settings, recreational opportunities, biological diversity, and the many other functions and values of forests.

Identifying and understanding the characteristics of private land owners, especially non-industrial private forests) and the major factors that may influence land use and management will be important to the development of effective owner assistance programs, as well as for predicting future resource conditions. To this end, the Task Force heard from Dr. Jim Grace, Pennsylvania State Forester; Dr. Jim Finley, Professor of Forest Resources at Penn State University; and Dr. Brett Butler, Research Forester for the USDA Forest Service.

The first thing the research shows about private forest landowners is that education is an important determinant of forest landowner behavior. Private forest landowners are generally well-educated (54 percent have a college background). Over 50 percent of forest landowners are between the ages of 55 and 74. The research found that the average age of the forest landowner in Pennsylvania is 61. Forty-nine percent of forest landowners are retirees. The high proportion of older landowners has serious implications for land tenure in the future. Much of the forest land owned by older landowners will transfer to others in the next decade.

Very few private forest landowners actively manage their lands with a primary goal of timber production. Only an estimated five percent of private forest landowners have professionally written forest management plans. These plans often involve the thinning of tree stands. Professional foresters suggest that the omission of this silviculture practice makes it difficult to keep forests ecologically balanced.

Benefits expected in the next five years provide another perspective on ownership objectives. Almost 70 percent of private forest landowners have no future plans for their holdings. According to the survey, timber production was an important ownership objective for over 50 percent of all forest landowners (harvesting firewood and harvesting timber). There is a need to deliver relevant information and services to the ever increasing and changing private forest landowners.

Pennsylvania forestland is becoming increasingly fragmented and parcelized. The term "fragmentation" typically is used to refer to the physical isolation of forested areas. As competing land uses result in forest conversion, previously large continuous tracts of forestland disappear, leaving small stands that are disconnected from one another. "Parcelization" refers to the ownership pattern of forestland. When a large tract of forestland has a single owner, only one person is responsible for making decisions about the management of that land. In Pennsylvania, forestland has been divided into increasingly smaller parcels, each with a different owner. The growing number and variety of owners now responsible for forest management leads to higher likelihood of conflicting values and interests. A parcelized landscape often leads to inconsistent, disjointed management with few considerations for landscape or ecosystem-wide processes.

Forest fragmentation and the tenure of land ownership suggests that private landowners and municipalities need land management and forest assessment information to help them make sound decisions about future land use directions.

The number of stakeholders with an interest in Pennsylvania's forests has increased in recent years. They include government forest resource agencies; conservation oriented organizations; industrial private landowners; non-industrial private landowners; organizations that represent the interests of forest landowners; financial institutions; Penn State University; the forest products industry and others.

Various research has been conducted to define owner characteristics and predict their management behavior, including the Forest Inventory and Analysis (FIA) project of the U.S. Forest Service and information supplied by the forest industry. This research illustrates somewhat varying types of owner-related data and makes it difficult to derive information useful for the Commonwealth as a whole.

Understanding the specific needs and interests of different targeted subgroups will remain critical to developing programs that successfully deliver useful assistance.

To instill a stewardship ethic in Pennsylvania's private forest landowners, the Bureau of Forestry needs to reach a greater number of owners and educate them on the benefits of forest management. Since 95 percent of Pennsylvania's private forest landowners have no written management plan, the Bureau of Forestry needs to focus on how to reach these owners through public education and outreach programs. These programs will allow private forest landowners to maximize sustainable forestry practices.

RECOMMENDATIONS

The Task Force recommends the following:

- **It is critical that Penn State University obtain information on specific ownership groups so that target populations can be identified for disseminating information on forestry and forest management. Available research information is insufficient to define an average private forest landowner in Pennsylvania. This information should be made available to interested stakeholder groups.**

- **The Bureau of Forestry should consider developing information management systems to track and analyze real estate conversion trends. Timely collection and analysis of such information would enable forest policy makers to make more informed decisions for land conservation efforts. This would include the magnitude, number, and location of subdivisions, consolidations, and land sales. This information should be made available to interested stakeholder groups.**

- **The Bureau of Forestry should work with Penn State University, the forest products industry, non-government organizations and other interested stakeholders to strengthen and expand current programs to inform private forest landowners and the general public about sound forest management practices, and the concept of sustainability. These programs should include continuing education for landowners and the general public.**

PRESCRIBED BURNING AS A FOREST REGENERATION MANAGEMENT TOOL

The association of fire with the formation and maintenance of Pennsylvania's forests has been clearly documented. Since the mid-twentieth century, however, fires have occurred only sporadically. Beginning at that time, social and economic concerns were instrumental in turning public sentiment against the practice of burning woodlands and toward the prevention of wildfire. Specifically, concerns about the negative impacts of deliberate burning and wildfire included

increased erosion, loss of timber value, and other property damage. However, the beneficial aspects of fire for forests were not widely appreciated.

In recent years, forest management agencies have started to explore or engage in forest regeneration programs involving periodic, low-intensity, prescribed burns. Forest resource managers and the landowners they serve are increasingly attentive to the beneficial role fire can play in regenerating forests, as well as maintaining other native vegetation.

Prescribed burning is defined as the planned and deliberate application of fire as a forest management tool. Contained prescribed burns are conducted under predetermined environmental conditions to achieve specific resource management goals and objectives. However, there are many knowledge gaps in basic fire science. Forest resource managers desiring to begin using fire or use more fire are hesitant to do so because of these gaps.

The Task Force reviewed prescribed fire practices, regulations and policies. Prescribed burns are conducted for many reasons. For example, natural ecosystems require periodic fire for their survival. Supporters of prescribed burns consider them essential to the management of Pennsylvania's forest system. Pennsylvania forestlands are economic, biological, and aesthetic resources of statewide significance. Prescribed burning reduces the naturally occurring buildup of vegetative fuels on forestlands, thereby reducing the risk and severity of wildfires and lessening the loss of life and property. In addition to reducing the frequency and severity of wildfires, prescribed burning of forestlands helps to prepare sites for replanting and natural seeding, to control insects and diseases, and to increase productivity.

Pennsylvania's ever-sprawling population is resulting in urban development directly adjacent to fire-prone forestlands, referred to as a wildland-urban interface area. The use of prescribed burning in these wildland-urban interface areas substantially reduces the risk of wildfires that can cause catastrophic damage to private property.

A number of conservation organizations have commenced burning for ecological reasons. In eastern Pennsylvania, the Natural Lands Trust and The Nature Conservancy routinely use fire to preserve rare plant communities such as serpentine barrens and scrub oak communities. Throughout the state, the Pennsylvania Game Commission burns grassy fields to benefit a variety of wildlife species. Bureau of Forestry personnel have conducted prescribed burns on several state forest lands.

However, the use of fire carries risk. The fear of liability is seen as the most significant barrier to the application of prescribed fire. The primary risk for

prescribed fire is that the prescribed fire will escape from its intended boundaries and cause property damage or personal injury before the escaped fire is extinguished.

The Bureau of Forestry is responsible for the prevention and suppression of wildfires on the more than 17 million acres of forestland throughout the Commonwealth. The fire laws of the Commonwealth provide authority for the Bureau of Forestry's Division of Forest Fire Protection to protect citizens and forestlands from wildfire. Under the Forest Fire Protection Law (Section 1005 - Penalty for Causing Fire on or Within Woodlots, Forests, or Wild Lands), an individual responsible for a wildfire can be billed for the cost of suppression. Thus, most private landowners are reluctant to use controlled fire.

The Bureau of Forestry recently engaged with others in the development of a Prescribed Fire Council in Pennsylvania. The mission of the Pennsylvania Prescribed Fire Council is to promote the exchange of information, techniques, and experiences of the Pennsylvania prescribed fire community, and to promote public understanding of the importance and benefits of prescribed fires.

RECOMMENDATIONS

The Task Force recommends the following:

- **Legislation should be created to regulate prescribed burning practices and limit liability for burners as long as they follow procedures established by the Bureau of Forestry's Division of Forest Fire Protection.**
- **The Task Force supports agency and stakeholder participation in the development of a Pennsylvania Prescribed Fire Council, which will serve to develop standards, protocols and other guidance related to prescribed burning and conduct outreach to landowners, educators, the general public, and state and local officials on the benefit of prescribed fire.**

THE IMPACT OF GOVERNMENT'S INCREASING ACQUISITION OF PRIVATE FOREST LAND

For many people, the term "land acquisition" means taking over the possession of privately owned land by the government to implement any or multiple purposes for the interest of the public. In Pennsylvania, government and non-government organizations, in various ways, control more than 30 percent of the Commonwealth's forested land area, with the great majority of the land being in state ownership. As Pennsylvania communities continue to grow, local open space lands are increasingly being developed. The growing concern over sprawl development has prompted state and local governments to search for effective

means to protect valued resources. Land acquisition is an important tool in efforts to address sprawl.

Currently, public land acquisition is accomplished through several state agencies and programs. The multiple programs are a result of different funding sources and agency mandates. One such funding source includes the Oil and Gas Fund which consists of revenue paid by private firms for oil and natural gas leases on lands owned by the Commonwealth. In recent years, between $3 million and $4 million have been paid into the Oil & Gas Fund annually. The Federal Land and Water Conservation Fund assists states in planning, acquisition, and development of outdoor recreation resources. In its heyday, Pennsylvania received over $10 million annually from this fund but currently receives less than $1 million annually.

Over the past 15 years, the most prominent program has been the Department's Keystone Recreation, Park and Conservation Fund (KRPCF). Funding comes from a $50 million bond issue in 1993 and 15 percent of the state's annual realty transfer tax receipts. Utilizing the real estate transfer tax as a funding source for land acquisition has the logic of tapping a percentage of the funds generated by development and land sales. The KRPCF has completed hundreds of projects resulting in the acquisition of thousands of acres of land and conservation easements.

In a May 2005 public referendum, Pennsylvania voters overwhelmingly supported a new $625 million Growing Greener II bond issue. The Department received $217.5 million in bond funds to preserve natural areas and open spaces, improve state parks and enhance local recreational needs. Of this total, not less than $90 million must support open space conservation.

In addition to the KRPCF and Growing Greener II, the Pennsylvania Game Commission has its own acquisition program. The Game Commission has been purchasing State Game Lands since 1920. The State Game Land system currently consists of more than 1.4 million acres.

Local ballot measures are quite common in Pennsylvania. In the 2006 midterm election in Pennsylvania, 22 open space conservation referenda appeared on the ballot. Conservation and land use groups experienced a victory when 20 of the proposed ballot initiatives were passed by voters, totaling more than $150 million in funding for conservation.

In addition to public agencies, private conservation organizations are involved in land acquisition, including a number of statewide organizations such as the Western Pennsylvania Conservancy and the Nature Conservancy of Pennsylvania, as well as many other local and regional land trusts. In recent years, large

tracts have come under the protection of private organizations. Over 400,000 acres have been protected by land trusts in Pennsylvania. These lands protect resources of great value to the public, and many of the lands are open to the public for recreational use. In addition, it is important to recognize that private conservation organizations often play an essential role in facilitating public land acquisition projects.

While all of these funding sources permit acquisition of lands for state forests, there have been concerns expressed by the forest products industry and others regarding not only the amount of land purchased by government, but also the reasoning behind such purchases.

In response to these concerns, staff from the Bureau of Forestry presented information to the Task Force concerning its land acquisition strategy titled "Conserving Special Places." This strategy will be used as a guide to future investments in land acquisition.

There are a number of reasons the Department formally established its strategy for future land acquisition activities. Statistics show that the Commonwealth is ranked 5th highest in the amount of open space lost to development while ranked 48th in population growth during the 1990s. In the last 50 years, more than half of the state's farmland has been lost. Over 80 percent of remaining undeveloped open space lacks any real protection or conservation status.

The Department's land acquisition strategy was developed out of its 2004 Strategic Action Plan. One of the four major goals of the Action Plan was promoting statewide land conservation. The Department found a consistent and compelling case for an ambitious acquisition program that would significantly expand conservation land ownership in Pennsylvania. The following is a description of the strategy.

There are two filters contained in the acquisition strategy. The first filter is a series of four general guidelines to assist the Department with its resource allocation for land acquisition. The four guidelines are:

- **Lands for protecting existing public resources.**
- **Lands for ecosystem and habitat conservation.**
- **Lands to protect and conserve water resources.**
- **Lands for public recreation and open space protection.**

A second filter is strategic geography which involves leveraging natural resource programs and economic development programs in a larger, regional approach called Conservation Landscape Initiatives (CLI). These are a collaborative state-local partnership in selected regions including the PA Wilds, Lehigh Valley

Greenway, Schuylkill Highlands and Laurel Highlands. Emerging CLI in the land acquisition stage include the Lower Susquehanna Riverlands, Pocono Forests and Waters, and South Mountain.

The Department's five-year spending plan for the land acquisition program is budgeted for $35 million per year. That amount also includes parks and forestry acquisition as well as grants to local communities and land trusts. The Department acquires about 12,000 acres a year. The acquisition program is funded by the Growing Greener II program.

RECOMMENDATIONS

- **The Task Force believes that while acreage goals for land acquisition provide a useful means to ensure progress, it fully recognizes that the quality of future acquisitions is as important as the amount of land acquired. Future efforts must effectively target those acquisition opportunities that meet a clearly identified public purpose. Moreover, the Task Force will continue to monitor the implementation of the "Conserving Special Places" strategy to ensure that its implementation fairly addresses the needs of all parties involved.**

- **Because public lands are often managed with inadequate resources, the Department should consider future stewardship costs in its acquisition strategy.**

- **The Department should continue to collect and analyze data on the status of natural resources and recreational needs and adjust its acquisition strategy appropriately. Establishing priorities within the strategy depends on a variety of factors. Therefore, the potential economic return from industrial management and recreational uses should be added to the Department's criteria for considering land acquisitions.**

APPENDIX A

Press Control + Click on link below.

..\scandocs\SR 137.PDF