



United States
Department of
Agriculture
Forest Service

Northeastern Area
State and Private Forestry
NA-IN-02-03



Northeastern Area State and Private Forestry
Strategic Plan

FY 2004 to FY 2008

Director's Message



Greetings!

I am pleased to share with you the Northeastern Area, State and Private Forestry Strategic Plan for Fiscal Years 2004 to 2008. We take seriously our responsibility to help States and private landowners manage

their forested lands to meet their particular objectives. Our cooperative efforts ensure a win-win situation in which forest resources are wisely managed, and States and private landowners are assisted in meeting their goals. Helping people to wisely manage their forest resources is our mission.

The Northeastern Area strategic plan helps us focus on the great threats affecting the Nation's forests today—fire hazards, invasive species, forest fragmentation, and effects of unmanaged recreation. Since a majority of the Nation's forests, including over 90 percent of the forests within the 20 Northeastern and Midwestern States, are in State and private ownership, the success of our cooperative efforts is important and significant! Our strategic plan recognizes the challenges of today and prepares us for the challenges ahead. We will use this plan

and the focus it provides to anticipate both opportunities and challenges facing forest resources, forest landowners, our partners, and our own organization. We'll learn from the past, as we focus on the future.

The Northeastern Area strategic plan is all about expectations for the future. I hope as you read this plan our intentions are clear—to help State and private forest managers meet their objectives through sound forest management. Our expectation is for healthy forests to be enjoyed and to provide their many benefits for generations to come. Our successes will provide for clean water, recreation opportunities, wildlife habitat, wood fiber and products, and other benefits. At the same time, the Northeastern Area will be accountable for providing its services efficiently and effectively. We are committed to using taxpayers' dollars wisely and delivering technical and financial assistance supporting wise forest management.

I look forward to working with the States, other partner organizations, and private forest landowners as we pursue our shared goals and objectives. Together, we will ensure the values and benefits of forest resources, from the rural woodlands to the community shade trees, are enjoyed today and for generations to come!

Sincerely,

A handwritten signature in black ink that reads "Kathryn P. Maloney". The signature is written in a cursive, flowing style.

Kathryn P. Maloney
Northeastern Area Director

Northeastern Area State and Private Forestry

Strategic Plan

FY 2004 to FY 2008



United States
Department of Agriculture
Forest Service

Northeastern Area
State and Private Forestry
11 Campus Boulevard, Suite 200
Newtown Square, PA 19073

www.na.fs.fed.us

NA-IN-02-03

July 2003

Table of Contents

Executive Summary	1
Introduction	2
Mission, Vision, and Guiding Principles	3
Strategic Goals, Objectives, and Management Strategies	4
Goal 1—Promote Sustainable Forest Management	5
Goal 2—Enhance the Capacity of Forests to Provide Public Benefits	11
Goal 3—Provide Effective Public Service	17
Appendix A. The Montreal Process Criteria and NAASF-Adopted Indicators	21
Appendix B. The Performance Cycle	25
Glossary	27
Literature Cited	29



Executive Summary

The Northeastern and Midwestern United States, the region served by the Northeastern Area, State and Private Forestry (NA), is more than 40 percent forested, contains nearly half of the Nation's population, yet comprises less than 20 percent of the Nation's land area. In addition, over 90 percent of the region's forest land is in State and private ownership.

Changes in population and regional ownership patterns make the imperative clear for the strong State and Private Forestry programs carried out by NA. This strategic plan builds from the past as it looks to the future, providing guidance for the next 5 years. Our mission, vision, and guiding principles ensure our accountability for activities that make a positive difference on the ground and in people's lives.

NA Mission: *Lead and help to support sustainable forest management and use across the landscape to provide benefits for the people of the 20 Northeastern and Midwestern States and the District of Columbia.*

NA Vision: *We will make principled decisions that help sustain natural resources and maintain public trust. We will honor existing partnerships and nurture new relationships dedicated to the needs of society and the land.*

The focus of NA's mission and its strategic direction is sustainable forest management, consistent with the Forest Service mission and authority set by Federal law. Seven internationally recognized criteria of sustainable forest management provide a framework for addressing forest sustainability. These criteria, known as the Montreal Process Criteria, are associated with measurable indicators and served as a foundation for developing this strategic plan.

NA's three **strategic goals** and associated **strategic objectives** set the direction for our activities during the next 5 years. **Management strategies** will guide NA along the path toward meeting strategic objectives. These strategies consider NA's operating environment, current conditions, key issues, and the desired future we are striving to attain. We will hold ourselves accountable for the activities identified in these management strategies.

Goal 1—Promote sustainable forest management. Includes five strategic objectives intended to reduce forest fragmentation, maintain sustainable timber harvests, increase awareness of the value of forests, reduce tree mortality by damaging agents, and improve impaired watersheds.

Goal 2—Enhance the capacity of forests to provide public benefits. Includes five strategic objectives intended to increase forestry's competitive edge, support forest-based recreation, increase forest-based employment, improve the financial viability of forest ownership, and use forests to improve the quality of life in urban areas.

Goal 3—Provide effective public service. Includes four strategic objectives intended to promote effective forest policies, assist partners to maintain their capacity to deliver forestry programs, maintain NA's capacity to work with partners, and improve homeland security.

Introduction

The Northeastern Area (NA) is an administrative unit of the State and Private Forestry branch of the USDA



Forest Service. NA serves the 20 Midwestern and Northeastern States, plus the District of Columbia. Of the 170 million acres of forest land in the region, over 90 percent is in State, local, or private ownership (figure 1).

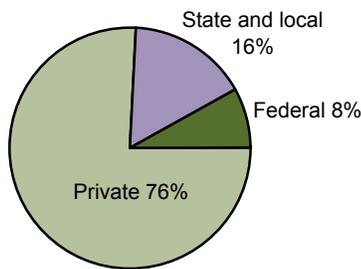


Figure 1. Forest land ownership in the Northeast and Midwest (170 million acres)

The 20 States served by the Northeastern Area comprise the most densely populated region of the country (figure 2). As the region's population grows, its urban centers expand, increasing the demand on the land and its resources. This dynamic, combined with ownership patterns in the region, make the imperative clear for the strong State and Private Forestry programs carried out by NA.

The Northeastern Area works with State forestry agencies and many other partners to influence the wise management, protection, and sustainable use of urban and rural natural resources. These partnerships help sustain forests, air and water quality, and people's relationship with nature. NA contributes to these partnerships by:

- Providing financial support and professional expertise to private forest landowners, nonprofit groups, tribal nations, communities, and States; and
- Protecting and enhancing forest health on both Federal and non-Federal forest lands.

NA and the State Foresters have a partnership that WORKS . . . hard!

That NA must work in partnership with others to meet common goals cannot be understated. The State Foresters of the Northeast and Midwest are integrally involved in nearly every aspect of the State and Private Forestry work that is accomplished in their States. We work closely with the Northeastern Area Association of State Foresters (NAASF) to sustain the regional forest landscape, and we recognize our partnership as the most valuable tool to meet the greater needs of people and resources.

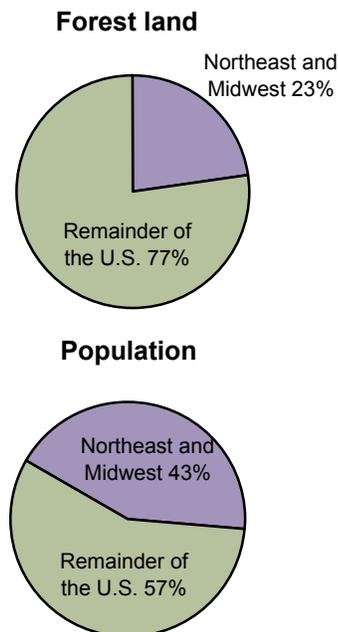


Figure 2. The Northeast and Midwest's proportion of U.S. forest land and population

Mission, Vision, and Guiding Principles

The Northeastern Area serves the Forest Service mission: “to sustain the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations.” NA’s mission, vision, and guiding principles, which are backed by authority and expectations set in Federal law, address the overwhelming proportion of State and private forest land ownership in our region.

NA’s Mission statement defines our primary purpose: *Lead and help to support sustainable forest management and use across the landscape to provide benefits for the people of the 20 Northeastern and Midwestern States and the District of Columbia.*

NA’s Vision describes our ideals about working toward our mission: *We will make principled decisions that help sustain natural resources and maintain public trust. We will honor existing partnerships and nurture new relationships dedicated to the needs of society and the land.*

NA’s Guiding Principles define how we put our ideals into practice:

- We focus on sustainability as the cornerstone of our management philosophy and objectives.
- We are accountable for our work.
- We work in a focused, integrated, and innovative manner.
- We make decisions collaboratively and base them on sound science.
- We make forest resource and related information widely available.
- We use appropriate measures to make informed decisions and evaluate the effectiveness of past decisions.
- We uphold NA’s business principles (see box below).

Northeastern Area Business Principles

Professional Image

- We are committed to the Forest Service, State and Private Forestry, and Northeastern Area missions.
- We are always fiscally responsible.
- We produce professional quality information products.
- We take pride in our work.

Quality Communications

- Our communications are responsive, accurate, timely, and effective.
- The public can always reach a person during business hours.
- We can be contacted in person and by letter, phone, and e-mail.
- We maintain a corporate information system.
- We use standard corporate formats.

Working Relationships

- Customer service (internal and external) is our top priority.
- We foster mutual trust, understanding, and respect.
- We are active listeners.
- We share information and work together.
- We are loyal to the organization.
- We hold each other and ourselves accountable.

Employee Development

- We value diversity.
- We provide new employees with orientation and time to learn.
- We stay current in our areas of expertise and on critical issues.
- We praise publicly and correct privately.
- We learn and grow from our mistakes and celebrate successes.

Strategic Goals, Objectives, and Management Strategies

The Northeastern Area's three **strategic goals** set the direction for our activities and define how we achieve our mission.

Fourteen **strategic objectives** (A–N) describe more specific or measurable levels of achievement to implement our goals. In light of environmental and social trends, these objectives are directly related to the Montreal Process criteria and are aligned with the NAASF-adopted indicators (appendix A).

Strategic goals and objectives are achieved through **management strategies**. These strategies consider NA's operating environment and respond to current conditions, key issues, and the desired future. We are accountable for performance of these strategies (appendix B).

Strategic Goals and Objectives

Goal 1—Promote sustainable forest management

- A** Maintain forest land area and reduce the rate of forest fragmentation
- B** Maintain sustainable timber harvests on private land
- C** Increase public appreciation of the value of forests
- D** Reduce growth loss and tree mortality caused by damaging agents—insects, diseases, and plants (including exotic invasive organisms), wildfire, and other catastrophic events
- E** Improve or restore impaired watersheds

Goal 2—Enhance the capacity of forests to provide public benefits

- F** Increase the competitive edge of forest industry to meet the demand for forest products and energy
- G** Increase support to private forest landowners to meet the demand for forest-based recreation
- H** Enhance the viability of the forest sector as a source of community employment
- I** Improve the financial viability of non-industrial private forest (NIPF) ownership
- J** Enhance the quality of urban life, environmental health, and water resources

Goal 3—Provide effective public service

- K** Promote consistent forest policies among Federal, State, and local governments to more effectively address forestry issues
- L** Help our partners maintain the capacity to effectively deliver forestry programs
- M** Maintain NA's capacity to work with States and other partners
- N** Improve homeland security by collaborating with other Federal and State agencies

Goal 1—Promote Sustainable Forest Management

Strategic Objective A—Maintain forest land area and reduce the rate of forest fragmentation

Current Situation

Development trends in the Northeast and Midwest have tended to reduce the amount of contiguous forest acreage, leaving remaining forests in small fragments or residential backyard woodlots. Although total forest acreage in the Northeast and Midwest has remained relatively stable for the past 20

years, gains in forest land have come from the conversion of pasturelands to young forests. These new forest stands have largely offset losses to development; however, quality and age of the

forest stands have declined in the transition. Subdividing of forests, or “parcelization,” creates additional forest management challenges. Parcelization of the forest is evidenced by the fact that more individual landowners own smaller tracts (10 to 50 acres) than 20 years ago, while the number of landowners owning larger tracts (100 to 500 acres) has decreased. Ownerships of more than 100 acres tend to maintain the integrity of the forest resource (Birch 1996).

Over time, parcelization, and the new infrastructure that comes with it, causes fragmentation of the forest. Fragmentation, the breakup of large unbroken expanses of forests, is a threat to the Nation’s forests. It compromises the protection of our natural resources and the integrity of wildlife habitat by increasing the amount of impervious



surfaces, promoting the introduction of nonnative plants and animals, and impacting the ability to economically and ecologically manage forests for multiple benefits.

Landowners’ objectives for their forests vary. Generally, owners of forested tracts larger than 100 acres actively manage their forest land. Those owning forested tracts less than

30 acres in size report their primary reason for owning forest land is that it is part of their residence, with only incidental management intent (Birch 1996). Many landowners are burdened by taxes on their land or see skyrocketing development values of their property as an opportunity for financial security. Others

seek to manage their forest for a variety of outcomes that will sustain it in perpetuity. An emerging trend—the sale of forest land by forest industry to either non-industrial private forest landowners or to those intending to permanently convert it to nonforest use—has the potential to significantly change forest land distribution, management, and ownership in the future.

Desired Future

Forest landowners and communities employ management strategies that maintain the integrity of important forest lands. They understand the principles of professional forestry, work with their neighbors to ensure that large forest parcels remain intact, and make wise land use choices.

Management Strategies

1. Identify landscape pressure points where rapid forest loss and fragmentation is occurring in critical forest land areas. Target analysis and assistance in these areas.
2. Provide program assistance to local communities, developers, and forest landowners that promotes forest conservation and management, and forest/tree care in priority areas where significant development pressures exist and land conversion is occurring.
3. Maintain an up-to-date clearinghouse of relevant, practical information and technical assistance for existing and prospective landowners and partners, through a variety of media.
4. Provide technical expertise in the preparation, implementation, and monitoring of forest management plans.
5. Use conservation easements, purchase of development rights, and other land acquisition techniques to protect priority forest lands.
6. Provide cost-share incentives, tools, techniques, current research, practical applications, and technical assistance for activities that reduce or mitigate fragmentation within forested landscapes.

Strategic Objective B—Maintain sustainable timber harvests on private land

Current Situation

Timber harvest from Federal land has declined, and forest industries are selling more of their forest landholdings to non-industrial private forest landowners or land developers. These dynamics place increased pressure on the remaining non-industrial private forest (NIPF) lands to produce the resources our Nation demands.

In 1996, nearly 70 percent of all wood removals in the Northeast and Midwest came from NIPF lands (figure 3). The NIPF harvest comprised about half the annual growth of timberland, while the harvest on national forest timberlands comprised

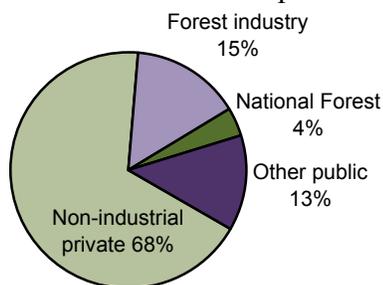


Figure 3. Timber removals in the Northeast and Midwest, 1996

just one-third of growth (Smith and others 2001). It is clear that private forest lands are pressured to provide greater amounts of harvested timber, but they must do so on a sustainable basis. Sustainable forest management means managing forests to produce wood and nontimber forest products in pace with the ecosystem's capacity for renewal (USDA Forest Service [In press]).

Desired Future

Timber is actively harvested on an annual basis from non-industrial private forest lands in proportion to the amount of total wood growth per year. Landowners seek professional forest management, ensuring resource protection and enhancement potential for the future. These efforts increase the annual growth and potential yield of non-industrial private forests in the Northeast and Midwest.

Management Strategies

1. Through technical assistance and cost-share incentives, ensure that forest growth exceeds removal throughout the region served by NA.
2. Provide technical expertise in the development of management plans.
3. Support efficient use of wood and forest products, emphasizing underutilized forest species.
4. Encourage the development of new sources of wood fiber and solid wood products through agroforestry, urban forestry, and biotechnology.
5. Cooperate with State partners to develop consistent and effective Best Management Practice (BMP) protocols to protect soil and water, including monitoring, evaluation, and accountability.
6. Develop and maintain a marketing and information system that helps non-industrial private forest landowners find buyers for their products.

Strategic Objective C—Increase public appreciation of the value of forests

Current Situation

In 2000, the Forest Service conducted a public survey to assess people's values, beliefs, objectives, and attitudes about natural resource and public land management. Overall, the public indicated a strong orientation toward environmental protection and conservation. They also supported some degree of development. Easterners in particular said that an important role for the Forest Service is to provide information. They also believe the Forest Service needs to play a strong role in protecting ecosystems and informing the public of potential environmental impacts of forest uses (Shields and others 2002).

These beliefs mirror a key issue expressed by State Foresters across the Northeast and Midwest—they feel the need for greater public awareness and understanding of forestry, especially the impact of personal and consumer choices on forest resources.



Desired Future

The people served by the Northeastern Area understand that most of their forests are in State and private ownership. They appreciate the ecosystem diversity and the many forest products that come from sustainably managed lands. They draw connections between their informed choices and the future of all natural resources.

Management Strategies

1. Provide educational opportunities for forestry assistance providers, landowners, and community leaders so they understand the environmental, social, and economic benefits of trees and forests, including the role of forest management, the importance of environmental responsibility, and the connection to regional, national, and global issues.
2. Develop and maintain a marketing and information system that promotes the value of forests and forest products.
3. Initiate and promote public participation in watershed, clean water, and clean air projects.

Strategic Objective D—Reduce growth loss and tree mortality caused by damaging agents—insects, diseases, and plants (including exotic invasive organisms), wildfire, and other catastrophic events

Current Situation

Threats from damaging agents and natural events are inevitable. NA uses proven management models and established partnerships to preempt or mitigate some damaging events, provides ongoing action in others, and, in cases such as catastrophic weather, responds quickly to assess damage and aid the States.

A certain level of tree mortality is expected in a healthy forest; however, damaging agents can accelerate the normal cycle. They have the potential to quickly alter forest conditions, upsetting the balance of species, affecting the quality and quantity of timber, and altering existing wildlife habitat.

Urban and community forest health continues to be threatened by factors such as insects and diseases, over-maturity, and inadequate planning. Often, urban forests act as “canaries in the mineshaft”—because of their proximity to points of entry, they may be the first exposed to foreign pests such as the Asian longhorned beetle and emerald ash borer. The impact of damaging agents could multiply as they move from urban settings across suburban and rural lands. Widespread tree mortality could significantly change species composition, water resources, and wildlife habitat.



While fire is a necessary component of forest ecology, wildfires, particularly human-caused, have the potential to threaten lives, structures, and forest integrity. Some Northeast and Midwest locations, such as the New Jersey Pine Barrens

and Michigan’s jack pine forests, are highly susceptible to wildfire devastation.

Weather-related catastrophic events such as ice and windstorms, hurricanes, floods, and tornadoes can cause widespread forest damage. Excessive animal populations can also leave an impact; deer browse continues

to be a problem in sections of the Northeast and Midwest. Such damage leads to restoration challenges and potential alterations in species composition. NA is experienced in response to these situations.



Desired Future

The Northeastern Area will be proactive in response to issues and threats that arise and will collaborate with partners to minimize the impact of threats to forest health, keeping tree mortality to an average cyclical rate.

Management Strategies

1. Ensure public safety in responding to damaging agents.
2. Support the use of technology to increase

- the detection, mitigation, eradication, and suppression of damaging agents (invasive plants, insects, disease, wildfire, weather); maintain and distribute up-to-date risk maps using latest technologies.
3. Promote active treatment of areas at risk through cost-share incentives and cooperative efforts.
 4. Prepare to act aggressively and in an integrated manner in response to catastrophic events, climatic or otherwise. Develop quick response teams to address specific events.
 5. Enhance coordination within program authorities and among our appropriate partners in addressing damaging agents.
 6. Work with partners to inform citizens of the ecological functions of forests and natural resources, the impacts of damaging agents, and the inevitability of change in dynamic ecosystems.
 7. Promote appropriate public participation in assisting with the detection of damaging agents.
 8. Implement the National Fire Plan.
 9. Increase the availability of equipment, resources, and training opportunities to forestry agencies and other partners to address damaging agents.
 10. Increase the capacity of communities at risk to prevent losses from damaging agents.

Strategic Objective E—Improve or restore impaired watersheds



forestry are proven to improve conditions.

Forests filter pollutants from air and water, store nutrients, mitigate flooding by reducing runoff, replenish ground water, and protect soils, flood plains, and stream ecosystems. They also supply critical fish and wildlife habitat, and provide for aesthetic and other benefits.

Current Situation

According to the U.S. Environmental Protection Agency (EPA), more than three-quarters of the watersheds in the Northeast and Midwest do not meet EPA water quality or natural resource goals (i.e., are classified as high priority or Category I; see figure 4). In places where agricultural and urban land uses have degraded watersheds, forests and

Watershed restoration and management across Federal, State, and private ownerships presents complex challenges. The Forest Service fosters integration of programs and partners to address watersheds needs. Increasing the tree canopy can significantly reduce the damage and costs resulting from storm water runoff in urban watersheds. In more rural areas, the Northeastern Area leads riparian

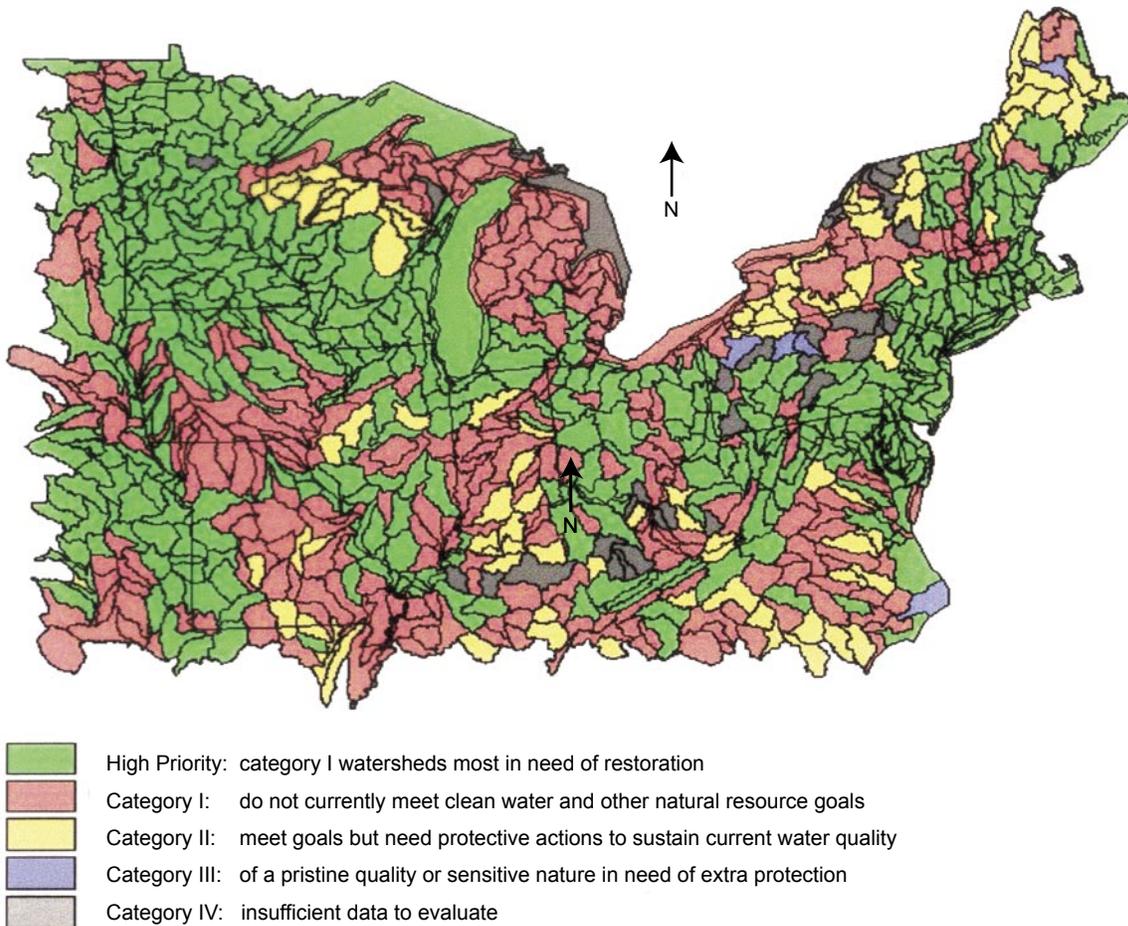


Figure 4. Unified Watershed Assessment categories by watershed in the Northeast and Midwest

buffer efforts, working with Federal, State, and local groups to restore degraded stream habitats.

Desired Future

Forested watersheds function as healthy, productive systems that filter water, provide aquatic habitat, and minimize technological fixes necessary to maintain ecosystem health.

Management Strategies

1. Accelerate the use of cost-share assistance programs to maintain and improve water quality and to restore riparian buffers and wetlands.
2. Facilitate and support the establishment of watershed-based partnerships and projects.
3. Promote the implementation of Best

Management Practices (BMP's), practices intended to protect soil and water, and apply a consistent NA protocol to measure their effectiveness.

4. Support watershed-scale assessment, planning, and management.
5. Conserve forests through acquisitions and easements, protecting water supplies and restoring impaired watersheds.
6. Provide training and guidance in watershed and riparian management.
7. Define and communicate the role of forests in restoring watershed health.
8. Work with the USDA Natural Resources Conservation Service (NRCS) to integrate forestry practices and technical assistance in implementing programs administered by NRCS intended to conserve natural resources on private lands.

Goal 2—Enhance the Capacity of Forests to Provide Public Benefits

Strategic Objective F—Increase the competitive edge of forest industry to meet the demand for forest products and energy

Current Situation

Currently, log prices, as well as the costs of labor, medical insurance, energy, and new technology, are high. At the same time, retail market prices for forest products are low, and

consumer's door. Emphasis on product quality has recently increased.

Desired Future

Domestic forest industries profit in a global market, using wood supplies from sustainably managed forests. Improved manufacturing technology and use of waste and second-grade material has reduced operating costs and finished product prices, and resulted in more efficient use of forest resources. Whether choosing



global competition is strong. Consequently, company auctions, bank foreclosures, corporate mergers, and “Business For Sale” signs are increasing. The Northeastern Area helps forest-based companies improve their processing efficiency, reduce operating costs, and improve product quality.

The Forest Service is an established advocate for technical improvements in harvesting, sawing, drying, and secondary manufacturing of timber resources. Efforts focus on increasing resource recovery and utilization—from the forest's floor to the

domestic or imported wood products, the public understands the need for sustainable forest management on a worldwide basis.

Management Strategies

1. Work in partnership with forest industry to identify and help shape resource needs for the future.
2. Develop new markets and promote industry investments in manufacturing technology to better use waste and second-grade materials from both industrial and urban sources.

3. Provide service and leadership through technical assistance and information transfer.
4. Use workforce training and technology transfer to share technological advances and management strategies that improve product quality, industry efficiency, and cost-effectiveness.
5. Provide information to promote economic investment in scientifically based sustainable forest management and the forest products that result from it.
6. Link forest stewardship, efficient industrial processing, and consumer awareness to reduce the volume of wood fiber needed to produce quality products.

Strategic Objective G—Increase support to private forest landowners to meet the demand for forest-based recreation

Current Situation

The demand for outdoor recreation is growing and diversifying. Hikers, equestrians, mountain bikers, off-road vehicle owners, and others all want access to a limited land base. Most public lands are open to visitors for recreational purposes; however, on national forests alone, the number of visitors has grown 15 to 20 times from 1946 to 2000 (USDA Forest Service 2003). This significant increased demand, compounded with a decline in private lands available for public recreation as a result of access restrictions, parcelization, fragmentation, and conversion to nonforest

uses, has led to greater pressure on the recreation lands that are available, both public and private. Private forest lands may provide economic opportunities in offering campgrounds, trails, and hunting grounds, but they also face natural resource and liability challenges.

Desired Future

More private forest landowners allow public access, managing it to enhance the land's personal and public recreational value. Those who enjoy recreating on forest lands understand their impact on resources, landowners, and other recreationists.



Management Strategies

1. Provide economic assistance and promote financial incentives to private forest landowners interested in developing commercial recreation opportunities on their land.
2. Identify barriers for forest-based recreation on private land; share and address results through technical and financial assistance.
3. Support demonstrations of effective cost-sharing enterprises.
4. Encourage private landowners to include recreation management in their planning.

Strategic Objective H—Enhance the viability of the forest sector as a source of community employment

Current Situation

Many rural counties depend on forest-based industries for employment and economic stability. The region's 900,000 forest industry jobs are at risk because of a downward trend in timber harvest from public land and greater foreign competition.

As a result of reduced timber harvests from public lands, the potential for long-term employment is uncertain. Traditional economic development programs have often overlooked the potential of forest-based assets to contribute to sustainable community development. Community leaders often don't recognize the connection between forest management, secondary forest products manufacturing, and local economies.

Desired Future

Domestic forest industries are globally competitive, supporting employment opportunities and long-term stability. Communities near forest resources benefit from forest-based employment, particularly those communities that otherwise suffer from the closure of manufacturing facilities.



Management Strategies

1. Provide incentives for community-based and value-added forest products processing to increase business opportunities and employment.
2. Retrain displaced workers from other industries in forest-based communities for jobs in forest industries as appropriate.
3. Encourage entrepreneurial activities that create jobs, especially those relating to underutilized species, specialty products, and nontraditional forest products.
4. Provide financial and technical assistance for employment opportunity networking and information brokering—compile, synthesize, and provide access.
5. Support industry requirements for workforce training technology, technology transfer, and management improvement.

Strategic Objective I—Improve the financial viability of non-industrial private forest (NIPF) ownership

Current Situation

The residential and commercial development demand for wooded areas has escalated land values and lured landowners to subdivide their large forested tracts and cash in on the one-time return from the sale of their land. This trend is in the face of studies that show the value of timber and timberland has increased at a net rate of 8 percent since the Great Depression. Today's under-performing stock market has made investment in forest land very attractive; however, the loss of forest land to residential and commercial development continues.

Private landowners face a number of forest management challenges. While there are significant support programs in place for agriculture, as well as tax breaks or infrastructure improvements to lure development, forestry is not heavily subsidized and has minimal tax benefits. Real estate taxes are a significant burden for many landowners. Taxes are either based on best and highest use (i.e., as developable land), or tax rates follow forest land taxation programs. These rates are often based on the assumption that the land will provide an annual income, resulting in high taxes even though harvests may be years away.

In many locations, the public wants to preserve wooded scenery and supports ordinances that prevent harvesting. This further limits the private landowner's opportunity to generate income and retain the property. The public benefits from financial incentives to private landowners either indirectly through cleaner air and water, or directly through aesthetically pleasing landscapes and the forest products received from private forest lands.

In addition to the economic challenges, the foremost problem for many landowners is lack of forestry knowledge, both personally and among the public. In the Northeast and Midwest, there is approximately 1 professional forester for every 44,000 acres of private land, or 1 per 1,760 landowners. This shortage leads to an inability to serve all interested forest landowners. Coupled with landowners' lack of knowledge, the result is often lower timber stumpage prices, environmental damage to the harvest site, and unnecessary damage to remaining trees. These consequences can ultimately reduce productivity and create unsightly harvest sites that draw criticism from the environmental community. Often landowners don't realize that they and their forest land could benefit, economically and environmentally, from professional forestry services, so they choose not to incur the cost.

Desired Future

There will be 1 forester for every 25,000 acres of non-industrial private forest land, or 1 forester per every 1,000 landowners. Owners will have a long-term vision for their land and understand the steps to financial and ecological success. Forest landowners will understand that they are in it for the long run and manage their forests sustainably. Financial incentives will ease the financial and regulatory challenges of owning non-industrial private forest land.

Management Strategies

1. Synthesize relevant forest tax and investment information for forest landowners.
2. Champion innovative approaches to forest management and marketing among communities of NIPF landowners.

3. Promote a stable regulatory environment for private forest land ownership.
4. Provide information to new forest landowners on the financial and ecological benefits of forest management and on how to market traditional and nontraditional forest products, such as mushrooms, ferns, and ginseng.
5. Promote and support State tax policies that offer lower taxes for landowners managing private forest lands.
6. Promote the economic benefits of forest land ownership.

Strategic Objective J—Enhance the quality of urban life, environmental health, and water resources

Current Situation

The Northeastern and Midwestern States, among America’s most densely populated, have the highest percentage of urban area in the country, taking 9 of the top 10 spots nationwide (Dwyer and others 2000). With so much built infrastructure, trees and urban forests tend to be highly valued by residents and visitors. They define quality of life for millions of people in cities and communities across the region.

Beyond providing shade and green space, urban forests contribute to clean air and water by providing shade and urban cooling, and by capturing and filtering pollutants. They help connect people to the natural world, add real estate value, and attract new residents and business. Management of urban forests occurs largely at the local or municipal scale, where the complexity of the ecosystem is most evident. Tree and ground cover, buildings, infrastructure, wildlife, and human populations contribute to urban ecosystems



through complex, interwoven relationships (Dwyer and others 2000). Each urban area has a unique system of green space, forest cover, and opportunities (figure 5). While urban forests change over time as a result of artificial and natural influences, management can minimize negative impacts by enhancing

species diversity and urban forest health. This leads to greater quality of life in the most populous region of the Nation.

Clean water has become one of the most valuable forest products. The region’s forested watersheds produce high quality drinking water used by more than 30 million people. Sustaining these

forests over the long term will protect water resources as the population grows.

Many rapidly developing areas lack adequate watershed or natural resource planning. As forests are lost and development creates more surface water runoff, the ability to maintain water quality and the health of stream ecosystems declines rapidly. Forested stream corridors and an adequate tree canopy not only enhance the quality of life in urban



Figure 5. Forest cover in metropolitan areas in the Northeast and Midwest (adapted from Zhu 1994)

areas, but also reduce storm water runoff and air quality problems (Dwyer and others 2000).

Desired Future

Urban forest resources are highly valued assets, integral to community planning and vital to sustaining the environmental health of urban and metropolitan areas. Municipalities enhance watersheds to provide clean water and reduce storm water runoff. Fully functioning watersheds increase the effectiveness and efficiency of natural systems.

Management Strategies

1. Provide technical assistance for managing the health of urban and community forests.
2. Provide information about the value of forests to communities and land use planners.
3. Be a catalyst, convener, and facilitator of community activism for tree planting and green space projects.
4. Improve the livability of urban areas, managing green spaces and restoring derelict properties.
5. Provide technical guidance and tools to protect water supplies through forest stewardship.
6. Enhance watershed health in urban areas through tree planting, stream corridor enhancement, and increases in the tree canopy.
7. Develop tools and techniques for integrating trees and forests in storm water and air pollution mitigation strategies.

Goal 3—Provide Effective Public Service

The USDA Forest Service has three agency branches located in the Northeastern and Midwestern United States—the Northeastern Area, State and Private Forestry; the Eastern Region of the National Forest System; and Forest Service Research, represented by two Research Stations, the Northeastern and North Central, and the Forest Products Laboratory. Grey Towers, a national historic landmark, is managed and maintained by the Forest Service with Northeastern Area administrative support, in cooperation with

the Pinchot Institute for Conservation, a nonprofit organization dedicated to conservation thought, policy, and action. When appropriate, these Forest Service units pool efforts to serve the public and improve natural resources more effectively and efficiently. Some of our cooperative activities include fire and aviation management, forest health protection, and administrative services, although opportunities transcend all aspects of our work.

Strategic Objective K—Promote consistent forest policies among Federal, State, and local governments to more effectively address forestry issues

Current Situation

The State Foresters of the Northeast and Midwest share concerns about the legal and institutional framework, and challenges to forest management. Third-party certification, the right to practice forestry, and potential conflicts among laws and regulations at different levels of government are a few of the challenges.

Many Federal laws affect forestry. These national laws and regulations are intended to protect public benefits from forests and prevent damage to wetlands, water and air quality, wildlife, and threatened and endangered species. Tax, business, health, and safety laws and regulations also affect private forestry, forest-based industries, and community sustainability. State-level laws and regulations are becoming more common. Advocates for State regulation see it as more pragmatic than Federal or local regulations. Counties, cities, and towns also have the authority to regulate land use and activities. Municipalities cannot usurp the State's regulatory rights, but can pass more restrictive laws (USDA Forest Service [In press]).

Voluntary forest certification by private entities is growing in importance. The Northeastern and Midwestern States lead the Nation in third-party certification activity. As of 2000, approximately 5.1 million acres of the region's forest land were certified, representing 91 percent of the national total (USDA Forest Service [In press]).

Desired Future

To the extent that NA is able to influence them, Federal rules and regulations affecting forest resource management will not conflict with one another and will not unduly burden non-industrial private forest landowners. Federal laws and regulations will facilitate responsible, sustainable forest land management, complementing State and municipal regulations. NA will continue to focus on facilitating voluntary, nonregulatory approaches to forest land management, while respecting landowner objectives.

Management Strategies

1. Develop and facilitate coordinated, innovative approaches among Federal and State entities in addressing forest policy,

- resource management issues, and land-use planning.
2. Help Federal, State, and local entities to anticipate forest resource issues and develop proactive ways to address them.
 3. Provide information concerning third-party certification processes, benefits, and implications to NIPF landowners.
 4. Network with professional organizations.
 5. Maintain active and effective congressional relationships.

Strategic Objective L—Help our partners maintain the capacity to effectively deliver forestry programs

Current Situation

The nature of State forestry agency work has evolved over the years from pure timber management to a full spectrum of forest resource management, including recreation, watershed, wildlife habitat, and cultural resource considerations. In addition, State governments, challenged to balance budgets during a nationwide economic downturn, have reset priorities, and, in some cases, reorganized. These decisions have significantly affected many State forestry agencies, which must now struggle to maintain core programs. Some States are considering the elimination of cooperative forestry programs altogether.

The Northeastern Area, State and Private Forestry's authority to deliver Federal programs in cooperation with partners is promulgated in the Cooperative Forestry Assistance Act of 1978, Section 2 (16 U.S.C. 2101). Our objectives include, first and foremost, delivering technical and financial assistance to support the sustainable management of State and private forests. Other objectives include valuing and preserving cooperative relationships with State forestry agencies and establishing new cooperative relationships and delivery systems when necessary.



Desired Future

NA continues to work in tandem with its partners to support their needs and co-develop innovative approaches for financial and technical assistance to private forest landowners. NA recognizes the increasing burdens on States and responds to emerging needs in a timely manner, minimizing emergency management and maximizing stability in program delivery.

Management Strategies

1. Help States build and maintain their capacity to deliver State and Private Forestry programs.
2. Help States build the skills and capacity to address new and emerging issues, to contribute to a diversified forest resource workload, and to meet landowner expectations.
3. Maintain relevant technical assistance and skills to meet customer and partner needs.
4. Facilitate technology transfer, innovation, and sharing of emerging information among all partners.
5. Provide interagency training, particularly in leadership development and organizational effectiveness..
6. Provide experts, expertise, and timely information to meet critical skills gaps.

Strategic Objective M—Maintain NA’s capacity to work with States and other partners

Current Situation

NA employs approximately 180 natural resource professionals and support staff to provide grants and technical expertise across the 20 Northeastern and Midwestern States and the District of Columbia. Approximately half of the workforce is located at the headquarters office in Newtown Square, Pennsylvania, with the remainder stationed at three field offices. The Northeastern Area’s staff includes professionals in forestry, entomology, plant pathology, planning, information management, and business. Individual staff members work with their State counterparts.

The President’s Management Agenda emphasizes sound business practices within the Federal government. NA strives to improve Area-wide business systems while complying with national requirements. Efforts include financial reconciliation, certification, and process adjustments to achieve an agency-wide clean audit. Amidst changing workforce needs, *e*-business opportunities, and increased fiscal accountability, NA must continue to inform and involve States and partners in the development and implementation of new processes.

Desired Future

NA plans, works, and is funded within a performance-based framework. We are an innovative, diverse workforce whose whole

is greater than the sum of its parts. We live our vision and maintain the innovative edge in providing technical and financial assistance to our partners and to private non-industrial forest landowners across the region.

Management Strategies

1. Maximize *e*-Government business opportunities.
2. Increase efficiency and streamline processes for grants and financial management, while increasing accountability.
3. Increase access to, as well as timeliness, accuracy, and integration of, corporate information.
4. Maintain a small, flexible, highly trained, technical, and diverse (skills and cultural backgrounds) workforce to meet changing mission-related needs.
5. Adopt and maintain state-of-the-art technology, such as video conferences, GIS mapping, and on-line databases.
6. Through NA programs and activities, demonstrate involvement of interested and affected people from all segments of society and collaborate with nontraditional partners.
7. Maintain safe and accessible NA facilities for employees and the public.
8. Focus on outcomes rather than outputs.
9. Link NA activities to the strategic plan, and set budget priorities accordingly.

Strategic Objective N—Improve homeland security by collaborating with other Federal and State agencies

Current Situation

The terrorist attacks of September 11, 2001, and the increasing frequency of ecoterrorism attacks on Forest Service facilities, natural resources, and construction sites have brought to bear the need to be vigilant and prepared to support national security and the security of our organization, infrastructure, and natural resources in the Northeast and Midwest. Through its long-standing leadership in fire and aviation management, which is based on a common Incident Command System, the Northeastern Area can support many aspects of homeland security. We have established partnerships, ongoing activities, and relevant expertise that allow us to deliver training, technical assistance, materials, supplies, and equipment to private forest landowners, as well as to firefighters and other emergency responders in rural and urban communities.

State and Private Forestry programs, with minor adaptations, can address homeland security needs through improved citizen awareness or vigilance, planning and preparedness, and incident management and recovery.

Desired Future

The Northeastern Area is a leading provider of training, technical support, and assistance to our existing partners and new partners as homeland security needs mature. NA assists NIPF landowners and urban and suburban communities in safeguarding natural resources. NA is responsible and proactive in ensuring safety in all that we do, and in all our program delivery with partners.



Photo: JoAnn O'Shaughnessy

Management Strategies

1. Promote and share the Incident Command System with existing and nontraditional partners, such as fire departments in major metropolitan areas.
2. Contribute resources toward providing a secure homeland and responding to national disasters or emergencies.
3. Build capacity and expertise in volunteer fire departments.
4. Learn from and coordinate with Forest Service units in the Northeast and Midwest, other agencies, and partners about related initiatives.
5. Ensure measures are in place for secure program delivery and employee safety.
6. Maintain controls on the contracting and release of aerial equipment and materials to prevent access to them by those who might use them in a hostile, unsafe, or harmful way.

Appendix A

The Montreal Process Criteria and NAASF-Adopted Indicators

In 1992, the United Nations sponsored a Conference on Environment and Development (UNCED) commonly referred to as the “Earth Summit,” in Rio de Janeiro, Brazil. The Montreal Process, named for an international seminar held in Montreal, Canada, developed as a result of efforts following the Earth Summit. It provided a conceptual basis for subsequent regional and international initiatives to develop *criteria* reflecting public values, and *indicators* that measure forest conditions and track changes in ecological, social, and economic conditions.

In 1995, the United States joined 11 other countries in signing a nonbinding document known as the “Santiago Declaration,” an outgrowth of the Montreal Process, which includes a comprehensive set of 7 criteria and 67 indicators for the conservation and sustainable management of temperate and boreal forests. The 12 signatory countries contain 90 percent of the world’s temperate and boreal forests, which account for 60 percent of all forests worldwide (USDA Forest Service 2002). The criteria and indicators established through the Montreal Process facilitate communication by using consistent data and vocabulary, allowing scientists and policymakers across jurisdictional boundaries to understand forest resource discussions, establish trends in forest condition, and identify management needs.

During the past 3 years, NAASF members and NA have adopted a subset of 18 indicators that are germane to the 20 Northeastern and Midwestern States and the District of Columbia. These indicators provide the foundation and framework for this revised strategic plan. This framework will help NA demonstrate and communicate its role in ensuring that the public continues to benefit from the Nation’s forests and natural resources.

The Montreal Process criteria and the NAASF-adopted indicators are as follows:

Criterion 1—Conservation of Biological Diversity

1. Area of forest land relative to total land area and area of reserved forest land
2. Extent of area by forest type and by size class, age class, and successional stage
3. Degree of forest land conversion, fragmentation, and parcelization
4. Status of forest/woodland communities and species of concern (with focus on forest-associated species)

Criterion 2—Maintenance of Productive Capacity of Forest Ecosystems

5. Area of timberland
6. Annual removal of merchantable wood volume compared to net growth

Criterion 3—Maintenance of Forest Ecosystem Health and Vitality

7. Area and percent of forest land affected by potentially damaging agents

Criterion 4—Conservation and Maintenance of Soil and Water Resources

8. Area and percent of forest land with diminished soil quality
9. Area and percent of forest land adjacent to surface water and area of forest land by watershed
10. Water quality in forested areas

Criterion 5—Maintenance of Forest Contribution of Global Carbon Cycles

11. Forest ecosystem biomass, and forest ecosystem and products carbon pools

Criterion 6—Maintenance and Enhancement of Long-term Multiple Socio-economic Benefits to Meet the Needs of Societies

12. Value and volume of wood and wood products production, consumption, and trade

13. Outdoor recreational facilities and activities

14. Public and private investments in forest health, management, research, and wood processing

15. Forest ownership and land use (including acres of specially designated land)

16. Employment and wages in forest-related sectors

Criterion 7—Legal, Institutional, and Economic Framework for Forest Conservation and Sustainable Management

17. Existence, type, and monitoring of forest management standards/guidelines

18. Existence, type, and frequency of forest-related planning, assessment, and policy review

Strategic Objectives by NAASF-Adopted Indicator

Strategic Objective	NAASF-Adopted Indicator
A. Maintain forest land area and reduce the rate of forest fragmentation	<ul style="list-style-type: none"> 1. Area of forest land relative to total land area and area of reserved forest land 2. Extent of area by forest type and by size class, age class, and successional stage 3. Degree of forest land conversion, fragmentation, and parcelization 4. Status of forest/woodland communities and species of concern (with focus on forest-associated species) 5. Area of timberland
B. Maintain sustainable timber harvests on private land	<ul style="list-style-type: none"> 6. Annual removal of merchantable wood volume compared to net growth 11. Forest ecosystem biomass, and forest ecosystem and products carbon pools 17. Existence, type, and monitoring of forest management standards/guidelines
C. Increase public appreciation of the value of forests	15. Forest ownership and land use (including acres of specially designated land)
D. Reduce growth loss and tree mortality caused by damaging agents—insects, diseases, and plants (including exotic invasive organisms), wildfire, and other catastrophic events	7. Area and percent of forest land affected by potentially damaging agents
E. Improve or restore impaired watersheds	<ul style="list-style-type: none"> 8. Area and percent of forest land with diminished soil quality 9. Area and percent of forest land adjacent to surface water and area of forest land by watershed 10. Water quality in forested areas
F. Increase the competitive edge of forest industry to meet the demand for forest products and energy	<ul style="list-style-type: none"> 12. Value and volume of wood and wood products production, consumption, and trade 14. Public and private investments in forest health, management, research, and wood processing
G. Increase support to private forest landowners to meet the demand for forest-based recreation	13. Outdoor recreational facilities and activities
H. Enhance the viability of the forest sector as a source of community employment	16. Employment and wages in forest-related sectors
I. Improve the financial viability of NIPF ownership	15. Forest ownership and land use (including acres of specially designated land)
J. Enhance the quality of urban life, environmental health, and water resources	<ul style="list-style-type: none"> 7. Area and percent of forest land affected by potentially damaging agents 10. Water quality in forested areas 15. Forest ownership and land use (including acres of specially designated land)
K. Promote consistent forest policies among Federal, State, and local governments to more effectively address forestry issues	<ul style="list-style-type: none"> 17. Existence, type, and monitoring of forest management standards/guidelines 18. Existence, type, and frequency of forest-related planning, assessment, and policy review
L. Help our partners maintain the capacity to effectively deliver forestry programs	18. Existence, type, and frequency of forest-related planning, assessment, and policy review
M. Maintain NA's capacity to work with States and other partners	
N. Improve homeland security by collaborating with other Federal and State agencies	

Appendix B

The Performance Cycle

The Plan . . . *where we are going*

Our plan's **strategic goals and objectives** provide the overall direction for the Northeastern Area. These strategic goals and objectives are timeless and, to a great degree, transcend day-to-day issues. We will continue to use the sustainability indicators adopted by NAASF to identify resource trends and periodically adjust our long-term direction.

NA also captures the current conditions and issues facing our partners, using such sources as the State Foresters' Key Issues, plus other sources of information from our cooperators and our workforce. These issues and additional comments help to shape identified **management strategies**, providing a basis for NA's annual plan of work.

The Work . . . *how we get there*

Within the next 2 to 3 years, the NA annual plan of work will become part of an agency-wide Performance Management Plan that will link performance to budget. NA's plan of work will include **management objectives**, which are attainable and quantifiable within 1 year and will produce tangible accomplishments or achievements. NA will establish performance measures to address selected management objectives.

The Performance Management Plan will be captured in a database application, called the Performance Accountability System (PAS), so that the budget funds the plan as the agency identifies and works toward meeting management objectives. The PAS will align work with desired results as efficiently as possible, minimizing the frequency and extent of information entries.

The Results . . . *what we achieve*

Monitoring and evaluation are the last steps in the cycle of planning and doing, in order to position NA for the next planning cycle. Assessing trend information using the sustainability indicators, determining if we accomplished what we said we would accomplish, and determining if the management strategies and strategic objectives made a difference on the ground and in people's lives, are critical pieces in bringing the strategic plan to life and action.

Glossary

Terms are defined as they pertain to this strategic plan.

Best Management Practices (BMP's)—State or local regulatory or nonregulatory guidelines for proper application of forestry operations, including protecting water quality as required by Federal statutes, including the Clean Water Act and Water Pollution Control Act. BMP's are primarily designed to prevent soil erosion and water pollution, and to protect certain wildlife habitat values in riparian and wetland areas (Pennsylvania Department of Conservation and Natural Resources 2003).

conservation easement—An easement that grants a party certain rights to the land someone owns, such as development rights or subdivision rights; a legal agreement that permanently limits the uses of a parcel of land in order to protect its conservation or recreation values (City of Auburn 2003, Pennsylvania Department of Conservation and Natural Resources 2003).

criteria and indicators—Criteria are categories of conditions or processes by which sustainable forest management may be assessed. Each criterion is characterized by a set of related indicators, which are monitored periodically to assess change.

e-Government—Using improved Internet-based technology to make it easy for citizens and businesses to interact with the government, save taxpayer dollars, and streamline citizen-to-government communications (E-Gov 2003).

forest land—Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use. The minimum area for classification of forest land is 1 acre. Roadside, streamside, and shelterbelt strips of timber must have a

crown width of at least 120 feet to qualify as forest land. Unimproved roads and trails, streams, or other bodies of water or clearings in forest areas shall be classed as forest if less than 120 feet wide (Shifley and Sullivan 2002).

fragmentation—The process by which larger, contiguous forest lands are broken into smaller, more isolated fragments or islands, surrounded by human-modified environments that are converted to agriculture and urban land uses (Hill and others 1998).

green space—A protected area of land whose primary purpose is to remain open or undeveloped; term is used interchangeably with “open space” (City of Auburn 2003).

invasive species—An alien species whose introduction does or is likely to cause economic or environmental harm, or harm to human health. An alien species means, with respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem (Executive Order 13112).

management objective—A tangible, measurable objective against which actual achievement can be compared, including a target expressed as a quantitative standard, value, or rate.

management strategy—The particular approach the agency intends to apply in achieving its strategic goals and objectives.

non-industrial private—An ownership class of private lands where the owner does not operate wood-using plants (Shifley and Sullivan 2002).

parcelization—Fragmenting ownership of a large forested tract into several smaller ownerships; shift from a few landowners with large holdings to many landowners with smaller holdings (DeCoster 2000, Mehmood and Zhang 2001).

riparian—Relating to or living or located on the bank of a natural watercourse (as a river) or sometimes of a lake or a tidewater (Merriam-Webster 1996).

species—A class of individuals having common attributes and designated by a common name; a logical division of a genus or more comprehensive class (Merriam-Webster 1996).

strategic goal—Included in a strategic plan, it defines how an agency will carry out its mission over a period of time. A strategic goal is expressed in a manner that allows a future assessment to be made of whether the goal was or is being achieved. It may be of a programmatic, policy, or management nature.

strategic objective—Included in a strategic plan, objectives are paired with a strategic goal and can be used to help assess whether the goal was or is being achieved. An objective usually describes a more specific or measurable level of achievement than a goal.

sustainable forest management—The forest component of sustainable development, which is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development 1987). The Montreal Process Criteria and Indicators (see appendix A) taken together also provide an implicit definition of what is meant by sustainable forest management at the national level.

third-party certification—A market-based instrument designed to document and reward specific forest management practices, and to assure consumers of forest products that their purchase comes from a forest whose management meets certain standards (Washburn and Block 2002).

timberland—Forest land that is producing, or is capable of producing, in excess of 20 cubic feet per acres per year of industrial roundwood products under natural conditions, is not withdrawn from timber utilization by statute or administrative regulation, and is not associated with urban or rural development (Shifley and Sullivan 2002).

Literature Cited

- Birch, Thomas W. 1996. Private forest-land owners of the Northern United States, 1994. Resour. Bull. NE-136. Radnor [Newtown Square], PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 293 p.
- City of Auburn. 2003. City of Auburn Green Space Task Force final report. <http://www.auburn.edu/~newlamc/GreenSpaceReport/glossary.htm>. [July 9].
- DeCoster, Lester A. 2000. Summary of the forest fragmentation 2000 conference—how forests are being nibbled to death by DUCs, and what to do about it. In: DeCoster, Lester A., ed. Proceedings of the forest fragmentation 2000 conference—Sustaining forests in the 21st century; 2000 September 17–20; Annapolis, MD. Alexandria, VA: Sampson Group, Inc.: 2–12.
- Dwyer, John F.; Nowak, David J.; Noble, Mary Heather; Sisinni, Susan M. 2000. Connecting people with ecosystems in the 21st century: an assessment of our nation's urban forests. Gen. Tech. Rep. PNW-490. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 483 p.
- E-Gov. 2003. E-Gov background. http://www.whitehouse.gov/omb/egov/about_backgrnd.htm. [June 16].
- Executive Order 13112. 1999. Invasive species. Federal Register 64(25): 6183–6186. February 8.
- Hill, Larry; Cooksey, Richard; McConnell, Jay; O'Connell, Katrin; Michaels, Joseph; Raimo, Deirdre; Garner, James; Grace, James; Mallow, James. 1998. Forest fragmentation in the Chesapeake Bay Watershed: ecological, economic, policy, and law impacts. SAF 98–09. Bethesda, MD: Society of American Foresters. 85 p.
- Mehmood, Sayeed R.; Zhang, Daowei. 2001. Causes of forest parcelization in the United States. Journal of Forestry. 99(4): 30–4.
- Merriam-Webster. 1996. Merriam-Webster's collegiate dictionary. 10th ed. Springfield, MA: Merriam-Webster, Inc. 1559 p.
- Pennsylvania Department of Conservation and Natural Resources. 2003. State forest resource management plan. <http://www.dcnr.state.pa.us/forestry/sfrmp/glossary.htm>. [July 9].
- Shields, Deborah J.; Martin, Ingrid M.; Martin, Wade E.; Haefele, Michelle A. 2002. Survey results of the American public's values, objectives, beliefs, and attitudes regarding forests and grasslands: a technical document supporting the 2000 USDA Forest Service RPA Assessment. Gen. Tech. Rep. RMRS-95. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 111 p.
- Shifley, Stephen R.; Sullivan, Neal H. 2002. The status of timber resources in the North Central United States. Gen. Tech. Rep. NC-228. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 47 p.
- Smith, W. Brad; Vissage, John S.; Darr, David R.; Sheffield, Raymond M. 2001. Forest resources of the United States, 1997. Gen. Tech. Rep. NC-219. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 190 p.
- USDA—See U.S. Department of Agriculture
- U.S. Department of Agriculture, Forest Service and Northeastern Forest Resource

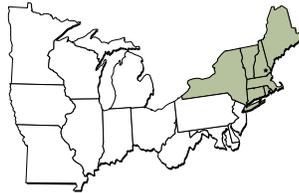
- Planners Association. 2002. Sourcebook on criteria and indicators of forest sustainability in the Northeastern Area. NA-TP-03-02. Newtown Square, PA; Northeastern Area, State and Private Forestry. 64 p.
- U.S. Department of Agriculture, Forest Service. 2003. Managing the National Forest System: great issues and great diversions. Unpublished draft. Washington, DC. 30 p.
- U.S. Department of Agriculture, Forest Service. [In press]. Sustainability assessment highlights for the Northern United States. Newtown Square, PA: Northeastern Area, State and Private Forestry.
- Washburn, Michael P.; Block, Nadine, E. 2002. Comparing forest management certification and the Montreal Process Criteria and Indicators. Washington, DC: Pinchot Institute for Conservation. 12 p. [http://www.pinchot.org/pic/publications/C&I_Certification.pdf].
- World Commission on Environment and Development. 1987. Our common future. Oxford, England: Oxford University Press. 400 p.
- Zhu, Zhiliang. 1994. Forest density mapping in the lower 48 States: a regression procedure. Res. Pap. SO-280. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 11 p.

**The Northeastern Area State and Private Forestry
USDA Forest Service**



Headquarters Office

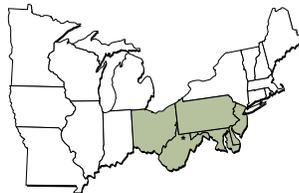
11 Campus Boulevard, Suite 200
Newtown Square, PA 19073
610-557-4103



Field Offices

Durham, New Hampshire

271 Mast Road
Durham, NH 03824
603-868-7694



Morgantown, West Virginia

180 Canfield Street
Morgantown, WV 26505
304-285-1540



St. Paul, Minnesota

1992 Folwell Avenue
St. Paul, MN 55108
651-649-5243



Grey Towers National Historic Landmark

151 Grey Towers Drive
Milford, PA 18337
570-296-9634

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.