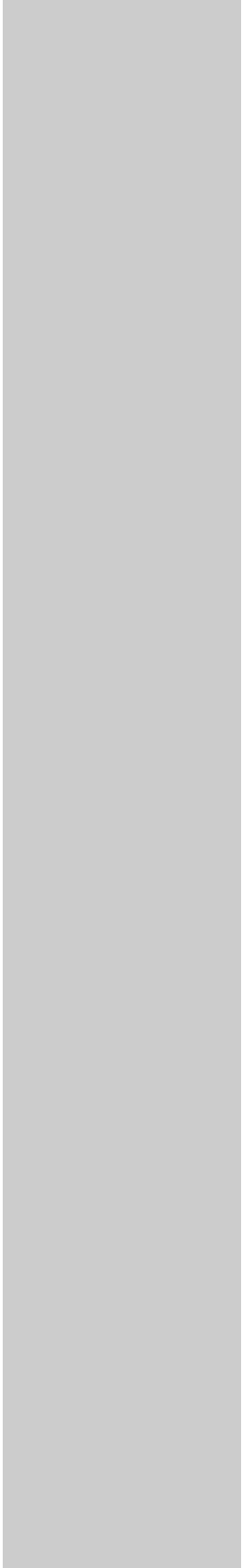


## **I. PROTECTING EXCEPTIONAL RESOURCES**

**The public expressed widespread support for protecting lands and resources with “exceptional” public values. These range from habitats of rare and endangered species, to recreation trail corridors, to unusual natural communities, to high amenity lands such as scenic shorelines or other especially scenic areas. Our land conversion research showed that these lands are more at risk to changes in use than lands without such attributes.**

**The traditional way to protect such resources has been through outright acquisition of land by a public agency. The contribution of private lands in conserving public values is just beginning to be recognized.**

**In this section, the Council proposes (1) mechanisms to assess what “exceptional lands” need protection in each Northern Forest state; (2) fair and proper allocation of existing funds and new funds for these purposes; and (3) new partnerships and alternatives to fee acquisition to achieve conservation of public values on private lands.**



## Public Land Management and Acquisition

**Public land acquisition and management are important tools in protecting components of the full range of values in the Northern Forest, where private lands cannot be expected to provide or protect such values. The Council supports public land acquisition and easements as set forth in the recommendations of this section, as part of an overall strategy to conserve the Northern Forest.**

**Public lands, amounting to 15% of all lands in the region, have long been a part of the traditional mix of ownerships in the Northern Forest. These patterns, however, differ from state to state. New York has a larger percentage in public ownership, while Maine contains a smaller percentage.**

### Management of Public Lands

**State and federal land management agencies have experienced significant declines in funding for management of existing public holdings. Use of public land has increased while resources and budgets for management have declined. Facilities have fallen into disrepair; some even pose threats to public safety. Other areas cannot be made available for public use because of funding constraints. Recent laws, including the Americans with Disabilities Act and the Federal Safe Drinking Water Act, impose additional costs on land managers, often without providing sufficient funds to meet them. Additional public land acquisitions that do not include funds for future management will further stress an already-overburdened public land system.**

**Recommendation 13, to fund public land management agencies. Congress and the states should provide sufficient funds to public land management agencies to manage and maintain existing public land holdings and recreation facilities for increased public use; to protect fragile areas; and to enhance public health and safety at existing facilities. Congress and the states should also provide sufficient funding to meet the costs of administering conservation easements held by public agencies.**

**For related recommendations, see recommendations 14 (Management of Private and Public Recreational Lands), 15**

“State-based programs play a crucial role in land conservation in the region; however, funding for public conservation and land management at all levels is often inadequate. Further, the increased need for additional management funding is rarely tied to new public land acquisitions. Recent trends in funding for management, repairs and improvements on public ownerships are also down.”

Conservation Strategies Subcommittee Finding #6, page A-29.

“Maintenance of buildings, comfort facilities, and trails in public parks and forests is often lacking. Poor upkeep and maintenance of facilities affects one’s recreational experience.”

Recreation and Tourism Subcommittee Finding #21, page A-50.

(Identification of Lands of Exceptional Value), 16 (Land and Water Conservation Fund), 17 (State Funding for Acquisition) and 18 (Conservation Tools Other than Acquisition).

**Responsible agency.** Congress and the states should act immediately to fund management of existing public lands and conservation easements held by public agencies.

**Related findings in the appendix.** Land conversion 1, 2, 3, 8, 9, 10, 11, 24; biological resources 14; and all conservation strategies findings.

**References.** Northern Forest Lands Council, Summary of Public Comment on the Draft Recommendations, August 1994.

State Resource Strategies, New Directions in Conservation Strategies: A Reconnaissance of Recent Experimentation and Experience, October 28, 1993.

“There is a lack of sufficient economic contributions by some recreational users, and by the public who demand or desire public recreational use of private lands. Some user groups have indicated their willingness to contribute funds to a recreational access program through a tax on recreational equipment, though no structure exists to undertake this task.”

Conservation Strategies  
Subcommittee Finding #9,  
page A-29.

### **Management of Private and Public Recreational Lands**

**To reach future land conservation goals, all recreation user groups must share the costs of conservation and management of important outdoor recreation resources and facilities. For many years hunters and anglers have contributed to the conservation of fish and wildlife species through excise taxes on the manufacture and export of hunting and fishing equipment and through license purchases. Boaters also help pay for new water access areas through fuel taxes. The proceeds from these excise taxes are conveyed to the states through the Pitman-Robertson, Dingell-Johnson, and Wallop-Breaux programs, which provide funding for fish and wildlife related activities.**

**Those who enjoy the outdoors in ways other than hunting, fishing, and boating have impacts on public and private land resources. All user groups have an interest in and should support contributing to the care and conservation of habitat and maintenance of outdoor recreational facilities. These user groups also require services and information to foster their enjoyment. In fact, the Council heard from many members of the public that they are willing and able to contribute to conservation efforts when they are sure that the funds will be used for the intended purposes.**

**Since the Council issued its draft recommendations, the International Association of Fish and Wildlife Agencies has advanced a proposal to create a Wildlife Diversity Initiative to provide a parallel funding program to the Pitman-Robertson, Dingell-Johnson, and Wallop-Breaux programs to support non-game wildlife programs through flexible grants to the states. As is the case for the existing fish and wildlife programs, this new initiative would be financed through a manufacturer’s excise tax on outdoor equipment. (It should be emphasized that hunting and fishing equipment would not be taxed again under such a program). This effort**

should provide funding for the states to support public access on private lands, as well as management and expansion of outdoor recreation opportunities on private and public lands. Such funding also should allow for assistance and fair compensation to landowners who provide public recreation opportunities on their lands.

**Recommendation 14, to institute a national excise tax on recreation equipment.** Congress should institute a national excise tax on outdoor specialty recreation equipment (e.g., climbing gear, hiking boots) to support wildlife and recreation management on public lands, and to support recreation opportunities on private lands through assistance and compensation to the landowners. The International Association of Fish and Wildlife Agencies' Wildlife Diversity Initiative is an example of a potential framework for this program, although, unlike the Council recommendation, it does not address public use of private lands for recreation. The tax collection and distribution system should be modelled after the Pitman-Robertson, Dingell-Johnson, and Wallop-Breaux programs of the U. S. Fish and Wildlife Service. Revenues should be distributed to all 50 states according to a specific formula developed in close collaboration with the states.

For related recommendations, see recommendations 13 (Management of Public Lands) and 26 (Recreation and Tourism on Private Lands).

**Responsible agency.** Congress should act immediately to institute the excise tax, to be distributed through the U. S. Fish and Wildlife Service.

**Related findings in appendix** Conservation strategies 6, 8, 9; and recreation and tourism 11, 17, 21.

**References.** Brown, Tommy, Forest Conservation, Forest Recreation and Tourism and the Forest Products Industry: Interrelations and Compatibility, October 7, 1993.

Brown, Tommy, Outdoor Recreation and Tourism Studies Applied to the Northern Forest Lands: Literature Review and Analysis, October 7, 1993.

Northern Forest Lands Council, Summary of Public Comment on the Draft Recommendations, August 1994.

State Resource Strategies, New Directions in Conservation Strategies: A Reconnaissance of Recent Experimentation and Experience, October 28, 1993.

## **Identification of Lands of Exceptional Value for Public Acquisition**

The Council recognizes the importance and appropriateness of public land acquisition and easements to conserve public values on exceptional or

important lands. For example, the Council's land conversion study results clearly showed that lands most affected by conversion are the "high amenity" areas, particularly shorelines and scenic areas. There is concern that large tracts of important forest lands may not be maintained for the long term in areas with significant development pressures.

**Given this, the Council sees three basic strategies for public land acquisition in the Northern Forest:**

1. **Acquisition of land in fee to conserve exceptional recreational, ecological, or scenic values.**
2. **Acquisition of rights-of-way or other limited easements in land where the property remains in private ownership but where negotiation with the owner can provide selective public benefits such as a trail corridor, fishing access, or protection of critical habitat.**
3. **Acquisition of conservation easements on large tracts where forest production and/or other important public values may be threatened over the long run by significant development or other pressures. (See Section I, Stewardship Incentives, page 25.)**

**In some cases these approaches may be combined to fit the particular character of the land or landowner. The Council supports a land acquisition program that uses these tools appropriately.**

**The Council believes that voluntary, willing seller/willing buyer purchases are a basic and fundamental requirement in all three types of public land acquisition activities described above. Further, the Council believes that full fee public acquisition is generally not an appropriate mechanism for maintaining the extensive working forest component across the broad landscape of the Northern Forest. Instead, conservation easements offer significant opportunities to protect public values while maintaining working landscapes and private ownership. In fact, a well-designed and well-funded conservation easement or development rights purchase program would be highly effective in achieving the Council's goals over the next half century.**

**Recommendation 15. to refine state land acquisition planning programs. By June 1996, states, in consultation with local governments, should refine their existing state land acquisition programs to follow a goal-oriented, public planning process that:**

- (a) **identifies and sets priorities for acquisition of fee or less-than-fee interests in exceptional and important lands. The criteria for such lands include:**

"Some land on the market today may have important public and private values and is available from willing sellers. The amount of land actively for sale in the region is not fully known. It is also not fully understood how much of this land is of broad conservation interest. Where these lands are of conservation interest, public acquisition of fee or less-than-fee interest in these lands can protect these values for the future and create opportunities for federal, state, local, and private partnerships in land conservation."

Conservation Strategies  
Subcommittee Finding #20,  
page A-30.

- **places offering outstanding recreational opportunities including locations for hunting, fishing, trapping, hiking, camping, and other forms of back-country recreation;**
  - **recreational access to river and lake shorelines;**
  - **land supporting vital ecological functions and values;**
  - **habitats for rare, threatened, or endangered natural communities, plants, or wildlife;**
  - **areas of outstanding scenic value and significant geological features;**
  - **working private forest lands that are of such significance or so threatened by conversion that conservation easements should be purchased.**
- (b) **acquires land or interest in land only from willing sellers.**
- (c) **involves local governments and landowners in the planning process in a meaningful way that acknowledges their concerns about public land acquisition.**
- (d) **recognizes that zoning, while an important land use mechanism, is not an appropriate substitute for acquisition.**
- (e) **ensures that unilateral eminent domain will only be used with the consent of the landowner to clear title and/or establish purchase price (i.e., “friendly” condemnation).**
- (f) **efficiently uses public dollars by purchasing only the rights necessary to best protect identified, exceptional values.**
- (g) **weighs the potential impacts and benefits of land and easement acquisition on local and regional economies.**
- (h) **considers the necessity for including costs of future public land management in the assessment of overall costs of acquisition.**
- (i) **minimizes adverse tax consequences to municipalities by making funds available to continue to pay property taxes based at least on current use valuation of parcels acquired, payments in lieu of taxes, user fee revenues, or other benefits where appropriate.**
- (j) **identifies the potential for exchanging currently owned public land for privately held land of greater public value.**
- (k) **provides that lands purchased are used and managed for their intended purposes.**

“Forrest land conversion is most likely to occur in areas with significant recreational, scenic, and wildlife habitat values. As a result, these resources are more seriously affected by conversion activities than are lands without these attributes.”

Land Conversion  
Subcommittee Finding #8,  
page A-19.

“Opportunities exist to work closely with private landowners to further land conservation efforts; however, landowners’ fears about the negative consequences of land conservation are impeding these efforts. These fears include current and potential land use regulations that may be inequitable, have no scientific basis and are ever changing, and government’s use of eminent domain and condemnation powers to create new public ownerships.”

Conservation Strategies  
Subcommittee Finding #3,  
page A-28.

For related recommendations, see recommendations 16 (Land and Water Conservation Fund), 17 (State Funding for Acquisition), 18 (Conservation Tools Other than Acquisition), 19 (Conservation Transactions), and 21 (Biological Diversity).

**Responsible agency.** State conservation agencies and acquisition agencies should immediately begin the process of acquisition planning at the state level.

**Related findings in the Appendix** Land conversion 1, 2, 3, 8, 9, 10, 11, 24; biological resources 1, 2; and all conservation strategies findings.

**References.** Northern Forest Lands Council, Summary of Public Comment on the Draft Recommendations, August 1994.

State Resource Strategies, New Directions in Conservation Strategies: A Reconnaissance of Recent Experimentation and Experience, October 28, 1993.

James W. Sewall Company and Market Decisions, Northern Forest Lands Council: Land Conversion Study, April 9, 1993.

### Acquisition Funding for Lands of Exceptional Value

**Existing funding sources for state land acquisition are insufficient to acquire lands of exceptional ecological, recreational, and cultural value, and other important lands as identified in the previous recommendation. The Council supports increased land acquisition funding at both the state and federal level to meet this need.**

### Land and Water Conservation Fund

**Created 30 years ago by an act of Congress, the Land and Water Conservation Fund (LWCF) was designed to provide reliable funding for federal land acquisition and for grants to states (and through states to local governments) on a matching basis to help support conservation and recreation activities such as land acquisition and development of recreational facilities. The LWCF program continues to provide funding for federal land acquisition, but in recent years funding for state and local governments has been so reduced that it is no longer meaningful. The Land and Water Conservation Fund is currently authorized at \$900 million per year. However, Congress has never appropriated the fully-authorized amount, but has allocated the balance to other programs. LWCF expenditures in northeastern states have been disproportionately small compared to those in the west, given the northeast's important natural resources and the population they serve. State grants nationwide declined from a peak of \$376 million in 1979 to less than \$25 million in 1994. In addition, the conditions and regulations for use of the money reduced the flexibility and usefulness of the program. (We recognize that several efforts are currently underway in Congress and the Administration to more fully assess these issues and to examine the future of the LWCF program.)**

**The Council believes that reliable sources of funding are needed to re-establish a working partnership among local, state, and federal**

"The federal Land and Water Conservation Fund historically has been an important funding mechanism for public acquisition and improving public recreational access in the Northern Forest region. However, the states in the Northeast have received less and less support from this program over time, as the emphasis has shifted to more federal acquisitions in other regions of the country."

Conservation Strategies Subcommittee Finding #7, page A-29.

governments to carry out the recommendations made through careful analysis and citizen involvement. Congress should act swiftly to restructure and restore the state-side of the Land and Water Conservation Fund. This would provide increased funding for the states to purchase and maintain land or conservation easements, and to develop needed outdoor recreational facilities in cities, small towns, and rural areas, including the Northern Forest area of New England and New York.

**Recommendation 16, to fund the Land and Water Conservation Program.** Congress should fund the overall Land and Water Conservation Program at the currently authorized level, with at least 60% of the funds going to the states. Along with adequate funding, Congress should revise the law to provide greater flexibility to the states allowing increased efficiency in expenditure of LWCF monies. The states should use broad based planning processes to allocate LWCF monies within their boundaries.

### State Funding for Acquisition

Historically, each state has provided funding for land conservation through such strategies as bond acts, dedicated funds, and public/private partnerships. In recent difficult economic times these sources have dwindled or disappeared entirely.

**Recommendation 17, to fund state land acquisition programs.** States should continue their history of providing funding for land acquisition through land purchase bonds, dedicated funds, private contributions, and legislative appropriations to purchase fee or less-than-fee interest in lands in conformance with the land acquisition process described above.

“Over the last decade, many landowners took advantage of state and federal land acquisition programs. Today, many landowners would likely be willing to sell additional forest land outright to the public or through conservation easements if sufficient funding were available.”

### Conservation Tools Other than Acquisition

**Recommendation 18, to employ a variety of conservation tools.** States should employ a variety of tools in addition to fee acquisition to conserve working landscapes and public values, including:

Conservation Strategies Subcommittee Finding #13, page A-29.

- (a) exchanges of land and less-than-fee interests such as perpetual conservation easements.

- (b) short and long term cooperative agreements with landowners for the protection of plant and animal species, scenic overlooks, and trailheads
- (c) public purchase of specific public recreation rights (independent of other property interests) such as fishing and boating access, snowmobile, cross country skiing and hiking trails.
- (d) partnerships with private land trusts to acquire land in situations where emergency actions and bridge loans are needed, or where complex approaches, such as partial development or land exchanges, are appropriate.

**For related recommendations, see recommendation 2 (State Easement Programs), 13 (Management of Public Lands), 14 (Management of Private and Public Recreational Lands), 15 (Identification of Lands of Exceptional Value), and 19 (Conservation Transactions).**

**Responsible agency.** Congress should act immediately to adequately fund the state-side of the Land and Water Conservation Fund and to revise the program to provide increased efficiency and flexibility.

**Related findings in the appendix.** Land conversion 1, 2, 3, 8, 9, 10, 11, 24; biological resources 14; and all conservation strategies findings.

**References.** Northern Forest Lands Council, Summary of Public Comment on the Draft Recommendations, August 1994.

State Resource Strategies, New Directions in Conservation Strategies: A Reconnaissance of Recent Experimentation and Experience, October 28, 1993.

## Conservation Transactions

**Limited public funds and bureaucratic requirements for land acquisition often make the process cumbersome and lengthy. This discourages some landowners who might otherwise be interested in selling land or interest in land to public entities. Action is needed to remove disincentives and encourage such transactions.**

“Based on national surveys, the general public prefers forests over development and would likely respond to tax policy incentives which encourage forest conservation.”

State and Federal Taxes  
Subcommittee Finding  
#11, page A-55.

**Recommendation 19, to exclude from income tax a portion of the gain from conservation sales. Congress and the state legislatures should change their income tax codes to exclude from income tax a portion of the gain received from sale of “qualified forest lands” and conservation easements (see below) to public conservation agencies (or third party organizations if lands are re-conveyed to a public agency within two years).**

- (a) For sale of a conservation easement, the exclusion from income tax should be 100% of the gain.
- (b) For sale of fee title, the exclusion from income tax should be 35% of the gain, up to a maximum of \$100,000 in taxes payable.
- (c) For sale of fee title to third party entities (such as non-profit land trusts), the exclusion should be allowed only if lands are re-conveyed to a public agency within two years.

“Qualified forest lands” and conservation easements are those identified through a state-based open space and public acquisition planning process, as described in Recommendation 15. Third party transfers should be only through non-profit organizations identified as part of the state acquisition planning process. If land is sold to third parties, landowners would only be allowed the income tax reduction retroactively upon final disposition to a government agency, not at time of sale to the non-profit.

**For related recommendations, see recommendation 1 (Forest Legacy), 2 (State Easement Programs), 15 (Identification of Lands of Exceptional Value), 16 (Land and Water Conservation Fund), 17 (State Funding for Acquisition), and 18 (Conservation Tools Other than Acquisition).**

**Responsible agency:** Congress and the state legislatures should enact this policy within five years.

**Related findings in the Appendix**All state and federal tax findings; and all conservation strategies findings.

**References.** DeCoster Group, Environmental and Societal Benefits of Certain Federal Taxation Policies Affecting Private Timberland Owners, October 12, 1993.

Dubroff, Harold and Geske, Alvin, A Report to the Northern Forest Lands Council on Federal Taxation Issues Affecting Private Timberland Owners, November 15, 1993.

Howard, Theodore, Federal Taxation and the Northern Forest Lands: A Discussion Paper Prepared for the Northern Forest Lands Council, May 20, 1992.

Northern Forest Lands Council, Summary of Public Comment on the Draft Recommendations, August 1994.

State Resource Strategies, New Directions in Conservation Strategies: A Reconnaissance of Recent Experimentation and Experience, October 28, 1993.

## Water Quality

The Council received considerable comment about the importance of water quality in the rivers, streams, and lakes of the Northern Forest. Clean water is fundamental to residents' quality of life, and provides the basis for much of the region's recreation and tourism. People are concerned about siltation, phosphorous loading, and other degradation to the region's water.

The Federal Clean Water Act and related state legislation have improved water quality, particularly in the region's rivers. Many point sources of pollution have been eliminated or treated to reduce impacts on receiving waters. The Clean Water Act and state laws now protect significant wetlands from being filled, and reduce the impacts of water use on fish populations. Many rivers are now cleaner than they were 20 years ago.

Significant problems remain, however, in addressing those sources of water pollution that come from diffused, scattered sources (non-point pollution). Non-point pollution can come from new or old septic systems, from land clearing and road construction, from air pollution, from highways, development, lawns, improperly managed agriculture or forestry, and even from intensive boating use. Well-managed forests, on the other hand, can improve water quality. Many other recommendations in this report regarding forest stewardship, if implemented, will further protect and enhance water quality.

The continued degradation of many lakes and some rivers within the Northern Forest is evidence that water pollution problems are not all solved. States must redouble their efforts to review the impacts of different land uses on water quality, and halt the decline. States must also continue participating in national efforts to reduce air pollution, a contributor to acidification of lakes and related water pollution problems.

**Recommendation 20, to assess water quality trends.** By June 1996, states should assess water quality trends within the Northern Forest from existing data, report on suspected or confirmed causes of identified deterioration, and propose revisions to state water pollution laws to stem that deterioration. Recommendations should include identifying, where needed, additional sources of funding for enforcement and administration of water pollution control programs and for assistance to local

**governments, property owners, and lake and watershed associations to improve water quality.**

**For related recommendations, see recommendation 33 (State University Cooperation), and 34 (Land Conversion Trends).**

**Responsible agency.** The Congress should direct the Environmental Protection Agency, and state legislatures should direct their natural resource protection agencies, to conduct these assessments by June 1996.

**Related findings in the Appendix** Land conversion 8; and biological resources 2, 5, 7.

**References.** James W. Sewall Company and Market Decisions, Northern Forest Lands Council: Land Conversion Study, April 9, 1993.

Northern Forest Lands Council, Summary of Public Comment on the Draft Recommendations, August 1994.

Northern Forest Lands Council, Summary of Proceedings: Biological Resources Diversity Forum, December 9, 1992.

## Biological Diversity

**Biological diversity, or “biodiversity” for short, has recently attained prominence as one indicator of ecosystem health. The science of biodiversity is relatively new and complex and is rapidly evolving. The Council believes that maintaining the region’s biodiversity is important in and of itself, but also as a component of stable forest-related economies, forest health, land stewardship, and public understanding.**

**Working now to conserve biodiversity will maintain options for future generations living and working in the Northern Forest.**

**Biological diversity ensures continued forest productivity in the face of changes in atmospheric, climatic, or site conditions. Conversely, land uses that transform or irreparably damage the landscape can decrease biodiversity and therefore could reduce the long-term sustainability of the forest.**

**People have cited a number of concerns for the future of biodiversity including forest fragmentation, conversion of working forests to other uses, and, in some cases, inappropriate forest practices. Also, current and future economic and other pressures on landowners may impair their ability to consider biodiversity in their management decisions. Many private landowners are concerned about the implications of biodiversity issues for their use of their lands, and what it means to manage for biodiversity.**

**Two components of the Council’s mission are to encourage a sustainable yield of forest products and to perpetuate recreation, wildlife, scenic and wildland resources. These two are not incompatible; the Council and others believe that well-managed multiple use lands can and do play a major role in conserving and enhancing biological diversity. Indeed, both private and public forest landowners have done a great deal to protect biodiversity on their lands already.**

**Biological systems are dynamic in nature. For example, present-day biodiversity differs from that of a century ago or that at the time of European settlement. The Council’s recommendations are designed to conserve the present diversity and to enhance it where possible.**

**The Council believes that the region’s biological resources must be viewed from a landscape perspective—that is, beyond the individual tract or ownership. Where this concept is difficult, strategies must be developed which avoid the kinds of controversies that have erupted elsewhere.**

Many different definitions exist for biodiversity. The following are a few that we encountered in our work.

“The variety and abundance of species, their genetic composition, and the communities, ecosystems, and landscapes in which they occur. It also refers to ecological structures, functions, and processes at all of these levels. Biological diversity occurs at spatial scales that range from local through regional to global.”

Society of American Foresters

“The variety of life and its processes.”

USDA Forest Service

“The diversity of life in all its forms, and at all levels of organization. In all its forms’ reminds us that biodiversity includes plants, invertebrate animals, and microorganisms, as well as vertebrates that garner most of the attention. All levels of organization’ indicates that biodiversity refers to the diversity of genes and ecosystems, as well as species diversity.”

Dr. Malcolm Hunter, University of Maine

“Any action to conserve biological resources is likely to have economic and social effects. Therefore, to be widely accepted, initiatives to conserve biological resources must address the needs of people as an integral part of the environment.”

Biological Resources  
Subcommittee Finding #4,  
page A-24.

“The Northern Forest region is characterized by a diverse land ownership and management pattern; therefore, a full range of techniques and mechanisms should be available to maintain and enhance the diversity of the region’s biological resources.”

Biological Resources  
Subcommittee Finding #7,  
page A-24.

During its research, the Council heard from members of the scientific community who advocate creation of ecological reserves as an essential means to conserve biodiversity. Some have promoted the establishment of large reserves for ecological as well as non-scientific values such as aesthetics, personal renewal, and non-motorized recreation. The Council recommends that states focus on the scientific rationale for identifying and establishing ecological reserves.

While the concept of ecological reserves is somewhat new, they already exist on federal, state, and private land in the Northern Forest region by other names (e.g., natural areas, Research Natural Areas, preserves, Wilderness areas, etc.). The exact acreage of such currently-protected areas is not known but it is a small proportion of the region.

The Council also learned that the scientific community has not reached consensus on the size and design of an ecological reserve program. While more research is needed to determine the size, scope, and parameters of a reserve system, the experience of the state of Maine offers some insight into this question. The state conducted a preliminary scientific assessment for the establishment of an ecological reserve system. That assessment indicates that a reserve system would be limited in size, encompassing only a small portion of the landscape.

We emphasize that ecological reserves are only one part of a four-part approach to maintaining and enhancing biodiversity. The other approaches include biodiversity definition and assessment, dissemination of forest management techniques to enhance biodiversity and landowner education and incentives. In addition, the forest management section of the recommendations speaks to enhancing biodiversity within the working forest.

**Recommendation 21, to conserve and enhance biodiversity.** By June 1996, states should develop a process to conserve and enhance biodiversity across the landscape:

- (a) First, assess the status of biodiversity in each state and determine the current level of protection on public lands and on private conservation lands by voluntary landowner agreement. Then, if needed, state conservation agencies and private landowners should consult and agree upon ground rules for assessing biodiversity on private lands. Written permission is essential for entry onto private lands during new biodiversity surveys.

- (b) Provide landowners with information about how to conserve biodiversity on their land through both forest management practices and establishment of ecological reserves. State conservation agencies should collect and distribute this information.
- (c) Provide financial incentives to landowners for measures taken to conserve and enhance biodiversity including strengthened Stewardship Incentive Program practices and reduced property tax valuations and/or exemptions.
- (d) Using scientific assessment and analysis, create ecological reserves as one component of state public land acquisition and management programs. Given current scientific knowledge, and economic, social, and political constraints, the Council envisions that such a system will be limited and should be re-assessed for scope as the science develops. The following criteria should be followed:
  - (1) Areas selected should meet the definition of an ecological reserve (see the definition at right).
  - (2) Selection must be according to the state's open space planning and acquisition plans (see Recommendation 15).
  - (3) Before new ecological reserves are established, the extent of ecological values already protected on public lands and private conservation lands must be assessed.

The Council defines an ecological reserve as "an area established to maintain in a relatively undisturbed state one or more ecosystems representative of a region." To properly understand the definition and use of the term "ecological reserve", several points need explanation. First, the Council recommends that the need, size, and location of ecological reserves will be based on sound science and determined through the Council-proposed open space planning process (see Recommendation 15). Second, human uses and activities allowed in a reserve, regardless of size, must be compatible with the scientifically-determined ecological value(s) of the particular site(s).

Northern Forest Lands Council

For related recommendations, see recommendation 3 (Stewardship Incentive Program), 10 (Education about Sound Forest Management), 11 (Forest Practice Regulations and Programs), 12 (Cooperation to Achieve Sustainability), 13 (Management of Public Land), 15 (Identification of Lands of Exceptional Value), 16 (Land and Water Conservation Fund), and 33 (State University Cooperation).

**Responsible Agency.** All state agencies with conservation, fisheries and wildlife management, forestry, and natural resources planning functions should collaborate to carry out these actions. The state conservation agency should serve as lead. Many of the recommendations in this section require a long deliberative process that will take several years to complete. The Council recommends that states give serious consideration to moving these processes forward in the first two years following the end of the Council's work. The State of Maine has already begun this work. Identification of existing, de facto reserves can take place concurrently.

**Related findings in the Appendix** All biological resources; land conversion 2, 8, 15; conservation strategies 1-6, 11, 13, 14, 19-21, 23; local forest-based economy 15; property taxes 5, 10, 22; recreation and tourism 1; and state and federal taxes 10, 11.

**References.** Ash Cove Consulting, Comparison of Ecological Classification Systems in the States of Maine, New Hampshire, New York and Vermont, May 19, 1993.

Ash Cove Consulting, Federal, State and Private Initiatives for Preserving Biological Diversity, July 12, 1993.

Ash Cove Consulting, Maintaining Biological Diversity on Private Forest Lands: Voluntary Techniques, August 24, 1993.

Brocke, Rainer, Recommendations to the Northern Forest Lands Council with Comments on a Briefing Paper, June 23, 1993.

DeCoster Group, Environmental and Societal Benefits of Certain Federal Taxation Policies Affecting Private Timberland Owners, October 12, 1993.

Haines, Sharon and Hunter, Malcolm, An Ecological Reserve System for the Northern Forest Lands of New England and New York, January 12, 1993.

McMahon, Janet, An Ecological Reserve System for Maine: Benchmarks in a Changing Landscape, Report to the 116th Maine Legislature, Natural Resources Policy Division, Maine State Planning Office, May 1993.

Northern Forest Lands Council, Summary of Public Comment on the Draft Recommendations, August 1994.

Northern Forest Lands Council, Summary of Proceedings: Biological Resources Diversity Forum, December 9, 1992.

State Resource Strategies, New Directions in Conservation Strategies: A Reconnaissance of Recent Experimentation and Experience, October 28, 1993.

President's Commission on Environmental Quality, Biodiversity on private lands. President's Commission on Environmental Quality: Washington, DC. March 1993.