



**Nature-Based  
Tourism Policy**



*THE CENTER FOR*



*Rural Pennsylvania*

*A Legislative Agency of the Pennsylvania General Assembly*



# **NATURE-BASED TOURISM POLICY**

*by*

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## Introduction

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Rural Pennsylvania has a unique opportunity to capitalize on the growing national and international interest in nature-based tourism (NBT). NBT is defined here as any non-consumptive or consumptive tourist activity that takes place in a natural environment setting. Recent national trends show huge increases in NBT activities, such as bird watching, hiking, downhill skiing and primitive camping (See Appendix 1).

Many changes in society, including public land scarcity, the increased focus on economic development, improved outdoor recreation equipment, and abundant information about natural environments, helped create this increased demand for NBT. These changes have allowed Pennsylvanians and visitors to the commonwealth to participate in a form of tourism that reflects Pennsylvania's heritage.

Because of the growing participation rates of NBT and the variety of organizations affected by this growth, this project set out to identify NBT policy initiatives designed to promote sustainable NBT activities in rural Pennsylvania.

### NBT POLICY DEFINED

NBT policy is defined as the management of all resources to fulfill economic, social, and aesthetic needs while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems. The seven dimensions involved in this definition underscore the general multi-dimensional and interdisciplinary aspects of NBT policy issues.

The most important issue is the need for resource management. Such management needs to reaffirm the concept that NBT is an economic activity capable of generating economic benefits for rural communities. Environmental policies must leave room for individual employment and economic well being to operate within the ecological parameters.

Another aspect of policy involves the need to fulfill social obligations, or more specifically, intergenerational equity and respect for other livelihoods and customs. Such variety and heritage is a

major resource for NBT in a world that is fast becoming homogenized into a global economy.

Another major component is aesthetic appeal. Examples include Pennsylvania heritage sites, townscapes, and rural landscapes.

All of the above needs should be addressed within ecological parameters to sustain both physical and human environments. In addition to the very real concerns about the natural environment, conservation of cultural legacies should not be ignored. Ecological processes need to be understood so that NBT intrusions will have minimal impact, especially in sensitive areas like riverbanks, mountains, and wetlands. The concern over maintaining biological diversity is particularly relevant to NBT, which thrives on the appeal of different flora and fauna along with a distinctive sense of place. Finally, the need to sustain our basic life support systems of air, water and soil is paramount. (Cordell and Bergstrom, 1999; Mill and Morrison, 1998; Gunn, 1994; U.S. Department of Commerce, 1986).

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### THE ECOSYSTEM APPROACH

Essentially, NBT policy initiatives need to be inexorably tied to the ecosystem approach. An ecosystem is an interconnected community of living things, including humans and the physical environment within which they interact.

The ecosystem approach is a method for sustaining or restoring natural systems and their functions and values. It is goal driven and based on a collaboratively developed vision of desired future conditions that integrate ecological, economic, and social factors, and is applied within a geographic framework defined primarily by ecological boundaries.

The goal of the ecosystem approach is to restore and sustain the health, productivity, and biological diversity of ecosystems and the overall quality of life through a natural resource management approach that is fully integrated with social and economic goals (U.S. Department of Commerce, 1986).

## ***Study Objectives and Methods***

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The study's objectives were to: summarize current programs supported in Pennsylvania to promote and develop NBT; document NBT-related policy issues of numerous other states that have major NBT activities; and develop a strategic plan that identifies current NBT issues, initiatives and related programs that need to be addressed in the state.

### **NBT-RELATED POLICY ISSUES FOR OTHER STATES**

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To develop a list of NBT issues, the researchers conducted a literature review of NBT-related planning documents for 17 states that have major NBT-related activities. The states and their related documents included in the review are listed in the box at right. The search resulted in 23 long- and short-term issues that are discussed further as part of the study's results. The issues are listed in the box at bottom right. (See Appendix 2 for a complete description of the issues).

### **NBT-RELATED PROGRAMS IN PENNSYLVANIA**

Next, the researchers compiled a list of Pennsylvania organizations or their membership that integrate various aspects of NBT in their missions and goals. The following 12 organizations were identified and included in this study:

- County Commissioners Association of Pennsylvania
- Pennsylvania Association of Convention and Visitors Bureaus
- Pennsylvania Fish and Boat Commission
- Pennsylvania Game Commission
- Pennsylvania Department of Environmental Protection
- Pennsylvania Department of Community and Economic Development
- Pennsylvania Department of Conservation and Natural Resources
  - Bureau of Forestry
  - Bureau of Recreation and Conservation
  - Bureau of State Parks
  - Heritage Parks Program

- Conservation and Natural Resources Advisory Council
- Pennsylvania Land Trust Association

In developing Pennsylvania-specific NBT policy recommendations, the researchers conducted a series of discussions and fact-finding sessions with key administrators of these organizations to determine the administrators' opinions about the scope and relative importance of the 23 NBT issues.

Based on the administrators' recommendations from these meetings, the researchers designed a survey with the following three questions:

1. "What do you think are the three most important NBT problems that need to be addressed by the General Assembly in order to promote NBT in Pennsylvania, and what do you recommend should be done in the next two to three years to help solve them?"
2. "Out of a list of 23 important long- and short-term NBT-related issues that we provide, please rank those that you feel are the five most important ones that need to be addressed by the General Assembly."
3. "Out of a list of 41 specific NBT activities that we provide, please select any one or more, and give us your recommendation(s) as to what the commonwealth's NBT policy should be regarding the activity(s)." (See Appendix 3)

In June 2002, the researchers mailed 240 surveys to association members and state agency personnel who were identified by the key decision makers in the above-mentioned associations and agencies. Sixty-two surveys were returned for a response rate of 26 percent.

## STATES AND PLANNING DOCUMENTS USED TO DEVELOP STUDY'S 23 NBT ISSUES

- Arizona State Parks Board.** (1994). *1994 Arizona Statewide Comprehensive Outdoor Recreation Plan*. Phoenix, AZ.
- Center for Policy Research and Planning, Mississippi Institutions of Higher Learning.** (1990). *1990 Mississippi Statewide Comprehensive Outdoor Recreation Plan*. Jackson, MS.
- California Resources Agency, Department of Parks and Recreation.** (1994). *California Outdoor Recreation Plan 1993*. Sacramento, CA.
- Delaware Department of Natural Resources and Environmental Control.** (1990). *Delaware Outdoors 1990*. Dover, DE.
- Florida Department of Environmental Protection, Division of Recreation and Parks.** (1994). *Outdoor Recreation in Florida 1994*. Tallahassee, FL.
- Idaho Parks and Recreation Board.** (1989). *1990 Centennial Edition: Idaho Outdoor Recreation Plan*. Boise, ID.
- Indiana Department of Natural Resources.** (2000). *2000-2004 Indiana Statewide Comprehensive Outdoor Recreation Plan*. Indianapolis, IN.
- Minnesota Department of Natural Resources and Trade and Economic Development.** (1989). *Minnesota's Outdoor Legacy: Strategies for the 90s – Statewide Comprehensive Outdoor Recreation Plan for 1990-1994*. St. Paul, MN.
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- Oregon Parks and Recreation Department, Policy and Planning Division.** (1995). *Oregon Outdoor Recreation Plan 1994-1999*. Salem, OR.
- Texas Parks and Wildlife Department.** (1996). *1995 Texas Outdoor Recreation Plan – Assessment and Policy Plan*. Austin, TX.
- Vermont Agency of Natural Resources, Department of Forests, Parks and Recreation.** (1993). *Vermont Recreation Plan: Assessment and Policy Plan 1993*. Montpelier, VT.
- West Virginia Development Office.** (1993). *West Virginia Statewide Comprehensive Outdoor Recreation Plan 1993-1997*. Charleston, WV.

### LONG- AND SHORT-TERM ISSUES

- |   |                                      |
|---|--------------------------------------|
| 1. Incompatible Competing Demand              | 13. Accessibility                    |
| 2. Multiple Challenges                        | 14. Limited Supply                   |
| 3. Congestion/Carrying Capacity               | 15. Water Sites                      |
| 4. Resource Extraction                        | 16. New Technologies                 |
| 5. Ecotourism                                 | 17. Data Management                  |
| 6. Economic Growth                            | 18. Population Diversity             |
| 7. Public/Private Complementarity             | 19. Private Enterprise Opportunities |
| 8. Public/Private Co-management Opportunities | 20. Inner-city Needs                 |
| 9. Developed/Dispersed NBT Use                | 21. Price Increases                  |
| 10. Scenic Quality                            | 22. Research                         |
| 11. Group Decision Making                     | 23. Reservation Systems              |
| 12. Wild land/Urban Interface                 |                                      |

## Survey Results

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### QUESTION 1 — RECOMMENDATIONS FOR THE NEXT TWO TO THREE YEARS

An analysis of the survey responses to Question 1 revealed 22 major initiative recommendations that address specific barriers or opportunities related to the funding, development, and management of sustainable NBT for rural Pennsylvania. Each of the 22 policy initiatives is described and categorized within one of the following six NBT areas:

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- Resource allocation and management
- State agency planning and coordination
- Partnership with stakeholders
- Communications between state agencies and the public
- Knowledge base and the role of science
- Information and data management

### Resource Allocation and Management

Agency coordination in NBT efforts may be improved by recognizing the interdependency of state agency (or bureau) budgets. The efforts of each agency to provide NBT opportunities is affected by its inability to budget for long-term NBT goals, to organize around and fund interdisciplinary activities, and to quickly modify programs in response to ever changing NBT demand patterns and their impact on the ecosystem. Budget priorities and structures, however, often reflect narrow, program-specific perspectives and are driven by immediate concerns. The General Assembly makes funding decisions on an agency-by-agency basis, making it difficult for agencies to coordinate funding of interagency programs for NBT. And, current policies and funding are highly weighted to state lands, while county and municipal NBT facilities are sorely lacking in support.

### Respondent Recommendations

#### Budget structure

The General Assembly could consider working more closely with NBT-related agencies to revise their budget structure and organization, where

needed, to facilitate an NBT/ecosystem management approach.

#### Line items

The General Assembly could consider reducing the number of line items, increasing re-programming authority, and improving management flexibility to respond to NBT/ecosystem management related needs.

#### Budget planning procedures

NBT-related state agencies could consider assessing their NBT-related budget planning procedures and identify mechanisms to: (1) enhance participation by field-level managers in the budget process; (2) ensure that budgets reflect long-term NBT needs; and (3) ensure that the NBT budget procedures reflect the ecosystem management approach as a way of meeting existing responsibilities rather than adding a new set of program responsibilities.

#### Cross referenced budgets

The General Assembly could consider ensuring that NBT-related budgets initiated at the local level are cross-referenced to each other through a successive budget review process.

#### County and local budgets

The General Assembly could consider enhancing financial support for county and local NBT planning and development activities.

### State Agency Planning and Coordination

A coordinated comprehensive framework is essential to implement NBT activities. State resource management has traditionally been characterized by specific missions, rigidly stratified and specialized organizational structures, and the subdivision of problems into narrowly defined tasks. Those activities are encompassed in the mission statements of the agencies that manage NBT resources. However, difficulties result when agencies do not have the resources and personnel to fulfill their present missions and simultaneously take on additional responsibilities that are implied in providing for NBT. Existing field level staff is often seasonal and cannot do the required planning within the context of an NBT/ecosystem approach.

## **Respondent Recommendations**

### Administrative boundaries

The General Assembly could encourage NBT land management agencies to reexamine the configurations of their agency mission boundaries to meet the demand and supply for NBT activities. The agencies could determine opportunities for adjustments, land exchanges, and reciprocal management agreements designed to enhance opportunities for NBT activities.

### Coordination mechanisms

To the extent that the above suggestion is not feasible, the General Assembly could encourage agencies to consider coordination mechanisms or procedures to ensure that an ecosystem approach for NBT activities can be effectively applied across administrative boundaries.

### Regional interagency collaboration

State agencies could consider expanding efforts for regional directors, or comparable executives of state agencies in various regions, to have regular and systematic exchanges of information about NBT plans, priorities, and programs. Such efforts would help clarify the respective contributions to NBT/ecosystem management activities of state agencies with varying missions.

### Management commitment

The General Assembly could consider encouraging managers of state agencies with NBT-related activities to continue implementing the NBT/ecosystem approach, at least on par with other approaches, and to establish personnel appraisal systems that reward NBT interagency cooperation.

## **Partnerships with Stakeholders**

An integrated NBT planning and development process requires active partnerships and collaboration among state, county and local governments, neighboring landowners, nongovernmental organizations, and universities. Although NBT partnerships between the state government and non-government entities are not uncommon in the commonwealth, state agencies should continue to strengthen their NBT outreach programs

and to enhance the ability of non-government entities to participate in and provide NBT opportunities.

## **Respondent Recommendations**

### Shared visions

NBT-related state agencies could continue their active assistance in developing an NBT vision while avoiding imposition of a solely “state” vision on local communities. While some cases may demand implementation of a top-down, state vision, these should be the exceptions.

### Technical assistance

The General Assembly could consider expanding and implementing policies to provide technical assistance to private landowners who allow their land to be used to meet increasing NBT demand.

### Financial compensation

The General Assembly could consider formulating a plan that compensates private landowners who allow public access to their land for NBT activities.

### Liability

The General Assembly could consider creating policies that reduce or eliminate liability for local government and non-profit organizations that allow public use of their land for NBT activities.

### Land use

The General Assembly could consider designing policies that fund and encourage the development of multi-municipal comprehensive land-use plans designed to prevent unplanned and unwise land use that endangers NBT environments.

## **Communications Between State Agencies and the Public**

Current outreach activities must be strengthened. In some situations, coordination with the public was perceived to be secondary to “normal” work of the agencies. Regional offices typically are understaffed to manage resources to meet the current demand for a wide range of NBT activities. Some state employees who should be interacting with the public are not trained in the skills needed for public participation

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aspects of an NBT/ecosystem approach, such as educating the public, motivating people to become involved, facilitating public discussions, building consensus, and resolving conflicts. A critical element of the NBT/ecosystem approach is community acceptance of the idea. Without community acceptance, knowledge, talent, and political support are highly unlikely.

### **Respondent Recommendations**

#### Public awareness programs

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NBT-related state agencies could consider creating and enhancing public awareness, understanding, and appreciation for the commonwealth's NBT resources and their management.

#### Public access to information

NBT-related state agencies could systematically increase public access to biological, social, and economic information associated with the relationship between sustainable NBT and ecosystem management.

#### Marketing

NBT-related state agencies could consider increasing interagency efforts to target and market NBT activities.

### **Knowledge Base and the Role of Science**

The linkages between scientists and managers and between natural resource agencies and other agencies and entities are essential to establish a shared vision of desired NBT/ecosystem conditions, to specify how the vision can be achieved, and to monitor and measure progress toward NBT goals.

### **Respondent Recommendations**

#### Multidisciplinary approach

In regard to science planning, NBT-related state agencies could incorporate a wide range of natural scientists and social scientists, address both ecological and social science issues and incorporate an explicit NBT policy of fostering integration among disciplines.

#### Translate science into everyday language

NBT-related state agencies could encourage and support research efforts to produce results that can be readily understood and used by NBT managers and the public.

#### Research Budgets

NBT-related state agencies could design their research budgets to deal with changing NBT/ecosystem approach circumstances. The budgets should focus on broad-based issues rather than specific projects at specific research centers.

### **Information and Data Management**

Together with the General Assembly, state agencies should explore ways to increase the amount of and flexibility in NBT information and data management budgets. No single agency has the resources or the mandate to develop all relevant information on any NBT program or even the capability for locating and accessing information that is timely and relevant.

### **Respondent Recommendations**

#### Data ownership

NBT-related state agencies could consider providing training to agency employees regarding communication and information sharing. Increased data sharing means that agency personnel will be handling data they did not generate, so they need to recognize the limitations as well as the benefits of such data.

#### Long-term monitoring of information

As part of an NBT/ecosystem approach, the General Assembly could consider committing adequate resources to conduct the necessary long-term monitoring of data needed for adaptive NBT/ecosystem management. Data monitoring may be used to determine whether management actions have placed an NBT/ecosystem effort on the proper trajectory towards desired future conditions. Monitoring can also provide regular feedback on changing information (and research) needs to support the NBT/ecosystem efforts.

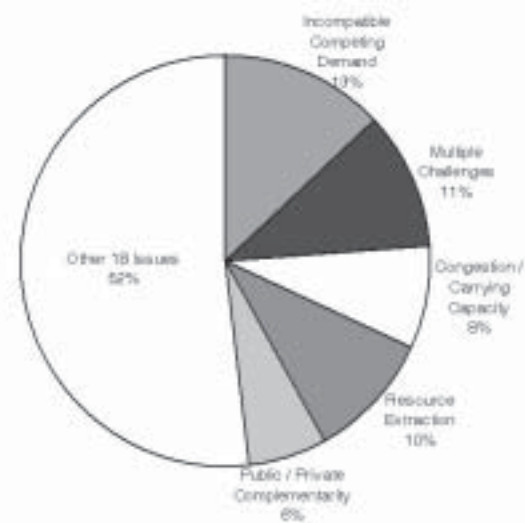
## QUESTION 2 – PRIORITIES FOR FUTURE LONG- AND SHORT-TERM NBT ISSUES

Survey respondents ranked their perceptions of the five most important issues out of all 23 long- and short-term issues that were compiled from the literature review. The rank score of each issue was:

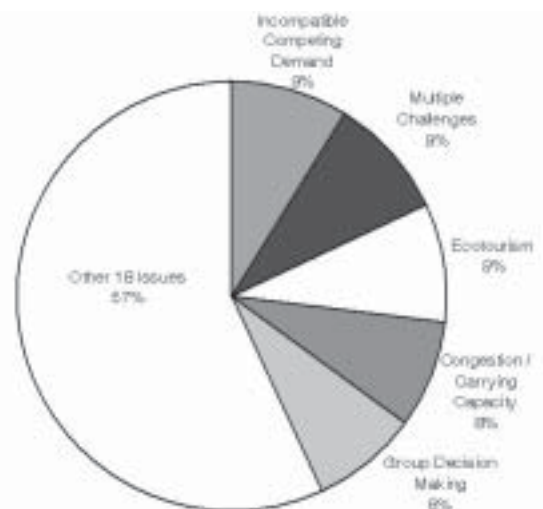
1. Incompatible Competing Demand
2. Multiple Challenges
3. Congestion/Carrying Capacity
4. Resource Extraction
5. Ecotourism
6. Economic Growth
7. Public/Private Complementarity
8. Public/Private Co-management Opportunities
9. Developed/Dispersed NBT Use
10. Scenic Quality
11. Group Decision Making
12. Wild land/Urban Interface
13. Accessibility
14. Limited Supply
15. Water Sites
16. New Technologies
17. Data Management
18. Population Diversity
19. Private Enterprise Opportunities
20. Inner-city Needs
21. Price Increases
22. Research
23. Reservation Systems

Many of these issues are not mutually exclusive. For example, demand is the fundamental measure of any area's success in attracting NBT visitors. All planning activities are ultimately intended to increase or control demand. Public/private co-management opportunities (and their related marketing programs) are aimed at increasing demand. Scenic quality is a prime consideration in resource extraction activities and congestion/carrying capacity considerations. Water site issues and limited supply issues are integral parts of many other issues. Issues on population, wild land/urban interface, population diversity, and inner-city needs overlap in their scope and complexity. New *Nature-Based Tourism Policy*

**FIGURE 1. PRIORITY ISSUES  
NBT-RELATED STATE AGENCY STAFF**



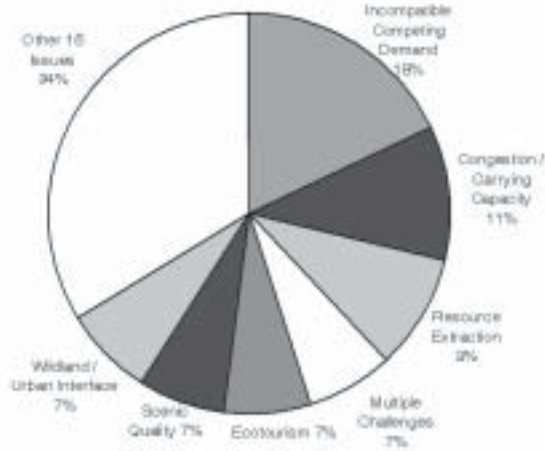
**FIGURE 2. PRIORITY ISSUES  
MEMBERS OF THE COUNTY COMMISSIONERS  
ASSOCIATION OF PENNSYLVANIA**



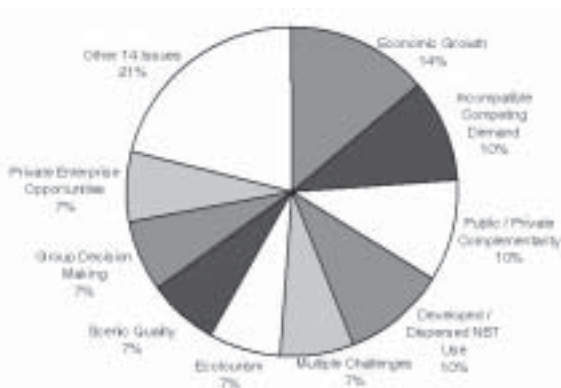
technologies, data management, and research issues are critical issues that need to be addressed within the context of many, if not all, of the other issues.

Results of survey Question 2 helped to uncover the variability that exists among members and staff of the NBT-related organizations surveyed in terms of what issues the respondents perceived to be important for developing sustainable NBT policy initiatives. Each of the groups surveyed had somewhat different priority patterns, and in some cases there were more than five issues because of ties in percentages. Priorities for those surveyed from the state agencies (Figure 1) were similar (three times out of five) to those surveyed from the membership of the County Commissioners Association (Figure 2). Members

**FIGURE 3. PRIORITY ISSUES  
MEMBERS OF THE PENNSYLVANIA LAND TRUST  
ASSOCIATION**



**FIGURE 4. PRIORITY ISSUES  
MEMBERS OF THE PA ASSOCIATION OF  
CONVENTION AND VISITORS BUREAUS**



surveyed from the Pennsylvania Land Trust Association had seven high-priority issues (Figure 3) and members surveyed from the Pennsylvania Association of Convention and Visitors Bureau had nine (Figure 4).

### QUESTION 3 – RESPONDENT RECOMMENDATIONS FOR 14 SPECIFIC NBT ACTIVITIES

An analysis of answers to survey Question 3 uncovered more than 60 recommendations that address some of the NBT activities provided in the question. Many of these recommendations provided by the survey participants are contingent upon the

successful implementation of the respondent recommendations resulting from answers to the first two survey questions.

#### **Biking**

- Prohibit bike contests/events that have negative environmental impacts on public lands.
- Prohibit development of unauthorized trails on public lands.
- Conduct international marketing of biking opportunities.
- Connect and extend existing paved bike and recreational trails.
- Improve signage to trailheads and disseminate more information about such trail systems.
- Identify and market cycling routes throughout the state.
- Provide wider shoulders for bike paths along roads.

#### **Boating, Canoeing, Kayaking**

- Develop and promote the use of canoeing and kayaking water-trails on the hundreds of miles of navigable streams and rivers within the state.
- Exempt non-motorized watercraft from registration currently required for use on state parks and Fish and Boat Commission waters. Most states do not require this.
- Eliminate Jet skis from any public waters.
- Ensure adequate funding for the infrastructure to meet the demand for fishing and boating opportunities.

#### **Camping (Developed)**

- Invest in new four-season cabins in state parks, including family lodges and smaller camping cottages.
- Provide more state park camping areas for people with pets.
- Increase funding for the creation of developed camping areas in county park systems.
- Market state camping areas that are close to metropolitan areas.

### **Camping (Primitive)**

- Provide and control use of “primitive” camping in secluded areas, especially near water bodies.
- Permit primitive camping on state game lands.
- Create a user fee for primitive camping on all state lands.
- Explore how primitive area camping has been successfully promoted in Canada and the Rocky Mountains.

### **Fishing**

- Restore “fly-fishing only” designations on selected historic waters. Market these assets in national magazines, with the logic that out-of-state licenses generate more revenue for conservation.
- Open drinking water/water-supply reservoirs to non-motorized boating, fishing, and ice-fishing.
- Produce legislation to improve environmental cleanup. Poor stream quality has affected the quality of fishing in the state and hindered tourism.
- Ensure adequate funding for fishing infrastructure that creates fishing opportunities (hatcheries, access areas, etc.)

### **Hiking**

- Explore funding mechanisms that will assist local groups to rapidly increase the development of rails-to-trails and similar non-motorized trails.
- Promote the network of the many state forest and national hiking trails throughout the commonwealth.
- Promote hiking and emphasize the values of this form of recreation to make Pennsylvania a world-renowned hiking destination.
- Support the development and the updating of regionalized hiking and other recreational maps.
- Promote and financially support activities of volunteer trail-maintenance organizations.

### **Historic Site Visits**

- Provide adequate facilities – restrooms, picnic tables, etc.
- Improve maintenance, protection, and marketing of prehistoric and historic sites.

### **Horseback Riding**

- Provide only on designated trails where improvements are made to maintain a sustainable ecosystem.
- Promote uniform guidelines for equestrians and equestrian camping that will promote good trail etiquette and environmental protection.
- Standardize a policy for this activity on all public lands and promote for private land use as well.
- Set standards for outfitter trail maintenance and camp cleanup.
- Establish outfitter rights and fees to allow these organizations to increase commerce and service while being accountable for negative environmental impacts and related problems.

### **Hunting**

- Increase public workshops and instructional classes for these activities and use naturalists, conservation officers, and foresters as instructors.
- Foster greater agency cooperation between the Game Commission, Fish and Boat Commission, DEP, and DCNR.
- Ensure that dedicated funding exists to remedy environmental hazards that hunters may encounter.
- Give high priority to bringing the white-tailed deer population down to a level that is in balance with the biological carrying capacity of the state’s ecosystems.

### **Mountain Biking**

- Curtail this activity until new facilities can be created in special parks, similar to ATV parks.
- Permit mountain biking only in designated areas where resources will not be damaged and users must stay on or in designated areas.
- More attention must be given to the development of low-impact mountain biking.

### **Off Road Vehicles, All Terrain Vehicles, 4x4 Trucks**

- Provide programs and brochures on trail etiquette. Improve enforcement of regulations regarding these activities.
- Permit activities only at private ATV parks. These

vehicles have the potential for far greater resource damage than any other recreational activities. The damage to water and soil erosion is very severe.

- Provide license and registration fee funds to private enterprise to create recreational opportunities for ATVs. Keep them out of state forests, game lands, and parks.
- Develop a conservation ethic that discourages off road driving.
- Public land managers need to develop additional areas for four-wheel, off-road activities.
- Determine acceptable locations for ATV operation.

### **Sightseeing Auto Tours**

- Forest districts should develop auto tours in conjunction with the parks located within the district to inform the public about sound forest management practices.
- Establish a series of public parking lots at scenic overlooks to give sightseers safe options for examining and photographing the landscape.
- Develop public-private partnerships to provide modern lodging facilities based on strict environmentally correct guidelines.
- Determine how “auto tour routes” could connect lumber heritage related sites.

### **Snowmobiling**

- Major issues for this activity are speeding and driving under the influence. Provide information and education programs and improved postings of routes for better safety.
- Open existing roads on state and federal lands to motorized recreational use. Work with trail

groups to connect roads with trails to develop an integrated system.

- Prohibit this activity in fragile ecosystems. Allow the activity only on trails that are properly designed and maintained to avoid environmental damage.

### **Wildlife/Bird Watching**

- Wildlife watching is under-valued by the tourism industry. Enhance the development of and marketing for these activities.
- Partner with National and State Audubon Societies to meet demand for this activity.
- Develop more brochures, audiotapes, and wayside exhibits on wildlife watching.
- Develop gift shops at regionally renowned sites for the sale of nature-oriented items.
- Identify existing viewing sites and assess potential impact.
- Improve cooperation among land management agencies on wildlife watching.
- Create an integrated wildlife watching program among NBT-related tourism agencies in the commonwealth.
- Maintain and promote large intact forest systems for bird watching and promote neo-tropical migrant birds, which bring tourists’ money to Pennsylvania.

While the information offered in this report provides a wide range of recommendations that vary in their applicability to public and nonprofit NBT sectors, it is offered in the hope that it will help the General Assembly, and public and nonprofit NBT-related organizations fulfill their missions and serve NBT stakeholders effectively, efficiently, and responsibly.

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## Appendix 1

### National trends in NBT activities: millions of participants, age 16 and older

Activity	Number in 1982-83	Number in 1994-95	Percent Change
Bird Watching	21.2	54.1	+155.2
Hiking	24.7	47.8	+93.5
Backpacking	8.8	15.2	+72.7
Downhill Skiing	10.6	16.8	+58.5
Camping-Primitive Area	17.7	28.0	+58.2
Off-Road Driving	19.4	27.9	+43.8
Walking	93.6	133.7	+42.8
Snowmobiling	5.3	7.1	+34.0
Motorboating	33.6	47.0	+39.9
Sightseeing	81.3	113.4	+39.5
Camping-Developed Area	30.0	41.5	+38.3
Swimming/river, lake, or ocean	56.5	78.1	+38.2
Cross-country Skiing	5.3	6.5	+22.6
Boating (overall)	49.5	58.1	+17.4
Swimming/Pool	76.0	88.5	+16.4
Picnicking	84.8	98.3	+15.9
Sledding	17.7	20.5	+15.8
Running/Jogging	45.9	52.5	+14.4
Water Skiing	15.9	17.9	+12.6
Bicycling	56.5	57.4	+1.6
Ice Skating	10.6	10.5	- 0.9
Fishing	60.1	57.8	- 3.8
Sailing	10.6	9.6	- 9.4
Horseback Riding	15.9	14.3	- 10.1
Hunting	21.2	18.6	- 12.3

*Source:* Cordell, H.K. "Outdoor Recreation in American Life: A National Assessment of Demand and Supply Trend." Presented at the National Leadership Conference in Phoenix, Arizona, 1998.

## Appendix 2

### *Descriptions of 23 long-and short-term NBT issues compiled from a literature review of the 17 states' NBT-related planning documents (ranked in order of priority)*

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#### **1. Incompatible Competing Demand**

There will likely be more conflicts among tourists who will be competing at the same times for use of some of the same areas and sites for different forms of NBT. Some of these activities are not incompatible with one another, but others are.

#### **2. Multiple Challenges**

Because of the persisting rise in the popularity of NBT, policies and management practices, including those on public land such as timber and water management that are not directly aimed at NBT opportunities, will increasingly affect larger numbers of people with increasingly diverse interests and social and economic characteristics. These trends will make policy formation and resource management more challenging and call for increasingly innovative, collaborative approaches.

#### **3. Congestion/Carrying Capacity**

The popular beaches, forest sites, parks, and special NBT attractions will experience greater congestion at peak times in the year, and these congestion levels and the situations resulting from them will challenge the experience of most NBT resource managers.

#### **4. Resource Extraction**

Development and resource extraction activities may increasingly be viewed as conflicting with NBT and nature conservation interests.

#### **5. Ecotourism**

As the interest in defining and managing for sustainability in communities and in natural systems grows, ecotourism is likely to become a popular and viable approach for achieving both. Ecotourism is generally defined as travel and recreation that contributes substantially to a natural area's conservation and protection through education and the dedication of tourism dollars.

#### **6. Economic Growth**

NBT contributes substantially to the economies of rural communities, and this contribution is likely to grow not only in terms of countywide income and jobs, but also in terms of share of income and jobs among economic sectors.

#### **7. Public/Private Complementarity**

Markets for outdoor activities are changing as new forms of participation are discovered; as the

backgrounds, perspectives, and tastes of NBT participants change; and as constraints and opportunities shift. In that these changes are in part determined by the opportunities that are available, public land management policies will be under increased scrutiny to determine how well they meet the needs of Pennsylvanians across all social strata, while at the same time providing private sector business opportunities.

#### **8. Public/Private Co-management Opportunities**

At times, the benefits from tourism may be substantial enough for local communities, conservation groups, and public or private interests to willingly co-manage the ecosystem to maintain and perhaps improve its integrity as a natural system and its attraction as a tourist resource.

#### **9. Developed/Dispersed NBT Use**

Access to developed NBT environments such as campgrounds and beaches and dispersed NBT environments for hiking or fishing will almost certainly be an increasingly important and difficult issue to resolve, especially when different types of activities conflict and where universal accessibility must be a significant concern.

#### **10. Scenic Quality**

Scenic quality will increasingly be an issue that managers of NBT areas, and of natural lands in general, must address as growth and interest in sightseeing, viewing and learning activities, and other activities drive the demand for aesthetically pleasing settings.

#### **11. Group Decision Making**

Organized groups representing specific NBT interests will grow in number and constituencies represented. As public agencies continue to open up the planning and decision processes to public involvement, these organized groups will have an increasing voice in public land management, and the NBT interests they represent are likely to grow in numbers. Increasingly, organized groups will be integrated as partners in helping manage and protect public lands, access rights, and unique resources.

#### **12. Wild land/Urban Interface**

Public- and private-sector providers will need to continue to provide viewing, learning, and social

gathering opportunities to meet the rising demand by the majority of the public. Many of these types of NBT opportunities can be provided near the urban places where many of those seeking such opportunities live.

### **13. Accessibility**

Because most forms of NBT participation depend so heavily on natural settings, which differ among regions of the state, and because most of these forms continue to grow in popularity, tourism and associated NBT travel can be expected to continue growing as long as transportation remains as affordable and as convenient as it is today and access to land and water areas is available.

### **14. Limited Supply**

Increasingly, travel to Pennsylvania for NBT will add to pressures on the state supply of NBT opportunities, particularly at the most popular parks, forests, and other NBT destinations.

### **15. Water Sites**

Especially heavy pressures are likely to occur at water sites that have always been a major attraction for many types of NBT activities. These pressures will take on added significance with advances of technology making them accessible to jet-propelled watercraft.

### **16. New Technologies**

New technologies and better modes of accessing NBT resources will continue to shift the nature of the demand for NBT. Most impacted by these shifts will be the traditional passive forms of NBT where quiet, natural settings for learning, reflection, and nature appreciation are sought. Also impacted will be traditional forms of active participation where new technology enables more and different users access to the resource: for example, canoeists' experiences impacted by jet ski use, or vice versa.

### **17. Data Management**

Improved data, monitoring systems, and well understood management objectives that are in touch with the NBT demand shifts occurring in Pennsylvania will be necessary to manage NBT successfully in the future. The unavailability of data and information on NBT visitation, customer satisfaction, and economic impact has proven to be a detriment to effective, timely management, and policy specification. Greater attention will be required for reliable information on trends, emerging issues, and effectiveness in delivering NBT services and opportunities.

### **18. Population Diversity**

Rapid increases in the diversity of the population in race, culture, age, income, and other factors will change the demand for NBT, but not diminish the size of the overall market. Increasing population diversity will result in different preferences, expectations, and ways of seeking and participating in NBT. Management policies and solutions of the past will only partially fit the emerging shifts in demand and new forms of NBT people will pursue.

### **19. Private Enterprise Opportunities**

Increasing NBT in Pennsylvania will create opportunities for large-scale private businesses to provide services, accommodations, and information.

### **20. Inner-city Needs**

Concerns about availability of NBT to disadvantaged, inner-city groups will grow with the realization that these groups participate substantially less in all forms of NBT because of affordability and proximity issues.

### **21. Price Increases**

As management tools, such as charging fees, continue to evolve, the implications of such tools will increasingly be viewed differently by different social groups and by different types of NBT participants.

### **22. Research**

Research will become increasingly important in helping to understand changes that will occur across many different fronts. Ongoing NBT participation surveys, on-site studies of various user groups and interests, the linking of NBT behavior and preferences with social changes, the enabling of NBT providers to understand market shifts as or before they happen, and the monitoring of access equity are among the vital research roles that will be needed.

### **23. Reservation Systems**

Continued increases in visits to most federal and state forests in Pennsylvania will put added pressures on public managers to adopt new management policies and practices, such as fees and reservation systems. Greater attention will be paid to the unequal effects of these policies on lower income, less well educated, and place-confined segments of the population.

## **Appendix 3**

### **41 NBT activities used in survey Question 3**

**Fitness Activities** – Biking; Walking

**Viewing Activities** – Visiting a prehistoric site; Visiting an historic site; Bird-watching; Wildlife viewing; Fish viewing; Sightseeing; Visiting a beach or waterside; Studying nature near water

**Snow and Ice Activities** – Downhill skiing; Cross-country skiing; Snowmobiling

**Camping (overall)** – Developed area; Primitive area

**Fishing** – Freshwater; Saltwater; Warmwater; Coldwater; Anadromous; Catch and release

**Hunting** – Big game; Small game; Migratory birds

**Boating** – Sailing; Canoeing; Kayaking; Rowing; Floating/rafting; Sailboard/windsurfing

**Swimming Activities** – Swimming-nonpool; Snorkeling/scuba

**Outdoor Adventure Activities** – Hiking; Orienteering; Backpacking; Mountain climbing; Rock climbing; Caving; Off-road driving; Horseback riding

**Social Activities** – Picnicking





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