



# Outdoor Recreation in the 21<sup>st</sup> Century: The Pennsylvania Wilds



Prepared for the Pennsylvania  
Department of Conservation  
and Natural Resources

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**FERMATA**  
Prepared by Fermata, Inc.  
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Cook Forest State Park, Ted Lee Eubanks/FERMATA, Inc.  
Front cover photo: Cook State Forest, Ted Lee Eubanks/FERMATA, Inc.  
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# Purpose

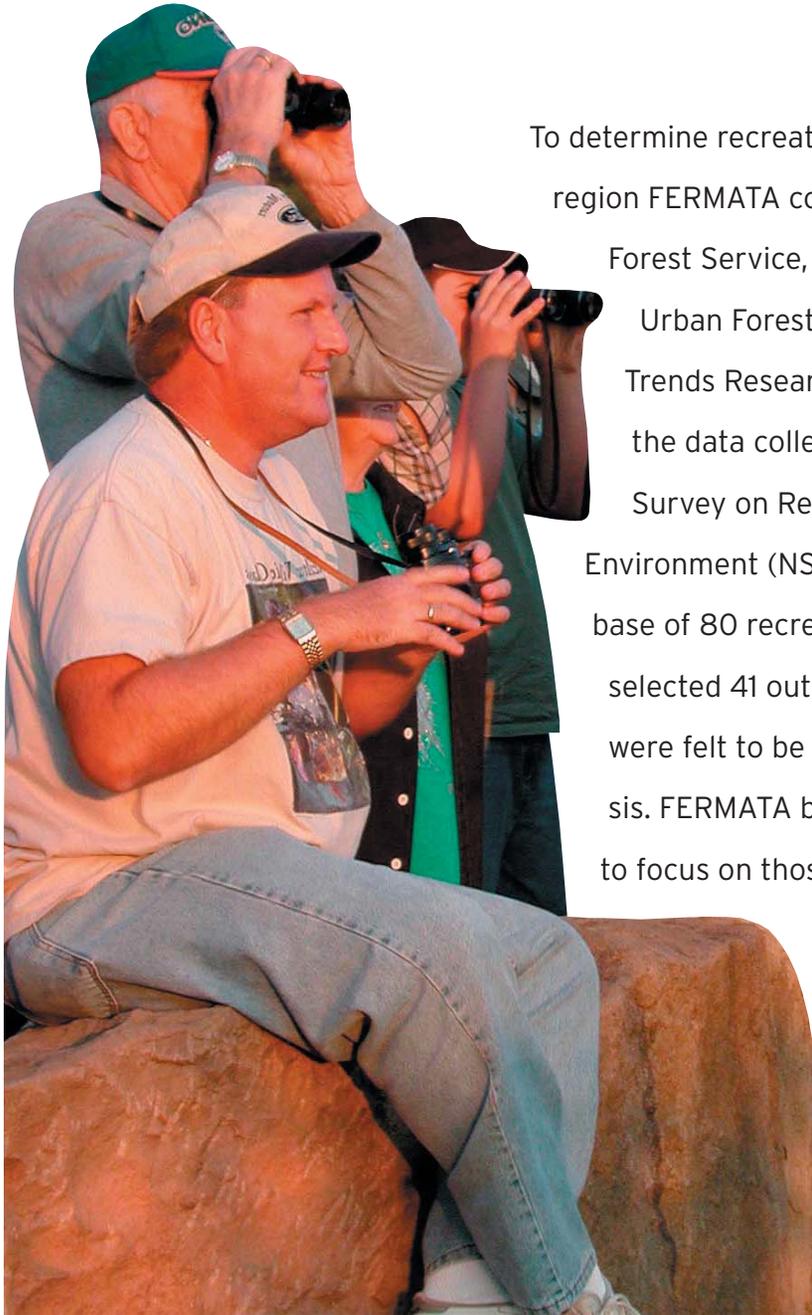
## AND SUMMARY OF FINDINGS

*“So get out there and hunt and fish and mess around with your friends, ramble out yonder and explore the forests, encounter the grizz, climb the mountains, bag the peaks, run the rivers, breathe deep of that yet sweet and lucid air, sit quietly and contemplate the precious stillness, that lovely, mysterious and awesome space.” --Edward Abbey*

**T**he Pennsylvania Department of Conservation and Natural Resources (DCNR) contracted with FERMATA in 2005 to develop a strategic recreation plan for DCNR lands within the Pennsylvania Wilds (PA Wilds). The PA Wilds encompasses over two million acres of public lands, managed by resource agencies such as DCNR, the U.S. Forest Service, and the Pennsylvania Game Commission. DCNR alone manages 27 state parks and 8 state forests within the PA Wilds. A critical component of the DCNR strategic recreation plan is to assess recreational trends in Pennsylvania and the larger market region (Pennsylvania and the adjacent five states), and to identify those recreations where DCNR has significant opportunities to connect to a broad constituency of recreational interests.

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To determine recreational trends within the region FERMATA contracted with the USDA Forest Service, Recreation, Wilderness, Urban Forest, and Demographic Trends Research Group for access to the data collected for the National Survey on Recreation and the Environment (NSRE). From an initial base of 80 recreations, FERMATA selected 41 outdoor recreations that were felt to be appropriate for analysis. FERMATA believed it important to focus on those recreations that were clearly dependent on

the natural resources contained within DCNR lands. Using trend data FERMATA projected the respective recreational populations within Pennsylvania and the adjacent five states in 2015, highlighting those recreations with significant positive growth rates and sizable projected populations. This ranking is displayed in the following table. The trend reflects growth in the past ten years, and the 2015 projection assumes continued growth at the same rate. Star gazing and hang gliding are not listed below since trend and population data for these recreations are lacking.

Ted Lee Eubanks/FERMATA, Inc.



Clarion National Wild & Scenic River, Ted Lee Eubanks/FERMATA, Inc.

## Key Outdoor Recreation Activities, Pennsylvania and Surrounding States

Activity	Trend (1995-2005)	2015 (millions)
View/Photograph other wildlife	46.50%	29.48
Picnicking	13.70%	29.04
View/Photograph natural scenery	3.90%	27.03
Visit nature centers	8.30%	26.62
Driving for pleasure (scenic driving)	3.90%	24.52
Bicycling (road)	36.90%	23.05
Visit historic sites	8.40%	22.84
Sightseeing	-5.40%	21.88
View/Photograph wildflowers, trees	3.90%	20.68
Swimming in natural waters	4.00%	19.05
View/Photograph birds	27.20%	18.91
View/Photograph fish	85.60%	18.88
Day hiking	36.80%	18.22
Gather mushrooms, berries	3.90%	12.99
Developed camping	32.60%	12.96
Visit a wilderness or primitive area	3.90%	12.47
Visit other waterside (besides beach)	3.90%	10.81
Sledding	26.10%	10.35
Visit prehistoric/archeological sites	17.90%	9.71

Mountain biking	3.90%	9.46
Warmwater fishing	10.50%	9.09
Drive off-road	24.10%	8.58
Coldwater fishing	24.40%	6.61
Primitive camping	17.50%	6.15
Canoeing	23.90%	5.01
Backpacking	23.20%	4.52
Big game hunting	17.20%	4
Horseback riding	17.10%	3.77
Kayaking	169.20%	3.77
Rafting	7.30%	3.63
Small game hunting	8.20%	2.86
Snowmobiling	21.30%	2.69
Rock/Ice climbing	17.60%	1.96
Rowing	-17.40%	1.64
Cross-country skiing	-0.70%	1.44
Ice fishing	23.50%	0.78
Migratory bird hunting	-8.50%	0.49
Snowshoeing	3.90%	0.43
Orienteering/Geocaching	-49.60%	0.31

Note: Data not available for stargazing and hang gliding.



Parker Dam State Park, Brenda Adams-Weyant/FERMATA, Inc.

However, these 41 recreations can be better analyzed when grouped according to the natural resource on which they depend. For example, swimming is dependent on clean and accessible water, and hunting is possible only with adequate wildlife populations. Therefore we next organized these 41 recreations in five resource-derived genres or brands. Each of the recreations within a specific “brand”

is related by dependence on a single natural resource - sky, water, wildlife, woods, and ways (byways or ways of life). Within each discrete brand FERMATA then ranked the recreations by the growth rate and the recreational population (market) projected by 2015.

The creation of these five resource brands, as well as the ranking of recreations within each brand according to its growth rate and projected 2015 population, is a critical step forward in developing a strategic recreational plan for the PA Wilds. First, DCNR is limited in resources available to implement such a plan. This structure allows DCNR to prioritize its expenditures over time, and to invest only in those recreations and resources where there is reasonable (and demonstrated) opportunity for success. Second, these 41 outdoor recre-

ations involve diverse populations and constituencies. For DCNR to develop a broader base of social and political support, key recreations may be identified for higher priority investment. Third, certain recreations are well represented in the PA Wilds, while others are only minimally present. By identifying the opportunities within each recreation, the Commonwealth may be able to broaden its appeal to a broad diversity of recreationists and take advantage of recreations that to date have been only peripherally available. Finally, outdoor recreations based on natural resources depend on the continued conservation of those resources for their viability over time. The DCNR conservation ethic, therefore, is reinforced by focusing only on those recreations dependent on those conserved natural resources of the PA Wilds.

## Findings

1. Outdoor recreation, rather than a special or niche interest, is a passion shared by most Americans. According to the Outdoor Industry Association (OIA), 71.6% of Americans age 16 and older participated in outdoor recreation in 2004.
2. Outdoor recreations and their participants, however, are not equally distributed across the landscape. There are distinct and measurable differences between male and female, old and young, white and minority, rural and urban.
3. The PA Wilds, for example, is generally situated in one of the most rural areas of Pennsylvania (of the eastern U.S., for that matter). Traditional recreational activities in the PA

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Tioga Welcome Center, Brenda Adams-Weyant/FERMATA, Inc.

Wilds have been similar to those seen in rural populations in the Commonwealth as a whole (small game hunting, big game hunting, snowmobiling, driving off-road, coldwater fishing, primitive camping, gathering mushrooms and berries). However, as the market region for the PA Wilds expands beyond this traditional base more urban recreationists will be introduced to the region. Therefore the recreations preferred by urbanites will present significant opportunities to DCNR for enhancement and development. These include the following selected recreations, with % of total recreational population that is urban:

- a. Horseback riding (86.7%)
  - b. Visit waterside other than beach (86.7%)
  - c. Visit historic sites (86.3%)
  - d. Bicycling (85.7%)
  - e. Kayaking (85.7%)
  - f. Swimming outdoors (84.6%)
  - g. Visit nature centers (84.2%)
  - h. Sightsee (84%)
  - i. Mountain biking (83.6%)
  - j. Cross-country skiing (83.4%)
  - k. Scenic driving (83%)
  - l. Developed camping (82.9%)
  - m. Canoeing (82.1%)
  - n. View/photograph birds (82%)
4. The outdoor activities with the largest populations are those look-and-learn activities that require limited physical exertion (view/photograph wildlife, picnicking, view/

photograph natural scenery, visit nature centers, scenic driving, visit historic sites, sight-seeing, view/photograph wildflower, trees).

5. Legacy activities (those outdoor recreations that are traditional in the U.S.) such as hunting, fishing, hiking, and camping remain strong interests within Pennsylvania and the adjacent five states. Growth rates in many legacy activities, however, are sluggish.

6. Relatively new recreations such as driving off-road, snowmobiling, hang-gliding, geocaching, kayaking, and trail running (a refashioned legacy activity) enjoy small populations but robust growth.

7. Approximately 50% of American outdoor recreationists are only passively involved in

outdoor recreation (Passives, Inactives, Nonconsumptive Moderates). Minorities, women, and the elderly are disproportionately represented in these passively involved segments of the outdoor recreation market. In order for DCNR to reach out to these underserved popula-

tions new programs and products, particularly in urban parks, will need to be developed and implemented.

8. In most outdoor recreation categories, enthusiasts consume the vast majority of recreation days, and therefore have a higher per capita economic impacts in areas where they recreate. Enthusiasts also tend to be opinion setters, and are therefore dispropor-



Common Yellowthroat, Ted Lee Eubanks/FERMATA, Inc.



Sayer's Lake, Bald Eagle State Park, Brenda Adams-Weyant/FERMATA, Inc.

tionately influential in their respective recreations. Focused marketing strategies will be required to connect with these segments of the recreational market.

9. The active half of the recreational market is engaged in an impressively diverse collection of recreations. Many of these recreations are appropriate for the PA Wilds. Marketing to these recreationists will be best approached in a targeted, strategically focused fashion that relies on a variety of marketing tools in addition to general advertising.

10. This diversity of recreational activities will demand that DCNR staff be better educated and trained in providing recreational opportunities at the park and forest level. To expand DCNR offering beyond the traditional legacy recreations will demand the active participation of a broad spectrum of DCNR personnel.

# Introduction

**A**ldo Leopold, in *Sand County Almanac*, remarked that “recreation is valuable in proportion to the intensity of the experiences, and to the degree to which it differs from and contrasts with workaday life.” Yet as the U.S. population has continued to expand and urbanize, particularly in the metropolitan east, the opportunities for such contrastive experiences have diminished. The PA Wilds, two million acres of public parks, forests, and game lands in north central Pennsylvania, still presents recreationists with a vivid shift in sceneries and recreational opportunities from those available in the denatured population centers of the eastern U.S. By doing so the Common-

wealth is offered the opportunity to develop a vibrant recreational travel and tourism industry in this region

Yet for the resource agencies that are charged with sustaining these wild lands for the enjoyment and profit of future generations, significant questions must be answered before inviting the masses. Which recreations are most appropriate for these lands? Which recreations are expanding in Pennsylvania and adjacent states, and which are declining? Which recreations are compatible with each other, and which tend to displace other uses? What must the resource agencies do (and how should they invest) in order to provide

Aldo Leopold, in *Sand County Almanac*, remarked that **“recreation is valuable in proportion to the intensity of the experiences, and to the degree to which it differs from and contrasts with workaday life.”** Yet as the U.S. population has continued to expand and urbanize, particularly in the metropolitan east, the opportunities for such contrastive experiences have diminished.



American Beech, Cook Forest State Park  
Ted Lee Eubanks/FERMATA, Inc.

high-quality recreational experiences? How should the agencies manage this increased flow of travel to the benefit, rather than detriment, of local communities and the very resources that the recreations depend on?

To answer these questions (and more) the Pennsylvania Department of Conservation and Natural Resources (DCNR) contracted with FERMATA, Inc. to develop an outdoor recreation strategy for the PA Wilds. This strategy involves a number of components, including an inventory of the recreational resources of the public lands in the region, an assessment of outdoor recreation trends in Pennsylvania and surrounding states, and the creation of specific strategies for enhancing outdoor recreation on DCNR lands in the region. This report on outdoor recreational trends and activity profiles is one in a

series of reports that combined will provide DCNR with a comprehensive recreational strategy for the PA Wilds.

The conclusions reached in this initial assessment of outdoor recreation in Pennsylvania and adjacent states will be elucidated in the following report, as follows:

- *Recreation is the pathway of choice for Americans who find their way to nature and to the agency.*
- *The world of recreation is complex, diverse, and intricate.*
- *The traditional DCNR recreationist reflects only a small segment of the overall population.*
- *To reach a more representative population, DCNR must align its recreational opportunities, facilities, and messages with a broader market.*

## Overview

For many years, few people residing outside the PA Wilds knew about its 2.1 million acres of public lands sandwiched between I-80 and Route 6. It was primarily hunters, anglers, hikers, and ATV-snowmobile enthusiasts who recreated there. But times (and recreational populations) have changed. The forests, once logged over, are growing back under DCNR stewardship into one of the world's most valuable hardwood forests. The recreation market too has grown beyond hunting, fishing, and motorized play. Outdoor recreationists have become more diverse, wealthier, urban, and older. To capture the potential benefits that those recreationists could bring to the PA Wilds and the Commonwealth, DCNR has to manage more than a changing forest landscape; it must broaden its concept of the market and diversify its portfolio of ac-



Colton Point State Park, Brenda Adams-Weyant/FERMATA, Inc.

activities for the changing 21<sup>st</sup> Century recreational landscape. Potential benefits include turning state recreation trade deficits into surpluses; generating revenue to maintain natural areas; bolstering economic development for the PA Wilds' rural economy; helping Pennsylvanians enjoy a higher quality of life; motivating more Americans to find nature and conserve dwindling natural resources.

To gain these benefits requires a deeper understanding of the recreational market.

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Thistle, Joel Flewelling/FERMATA, Inc.

Traditional land managers are accustomed to seeing the market as one undifferentiated mass of recreationists. For them, hiking and ATV trails, orientation signs, and campsites have always been adequate. But modern recreation planners parse that amorphous market into segments. With knowledge of specific kinds of visitors, planners can precisely target them with the activities for which they search.

...every chosen activity can be paired with specific segments using the PA Wilds resource brands: **WildsDarkSkies, WildsWaters, WildsLife, WildsWays, and WildsWoods.**

Fortunately, tools exist to understand these market nuances. For example, the **National Survey on Recreation and the Environment (NSRE)**, the principal source for information about who hikes, boats, skis, and hunts in the United States, provides information on recreationists and over eighty specific outdoor activities. Ken Cordell and colleagues have analyzed the data and described eight dif-

ferent kinds of visitor segments or clusters. Each segment behaves like a human personality, exhibiting preferences, tendencies, and even quirks. FERMATA has adapted this market segmentation scheme for use in understanding outdoor recreation in the PA Wilds.

In addition to understanding the diverse array of recreational activities, as well as recognizing the distinctions between segments of recreation enthusiasts, DCNR recreation planners must also choose the activities that can reasonably be developed and promoted with the PA Wilds region. For example, the PA Wilds is predominantly an undeveloped natural landscape. There is little advantage in promoting outdoor activities that have little to do with nature; i.e., that can be developed anywhere interested folks may be, such as

a tennis court or soccer field. Since the PA Wilds' competitive advantage is in its rivers and forests (its nature), DCNR should choose outdoor activities that attract the public to these natural resources. DCNR also cannot select activities like caving or surfing for, although nature based, the PA Wilds does not possess the necessary natural resources to offer a quality recreational experience.

A focus on nature also allows DCNR to classify each recreational activity according to one of five PA Wilds resource brands. A brand, like that of Nike or the National Park Service, is a promise of an experience. People often purchase products simply because they trust that the branded product will deliver the experience they expect. The PA Wilds brand promises that recreationists will have a natural, authentic, rustic experience. Thus

every chosen activity can be paired with specific segments using the PA Wilds resource brands: *WildsDarkSkies*, *WildsWaters*, *WildsLife*, *WildsWays*, and *WildsWoods*.

FERMATA, Inc. is developing this strategy for a DCNR **PA Wilds Recreation Plan**, which should be completed by the end of 2005. The current report focuses on only one aspect of that strategic plan -- trends in the outdoor recreational market. FERMATA's wish is to aid DCNR in broadening its concept of the recreation market, diversifying its offering of outdoor activities, and then assist the agency in linking market segments with branded activities to harvest benefits from the recreation market of the 21<sup>st</sup> Century.



Pennsylvania Wilds Directional Sign  
Ted Lee Eubanks/FERMATA, Inc.



Kettle Creek Reservoir, Ted Lee Eubanks/FERMATA, Inc.

# Populations

Since the founding of this nation, populations have gradually (and inexorably) migrated toward urban centers. No longer predominantly an agrarian economy, the United States population now aggregates in immense urban complexes. This socio-demographic shift accelerated after the end of World War II, and continues to the present. As people have moved from rural to urban settings, outdoor recreation preferences have shifted as well. An understanding of these patterns allows us to project where outdoor recreation markets may be in the foreseeable future.



## Pennsylvania Demographics

When it comes to Pennsylvania, population patterns have largely followed the national trends:

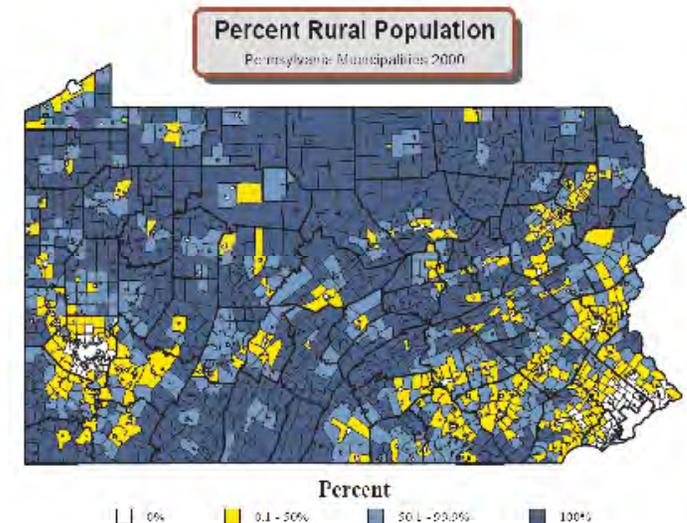
### Pennsylvania's Changing Demographics

% Urbanized Population <i>(in urbanized areas but outside central cities)</i>	60.7%
% Urban Population <i>(in central cities)</i>	8.3%
% Rural Population	31.1%
# Farms - 1969: 62,824	1997: 45,457
Total # of Acres in Farmland - 1969: 8,900,767	1997: 7,167,906

More specific to the PA Wilds, recreational preferences differ significantly between rural and urban populations. As seen in the map below, the counties within the PA Wilds are rural. Much of the recreational activity in the PA Wilds is generated by local residents and Pennsylvanians within driving distance. Rural recreations, such as hunting, are therefore

...the population of the PA Wilds market region is predominantly urban, and future growth in recreation in the PA Wilds will come from this population. Recreations favored by urbanites, such as wildlife viewing, hiking, and canoeing/kayaking, offer DCNR significant opportunities to reach a diverse and expanding population and to use existing DCNR resources as a means of connecting this population to nature.

well represented in the PA Wilds. However, the population of the PA Wilds market region is predominantly urban, and future growth in recreation in the PA Wilds will come from this population. Recreations favored by urbanites, such as wildlife viewing, hiking, and canoeing/kayaking, offer DCNR significant opportunities to reach a diverse and expanding population and to use existing DCNR resources as a means of connecting this population to nature.



## Outdoor Recreationists: An Expanding Market

Winds once swept great fires across a landscape stripped of its trees and topsoil. The mighty white pines and hemlocks fell, their snapped branches and splintered stumps littering a land that few valued. For example, locals at that time nicknamed the land that became the Allegheny National Forest the “Allegheny Briar Patch.” When the old lumber era came to a close 80 years ago, a few people did see value in this denuded landscape. People like Joseph Trimbel Rothrock (father of Pennsylvania Forestry) and Gifford Pinchot (America’s first trained forester, first to use the term “conservationist,” and Governor of Pennsylvania), saw great possibilities in the miles of brambles and cinders. They bought up acres on the dollar for the Commonwealth, knowing full well they

would never live to hike or fish their vision. Today the oaks, ashes, and black cherry have branched out into one of the most valuable hardwood forests in the world. The natural landscape, rough and full of life, has grown into the PA Wilds, heart of Pennsylvania’s outdoor recreation.

Now a new landscape is evolving. The recreationists who for many years enjoyed this unknown region – hunters, campers, ATV enthusiasts – will be joined by a whole new generation of recreationists, more diverse and desirous to experience nature. Changing national demographics fuel their emergence. The United States is becoming more ethnically diverse, urban, wealthier, and craving of the physical and spiritual advantages wild nature can provide.



West Branch Sojourn, Ted Lee Eubanks/FERMATA, Inc.



Hyner View State Park, Brenda Adams-Weyant/FERMATA, Inc.

The American population also grows older and more energetic. Pennsylvania is third in the Union for percentage of its population (15.3% or nearly 2 million people in 2004) in the 65 and older range. Baby Boomers alone will change forever the way traditional park managers look at recreation. As noted above, an understanding of these demographic changes allows us to project outdoor recreation trends as well as future demands on the resources of the agency.

The Outdoor Industry Association (OIA) sponsors an annual survey of human-powered outdoor recreations in the U.S. The most recent survey, reporting on outdoor recreation in 2004, found the following:

In 2004, the vast majority of Americans 16+ participated at least once in a human powered active outdoor activity:

- 159 million Americans 16+ participated in an outdoor activity in 2004
- 71.6% of Americans 16+ were participants
- 50.2 million Americans 16+ participated at an enthusiast level in 2004
- 22.6% of Americans 16+ (greater than 1 in 5) were enthusiasts

Participants in human powered outdoor activities in 2004:

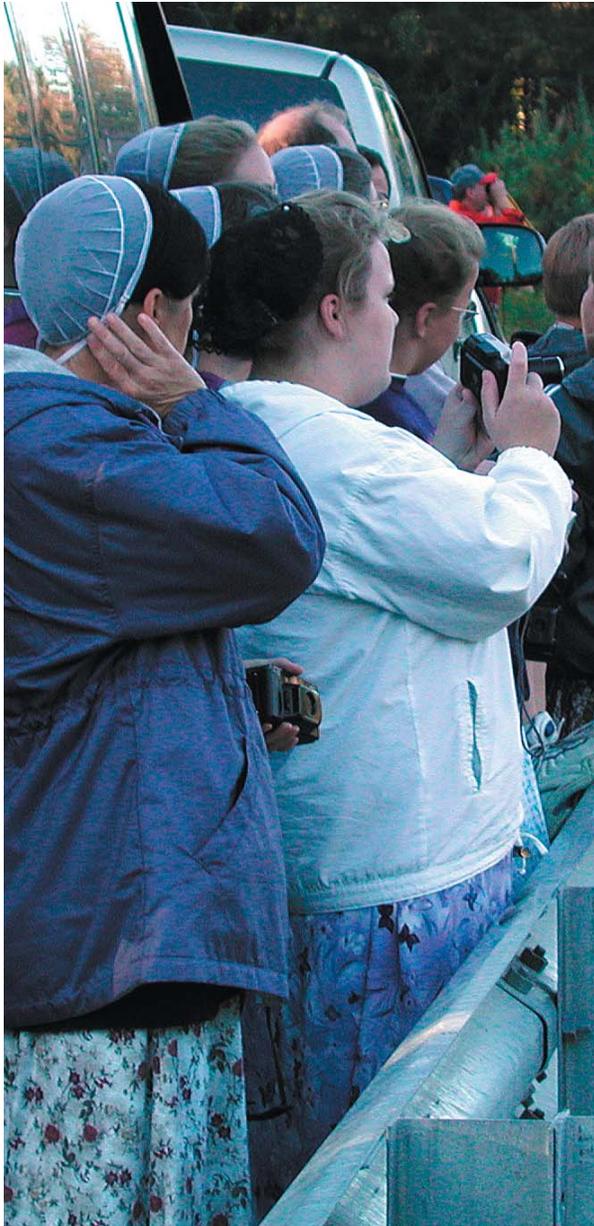
- Males and females (male/females = 56%/44%)
- All ages (median = 41 years old)
- All incomes (median household income = \$56,900)
- Ethnically diverse (21% non-white)
- Families (49% have children under 18 in household)

Enthusiasts in human powered outdoor activities are:

- More likely male (64%)
- Younger than the Participant population (median = 36 years old)
- Moderately affluent (median household income = \$62,000)
- More likely than the Participant population to be Caucasian (83% white)
- Likely to include the presence of children under 18 in the household (47%)

A closer look at Pennsylvania reveals these recreation trends have already taken root. Between 1995 and 2004, outdoor recreation in Pennsylvania increased 3.5%, while participation in team sports decreased 29%. In this expanding outdoor marketplace, the Commonwealth faces a potentially valuable harvest of new recreationists to add to its rich cuttings in red oak and black cherry timber. This report, then, traces this new landscape, and it maps the possible routes

In this expanding outdoor marketplace, the Commonwealth faces a potentially valuable harvest of new recreationists to add to its rich cuttings in red oak and black cherry timber. This report, then, traces this new landscape, and it maps the possible routes that the Pennsylvania Department of Conservation and Natural Resources (DCNR) may trek in its management of 27 state parks and 8 state forest districts in the PA Wilds.



Elk Watchers, Ted Lee Eubanks/FERMATA, Inc.

that the Pennsylvania Department of Conservation and Natural Resources (DCNR) may trek in its management of 27 state parks and 8 state forest districts in the PA Wilds. The new recreationists are bustling in Pennsylvania and the five surrounding states, and DCNR can position itself to welcome them to the PA Wilds.

### Getting the Numbers

As stated above, the best source for information about who hikes, boats, skis, and hunts in the United States is the National Survey on Recreation and the Environment (NSRE). While NSRE's scientists have catalogued 80 different activi-

ties or recreations, not all of these activities qualify for DCNR's new strategy to diversify recreation in the PA Wilds.

For example, as catalogued by NSRE, 19 outdoor activities do not depend on nature. Activities like baseball, golf, swimming in a pool, running, and yard games happen anywhere. In fact, those who promote these activities enjoy no particular competitive advantage in the recreation marketplace. Just like a chain store restaurant, a tennis court succeeds wherever tennis players are likely to be. As a result, eliminating these non-nature-based activities from consideration leaves 61 potential recreations. But not all of these can be enjoyed by recreationists in the PA Wilds. Search though they may, recreationists simply will not find in the PA Wilds water bodies

to SCUBA dive and surf or caves to spelunk. Disqualifying the 17 activities that have no place in the PA Wilds, then, leaves 44. By eliminating generic categories such as “hunting” (which is categorized more finely as “big game hunting,” “small game hunting,” and “migratory bird hunting,”) and adding non-NSRE recreations such as hang gliding and star gazing, we are left with a collection of 41 recreations which we believe are appropriate for the PA Wilds.

Of course, identifying appropriate recreations and estimating the number of potential participants is not all that planners need to consider. Visitors experience nature through many different activities. Some people prefer to hike, others to boat, and some even to hang-glide over nature. Many



Wood Fern, Ted Lee Eubanks/FERMATA, Inc.

of these activities are compatible. That is, different people can participate in different activities in the same general place at the same time. Hikers, picnickers, canoeists, and butterfly photographers can use the same

Rather than approach the market as a homogenous mass, DCNR is better served by connecting specific recreational populations to its specific resources.

landscapes without much bumping into each other. Incompatible activities, however, prove annoying and even dangerous to other activities. Horseback riders are unwelcome on a golf course; canoeists fear wave-generating motorboats; and hikers (not to mention the wildlife) quickly abandon areas criss-crossed by loud, speeding ATVs.

The challenge for DCNR is to find the appropriate balance between these often competing and conflicting recreational activities. Consonant with their mission to serve Pennsylvania, DNCR managers aspire to maximize the number of compatible activities, to serve the most people and generate the most benefits for the Commonwealth.

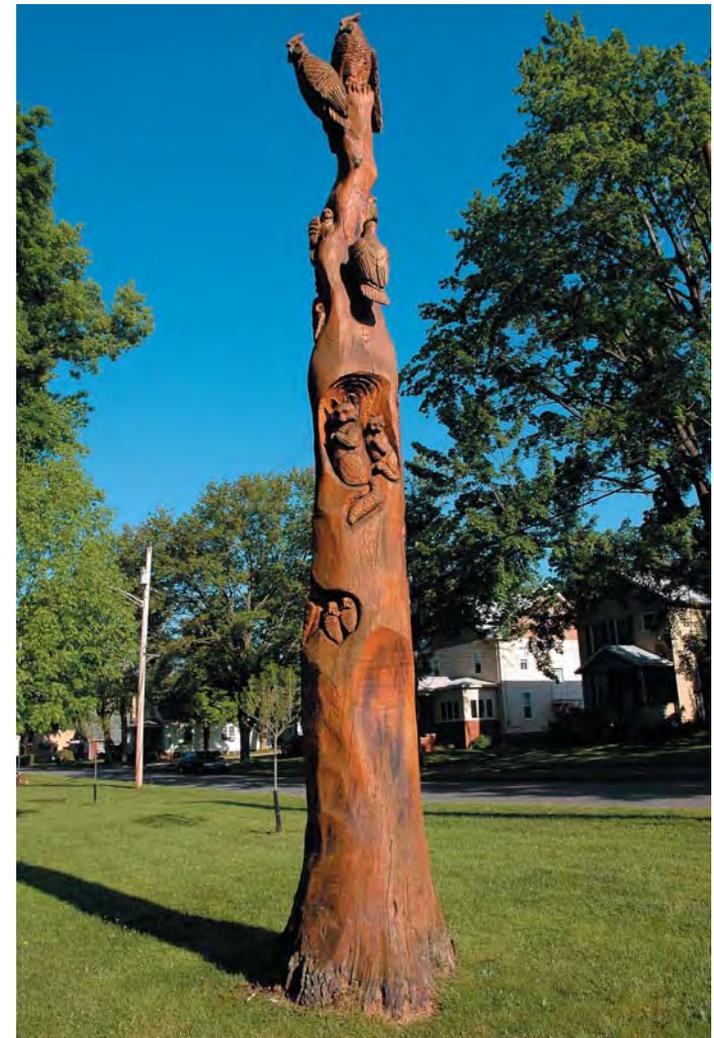
## Outdoor Recreation Populations

Populations coalesce around distinguishable preferences or habitats. For our purposes, we are most interested in how segments of the population express consistent, definable partiality for discrete recreational activities. The need is clear. Rather than approach the market as a homogenous mass, DCNR is better served by connecting specific recreational populations to its specific resources. Mass marketing refers to the treatment of the market as a homogenous group and offering the same marketing mix to all customers. Target marketing on the other hand recognizes the diversity of customers and does not try to please all of them with the same offering. **The first step in target marketing is to identify different market segments and their needs.**

The outdoor recreation market is a universe of potential participants (buyers) in search of specific outdoor experiences. This universe may be analyzed (and therefore understood) through segregating this mass population into distinct related groups of buyers that require different (yet distinguishing) products or marketing mixes. These populations or markets can be segmented or targeted using a variety of factors. **The bases for segmenting consumer markets include:**

- 1. Demographical bases (age, family size, life cycle, occupation)**
- 2. Geographical bases (states, regions, countries)**
- 3. Behavior bases (product knowledge, usage, attitudes, responses)**
- 4. Psychographic bases (lifestyle, values, personality)**

FERMATA has adopted the market segmentation scheme developed for U.S. outdoor recreation by Cordell et.al (*Outdoor Recreation for 21<sup>st</sup> Century America, 2004*). The scheme is based on a cluster analysis of the data gathered on outdoor recreation by the NSRE. FERMATA contracted with the NSRE to develop specific market information for Pennsylvania and the adjacent states, and we have modified the scheme where we believe regional influences to be important. A comparison of the Pennsylvania market region with the U.S. as a whole did not show significant differences



O.B. Grant Park, Ridgway, Ted Lee Eubanks/FERMATA, Inc.



Forget-me-not, Ted Lee Eubanks/FERMATA, Inc.

in these patterns, nor between Pennsylvania and the adjacent states.

FERMATA endorses a need-based approach to defining market segments. Needs-based

segmentation is where products are aligned with a broad set of customer demands.

**The criteria include:**

- 1. The segments must exist in the environment (and not be a figment of the researcher's imagination),**
- 2. The segments must be identifiable (repeatedly and consistently),**
- 3. The segments must be reasonably stable over time, and**
- 4. One must be able to efficiently reach segments (through specifically targeted distribution and communication initiatives).**

## Outdoor Recreation Market Segmentation

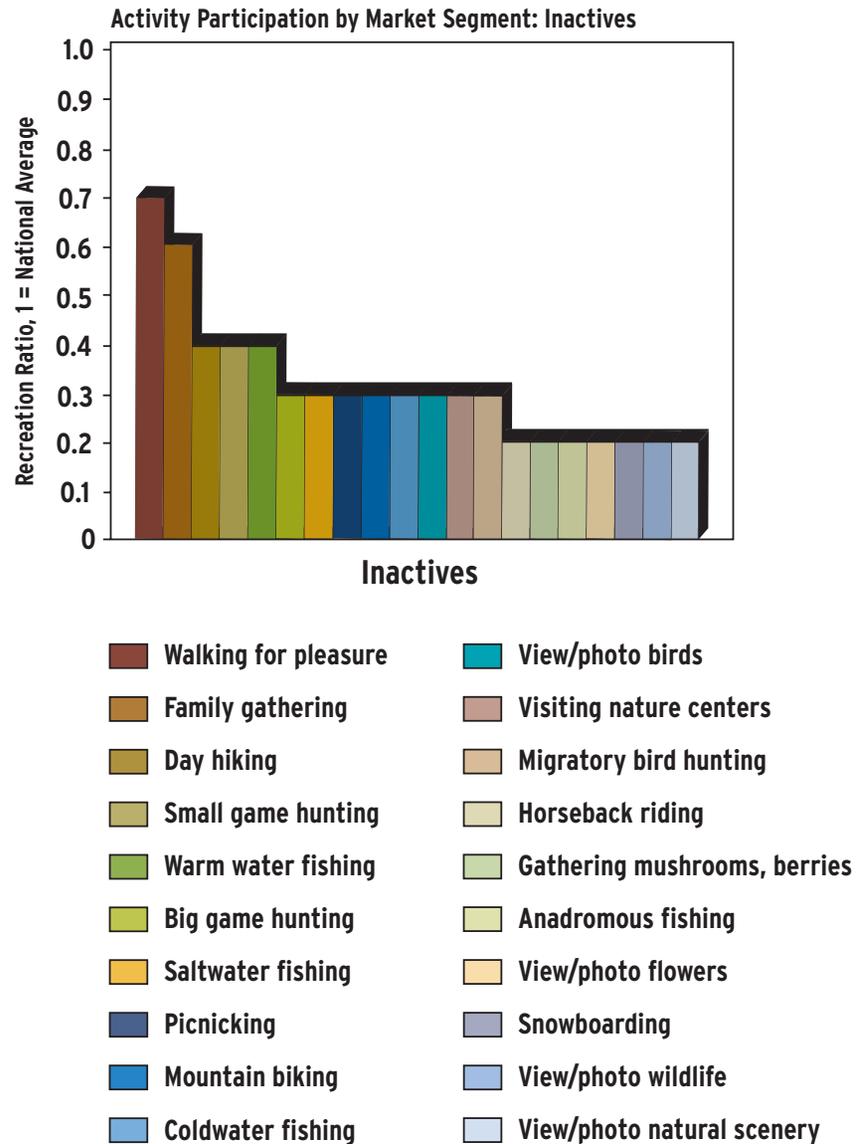
The outdoor recreation market in the U.S. is characterized by the NSRE in the following eight segments:

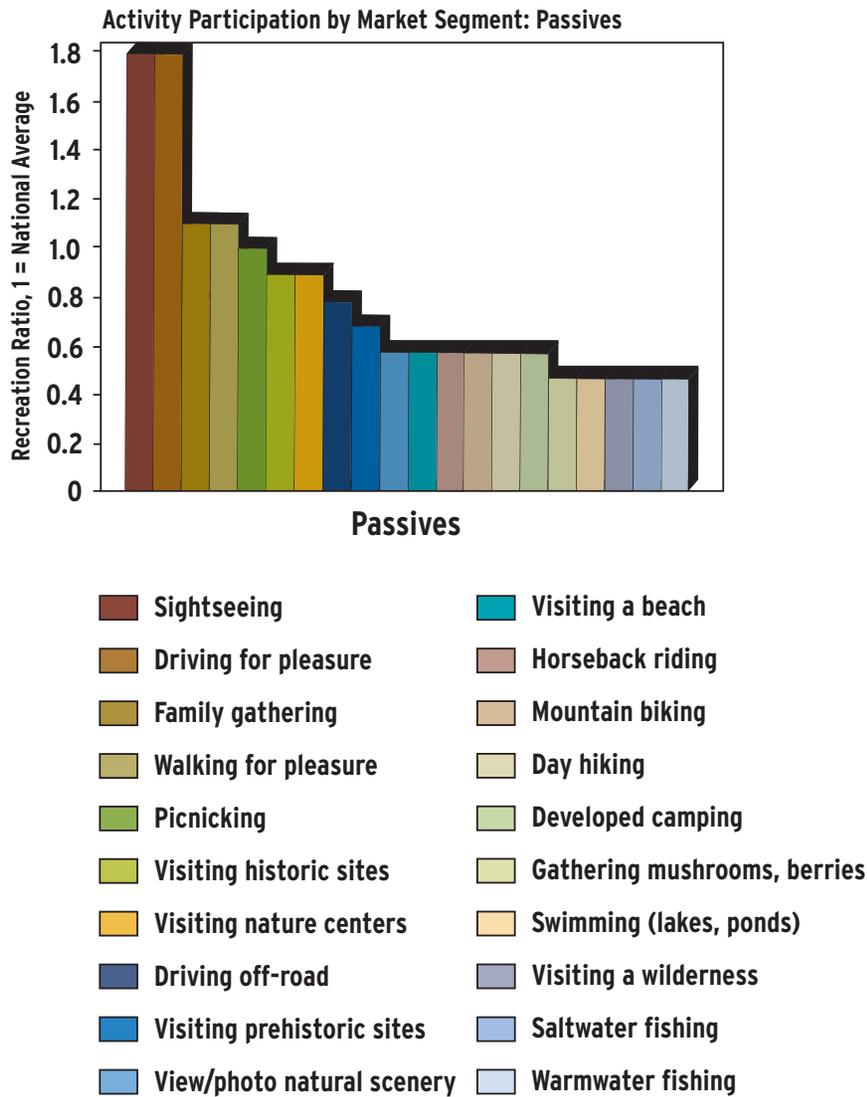
- Inactives
- Passives
- Nonconsumptive Moderates
- Nature Lovers
- Water Bugs
- Backcountry Actives
- Motorized Consumptive
- Outdoor Avids

The first three groups listed above represent the least invested, least committed segments of the U.S. outdoor recreational market. In detail, those groups, listed on the following page, are:

## Inactives (23.9% of Population age 16 and older)

- Least active outdoor segment in American society.
- Walking is the only activity in which more than half participate.
- Disproportionately more female, more Black and Hispanic, older, have lower incomes, and more foreign born.
- All recreation ratios lower than 1.0. In other words, Inactives participate in all outdoor recreations at a rate lower than the national average (1.0).



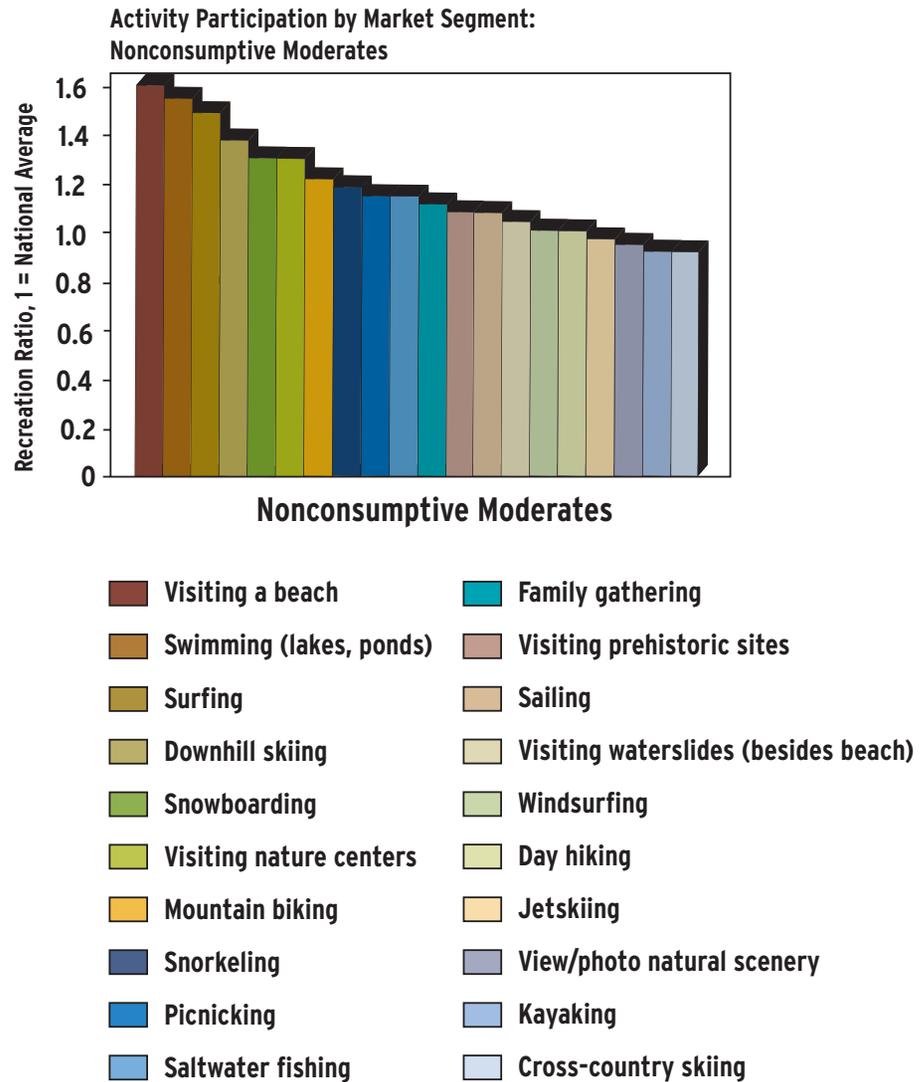


### Passives (15.0%)

- Limited set of preferred recreational activities (compared to none for the Inactives).
- Prefer low-intensity, low-commitment recreations such as sightseeing, driving for pleasure, walking for pleasure, attending family gatherings, and picnicking.
- Relatively high proportions of females, Blacks, and people 65 and older.
- Otherwise, this group mirrors the national population.

## Nonconsumptive Moderates (Dabblers) (11.7%)

- More expansive set of preferred recreational activities than Passives or Inactives.
- Favored activities include visiting a beach, visiting a nature center, mountain biking, and swimming in lakes and ponds.
- Most of the non-favored activities are either consumptive or motorized.
- Gender equivalent, young relative to general population, disproportionately Hispanic, with moderate incomes.
- Disproportionate representation in New England, Middle Atlantic, and South Atlantic regions.





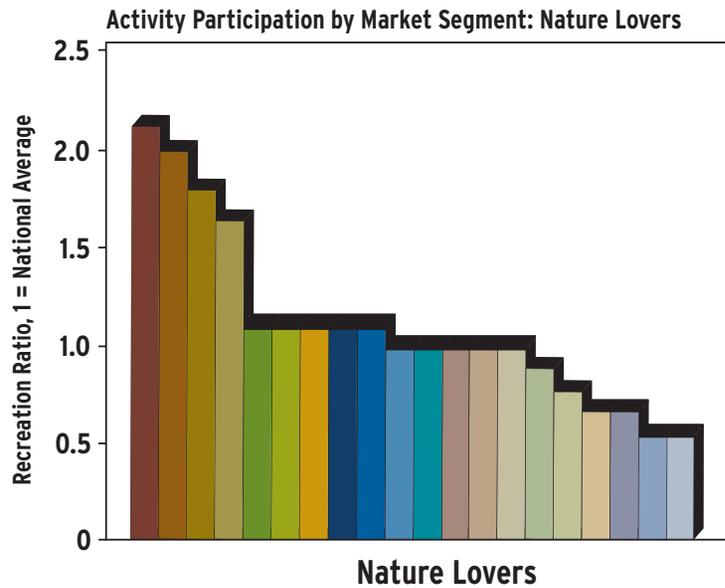
Leonard Harrison State Park  
Brenda Adams-Weyant/FERMATA, Inc.

Combined, Inactives, Passives, and Nonconsumptive Moderates represent over half of the U.S. population age 16 and older. Several key social and ethnic groups are disproportionately represented in these segments. Although the PA Wilds may offer recreational opportunities for these segments, DCNR will need to develop more specific urban-based strategies to reach many of these populations in any meaningful way.

In contrast, the following segments consist of those Americans who have found their way to nature through recreation. The recreationists have crossed an important threshold (participating in outdoor recreation), but may not be specialized in any specific recreation. In detail, these groups are:

### **Nature Lovers (Look and Learners) (12.5%)**

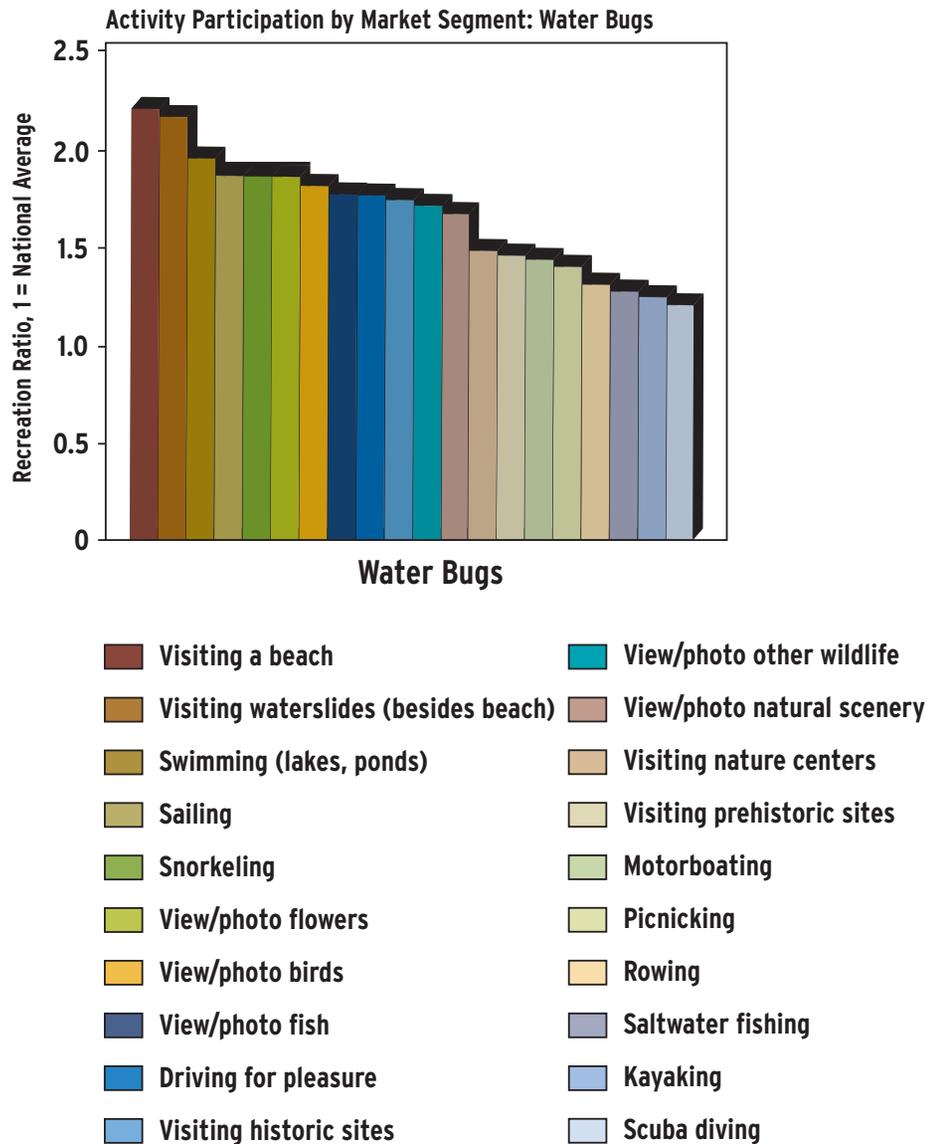
- Relatively large percentages involved in viewing/learning activities (birding, wildflowers and other plants, wildlife, natural scenery, fish).
- Also prefer visiting nature centers and museums, sightseeing, and driving for pleasure.
- Do not favor strenuous or consumptive activities.
- Disproportionately female (60%), over 45 (60%), with more Hispanic participation than most other segments.
- Rural, with disproportionate representation in West North Central states (Minnesota and the Dakotas) and the Mountain states (Colorado, Wyoming, Utah).



- |                            |                              |
|----------------------------|------------------------------|
| View/photo birds           | Family gathering             |
| View/photo flowers         | Gathering mushrooms, berries |
| View/photo wildlife        | Driving for pleasure         |
| View/photo natural scenery | Visiting prehistoric sites   |
| View/photo fish            | Visiting a wilderness        |
| Visiting nature centers    | Day hiking                   |
| Walking for pleasure       | Warmwater fishing            |
| Picnicking                 | Horseback riding             |
| Visiting historic sites    | Big game hunting             |
| Sightseeing                | Developed camping            |



Cranberry Swamp Natural Area, Ted Lee Eubanks/FERMATA, Inc.

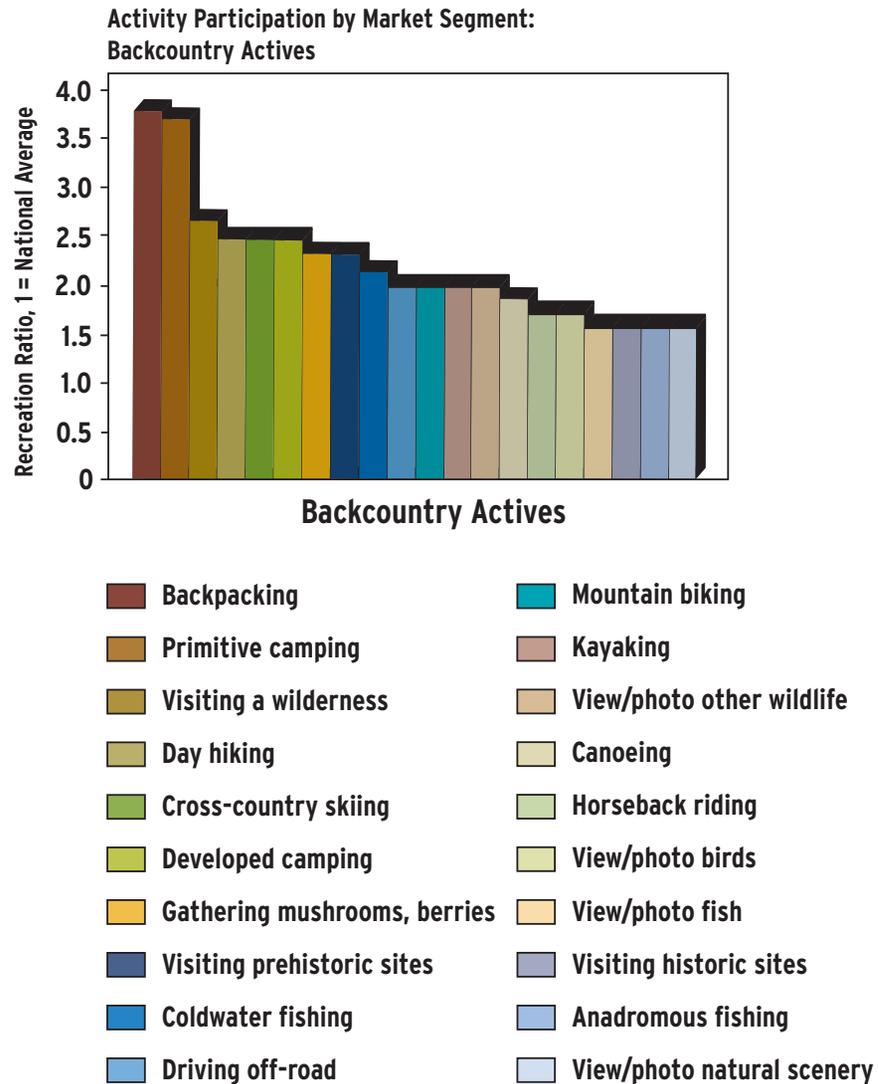


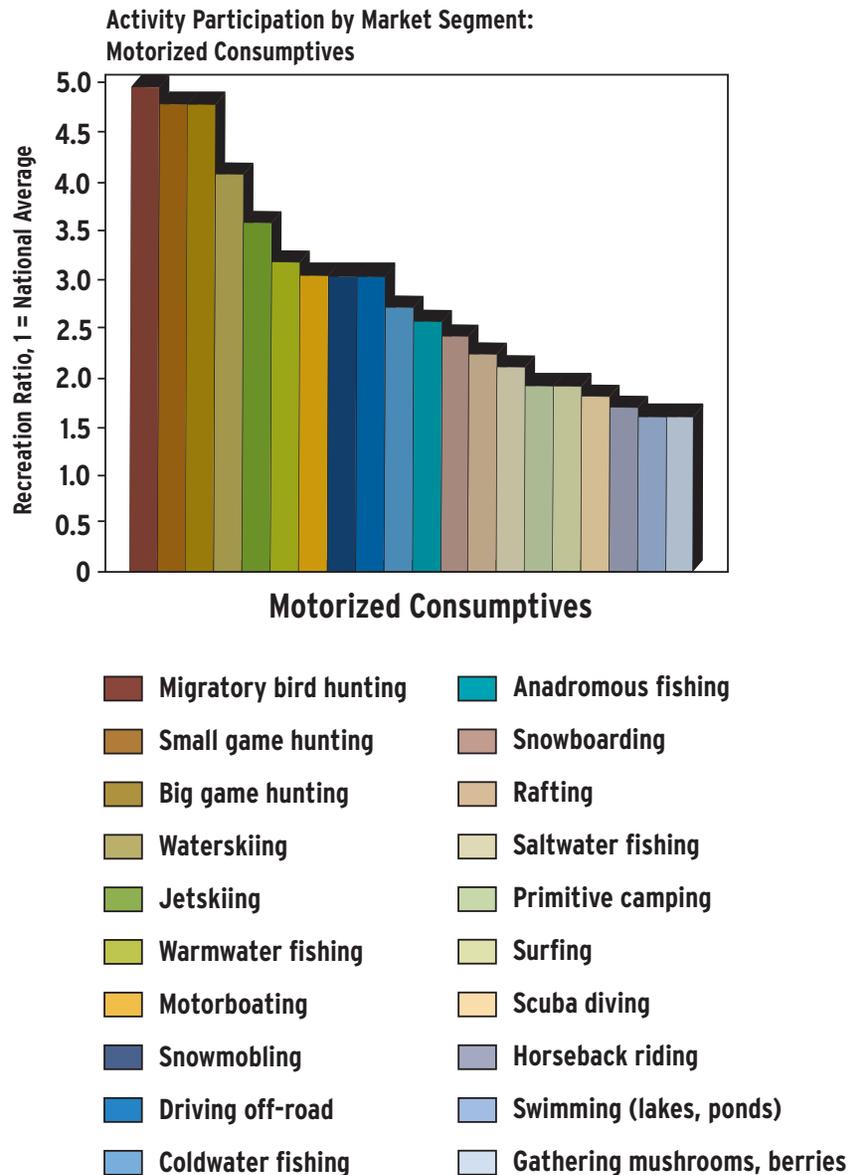
### Water Bugs (13.3%)

- Attracted to water as a recreational venue, and participation in water-based activities is the distinguishing characteristic of the group.
- Also prefer look-and-learn activities such as viewing/photographing nature, visiting nature centers, sightseeing, and driving for pleasure.
- Do not favor consumptive or motorized recreations.
- Unlike Nature Lovers, Water Bugs are middle aged, higher proportion with upper incomes, disproportionately from New England, Middle Atlantic, South Atlantic, and Southern Coastal states.

### Backcountry Actives (8.6%)

- Participate at a higher than national average in most recreations.
- Defined by high participation rates (greater than 2.5 times the national average) in backpacking, primitive camping, visiting wilderness, day hiking, cross-country skiing, and camping in developed areas.
- Disproportionately male, White, rural, middle income, and from Mountain and Pacific states.



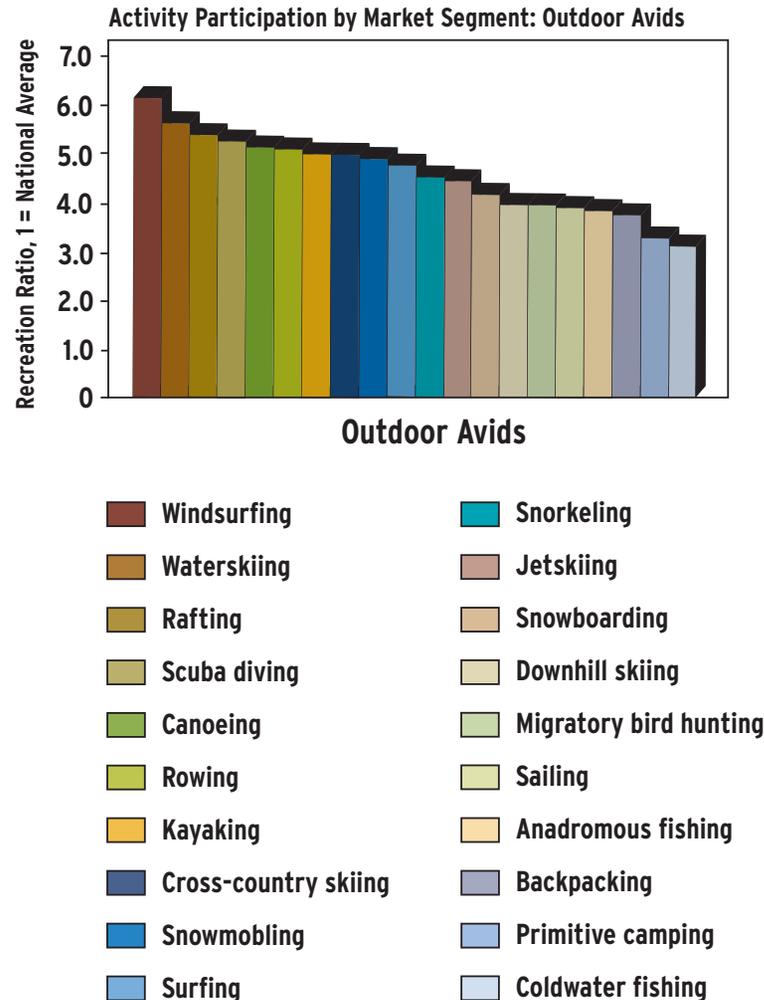


### Motorized Consumptives (7.5%)

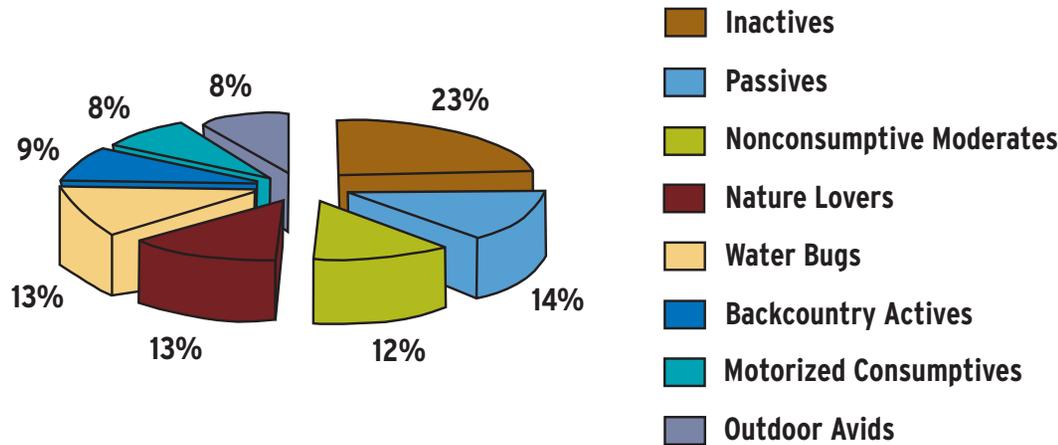
- Disproportionately involved in hunting, fishing, and motorized activities.
- Disfavor look-and-learn activities.
- Compared to Outdoor Avids, substantially lower rates of participation in physically demanding or challenging activities.
- Predominantly male (85%), White, young (60% <35, 39% <25), and middle income.
- Disproportionately rural, from Midwest and South.

## Outdoor Avids (7.5%)

- Highest participation rates of any segment, with nine activities 5 times greater than the national average.
- Prefer recreations that demand skill and physical exertion.
- Examples include canoeing, scuba diving, windsurfing, waterskiing, cross-country skiing, rowing, rafting, and kayaking.
- Disproportionately male (62%), White (87%), under 45 (80%), and upper income.
- From New England, West North Central, East North Central, and Mountain states.



When viewed together, the breakdown looks as follows:



The most significant growth opportunities for DCNR, therefore, are in those segments where the resources of the PA Wilds offer abundant recreational opportunities and where these market segments are currently underserved.

Of these five “committed” segments (whose participants are committed to forms of outdoor recreation as a meaningful leisure activity), “motorized consumptives” are the best represented (and invested) in the PA Wilds. The most significant growth opportunities for DCNR, therefore, are in those segments where the resources of the PA Wilds offer

abundant recreational opportunities and where these market segments are currently underserved.

### Enthusiasts: A Special Case

Within recreations, there are recreationists who consume a disproportionate number of the annual recreation days. These “enthusiasts” (by Cordell’s definition) are the most active third of the participants in any recreation. In certain recreations (surfing, for example) enthusiasts are dominant, where in others (walking for pleasure) most involved in the recreation are casual participants.

**The dominance of enthusiasts within a given recreation is important to the agency in assessing the impacts of given recreational populations on its resources, and in developing fee structures that will allow the agency to mitigate these impacts.**

## Occurrence of Enthusiasts by Activity

Activity	% Enthusiasts	Enthusiasts % Total Days	Min Days/Yr
Surfing	0.5%	89.0%	13
Visiting a wilderness	10.3%	88.9%	7
Day hiking	10.4%	88.5%	16
Orienteering	0.6%	85.6%	7
Kayaking	1.2%	84.2%	5
Mountain biking	6.8%	83.6%	25
Saltwater fishing	3.1%	83.5%	8
Gathering mushrooms, berries	9.3%	83.4%	9
Scuba diving	0.6%	83.3%	6
Snorkeling	2.2%	82.5%	5
Rock climbing	1.4%	82.4%	4
Jetskiing	3.1%	82.0%	7
Mountain climbing	1.8%	82.0%	5
Rowing	1.4%	81.0%	5
Warmwater fishing	7.5%	80.6%	15
Canoeing	3.2%	80.5%	5
Coldwater fishing	4.3%	80.3%	11

Activity	% Enthusiasts	Enthusiasts % Total Days	Min Days/Yr
Sailing	1.4%	80.2%	6
Backpacking	3.5%	79.8%	7
Waterskiing	2.6%	79.0%	8
Windsurfing	0.2%	78.9%	6
Walking for pleasure	26.3%	77.8%	101
Small game hunting	2.2%	76.8%	16
Swimming (outdoor pools)	11.8%	76.6%	21
Swimming (natural waters)	12.7%	76.5%	13
Anadromous fishing	1.3%	76.3%	7
Downhill skiing	2.6%	76.1%	7
Migratory bird hunting	0.8%	75.5%	12
Snowboarding	1.5%	74.0%	7
Rafting	2.9%	72.7%	4
Cross-country skiing	0.5%	72.2%	6
Showshoeing	1.2%	72.2%	6
Big game hunting	2.6%	68.8%	15
Caving	0.9%	58.0%	3



By understanding these preferential distinctions **DCNR will be able to tailor its recreational offerings based on the distinct (and discrete) demographic profile of the neighborhoods and communities that surround its public lands** (particularly state parks). More important for the PA Wilds, the recreational resources available in the PA Wilds will attract distinct demographic groups, and DCNR, by recognizing these distinctions, will be able to broaden its constituency base through broadening its recreational offerings in the PA Wilds.

## The Social Connection

The NSRE data that have been collected and analyzed by FERMATA for the DCNR outdoor recreation strategy allows us an insight into far more than the macro-level market segments as described previously. These data illustrate distinct differences between gender, race, age, and residency (for example) in recreational preferences. The following are a few examples of these differences. By understanding these preferential distinctions DCNR will be able to tailor its recreational offerings based on the distinct (and discrete) demographic profile of the neighborhoods and communities that surround its public lands (particularly state parks). More impor-

tant for the PA Wilds, the recreational resources available in the PA Wilds will attract distinct demographic groups, and DCNR, by recognizing these distinctions, will be able to broaden its constituency base through broadening its recreational offerings in the PA Wilds. The following are a few examples of these preferential differences. The first column lists the recreation, and the second column shows the percentage of each recreational population related to the respective demographic component. For example, as shown below 92.5% of hunters in Pennsylvania are male, and hunting has the highest percentage of male participants.

## Recreational Preferences of Pennsylvania Residents Vary By Demographic Characteristics

### PA Recreations - Male

Big game hunting	92.5
Small game hunting	90.2
Football	86.8
Migratory bird hunting	84.2
Scuba diving	81
Anadromous fishing	77.1
Surfing	74.8
Windsurfing	71.7
Golf	70.5
Primitive camping	69.9
Coldwater fishing	65.8
Saltwater fishing	64.3
Warmwater fishing	63.8
Rock climbing	63
Orienteering	62.8

### PA Recreations - White

Orienteering	100
Windsurfing	100
Snowshoeing	100
Caving	100
Golf	100
Big game hunting	96.5
Canoeing	95
Kayaking	94.3
Boat tours or excursions	94.3
Small game hunting	93.9
Motor boating	93.8
Gather mushrooms, berries	92.1
Coldwater fishing	91.5
Waterskiing	91.3
Visit a farm or agricultural setting	90.9

### PA Recreations - Metro

Orienteering	100
Windsurfing	100
Baseball	97
Handball outdoors	95.3
Softball	95.2
Football	95.2
Basketball	95.1
Ice skating outdoors	94.7
Tennis outdoors	94.4
Volleyball outdoors	94.4
Saltwater fishing	92.4
Running or jogging	91.5
Attend outdoor concert	91.4
Boat tours or excursions	91.1
Jet skiing	89.7

### PA Recreations - Female

Inline skating	70.8
Soccer	70.6
Volleyball outdoors	70.6
Caving	64.1
Boat tours or excursions	62
View/photograph birds	58.1
Sailing	57.8
Horseback riding	57.7
View/photograph wildflowers/trees	57.3
Picnicking	56.9
Tennis outdoors	56.5
Walking for pleasure	55.8
Sightseeing	55.6
Cross-country skiing	54.8
Handball outdoors	54.6

### PA Recreations - Black

Football	63
Baseball	57.4
Basketball	43.1
Softball	41
Handball outdoors	39.7
Inline skating	36
Ice skating outdoors	29.7
Volleyball outdoors	23.5
Scuba diving	15.5
Saltwater fishing	15.1
Rock climbing	14.1
Yard games	14.1
Tennis outdoors	14.1
Mountain climbing	13.6
Attend outdoor concert	12.6

### PA Recreations - Rural

Small game hunting	27.2
Big game hunting	26.5
Snowmobiling	26.4
Mountain climbing	25.1
Driving off road	24.8
Surfing	24.7
Coldwater fishing	23.3
Primitive camping	22.7
Rock climbing	22.7
Gather mushrooms, berries	21.5
Rowing	20.4
Snowboarding	20.3
Snowshoeing	20
View/photograph other wildlife	20
Visit a wilderness	19.5

Note: Column 1 = Activity, Column 2 = % participation by demographic category.

# Preliminary Findings

The obvious next step in this planning process is to connect specific recreations to specific DCNR resources in order to meet the demands of the recreationist segments identified above. For example, of the long-distance hiking trails in the PA Wilds which provide the most rewarding experiences? Which streams are the best to kayak and canoe? Where should DCNR invest to elevate the quality of these recreational experiences?

Where should DCNR invest to elevate the quality of these recreational experiences?

Populations

DCNR Resources

Recreations

FERMATA has developed a simple set of criteria for ranking these outdoor recreations. Through such a prioritization DCNR will be in a position to focus its labor, its attention, and its investments.

## Ranking Criteria

Admittedly, FERMATA is only beginning to make these critical connections. Yet even at this preliminary stage there are observations to be shared. Not all recreations offer DCNR and the Commonwealth equal opportunities. In certain cases, the PA Wilds simply lacks the resources to provide quality recreational experiences (such as for surfing or alpine mountain climbing). In other instances the recreations in question have high displacement costs (displacing other outdoor recreationists from the same management unit during the same season). Therefore, FERMATA has developed a simple set of criteria for ranking these outdoor recreations. Through

such a prioritization DCNR will be in a position to focus its labor, its attention, and its investments.

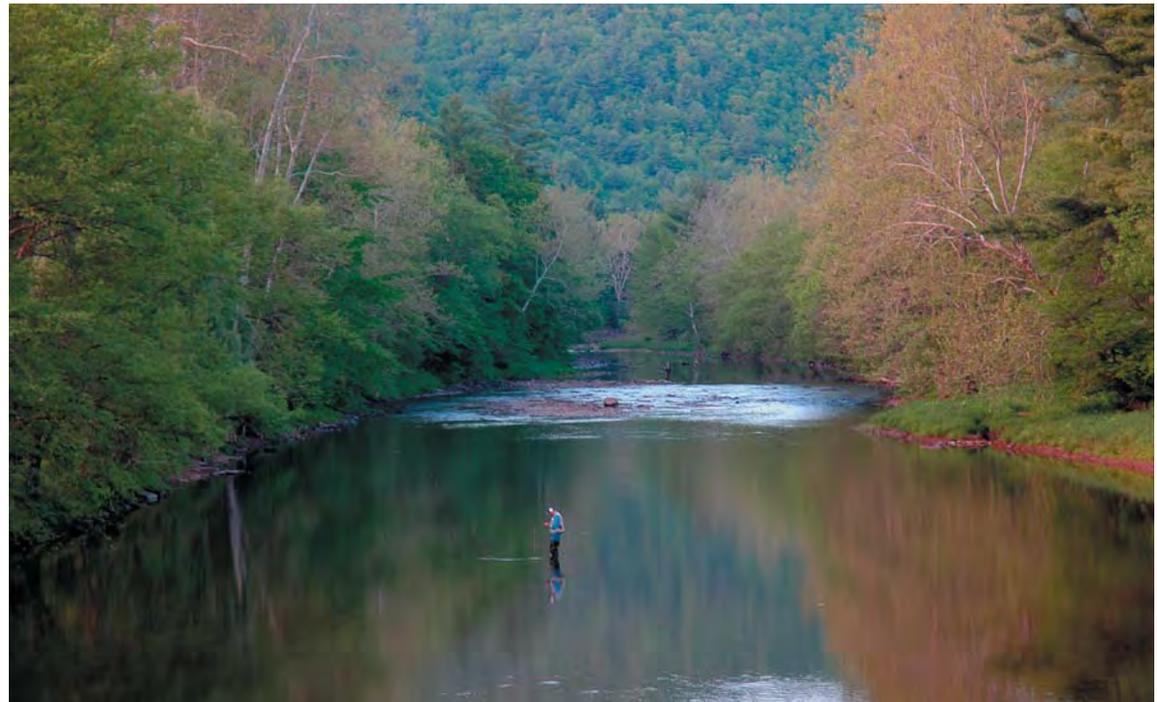
The following are the criteria used by FERMATA for ranking outdoor recreations in the PA Wilds:

### **1. Quality Experience**

- Does DCNR possess the resources to provide a quality experience for the recreation in question? Is the quality of these resources consistent, or is the quality intermittent or unpredictable?

### **2. Large market size**

- Is there a significant population, relative to the outdoor recreation market in general, involved in this recreation in Pennsylvania and the adjacent states?



Angler on the Kettle Creek, Ted Lee Eubanks/FERMATA, Inc.

### **3. Positive market growth**

- Is this recreation exhibiting positive growth, particularly in Pennsylvania and the adjacent states?

### **4. Compatible Use**

- Is this recreation compatible with other recreations, allowing DCNR to offer a diversity of recreational opportunities within the same management unit in the same season?



Camping at the West Branch Sojourn, Ted Lee Eubanks/FERMATA, Inc.

## 5. Low impact

- Is the anticipated recreational impact on the resource projected to be within acceptable maintenance and management limits? Is this impact compatible with the DCNR conservation ethic and commitment?

We understand far too well that we do not work in a vacuum, or make our recommendations in a perfect world. There are external modifiers that may prevent the development of recreational opportunities within a specific

forest or park. In certain cases, these modifiers impact supply. Such modifiers include ecological constraints, financial constraints, physical constraints, and social constraints. In addition, there are factors that may modify demand. These include price constraints, informational constraints, experiential constraints, and travel constraints.

Yet after considering populations, trends, recreations, and resources, each assessed with these constraints in mind, there are abundant opportunities for DCNR to develop a broad diversity of recreations for citizens of the Commonwealth and the world at large. FERMATA began this analysis by considering all of the recreations tracked by the NSRE. These recreations are listed on the following page:

## Recreational Activities Tracked in the *National Survey on Recreation and the Environment*

1. Anadromous fishing	28. Horseback riding on trails	55. Snowmobiling
2. Attend outdoor concerts, plays	29. Hunting (general)	56. Snowshoeing
3. Attend outdoor sports events	30. Ice fishing	57. Soccer outdoors
4. Backpacking	31. Ice skating outdoors	58. Softball
5. Baseball	32. Inline skating or rollerblading	59. Surfing
6. Basketball outdoors	33. Jet skiing	60. Swimming in an outdoor pool
7. Bicycling	34. Kayaking	61. Swimming in natural waters
8. Big game hunting	35. Migratory bird hunting	62. Tennis outdoors
9. Boat tours or excursions	36. Motor boating	63. View/Photograph birds
10. Canoeing	37. Mountain biking	64. View/Photograph fish
11. Caving	38. Mountain climbing	65. View/Photograph natural scenery
12. Coldwater fishing	39. Orienteering	66. View/Photograph other wildlife
13. Cross-country skiing	40. Picnicking	67. View/Photograph wildflowers, trees
14. Day hiking	41. Primitive camping	68. Visit a farm
15. Developed camping	42. Rafting	69. Visit a wilderness or primitive area
16. Downhill skiing	43. Rock climbing	70. Visit beach
17. Drive off road	44. Rowing	71. Visit historic sites
18. Driving for pleasure	45. Running or jogging	72. Visit nature centers
19. Family gathering	46. Sailing	73. Visit other waterside (besides beach)
20. Fishing	47. Saltwater fishing	74. Visit prehistoric/archeological sites
21. Football	48. Scuba diving	75. Volleyball outdoors
22. Freshwater fishing	49. Sightseeing	76. Walk for pleasure
23. Gardening or landscaping for pleasure	50. Sledding	77. Warmwater fishing
24. Gather mushrooms, berries	51. Small game hunting	78. Waterskiing
25. Golf	52. Snorkeling	79. Windsurfing
26. Handball or racquetball outdoors	53. Snow/ice activities	80. Yard game
27. Horseback riding (general)	54. Snowboarding	



Canoeing on the Clarion River, Ted Lee Eubanks/FERMATA, Inc.



Hyner Run State Park, Brenda Adams-Weyant/FERMATA, Inc.

However, there are a number of recreations that are not natural resource dependent. Although these are appropriate for the PA Wilds in general, DCNR, as the agency chiefly managing the public lands and natural resources of the region, resource-dependent recreations are those most likely to present immediate opportunities for enhancement and development.

### Non-Natural Resource Dependent Recreations (19)

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| 1. Attend outdoor concerts, plays   | 11. Inline skating or rollerblading |
| 2. Attend outdoor sports events     | 12. Running or jogging              |
| 3. Baseball                         | 13. Soccer outdoors                 |
| 4. Basketball outdoors              | 14. Softball                        |
| 5. Family gathering                 | 15. Swimming in an outdoor pool     |
| 6. Football                         | 16. Tennis outdoors                 |
| 7. Gardening                        | 17. Volleyball outdoors             |
| 8. Golf                             | 18. Walk for pleasure               |
| 9. Handball or racquetball outdoors | 19. Yard games                      |
| 10. Ice skating outdoors            |                                     |

Note: Above considered unsuitable for development on DCNR lands in PA Wilds.

Once these 19 recreations are eliminated for the list being considered, there are additional recreations that, although resource dependent, are not available to DCNR since these specific resources do not exist (at least measurably) in the PA Wilds.

### Non-PA Wilds Natural Resource Dependent Recreations (17)

- |                             |                  |
|-----------------------------|------------------|
| 1. Anadromous fishing       | 10. Scuba diving |
| 2. Boat tours or excursions | 11. Snorkeling   |
| 3. Caving                   | 12. Snowboarding |
| 4. Downhill skiing          | 13. Surfing      |
| 5. Jet skiing               | 14. Visit a farm |
| 6. Motor boating            | 15. Visit beach  |
| 7. Mountain climbing        | 16. Waterskiing  |
| 8. Sailing                  | 17. Windsurfing  |
| 9. Saltwater fishing        |                  |

Note: Above considered unsuitable for development on DCNR lands in PA Wilds.



Bracket Fungus, Cook Forest State Park, Ted Lee Eubanks/FERMATA, Inc.

## Key Outdoor Recreation Activities in the PA Wilds

1. Backpacking	22. Rock/Ice climbing
2. Bicycling (road)	23. Rowing
3. Big game hunting	24. Sightseeing
4. Canoeing	25. Sledding
5. Coldwater fishing	26. Small game hunting
6. Cross-country skiing	27. Snowmobiling
7. Day hiking	28. Snowshoeing
8. Developed camping	29. Star Gazing (amateur astronomy)
9. Drive off-road	30. Swimming in natural waters
10. Driving for pleasure	31. View/Photograph birds
11. Gather mushrooms, berries	32. View/Photograph fish
12. Hang gliding	33. View/Photograph natural scenery
13. Horseback riding	34. View/Photograph other wildlife
14. Ice fishing	35. View/Photograph wildflowers, trees
15. Kayaking	36. Visit a wilderness or primitive area
16. Migratory bird hunting	37. Visit historic sites
17. Mountain biking	38. Visit nature centers
18. Orienteering/Geocaching	39. Visit other waterside (besides beach)
19. Picnicking	40. Visit prehistoric/archeological sites
20. Primitive camping	41. Warmwater fishing
21. Rafting	

Note: Above considered most suitable for development on DCNR lands in PA Wilds.

Finally, several amendments to the remaining list have been made. These changes include:

- Eliminate “hunting,” “fishing,” “snow/ice activities,” and “freshwater fishing” as general categories.
- Combine “horseback riding” and “horseback riding on trails” as a single activity.
- Add “ice” to rock climbing.
- Add “geocaching” to “orienteering.”
- Add “star gazing” and “hang gliding” as emergent activities.

The resulting list of PA Wilds recreations, 41 in total, is shown in the table to the left.

# PA Wilds

## OUTDOOR RECREATION BRANDS

In order to prioritize the recreational opportunities of the PA Wilds, FERMATA first has segregated these activities into classes or genres. Each genre, in effect, is branded by a unifying natural, cultural, or historical characteristic. **The DCNR brands for the PA Wilds are as follows:**

- *WildsDarkSkies*
- *WildsWaters*
- *WildsLife*
- *WildsWays*
- *WildsWoods*

The PA Wilds brands, with their associated PA Wilds activities, are as follows:

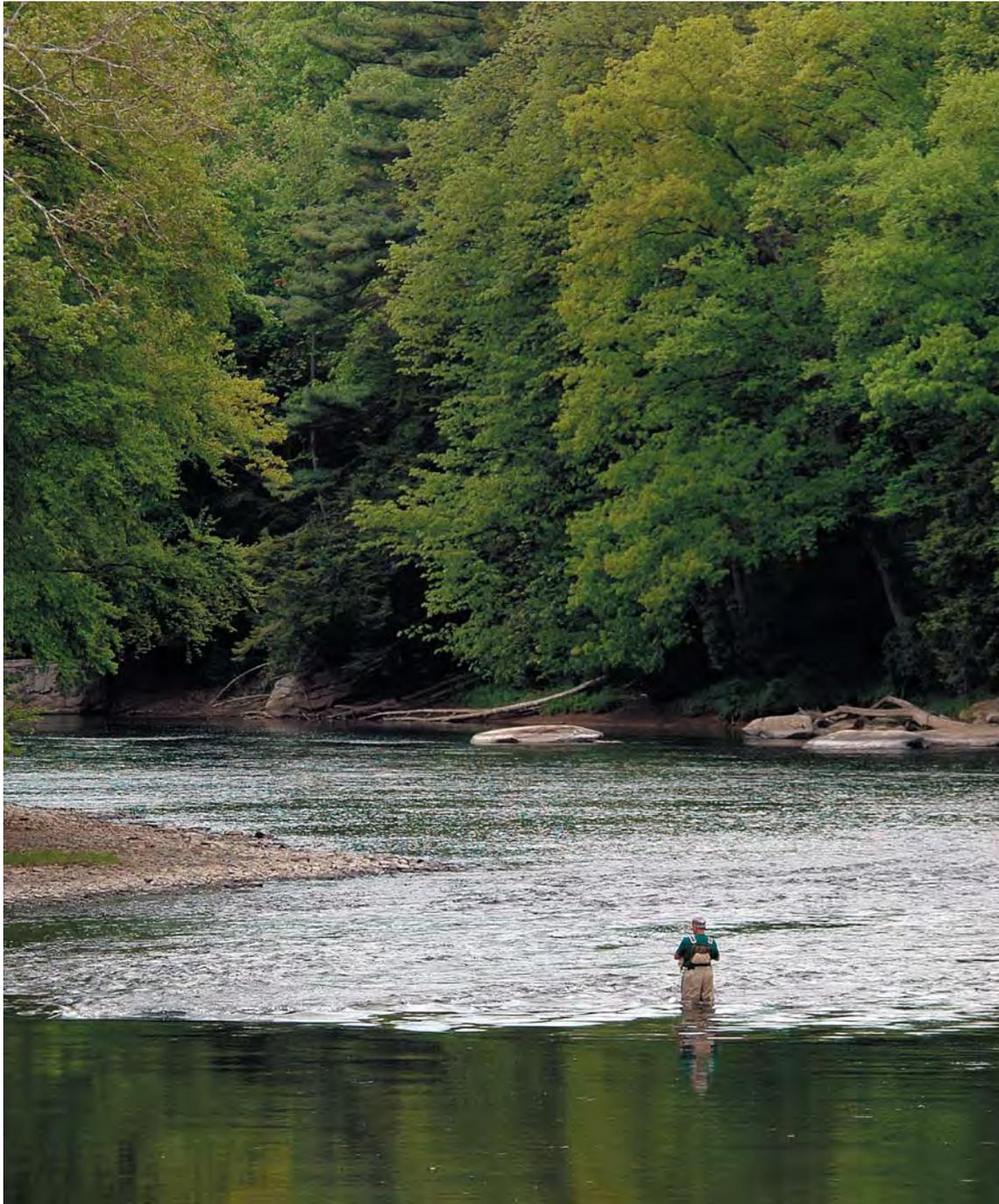
### ***WildsDarkSkies***

- Amateur Astronomy
- Skywatching

This genre, unified by the dark skies of the PA Wilds, is limited to a few nighttime activities. There is little data on the size of the market or its growth trends, but at parks such as Cherry Springs amateur astronomy and stargazing have developed into significant activities. FERMATA has recommended a number of improvements to Cherry Springs to serve these burgeoning recreations. Possible enhancements for additional dark sky sites, such as the Fish Dam Run scenic overlook, will be assessed as well.



Sproul State Forest, South of Renovo, Ted Lee Eubanks/FERMATA, Inc.



Clarion National Wild & Scenic River, Ted Lee Eubanks/FERMATA, Inc.

## **Wilds Waters**

The recreations encompassed by this brand are dependent on the water resources of the PA Wilds. These extend from traditional outdoor recreations such as fishing and swimming to those that have appeared recently (at least significantly) such as fish watching and kayaking. The chart below lists the recreations that FERMATA has included in the genre. The NSRE has estimated the number of Pennsylvania residents age 16 and older that participate in each specific recreation within a 95% certainty. The low and high estimates within this percentage of certainty are listed as well, followed by the growth trends in Pennsylvania over the past 10 years.

## WildsWaters Activities - Participation by Pennsylvania Residents

Recreation	Low Estimate (in 1000s)	High Estimate (in 1000s)	Trend 1995-2005
Canoeing	766	998	38.8%
Fishing (cold water)	1,454	1,745	26.0%
Fishing (warm water)	1,667	1,997	29.8%
Ice Fishing	29	320	157.1%
Kayaking	165	281	340%
Swimming in streams, lakes, or the ocean	3,781	4,149	6.5%
Viewing, identifying, or photographing fish	2,171	2,482	133%
Visiting a beach or waterside	3,655	4,023	6.1%



Canoes at West Branch Sojourn, Ted Lee Eubanks/FERMATA, Inc.

However, FERMATA is more interested in participation rates and growth trends in the primary Pennsylvania market region. Out-of-state recreationists represent an important source of potential net new dollars for DCNR and the Commonwealth. Therefore, we have focused our attention on the NSRE data that include the surrounding states. For the purposes of this report, the Pennsylvania market region includes Pennsylvania, New Jersey, New York, Ohio, Maryland, and West Virginia.

To prioritize these recreations, FERMATA has projected growth over the next ten years within the market region and has estimated the number of people who will be involved in each recreation at that future time (market size). The following list ranks these water-dependent recreations based on this projected market. The list includes each recreation, the number of people currently involved in the region, the growth trend, the growth of the population projected over the next ten years (in thousands), and the total population projected to be involved in ten years (in thousands).



Marsh Creek Wetlands, Brenda Adams-Weyant/FERMATA, Inc.

### WildsWaters Activities - Participation in Pennsylvania Market Region

Recreation	2005 Market (in 1000s)	Trend 1995-2005	10-Year Growth (in 1000s)	2015 Market (in 1000s)
Swimming in streams, lakes, oceans	18,300	4%	730	19,032
Viewing, identifying, photographing fish	10,200	86%	8,770	18,972
Visiting a waterside	10,400	3%	310	10,712
Fishing in warm rivers and lakes	8,200	10%	820	9,020
Fishing in cold water rivers and streams	5,300	24%	1,270	6,572
Canoeing	4,000	24%	960	4,960
Kayaking	1,400	169%	2,370	3,766
Ice Fishing	600	24%	140	744

## WildsLife

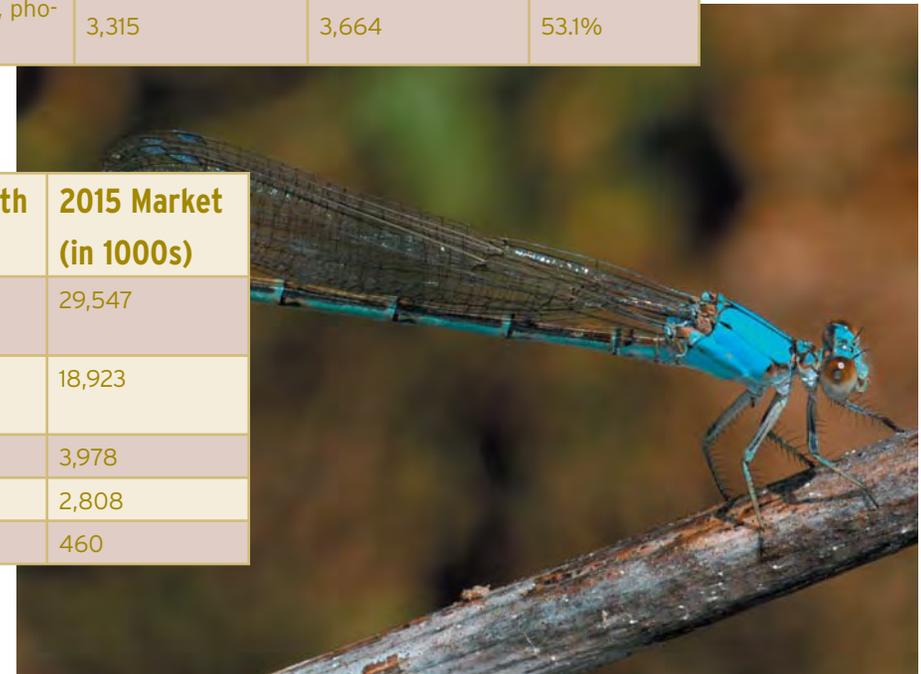
These recreations are bound by their dependence on a diverse, robust wildlife population in the PA Wilds. In this genre we have included both consumptive (hunting) and nonconsumptive recreations.

## WildsLife Activities - Participation by Pennsylvania Residents

Recreation	Low Estimate (in 1000s)	High Estimate (in 1000s)	Trend 1995-2005
Big game hunting	1,006	1,357	70.4%
Small game hunting	698	950	46.4%
Migratory bird hunting	107	204	23.1%
Viewing, identifying, photographing wildlife	4,643	5,012	59.1%
Viewing, identifying, photographing birds	3,315	3,664	53.1%

## WildsLife Activities - Participation in Pennsylvania Market Region

Recreation	2005 Market (in 1000s)	Trend 1995-2005	10-Year Growth (in 1000s)	2015 Market (in 1000s)
Viewing, identifying, or photographing wildlife	20,100	47%	9,450	29,547
Viewing, identifying, or photographing birds	14,900	27%	4,020	18,923
Big game hunting	3,400	17%	580	3,978
Small game hunting	2,600	8%	210	2,808
Upland bird/waterfowl hunting	500	-8%	-40	460



Ted Lee Eubanks/FERMATA, Inc.

## WildsWays Activities - Participation by Pennsylvania Residents

Recreation	Low Estimate (in 1000s)	High Estimate (in 1000s)	Trend 1995-2005
Bicycling (mountain)	1,871	2,201	n/a*
Bicycling (road)	3,267	3,616	51.5%
Cross-country skiing	213	349	-6.7%
Day hiking	2,705	3,034	41.4%
Driving off-road	1,580	1,871	37.3%
Driving for pleasure	5,274	5,642	7.0%
Hang gliding	n/a*	n/a*	n/a*
Horseback Riding	572	766	52.3%
Orienteering/geocaching	318	862	4.6%
Sightseeing	5,031	5,419	-3.7%
Sledding	1,716	2,646	39.5%
Snowmobiling	475	649	67.6%
Snowshoeing	0	126	n/a*

\*This data is not available from the NSRE.



Sproul State Forest, Ted Lee Eubanks/FERMATA, Inc.

## WildsWays (1)

*...a thoroughfare for travel or transportation from place to place*

FERMATA has recognized two genres of activities that are branded as “WildsWays.” First, there is a set of recreations that is dependent on the travel ways or way fares of the region (highways, trails, byways, even air ways).

## WildsWays Activities - Participation in Pennsylvania Market Region

Recreation	2005 Market (in 1000s)	Trend 1995-2005	10-Year Growth (in 1000s)	2015 Market (in 1000s)
Driving for pleasure	23,600	7%	1,652	25,252
Bicycling (road)	16,800	37%	6,216	23,016
Sightseeing	22,700	-5%	-1,135	21,565
Day hiking	13,700	37%	5,069	18,769
Sledding	8,200	26%	2,132	10,332
Bicycling (mountain)	9,100	n/a*	n/a*	9,100
Driving off-road	6,900	24%	1,663	8,563
Horseback riding	2,600	17%	445	3,045
Snowmobiling	2,200	21%	462	2,662
Cross-country skiing	1,500	-1%	-15	1,485
Snowshoeing	400	n/a*	n/a*	400
Hang gliding	n/a*	n/a*	n/a*	n/a*
Orienteering/Geocaching	n/a*	n/a*	n/a*	n/a*

\*This data is not available from the NSRE.

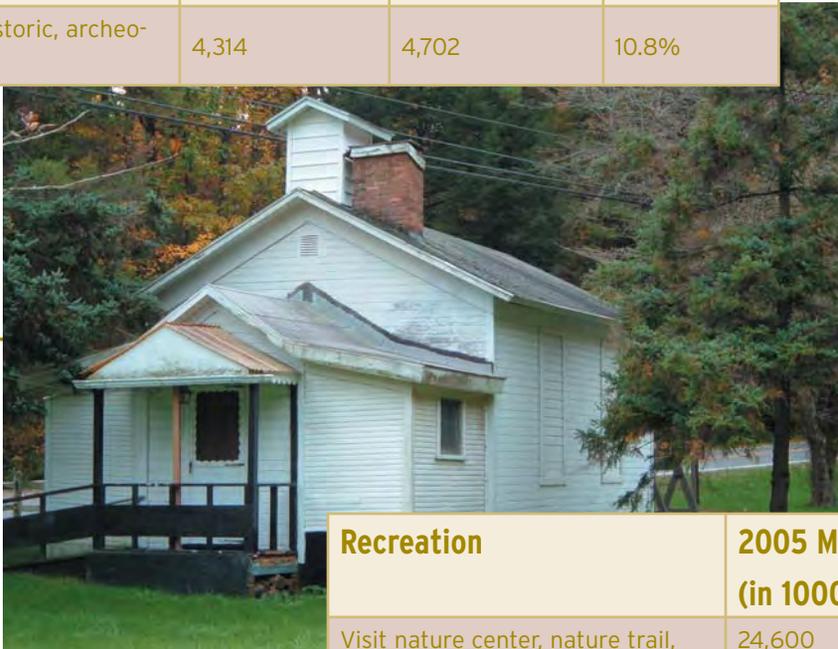


Train wreck on the Buffalo, Rochester & Pittsburgh Railroad, 1898  
Elk County Historical Society

### WildsWays Activities - Participation by Pennsylvania Residents

Recreation	Low Estimate (in 1000s)	High Estimate (in 1000s)	Trend 1995-2005
Visit farm or rural land setting	11,977	12,884	n/a*
Visit nature center, nature trail, visitor center, zoo	4,905	5,274	12.6%
Visit cultural (historic, archeological) sites	4,314	4,702	10.8%

\*This data is not available from the NSRE.



Black Moshannon State Park  
Brenda Adams-Weyant/FERMATA, Inc.

### Wilds Ways (2)

...a manner or method of doing or happening; a “way” of life

This additional genre of WildsWays activities is unified by the folkways of the region, or the ways of life. In particular, we are interested in those recreational or leisure activities that are related to the culture and history of the region.

### WildsWays Activities - Participation in Pennsylvania Market Region

Recreation	2005 Market (in 1000s)	Trend 1995-2005	10-Year Growth (in 1000s)	2015 Market (in 1000s)
Visit nature center, nature trail, visitor center, zoo	24,600	8%	1,968	26,568
Visit cultural (historic, archeological) sites	21,100	8%	1,688	22,788
Visit a farm or rural land setting	12,400	n/a*	n/a*	12,400

\*This data is not available from the NSRE.

## Wilds Woods

The woodlands of the PA Wilds offer a diversity of recreational opportunities, and the DCNR lands provide abundant opportunities for the further development of all of these recreations. These are generally the atavistic recreations that once were called “woodcraft” (backpacking, primitive camping).

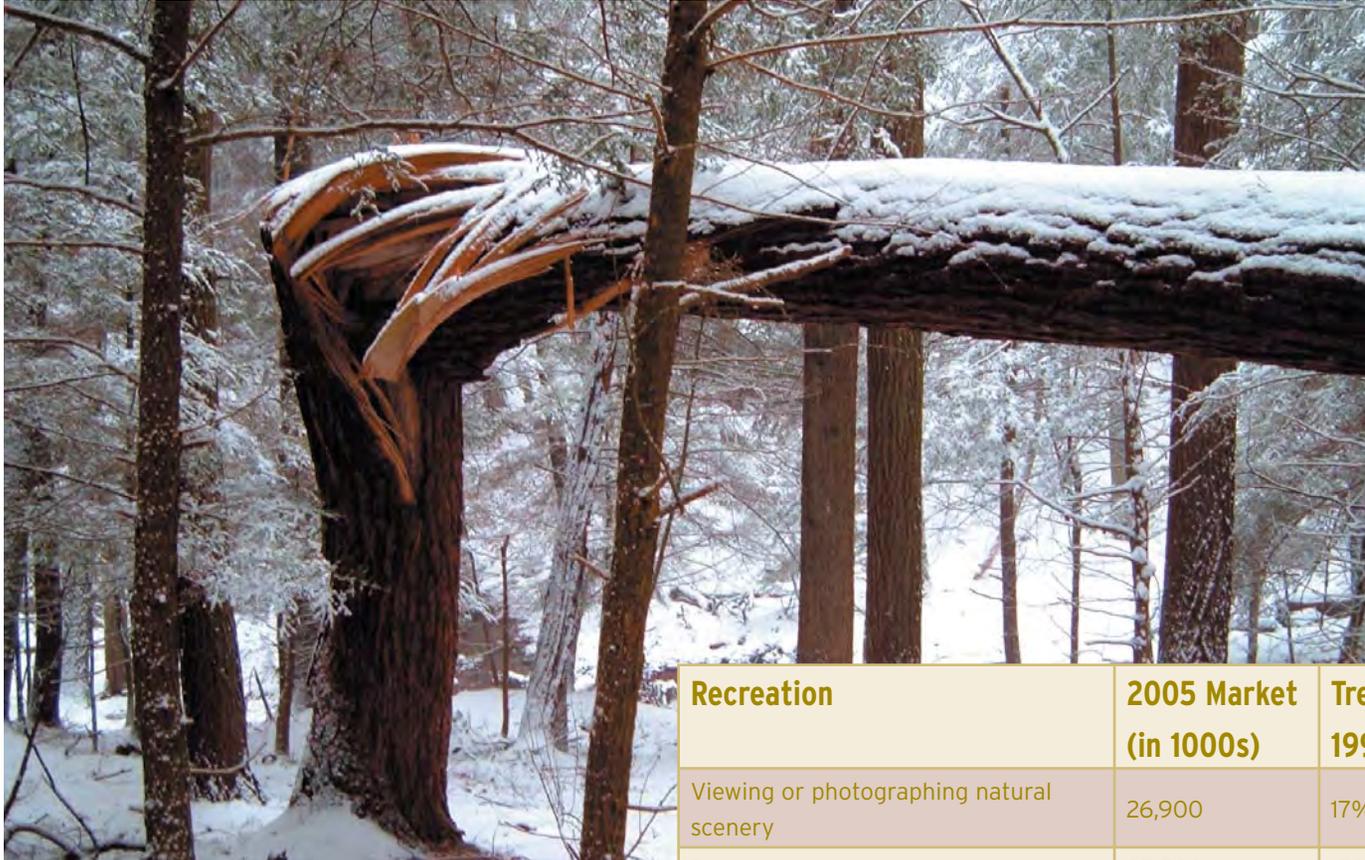


Cook Forest State Park, Ted Lee Eubanks/FERMATA, Inc.

### Wilds Woods Activities - Participation by Pennsylvania Residents

Recreation	Low Estimate (in 1000s)	High Estimate (in 1000s)	Trend 1995-2005
Backpack	717	931	27.7%
Camping at developed sites	2,142	2,453	41.4%
Camping at primitive sites	1,105	1,357	30.8%
Picnicking	5,642	6,010	18.1%
Viewing or photographing natural scenery	5,855	6,224	n/a*
Viewing or photographing wildflowers, trees, or other natural vegetation	4,343	4,711	n/a*
Visiting a wilderness or primitive area	2,676	3,005	n/a*

\*This data is not available from the NSRE.



Cook Forest State Park, Brenda Adams-Weyant/FERMATA, Inc.

### WildsWoods Activities - Participation in Pennsylvania Market Region

Recreation	2005 Market (in 1000s)	Trend 1995-2005	10-Year Growth (in 1000s)	2015 Market (in 1000s)
Viewing or photographing natural scenery	26,900	17%	4,573	31,473
Picnicking	25,500	15%	3,570	29,070
Viewing, identifying, or photographing vegetation	19,900	n/a*		19,900
Visit a wilderness or primitive area	12,600	8%	1,008	13,608
Camping at developed sites	9,700	33%	3,201	12,901
Camping at primitive sites	5,200	18%	936	6,136
Backpack	3,700	23%	851	4,551

\*This data is not available from the NSRE.

# Next Steps

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The next step in developing a comprehensive recreational strategy for DCNR and the PA Wilds will be to identify those specific, defined locations where these high-priority recreations may best be developed and enhanced. The on-site assessment work by FERMATA staff in Spring and Summer 2005 will be critical in refining these applications, in detailing specific development recommendations, and in defining an investment strategy.



Winslow Hill, Ted Lee Eubanks/FERMATA, Inc.



Swamp Branch Beech Creek, Sproul State Forest, Ted Lee Eubanks/FERMATA, Inc.



Pine Creek Rail-Trail, Brenda Adams-Weyant/FERMATA, Inc.



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