



National Park System Advisory Board



# HEALTH, RECREATION, AND OUR NATIONAL PARKS

Addressing the Role of National Parks to Promote  
and Provide Healthful Recreational Activities:  
An Outcome-Based Approach

March 2006

*National Park System Advisory Board*



The following report of the National Park System Advisory Board Committee on Health and Recreation was adopted unanimously by the Board on March 21, 2006.

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March 21, 2006

Committee on Health and Recreation

**Report to the  
National Park System  
Advisory Board**

*The National Park Service conveys health benefits to the American public by providing places for healthful, physically active recreation in the great outdoors.*

Committee on Health and Recreation  
NATIONAL PARK SYSTEM ADVISORY BOARD

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## Foreword

Increasingly, scientific evidence points to the fact that the American public needs to increase their level of physical activity to improve overall health and well being. Recreational attributes inherent to national parks play a vital role in what now is emerging as a powerful prescription for our nation's health: physically active outdoor recreation.

In 2004, the National Park System Advisory Board formed a Committee on Health and Recreation to consider how the National Park Service can through its park units and programs address this national need. This report is in response to these needs and supportive of President Bush's *HealthierUS* Initiative and Executive Order 13266, which calls on federal agencies to seek to improve the flow and use of information about personal fitness and increase the accessibility of resources for physical activity.

Two goals focused the work of an interdisciplinary team comprised of 10 people representing recreation, conservation and the health community and the National Park Service staff who assisted them in this effort—

- To identify how the National Park Service might increase public awareness of recreation opportunities available through the National Park Service that promote individual health and wellness;
- To strengthen the National Park Service's commitment to outdoor recreational opportunities in a manner that does not compromise the agency's mission of stewardship.

This Committee has carefully examined these issues and heard from a wide array of experts and leaders in the field of recreation and health, as well as the staff of the National Park Service. We have taken seriously the importance of this national health need and balanced this with the mission of the National Park Service “. . . to preserve unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations . . . to help extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country. . . .” We believe this report will provide a framework for the National Park Service to promote healthful recreation activities while at the same time helping park visitors understand the importance of protecting the wide array of natural, cultural and historic resources which are to be preserved unimpaired for future generations to enjoy and appreciate.

This vision and set of recommendations are intended to encourage the National Park Service to manage and promote parks as places for people to take part in physically active experiences and not just to “see the parks,” thus contributing to a healthier nation. Moreover, the Committee sees extensive opportunities for the National Park Service to work with existing partners and an exciting array of new partners in the health, medical and research communities.

Sincerely,

Dr. George Willeford III, Chair  
Committee on Health and Recreation

Ernest Quintana, Vice Chair  
Committee on Health and Recreation



## Background

The National Park Service has a rich history of preserving special places that inspire and enrich our lives. National parks provide opportunities for improving America’s intellectual, physical and spiritual well being. An original idea that has been emulated world wide, the National Park Service is prepared to continue its leadership role as a premier conservation and recreation agency into the 21st century.

Recreation in natural settings provided by parks is becoming increasingly important as our lives become dominated by built environments and indoor activities. Pursuing recreation in a park setting enables people to develop a clearer understanding of their relationship to nature, which can influence their everyday lives. Natural park settings alone have quite a powerful effect as a form of a health intervention.

A recent survey by the Outdoor Industry Foundation found that human-powered outdoor activities are popular and span age and gender. The longevity of outdoor participation is rooted not only in the functional health benefits, but also in the emotional benefits of actual participation. Over three-fourths of participants agree that participating in outdoor activities gives them a feeling of accomplishment, an escape from life’s pressures and a connection with themselves (Outdoor Industry Foundation’s Exploring the Active Lifestyle survey, 2004).

In 2001, the National Park System Advisory Board issued a report, *Rethinking the National Parks for the 21<sup>st</sup> Century*, which included among its recommendations that the National Park Service should:

- Be an energetic advocate of outdoor recreation and open space conservation, and of the considerable public benefits they provide.
- Serve as a catalyst to encourage collaboration among public and private park and recreation systems at all levels—to build a national network of parks and open spaces across America.

In 2005, NPS Director Fran Mainella established a National Park Service Legacy Initiative and 4-year goals: *Doing Business in the 21<sup>st</sup> Century*, which recognizes the critical responsibility of the NPS to provide appropriate outdoor recreation and to contribute to the physical and mental well-being of all Americans by promoting a seamless network of parks and continuing to link ongoing recreation opportunities at national parks to health and fitness.

“Combining inherently enjoyable and readily accessible recreational activities such as hiking and biking with simple, effective, health-related messaging may serve as a gateway to better health.”

(American Journal of Law and Medicine, Norton and Suk, Vol 30, no. 2 and 3, 2004.)

“A widening circle of researchers believes that the loss of natural habitat, or the disconnection from nature even when it is available, has enormous implications for human health and child development . . .

Consistent with these key issues, the National Park System Advisory Board established a Committee on Health and Recreation in late 2004 to explore and prepare a report on “The National Park Service’s role in increasing public awareness of recreation opportunities to help address the nation’s health needs.” Following are the results of the Committee’s work.

The findings and recommendations of this report address the goals of the President’s *HealthierUS* Initiative and Executive Order 13266 and are consistent with the National Park Service Mission Statement:

“The National Park Service is dedicated to conserving unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education and inspiration of this and future generations . . . to help extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country . . . .”



the quality of  
exposure to  
nature affects our  
health at an  
almost  
cellular level.”  
(Last Child in the  
Woods, Louv,  
2005)



## Findings

### Health and Physical Activity

- Physical activity is a proven means to combat chronic disease and early mortality.
- Parks and trails provide opportunities for convenient and accessible venues for regular physical activity.

A report of the Surgeon General in 1996 identified the importance of physical activity and the health benefits that such activity provides if undertaken on a regular basis. According to this report, just 30 minutes of brisk walking, bicycling, or even working around the house or yard most days of the week will reduce an individual's risks of developing heart disease, diabetes, hypertension and obesity. Regular physical activity also reduces anxiety, negative mood and depression, and improves self-esteem and cognitive functioning.

In June 2002, President Bush established the *HealthierUS* Initiative and issued Executive Order 13266, which have as their objective the improvement of individual personal health through simple improvements in physical activity and behavior. Public lands and programs at the federal, state and local level provide a significant venue for recreation and physical activity opportunities. Public parks, recreation areas, trails, and open space that are accessible to public use are underutilized resources in addressing the nation's needs in health and wellness. Recreation is a means through which physical activity opportunities can be provided, especially for key target groups.

### Healthful Recreation

- Parks and trails provide a desirable, proven means to improving health and wellness.
- Many NPS areas already provide venues for outdoor recreation through resource-based activities, such as hiking, walking, paddling, biking, camping, fishing and other activities.
- National Park Service areas and programs provide an opportunity to assist Americans in improving their personal health and well-being.

Participation in outdoor recreation provides a range of well-documented benefits. These include mental and spiritual well-being, an increase in self-esteem, an appreciation for the natural and cultural environment in which the activity is taking place, and health benefits derived from involvement in physical activities.

The National Park Service is well suited and situated to provide opportunities that positively influence physical activity behavior with a focus on better promotion and

encouragement of healthful recreation activities. Physical activity in parks can be increased through existing recreational opportunities and by taking into consideration such factors as access, convenience, safety, and aesthetics.

The National Park Service through its parks and park-related programs provides an array of recreation opportunities, including hiking, walking, paddling, jogging, bicycling, snowshoeing, and skiing, and other forms of healthful physically active recreation activities.

We find that many parks already are providing and promoting opportunities to participate in recreation activities that have direct health benefits, and many parks have unrealized potential to achieve these same ends. What we lack is solid data that quantifies and, in turn, validates the value national parks provide in promoting a healthier America through appropriate recreational activities.

## Understanding Our Role

- NPS is a public land managing agency and is not a public health authority; however, NPS can and should be more effective in the facilitation and evaluation of our contribution to healthy lifestyles of the American public.
- National parks are public health assets that are uniquely situated to provide opportunities for outdoor, physically active recreation activities and should be pro-actively communicating the health benefits of such participation.
- NPS can increase its capacity by developing multi-disciplinary partnerships that include the health and medical communities.

## Validating Our Role

Before considering any full-scale servicewide initiative, the NPS should first implement and evaluate a set of pilot projects. The implementation and evaluation of health and recreation pilot park initiatives (one per region) can help the NPS further explore and understand the opportunities to incorporate a culture of health and wellness into existing recreational activities that are widely accepted in the national parks. Pilot parks can serve as models for encouraging healthful participation in the outdoors.

- Pilot parks can validate the connection parks have to visitor health and wellness through the application of consistent, objective evaluation measures.

Public health specialists use the term “intervention” when they propose to take action in the attempt to change health behaviors. A set of seven health and recreation pilot park intervention concept plans (one for each region) have been developed and should be implemented in tandem with the application of consistent performance indicators to determine and hopefully demonstrate the validity of the NPS to promote and provide opportunities for healthful recreational activities. Pilot park concepts will be developed using a “logic model approach,” as advised by the Centers for Disease Control.

## Relying on an Evidence-based Approach

Implementation strategies to improve visitor health by promoting physical activity should rely on scientific evidence. The Task Force on Community Preventive Services, with the review of interventions that promote physical activity. On the basis of strong evidence of effectiveness, the Task Force recommends: creation of or improved access to places for physical activity, combined with distribution of information (outreach) that increases public awareness of these places. What has not been studied or determined is the effectiveness of implementing this intervention strategy in national parks. Additionally, scientific evidence suggests the following:

- The active living and leisure sciences can provide a means for NPS to measure and report outcome measures that have a direct connection to health.
- The National Park System offers outstanding opportunities for healthful and appropriate activities that contribute to the physical well-being of visitors.
- Through appropriate design and programming interventions, the NPS could increase the number of visitors who use parks for healthful recreation.
- Measurement of active visits could be achieved through the use of: pedometers, infra-red counters, visual observation, surveys, on-line self-reported log of activity (including use of existing opportunities such as the President's Challenge program, offered by the President's Council on Physical Fitness and Sports), a passport program, GPS monitoring, wearable radio frequency identification (RFID) tags similar to those used for marathons and other events and other creative means.
- Communications effectiveness in raising the awareness of park visitors to the health benefits derived from outdoor recreation can be measured in terms of efficiency (numbers reached) and effectiveness (impact on behavior and knowledge).





## Committee recommendations

Committee members embrace a collective vision for the National Park Service to address the topic of Health and Recreation, as follows:

The National Park Service conveys health benefits to the American public by providing places for healthful, physically active recreation in the great outdoors.

The National Park Service is uniquely suited and situated to:

- Promote parks as fun, attractive, accessible places for people to be active;
- Encourage increased physical activity among park visitors; and
- Influence park visitors to become more physically active via outdoor recreation activities in their home communities.

The Committee recommends that the National Park Service undertake seven pilot intervention projects beginning in 2006. The purpose of the pilots is to test, measure and validate the premise that parks contribute to healthy lifestyle through active participation in park based recreational activities.

These pilots consist of three “destination” parks—Sitka National Historical Park, Zion National Park and Acadia National Park, and four “urban” parks—Cuyahoga Valley National Park, Chesapeake and Ohio Canal National Historical Park, Point Reyes National Seashore and Timucuan Ecological and Historic Preserve. Each of these pilots (detailed in Appendix A—Health and Recreation Pilot Park Concept Plans) will focus on the following key outcomes in undertaking their pilot intervention projects:

Outcome 1: Increase awareness of health benefits by park visitors derived from participation in recreation in National Parks.

Outcome 2: Increase healthful recreation/physical activity behavior in national parks.

Outcome 3: Increase healthful recreation/regular physical activity behavior as a lifestyle at home.

The minimum threshold for healthful recreation activities for National Park Service communications, evaluation and reporting purposes is 30 minutes of activity (walking, biking, paddling, etc.) per day visit. This corresponds to the Surgeon General's endorsement of the physical activity recommendation for adults to engage in a minimum of 30 minutes of moderate-intensity physical activity on most, preferably all, days of the week.

Summary Table. Pilot Park Intervention Concepts

PARK NAME	RECREATIONAL ACTIVITY			GOALS <sup>1</sup> ADDRESSED			TARGET AUDIENCE					RESOURCE	PARK GOALS/ GENERAL MANAGEMENT PLAN ADDRESSED
	WALKING	CYCLING	PADDLING	1	2	3	LOCAL COMMUNITY	LOCAL YOUTH	LOCAL MINORITY	CRUISE SHIP PASSENGERS	PARK VISITORS		
CUYAHOGA VALLEY NATIONAL PARK	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			Trail, Park and Community Destinations	“Parks to the People” enabling legislation to provide recreational open space necessary to the urban environment.
SITKA NATIONAL HISTORICAL PARK	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		Trail, Park and Community Destinations	Park goals to provide authentic, relevant, quality interpretive and education programs and products for a broad range of visitors and stakeholders; and to develop and maintain effective working relationships with internal and external partners to achieve the park mission.
CHESAPEAKE AND OHIO CANAL NATIONAL HISTORICAL PARK	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Trail, Park and Community Destinations	Enabling legislation to develop the potential of the canal for public recreation.
TIMUCUAN ECOLOGICAL AND HISTORIC PRESERVE			<input checked="" type="checkbox"/>			St. Johns River, Atlantic Ocean, Park Destinations	Park goals to improve water-based recreational and interpretive access, improve non-motorized (less resource impacting) access to Preserve resources, and increase public appreciation of cultural and natural resources of the Preserve.						
POINT REYES NATIONAL SEASHORE	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Trail, Pacific Ocean	Enabling legislation to save and preserve for purposes of public recreation, benefit, and inspiration, a portion of the diminishing seashore of the United States that remains undeveloped.						
ZION NATIONAL PARK	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	Trail, Park and Community Destinations	Park goals to provide park visitors educational and recreational opportunities that foster an appreciation of Zion and its resources, and ensure that visitor impacts do not impair resources.
ACADIA NATIONAL PARK	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Trail, Park and Community Destinations	Park goals to improve non-motorized access to the Park; avoid adverse impacts on currently undisturbed species and habitats.

<sup>1</sup>GOAL 1—Increase awareness of health benefits by park visitors derived from participation in recreation in National Parks.

GOAL 2—Increase healthful recreation/physical activity behavior in national parks.

GOAL 3—Increase healthful recreation/regular physical activity behavior as a lifestyle at home.

The communications strategy should accomplish the following objectives:

- Convey the findings of the seven pilot projects so that parks can replicate successful intervention strategies and apply findings to NPS performance measurements;

Each Health and Recreation Pilot Park Concept Plan proposes an intervention strategy aligned with the Committee’s vision statement that seeks to address one or more of the three outcome measures. Each of the concepts details the specific resource, the audience, the activity, the goals, a measurement tool, a list of partners, and a realistic timeline (see Summary Table—Pilot Park Intervention Concepts, page 10).

- NPS should consider various opportunities for funding both within NPS and through various partner and external sources. An implementation strategy should be developed working with the National Park Foundation to identify and explore funding opportunities.
- NPS should rely on a collective team effort among NPS Interpretive staff, Rivers and Trails Program staff and the staff from NPS Social Science Program and Cooperative Ecosystem Studies Units in order to implement recommendations of this Report effectively. (See Appendix B—Program Descriptions)
- NPS should designate a staff person to provide technical assistance and oversight of the interventions in tandem with a principle investigator to lead the evaluations.

The Committee believes that outcomes from the pilot projects will lead to NPS employing health and recreation interventions servicewide. However, this assertion needs to be scientifically demonstrated. The Committee further believes that the results derived from the pilot projects will provide an irrefutable means for NPS to affirm its role in contributing to our nation’s health through interpretive based messaging interventions. Therefore, we recommend that NPS, through its Interpretive and Social Science Program, work with the Cooperative Ecosystem Studies Unit (CESU) system to design and implement a set of evaluation methods for each of the pilot projects to:

- Develop a methodology for measuring active visits in NPS park areas;
- Improve its internal capacity to measure participation in outdoor recreation activities at the national and park level to determine use patterns and identify trends and use characteristics; and
- Consider examining other key issues related to health including mental well-being and nutrition as they relate to NPS.

The Committee recommends a deliberate and detailed approach to sharing the results and possibilities generated by this Report and the pilot projects. A Health and Recreation Communications Plan will facilitate success, both in the short and long term, by proactively engaging and informing specific audiences. The Communications Plan should define the boundaries, clarify expectations, and customize messages to create greater potential for shared commitment at many levels. By undertaking a purposeful effort to

communicate with all staff, volunteers, concessions employees, recreationists, and partners the NPS can foster informed messengers to the public. References to widely accepted forms of recreation (walking, biking, paddling) and the long tradition of these types of recreation in parks beginning with John Muir, links a rich history to a healthy future. The Committee suggests the Health and Recreation Communications Plan be developed upon completion of the pilots and evaluation of the intervention strategies.

- Encourage park visitors to actively participate in outdoor recreation activities while visiting NPS areas and to continue participation by making use of local park and recreation lands when they return to their home communities both directly and in cooperation with such partners as concessioners, gateway communities and permittees; and
- Utilize NPS interpretive skill sets to communicate the benefits of healthful participation in outdoor recreation in the national parks to the public (as well as to NPS employees, who are critical messengers for reaching the public);
- Provide consistent information about where recreation opportunities exist in park units and adjacent public lands;
- Integrate outreach and communication messaging that encourage physical activity in tandem with visitor safety information;
- Use all tools available to incorporate health and recreation messaging throughout the national park system, to communicate with visitors as well as NPS staff and partners.



# Acknowledgements

## Committee Members

Dr. George Willeford III	National Park System Advisory Board, Committee Chair
Ernest Quintana	NPS Midwest Regional Director, Committee Vice Chair
Dr. David M. Buchner, MD, MPH	Chief, Physical Activity and Health Branch, Division of Nutrition and Physical Activity, Centers for Disease Control
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Kathy J. Spangler	Director, National Partnerships, National Recreation and Park Association
Dr. Michael Suk, MD, JD, MPH	White House Fellow, University of Florida, School of Medicine

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Dr. James Gramann	NPS Chief Visiting Social Scientist
Linda Wright	NPS Organization Specialist

## Health and Recreation Pilot Park Projects

John Debo, Jennie Vasarelyi	Cuyahoga Valley National Park
Greg Dudgeon, Liz Roberts	Sitka National Historical Park
Barbara Goodman, Dan Tardona	Timucuan Ecological and Historic Preserve
Kevin Brandt, Bill Justice, Kathy Kupper	Chesapeake and Ohio Canal National Historical Park
Don Neubacher, John A Dell'Osso	Point Reyes National Seashore
Jock Whitworth, Tom Haraden	Zion National Park
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Unilever Lipton/Healthy Parks—Healthy Living  
Outdoor Industry Foundation  
National Park Foundation

# Appendices

Appendix A—Health and Recreation Pilot Project Concept Plans

Appendix B— Program Descriptions

## Health and Recreation Pilot Project Concept Plans

- **CUYAHOGA VALLEY NATIONAL PARK**
  
- **SITKA NATIONAL HISTORICAL PARK**
  
- **CHESAPEAKE AND OHIO CANAL NATIONAL HISTORICAL PARK**
  
- **TIMUCUAN ECOLOGICAL AND HISTORIC PRESERVE**
  
- **POINT REYES NATIONAL SEASHORE**
  
- **ZION NATIONAL PARK**
  
- **ACADIA NATIONAL PARK**

## DESCRIPTIONS

### NPS INTERPRETATIVE DEVELOPMENT PROGRAM

The National Park Service Interpretive Development Program encourages the stewardship of park resources by facilitating meaningful, memorable visitor experiences. The program is based on the philosophy that people will care for what they first care about. This is accomplished by aiming for the highest standards of professionalism in interpretation.

The Interpretive Development Program provides NPS mission-based training and development curriculum, field-developed national standards for interpretive effectiveness, peer review certification program, developmental tools and resources. The Interpretive Development Program is designed to foster accountability and professionalism in interpretation in the NPS, facilitate meaningful, memorable experiences for all visitors, result in a higher level of public stewardship for park resources, and facilitate learner-driven skill development.

### NPS RIVERS, TRAILS AND CONSERVATION ASSISTANCE PROGRAM

The NPS Rivers, Trails and Conservation Assistance Program (RTCA) implements the natural resource conservation and outdoor recreation mission of the National Park Service in communities across America. The vision of the program is a network of parks, rivers, trails, greenways and open spaces that promotes quality of life and links people to their natural and cultural heritage. RTCA has a demonstrated facility in bringing together partners to implement health and recreation projects all across the country and consulting with NPS Superintendents and potential partners in communities and states around NPS areas to identify and conduct projects.

### NPS SOCIAL SCIENCE PROGRAM

The objectives of the NPS social science program are to conduct and promote state-of-the-art social science related to the mission of the National Park Service and deliver usable knowledge to NPS managers and to the public. The role and functions of the Social Science Program are to: provide leadership and direction to the social science activities of the NPS, serve as a liaison with other programs of the NPS and the Department of the Interior, provide technical support to parks, park clusters, support offices and regional offices, and support a program of applied social science research related to the national research needs of the NPS.

### COOPERATIVE ECOSYSTEM STUDIES UNITS

The national network of Cooperative Ecosystem Studies Units (CESU) was created to provide research, technical assistance and education to federal land management, environmental, and research agencies and their partners. They also provide support in the biological, physical, social, and cultural sciences needed to address natural and cultural resource issues and interdisciplinary problem solving at multiple scales and in an ecosystem context. Each CESU consists of several federal agencies, a host university, and partner institutions that bring additional expertise to the CESU to complement the skills of the host university. Participating agencies include the Bureau of Land Management, the Bureau of Reclamation, the USGS Biological Resources Division, the U.S. Forest Service, the Department of Energy, and the National Oceanic and Atmospheric Administration.