



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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Larry Selzer	President, The Conservation Fund
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

## Key NPS Staff Support to the Committee

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Alan Turnbull	NPS Rivers Trails and Conservation Assistance Program
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
Sheridan Steele, Charlie Jacobi	Acadia 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**



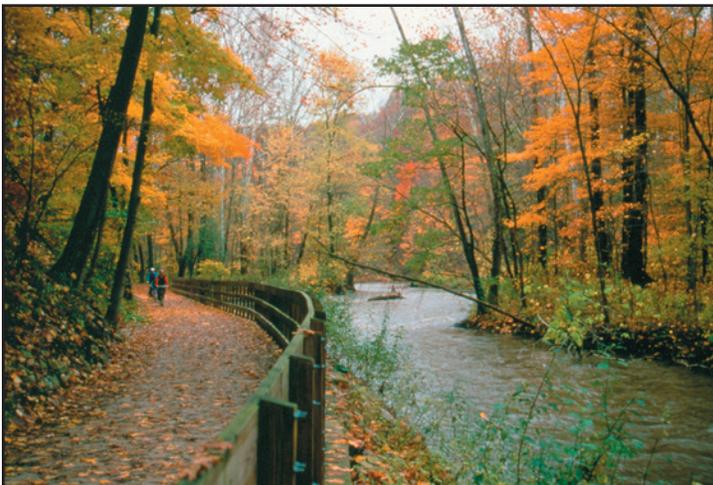
# Health and Recreation Initiative

Cuyahoga Valley National Recreation Area has developed the following concept regarding the Health and Recreation Initiative

## Community-Based Promotion of Health and Recreation on the Ohio & Erie Canal Towpath Trail

Recreational opportunities are a cornerstone of the purpose of Cuyahoga Valley National Park. The park's enabling legislation states that the park was established for the purpose of "providing for the needed recreational open space necessary to the urban environment."

Health and wellness issues cross demographic boundaries, and it is hoped that by developing programs and promotional materials tied to health and wellness targeted to under-served audiences, the park may be able to fulfill its long-standing goal to bring "Parks to the People."



Bikers along the river in fall at Ohio & Erie Canalway, Maryland.

## Specific Resource

Ohio & Erie Canal Towpath Trail in Cuyahoga Valley National Park and the Ohio & Erie National Heritage Canalway.

## Who is the Audience

Residents in the demographically mixed Akron neighborhoods adjacent to the Towpath Trail between North Street and Memorial Parkway. This area is three to six miles south of Cuyahoga Valley National Park and within the Ohio & Erie Canalway.

## Activity

We envision a campaign of programs and marketing activities that will be refined through joint planning with community residents. The goal of the campaign is increased use of the Towpath Trail both in the community and within Cuyahoga Valley National Park. Elements of the campaign could include:

### Program

- Campaign kick-off and ending events to include an activity combining trail and train transportation in cooperation with Cuyahoga Valley Scenic Railroad
- On-going ranger-guided walks and/or bicycle rides
- A "spree" set of activities with an incentive for completion

### Marketing

- Flyer/rack card distributed through schools and community organizations
- Poster for schools, community organizations, and health organizations
- Business-based marketing, such as grocery bag messages
- Advertising in local media outlets that target the community
- Public art
- On-going park communication tools (Schedule of Events, Press Releases, web sites)

## Goals Addressed:

### Outcomes 1-3

- Increase awareness of health benefits by park visitors derived from participation in recreation in National Parks.
- Increase healthful recreation/ physical activity behavior in National Parks.
- Increase healthful recreation/ regular physical activity behavior as a lifestyle at home.

### Measurement Tool

Two measurement tools will be employed: phone surveys and trail counts. Pre- and post-phone surveys, focused on self-reports of recreational behavior and awareness of health benefits, will be administered to community residents. The budget is based on a 400-person sample size in each survey, assuming a 10-minute phone interview with intensive follow-up efforts to reduce non-response bias. Trail counts will be used to measure towpath use before, during, and

after the intervention. To ensure accuracy, trail counters will be periodically calibrated by human observers. Systematic observation may be used to record the race of hikers (African American or white) during the same periods. A second day-use trail may be monitored to determine if there is a general increase or decrease in trail use in the park not related to the marketing activity. This would allow us to separate out the effect of the interpretive messages from other factors that might be influencing towpath use during the evaluation period.

### Partners

The program will be coordinated by the National Park Service in cooperation with its friends group (Cuyahoga Valley National Park Association) and the NPS Rivers, Trails and Conservation Assistance Program. Ohio & Erie Canalway partners will also be invited to participate. Other partners will include political leadership, schools, and community-based organizations.

### Start-Up Date

- December 2005. Identify and recruit community-based planning team.
- Early January 2006. Hold planning workshop with community-based planning team to outline marketing and program campaign
- Mid-January 2006. Hold follow-up planning workshop with community-based planning team to finalize campaign elements.
- February – May 2006. Prepare for campaign implementation. Steps may include designing and printing marketing materials, developing advertising materials, and planning special event details.
- March 2006. Hire seasonal park ranger to support campaign development and implementation.
- May 2006. Conduct pre-treatment phone survey and trail counts
- June – August 2006. Campaign implementation, continue trail counts
- September 2006. Conduct post-treatment phone survey, continue trail counts

Mustill Store, a canal-era grocery store that is now a small museum along the Towpath Trail in north Akron. The Mustill image donated for use by Dick Whitehead.





# Health and Recreation Initiative

Sitka National Historical Park has developed the following concept regarding the Health and Recreation Initiative

## Take a Walk in Your Park

Sitka National Historical Park's "Take A Walk In Your Park" campaign is intended to promote the healthful, recreational and educational benefits realized by visiting the park on foot as an alternative to the motor coach tours experienced by many contemporary cruise ship passengers.

## Specific Resource

The natural and cultural setting of Sitka National Historical Park has enthralled Alaska travelers since the 1880s. With its beautiful coastal rainforest environment, visitors are awed by historic Indian totem poles and 19th century Russian architecture in an area that was the center of Russian influence in America and remains a center of the culture of Southeast Alaska and Alaska Natives to this day. The park provides today's visitors with the same opportunities for recreation and inspiration enjoyed by the early steamship travelers, while increasing their awareness that visiting parks on foot can help achieve healthier lifestyles.

## Who is the Audience

The 240,000 annual cruise ship passengers to Sitka.

## Activity

Year One: Cruise ship passengers are welcomed by uniformed rangers as they disembark in Sitka. Visitors are informed of the healthful activities available at the park, encouraged to walk the well-maintained trails and invited to join regularly scheduled ranger tours. Three interpretive rangers are located strategically at disembarkation points in town to maximize passenger contacts and increase walking tour participation. The "Take A Walk In Your Park" campaign lasts the duration of the cruise ship season, from early May through September.

Year Two: In addition to the intervention described above, rangers prepare a Healthy Parks campaign brochure describing the healthful, recreational and educational opportunities available at Sitka National Historical Park to visitors on foot. Schedules for ranger-led walks are included in the brochure. The publication is distributed to passengers onboard cruise ships prior to their arrival in Sitka. It is also distributed on Sitka-bound vessels by rangers at neighboring Glacier Bay and Klondike Goldrush National Parks. In addition to the park's natural and cultural history attractions, prospective visitors learn about walking and other recreational opportunities at the park, the distances between key features and accessibility for the infirmed or disabled.



Hikers along an entrance trail at Sitka National Historical Park.

## Goals Addressed: Outcome 2

- Increase healthful recreation/physical activity behavior in National Parks.

## Measurement Tool

Infrared trail counters installed at the park's three entrances and at Indian River Bridge. Counters are used to document weekly trail use during the cruise ship season(s), while rangers record the number of participants on each guided walk.

In Year One, a predetermined random schedule is implemented where campaign rangers do not greet passengers at disembarkation points for a week at a time throughout the season (control). During other randomly scheduled weeks they will greet passengers (intervention). At the end of the year, the numbers of trail walkers are determined for each week. The number of walkers documented in the park during the weeks with intervention (rangers meet, orient and encourage passengers to visit the park on foot) are compared with the numbers from those weeks without intervention. The comparison will determine whether there is a statistically reliable change in passenger use of the park due to intervention.

In Year Two, the same intervention methods and measurement tools are used, with the additional intervention of the shipboard Healthy Parks campaign brochure. The park will determine whether the brochure resulted in larger numbers of walkers in Year Two compared with Year One (no brochure intervention).

## Partners

The park envisions working with a partnership that includes: Cruise companies Holland America, Princess, Carnival, Celebrity, and/or Royal Caribbean, City of Sitka, State of Alaska, NPS Rivers, Trails and Conservation Assistance Program, Glacier Bay National Park, Klondike Goldrush National Historic Park.

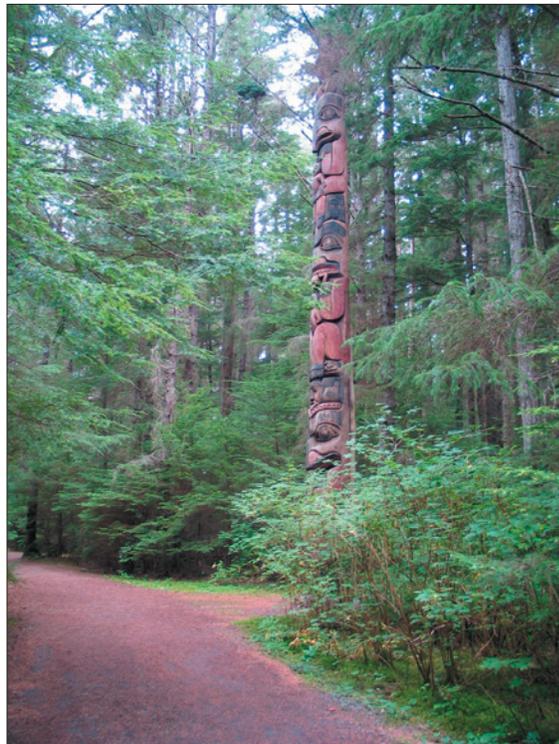
## Start-Up Date

### Year One

- Winter 2006: Implement campaign preparations, purchase equipment, recruit and hire park rangers.
- May through September, 2006: Implement intervention(s).
- Fall 2006: Determine intervention results, document and report findings

### Year Two

- Spring 2006: Draft campaign brochure, formalize cruise ship partnerships.
- Winter 2007: Publish and distribute brochure to cruise ship partners and neighboring parks.
- May through September, 2007: Implement intervention(s).
- Fall 2007: Determine intervention results, document and report findings to the NPS Advisory Board Health and Recreation Committee



Totem pole along trail at Sitka National Historical Park, Alaska.



# Health and Recreation Initiative

C & O Canal National Historical Park has developed the following concept regarding the Health and Recreation Initiative

## Your Towpath to Healthy Living

The park will endeavor to help people discover the many wonders of the canal while demonstrating how easy it is to incorporate more physical activity in their lives. U.S. Supreme Court Justice William O. Douglas, who frequently combined his office breaks with walks on the towpath, wrote that the canal “provided a refuge, a place of quiet and peace at the capital’s back door.” Following Justice Douglas’ example can lead people to a healthier lifestyle and greater understanding of the canal’s resources.

## Specific Resource

The canal literally travels through both business and residential areas in this section of the park, making it easily accessible to tens-of-thousands of people. This 15 mile stretch of the park includes 20 historic locks and a wide variety of canal structures. There are numerous access points for people to use to get on the towpath, and the park maintains visitor centers in Great Falls and Georgetown and a park partner operates a learning center at Lockhouse 8, midway between the two.

## Who is the Audience

The target audience will be people of all ages who live or work within walking distance of the park in the metropolitan Washington, DC area along the canal and don’t regularly engage in physical activity. One specific audience will be office workers from the buildings that line the canal in the neighborhood of Georgetown.

## Activity

The purpose of the program will be to entice people who don’t regularly engage in physical activity to walk 185 miles in 185 days on the canal towpath. The distance is the equivalent of walking the entire length of the canal from Washington, DC to Cumberland, MD. As participants reach designated “mileposts of accomplishments” along the way they will be rewarded with attainment prizes provided by sponsors to recognize their success.

The “Towpath to Healthy Living” program will focus on getting people to incorporate exercise into their everyday routine. The program will include factors intended to motivate people to maintain or increase their level of activity after participating in the

program. These features include introducing exercise partners or groups, demonstrating the ease of incorporating physical activity on the towpath into everyday routines, giving registered participants pedometers, and setting up electronic journals (e.g. [fitnessjournal.org](http://fitnessjournal.org)) that chart accomplishments.

Rangers will provide an introduction to the park and the pilot program by offering free guided walks at lunchtime and immediately after work in these areas on a regular schedule. The ranger-led programs would provide support and encouragement in establishing a work-out regimen, as well as introduce participants to potential long-term exercise partners and tell people how to register online for the program

The park will develop a series of downloadable interpretive media files for iPods and other MP3 players that could be used by participants to learn about the park’s nature and history as they walk along the trail. A typical ‘downloadable’ will include first person oral interviews with authentic early 20th century canallers, interspersed with excerpts of canal books, songs and historic sound effects.

## Goals Addressed: Outcomes 1-3

- Increase awareness of health benefits by park visitors derived from participation in recreation in National Parks.
- Increase healthful recreation/ physical activity behavior in National Parks.
- Increase healthful recreation/ regular physical activity behavior as a lifestyle at home.

## Measurement Tool

Registration will be required for participants to get the benefits and recognition associated with the program. Registration will allow us to keep track of the number of people involved in the program.

Because this is a new program, its participation baseline is zero. Therefore, the first way to evaluate the change in physical activity as a result of the program will be by the amount of activity (e.g., steps and miles) recorded by participants. Participants will record their steps into an online log which will serve as both a tracking device and feedback tool. However, this does not take into account that some participants may have been as active previously, either at home or in the park. So a web-based questionnaire could be administered to participants when they first register. This survey would ask registrants to estimate their previous level of physical activity on the towpath and at home. These levels could later be compared to the amount recorded during the intervention as another measure of the change in healthful activity. The survey

could also measure knowledge of the health benefits of walking on the towpath. If repeated at the end of the program, the survey could measure changes in this knowledge as a result of program participation.

## Partners

Potential partners include the President's Council on Physical Fitness and Sports, NPS Rivers, Trails and Conservation Assistance Program, environmental groups, formal park friends' organizations, commercial sponsors, hiking clubs, and citizens associations. The partnerships will allow the park pilot program to reach more people and also to provide additional resources to supplement the items requested for in the budget.

## Start-Up Date

Advance preparations would take place in the spring and early summer of 2006 with an implementation date in late June. The trial period would conclude on December 31, 2006. That way an expanded park wide implementation could coincide with New Year resolutions for 2007.



Cyclists and walkers find many recreational and healthful opportunities at Chesapeake & Ohio Canal NHP, Maryland.





# Health and Recreation Initiative

Timucuan Ecological & Historic Preserve has developed the following concept regarding the Health and Recreation Initiative

## Paddling to Promote Health at Timucuan Specific Resource

This project will introduce a kayaking program promoting health through history and recreation for disadvantaged urban youth at Timucuan Ecological & Historic Preserve. The Preserve is located entirely within the City of Jacksonville, Florida. Similar to many urban environments, Jacksonville contains an underserved urban and economically disadvantaged community. While many land based sites within the Preserve are accessible to some members of this community, water-based access is severely limited because of cost and transportation. As a model program, this project will promote awareness of health benefits by engaging these disadvantaged youth in a physical recreational activity kayaking, whereby also promoting opportunities to enlist lifestyle changes at home for these young people and their families.

All cultural and natural history resources within the Timucuan Ecological & Historic Preserve are influenced by water. Of the 46,000 acres contained within the Preserve, approximately 30,000 acres are aquatic. The Preserve waters include a great expanse of brackish water marshes, two major rivers (St. Johns and Nassau), a portion of the Intra-coastal Waterway as well as numerous tributaries connecting the marshes, rivers, the Atlantic Ocean and many upland areas associated with significant land based cultural and natural resources.

In a water-based activity such as kayaking, new users can experience diverse elements of significant prehistoric and historical events as well as enjoy a vast array of regional natural history, all the while enjoying a wonderful recreational pursuit. A particular resource area will serve as the focus for this project; the Kingsley Plantation, a historic Sea Island slave Plantation site located on Fort George Island.

## Who is the Audience

Jacksonville inner city youth participating in Sierra Club “Inner City Outings”, predominately young children and teens. A particularly important segment of this target community is young children and teens belonging to ethnic minorities. It is this segment of the underserved population that is in the most need of opportunities that promote physical activity and recreation within the context of cultural and natural heritage exposure and experience.

## Activity

The intervention is a campaign of programs and marketing activities that will be targeted to specific park areas to encourage increase use for health benefits. The interventions strategy would include the development of a brochure and signs for broad distribution, a press release to announce the health initiative, and some strategic advertising. Intervention education materials would stress the health value of recreation use in parks, specifically use of the three selected trails.



The Kingsley Plantation in Timucuan Ecological & Historic Preserve, Florida.

## Goals Addressed:

### Outcomes 1-3

- Increase awareness of health benefits by park visitors derived from participation in recreation in National Parks.
- Increase healthful recreation/ physical activity behavior in National Parks.
- Increase healthful recreation/ regular physical activity behavior as a lifestyle at home.

### Measurement Tool

A pretest survey of participants will be conducted as they register for the program, and a post-test survey of participants will be conducted at the completion of their kayaking activity. These surveys will measure awareness of the park as a place for healthful recreation, as well as knowledge of safe kayaking use. A count of participants in the kayaking program will be collected and vouchers provided at the program conclusion. The count will measure the increase in kayaking in this audience, since it's likely the baseline rate is zero. A count of vouchers used by participants will be collected during a community day park event to occur in October '07 in conjunction with the Kingsley Heritage Celebration. The number of vouchers returned will provide a measure of continuing participation in kayaking two-to-five months after the intervention.

## Partners

The Preserve staff envisions a water-based recreational activity that will be provided through a partnership with Sierra Club program "Inner City Outings" that targets Jacksonville inner city urban youth, Police Athletic League, Florida Park Service concessionaire located within the Preserve, Kayak Amelia and other kayaking outfitters, National Park Service (Timucuan Ecological & Historic Preserve), National Park Service Rivers, Trails and Conservation Assistance Program -Florida Field Office, Local Health Care Professional (expertise to assist in program-i.e. Dr. Suk), Preservation Project Jacksonville, and City of Jacksonville Department of Parks, Recreation & Entertainment.

## Start-Up Date

October '06- March '06. Outreach campaign (in conjunction with Sierra Club).  
April '07. Begin conducting pretest survey of participants.  
May '07- August '07. Provide field kayaking program, conduct post-test survey.  
October '07. Conduct a community day event in conjunction with the Kingsley Heritage Celebration.



Kayaking in Timucuan Ecological and Historic Preserve, Florida.



# Health and Recreation Initiative

Point Reyes National Seashore has developed the following concept regarding the Health and Recreation Initiative

## Create a Menu of Recreational Opportunities

To enhance the recreational value of this park as a destination, the park would create a menu of opportunities and explain the associated health benefits of hiking, bicycling, or walking at specific locations. The park receives over 2.0 million visits per year and has myriad types of recreational use.

## Specific Resource

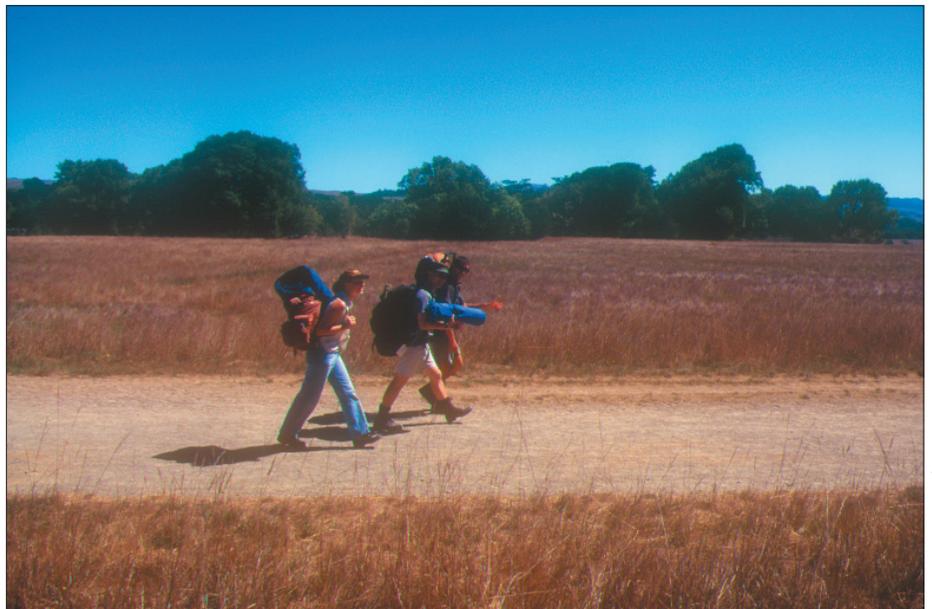
The specific resources to be utilized are three major trails at Point Reyes: the Cross Marin Trail (heavy bicycle use, 6 miles through Samuel P. Taylor State Park), Bear Valley Trail (4.2 mile main park trail with heavy local use), and Limantour Beach Trail (park user that generally strolls along beach, 2.3 miles to Coast Camp). These three locations were selected since they are fairly easy to access and include a combination of hikers and bikers, and are already heavily used, so we will be able to reach a large number of people.

## Who is the Audience

The audience will be general park visitors including local residents that use the National Seashore on a regular and frequent basis. The project would target visitors that engage in a range of recreational activities while in the park, including hiking, walking and bicycling. The park receives approximately 200,000 visitors per month year round, with approximately 70% coming from the nine local counties in the San Francisco Bay Area. (Sonoma State University surveys, 2001).

## Activity

The intervention is a campaign of programs and marketing activities that will be targeted to specific park areas to encourage increase use for health benefits. The interventions strategy would include the development of a brochure and signs for broad distribution, a press release to announce the health initiative, and some strategic advertising. Intervention education materials would stress the health value of recreation use in parks, specifically use of the three selected trails.



Hikers along the Bear Valley Trail, Point Reyes National Seashore, California.

## Goals Addressed:

### Outcomes 1-3

- Increase awareness of health benefits by park visitors derived from participation in recreation in National Parks.
- Increase healthful recreation/ physical activity behavior in National Parks.
- Increase healthful recreation/ regular physical activity behavior as a lifestyle at home.

## Measurement Tool

The park would use two major measurements. They are:

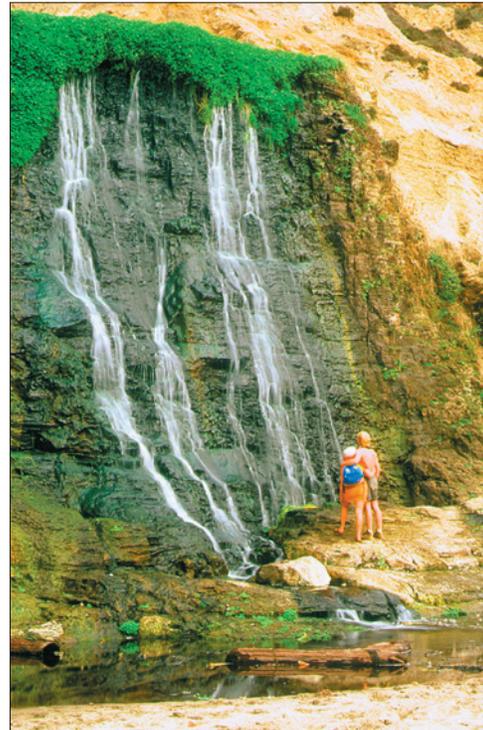
1. the number of users in specific areas (pre and post-intervention). Through direct observation and trail counters, the increase of users after information is provided to the public and marketing campaign is conducted would be determined.
2. a survey would be developed to determine if a change in recreational behavior occurs and what is the visitor's baseline knowledge of the health benefits of outdoor activities. With assistance from a local university, a statistical sampling of users would be interviewed to determine how often they exercise, their knowledge of the health benefits, and how they became knowledgeable of the park area.

## Partners

The program will be a strategic partnership project. The five main partners will be the NPS Rivers, Trails and Conservation Assistance Program based in Oakland, California State University System, Point Reyes National Seashore Association, West Marin Medical Clinic (Kaiser Permanente), and Point Reyes National Seashore.

## Start-Up Date

The project can be started in Fall 2006. This is a strategic time to implement the program because the park receives high visitation due to warm coastal weather. The park would need to be assured of funding by June due to the time needed to engage RTCA, local university, and other partners in planning and implementation.



Alamere Falls - one of the many rewards awaiting hikers at Point Reyes.



Hikers along Limantour Beach at Point Reyes National Seashore, California.



# Health and Recreation Initiative

Zion National Park has developed the following concept regarding the Health and Recreation Initiative

## Pa'rus Trail to Health in Zion

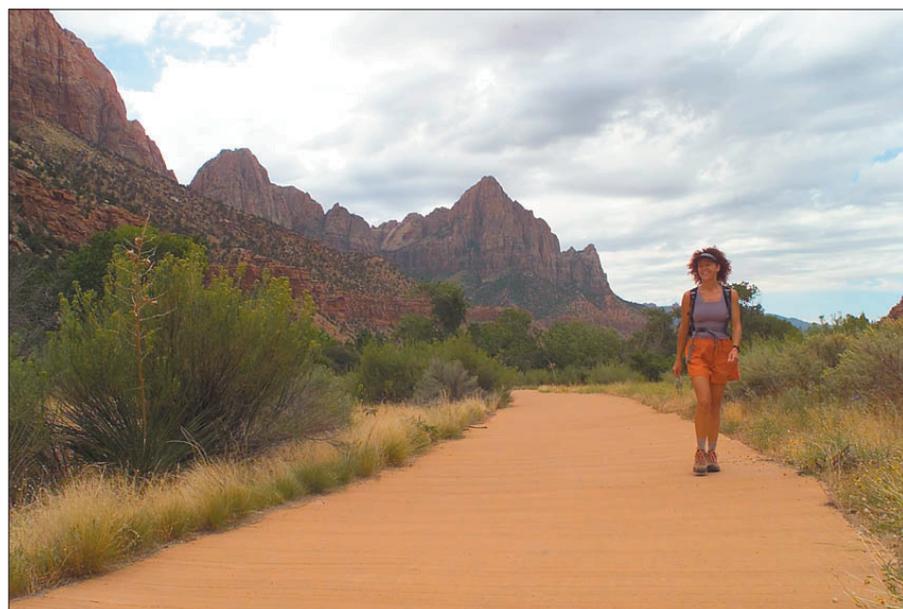
Zion National Park has many ways to inform park visitors of the availability, accessibility, and health benefits of hiking and biking on the Pa'rus Trail. The park plans to develop an education and outreach program to encourage visitors to get out of their cars and experience Zion for mental and physical health benefits. The encouragement would be to ride their bikes and hike from Springdale, Utah, or Zion's Visitor Center on the Pa'rus Trail and beyond. Trail users will be given a patch, stamp or pin as reward for biking or hiking the trail.

## Specific Resource

The Pa'rus Trail is a concrete connector trail in the park that extends 1.5 miles between the Zion Canyon Visitor Center and main shuttle stop to the Canyon Junction shuttle stop. The trail crosses the Virgin River by Foot Bridge five times as it winds its way to Canyon Junction. The trail is eight feet wide, level, wheelchair accessible and open to bicycles and pets on leash. The south end of the Pa'rus Trail is anchored by the Zion Canyon Visitor Center. Here the town of Springdale adjoins the park and the shuttle loops connect. The Zion Human History Museum is a half mile north of the Visitor Center.

## Who is the Audience

The main audience is day and overnight park visitors staying in the park and in the gateway community of Springdale. The trail is already used by locals for walking, dog walking, running, and biking. The local audience would be included in the marketing program, but is not likely to contribute significantly to an increase in trail use.



Hiker along the Pa'rus Trail, Zion National Park, Utah.

## Activity

We will encourage visitors to use the trail, whether on foot or bicycle, using interpretive techniques as an intervention to target park visitors with the following:

- Add a section promoting the trail's health benefits in the Zion Map & Guide, the park's main planning document that is given to all visitors as they enter the park and mailed on request in advance. Also add it to the planning map;
- Add a section to the park's web site promoting the health benefits of using the trail;
- Place posters in hotels, motels, Zion Lodge, restaurants, outfitters, and bicycle rental shops promoting use of the trail for healthful recreation;
- Place posters in campground bulletin boards and the visitor center and museum;
- Add a section to the map inside the shuttle buses;
- Develop promotional script for bus shuttle drivers announcing the opportunity to hike the Pa'rus at the Canyon Junction stop and informing riders of the healthful benefits of doing this;
- Provide information and interpretive prompts for park information desks and ranger-led activities;
- Press release for area news media promoting healthful recreation on the trail.

The intervention will include a reward and recognition program that may include:

- Passport-like rubber stamp (could be tied to a national program, reward for acquiring certain # of stamps);
- Pin, patch, sticker, bumper sticker;
- Sticker for their National Parks, Golden Age, or Golden Eagle Pass.

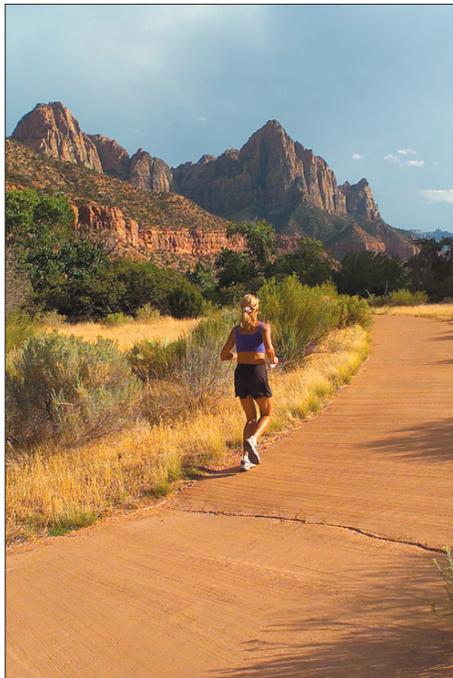
## Goals Addressed:

### Outcome 2

- Increase healthful recreation/physical activity behavior in National Park.

## Measurement Tool

Evaluating the increase in healthful activity as a result of the intervention will be done by measuring Pa'rus Trail use with counters before and after the marketing activity. Infrared and metal detecting counters will measure walkers and bicycle riders separately. The trail counters will be periodically calibrated by human observers to ensure accuracy in counts. A second day-use trail may be monitored to determine if there is a general increase or decrease in trail use in the park not related to the marketing activity. This would allow us to separate out the effect of the interpretive messages from other factors that might be influencing trail use during the evaluation period.



## Partners

Zion Canyon Visitors Bureau, Town of Springdale, and Town of Rockville, Zion Natural History Association, NPS Rivers, Trails and Conservation Assistance Program, Springdale and Rockville, UT, hotels and bed and breakfasts.

Other potential partners: International Health Care (IHC), Hurricane Family Clinic, Zion Canyon Medical Clinic, Dixie Regional Medical Center, Gold's Gym.

## Start-Up Date

### 2006 Base line Data

- Purchase counters, February 2006
- Install, calibrate counters, March 2006
- Count trail use, April 1, 2006-March 31, 2007 (Pa'rus Trail and control trail)

### 2007 Implement

- Prepare marketing materials, Fall 2006
- Second baseline measurement, April 1-April 30, 2007 (Pa'rus Trail and control trail)
- Distribute marketing materials, May 1 – September 30, 2007
- Post-test measurement, May 1 – September 30, 2007 (Pa'rus Trail and control trail)
- Evaluate results, Winter 2008/09

Jogger along the Pa'rus Trail at Zion National Park, Utah.



# Health and Recreation Initiative

Acadia National Park has developed the following concept regarding the Health and Recreation Initiative

## Great Meadow Loop Trail Health and Fitness Project

This project will promote hiking and walking on the Great Meadow Loop Trail to park visitors, especially those visiting downtown Bar Harbor. It will measure hiking use and the success of a multi-media promotional campaign through visitor counts and visitor surveys. Marketing of the trail will focus on park attractions at Sieur de Monts Springs (Abbe Museum of Native American Antiquity, Wild Gardens of Acadia, and the Acadia National Park Nature Center) and the fitness benefits of walking.

## Specific Resource

The specific resource for the focus of this project is the Great Meadow Loop Village Connector Trail, a footpath extending from the Town of Bar Harbor to Acadia National Park. The Great Meadow Loop Trail was built in 1999 as a Village Connector Trails project to re-connect the park and the Town of Bar Harbor for foot traffic.

## Who is the Audience

The audience is all park visitors, but especially those visiting Bar Harbor for the day or staying overnight in downtown Bar Harbor. It includes residents in the downtown area.

## Activity

We propose a multimedia marketing campaign focused on a four-week period in the summer of '07 to raise awareness of the trail and encourage its use to access the Wild Gardens of Acadia, the Abbe Museum, the Acadia National Park Nature Center and hiking trails

at the Sieur de Monts area of the park. We will emphasize the fitness benefits of walking in the campaign. Marketing will also promote the use of the Island Explorer bus to facilitate a one-way walk in either direction. The multimedia campaign will include PSA's, printed brochures, posters, new directional signs, newspaper ads and news articles. Key messages of the campaign will include a focus on fitness benefits, level of difficulty, hike times, distances, attractions at Sieur de Monts, birdwatching in Great Meadow, history information/interpretation and trail connections.



Winter walkers cross CCC style bridge along Great Meadow Loop Trail Acadia National Park, Maine.

## Goals Addressed:

### Outcomes I-2

- Increase awareness of health benefits by park visitors derived from participation in recreation in National Parks.
- Increase healthful recreation/ physical activity behavior in National Parks.

### Measurement Tool

The measurement tools for this project are an electronic trail counter and visitor surveys. Both tools would be used over a 4-week period from July 27 - August 23, 2006. Summer 2006 would be used as a control to obtain baseline measurements of trail use. Summer '07 would market the trail following the campaign described above and continue to measure trail use. These measurements would allow us to estimate the impact of the marketing campaign. A second day-use trail may be monitored to determine if there is a general increase or decrease in trail use in the park not related to the marketing activity. This would allow us to separate out the effect of the interpretive messages from other factors that might be influencing trail use during the evaluation period.

The electronic trail counter would record use continuously at one key location (farthest from town) on the Great Meadow Loop Trail. Surveys would be administered to a representative sample of visitors during the control and experimental periods. In the survey we would ask some demographic questions (residency e.g.), and why they walked this trail today (to get to Sieur de Monts, for health, saw promotion materials etc.).

Success would be measured by a statistically significant increase in the numbers of people using the trail during the experiment (as compared with the control), and the number of respondents who walked the trail because of one or more elements of the campaign with a special focus on health-related benefits. We propose to hire a graduate student, university professor, or other research consultant to oversee the research component of this project from beginning to end.



## Partners

Friends of Acadia (FOA), Healthy Acadia Coalition, Mount Desert Island (MDI) Hospital, MDI YMCA, Bar Harbor Chamber of Commerce, non-Chamber of Commerce accommodations in town, Downeast Transportation, Jackson Laboratory, NPS Rivers, Trails and Conservation Assistance Program, and Jeff Dobbs Productions.

## Start-Up Date

May 06 - Notification of funding  
July 06 - August 06 - Control period, with no marketing intervention, evaluation begins  
June 07 - July 07 - Preparation of intervention activity materials  
July 07 - August 07 - Multi-media marketing applied, evaluation continues  
Fall '06 - Winter '07 - Data analysis and report writing by consultant

Emery Path - the Great Meadow Loop Trail provides a connection for several highly crafted stone trails leading up Dorr and Champlain Mountains.

## 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.