

## Table of Contents

### Keynote Address

Discipline and Chaos <i>Tom Goodale</i> .....	3
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### Management and Planning

Recreational Leasing of Industrial Forestlands in New York State <i>Sergio Capozzi and Chad P. Dawson</i> .....	11
Environmental Attitude-Behavior Correspondence Between Different Types of Forest Recreationists <i>Brijesh Thapa and Alan Graefe</i> .....	20
Support for Recreational Trail Development and Community Attachment: A Case of the Soucook River Watershed <i>Jodi L. Michaud and Robert A. Robertson</i> .....	28
Human Territoriality: An Examination of a Construct <i>Thomas D. Wickham and Harry C. Zinn</i> .....	35
What's Happening in Our Parks? <i>G. Scott Place</i> .....	40
Open Space and Imagination <i>G. Scott Place and Bruce Hronek</i> .....	43

### Economics of Outdoor Recreation and Tourism

Opinions of Elk Viewers on a Proposed Pennsylvania Elk Hunt <i>Bruce E. Lord, Charles H. Strauss, and Walter M. Tzilkowski</i> .....	49
The Role of Non Timber Forest Products: A Case Study of Gatherers in the Eastern United States <i>Siri Doble and Marla Emery</i> .....	53
Degraded Visibility and Visitor Behavior: The Case of New Hampshire's White Mountain National Forest <i>John M. Halstead, Wendy Harper, and L. Bruce Hill</i> .....	58
Estimating Relative Values for Multiple Objectives on Private Forests <i>Donald F. Dennis, Thomas H. Stevens, David B. Kittredge, and Mark G. Rickenbach</i> .....	64
Cost Consideration as a Factor Affecting Recreation Site Decisions <i>Allan Marsinko, John Dwyer, and Herb Schroeder</i> .....	68
Attendance Structure and Economic Impact of the National Road Festival <i>Charles H. Strauss and Bruce E. Lord</i> .....	74

### Tourism

A Comparison of Tourists and Local Visitors to National Estuarine Research Reserve Sites <i>Allan Marsinko, William C. Norman, and Tiffany J. McClinton</i> .....	83
Individuals' Interpretation of Constraints: A New Perspective on Existing Theory <i>Po-Ju Chen, Deborah Kerstetter, and Linda Caldwell</i> .....	89
Culture, Heritage and Tourism Destination Choices <i>Achana Francis, Joseph T. O'Leary, and Alastair Morrison</i> .....	94

A Measurement of the Experience Preferences of Central Appalachian Mountain Bicyclists <i>Roy Ramthun and Jefferson D. Armistead</i> .....	104
Effect of Balanced Information on Attitudes Towards Open Ocean Aquaculture Development in New England <i>Robert A. Robertson and Erika L. Carlsen</i> .....	107
<b>Characteristics of Outdoor Recreationists</b>	
Use and Users of the Appalachian Trail: A Geographic Study <i>Robert E. Manning, William Valliere, Jim Bacon, Alan Graefe, Gerard Kyle, and Rita Hennessy</i> .....	115
A Comparison of Recreation Conflict Factors For Different Water-Based Recreational Activities <i>Cheng-Ping Wang and Chad P. Dawson</i> .....	121
SCUBA Diving & Underwater Cultural Resources: Differences in Environmental Beliefs, Ascriptions of Responsibility, and Management Preferences Based on Level of Development <i>Sharon L. Todd, Tiffany Cooper, and Alan R. Graefe</i> .....	131
<b>Ethnicity and Culture</b>	
Recreation Safety in Municipal Parks - Bloomington, Indiana and Tsukuba, Japan: A Comparison Study of Risk Management <i>Bruce Hronek</i> .....	143
The Meaning of Leisure: Conceptual Differences Between Americans and Koreans <i>Joohyun Lee, Sae-Sook Oh, and Jae-Myung Shim</i> .....	145
Universal Campsite Design: An Opportunity for Adaptive Management <i>Jason R. Biscombe, Jeri E. Hall, and James F. Palmer</i> .....	150
A Life to Risk: Cultural Differences in Motivations to Climb Among Elite Male Mountaineers <i>Patrick T. Maher and Tom G. Potter</i> .....	155
Outdoor Recreation Behaviors and Preferences of Urban Racial/Ethnic Groups: An Example from the Chicago Area <i>John F. Dwyer and Susan C. Barro</i> .....	159
<b>Methodological Issues</b>	
Evaluating Multiple Dimensions of Visitors' Tradeoffs Between Access and Crowding at Arches National Park Using Indifference Curve Analysis <i>Steven R. Lawson and Robert E. Manning</i> .....	167
Effective Survey Automation <i>John Weisberg and Jay Beaman</i> .....	176
Weighting Issues in Recreation Research and in Identifying Support for Resource Conservation Management Alternatives <i>Amy L. Sheaffer, Jay Beaman, Joseph T. O'Leary, Rebecca L. Williams, and Doran M. Mason</i> .....	183
Intervention for the Collaborative Use of Geographic Information Systems by Private Forest Landowners: A Meaning-Centered Perspective <i>Kirk Sinclair and Barbara A Knuth</i> .....	187
Estimating Social Carrying Capacity Through Computer Simulation Modeling: An Application to Arches National Park, Utah <i>Benjamin Wang, Robert E. Manning, Steven R. Lawson, and William A. Valliere</i> .....	193
Does the Suggestion That Respondents Recall Events Chronologically Significantly Influence the Data Collected? <i>Andrew Hill, Jay Beaman, and Joseph O'Leary</i> .....	201

## Marketing and Management in Outdoor Recreation and Tourism

Importance-Performance Analysis: An Application to Michigan's Natural Resources <i>Gloria Sanders, Erin White, and Lori Pennington-Gray</i> .....	207
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### Poster Session

The Eastern States Exposition: An Exploration of Big E Tourist Expenditures <i>Robert S. Bristow and Heather Cantillon</i> .....	213
Sustainable Tourism Development: The Case Study of Antalya, Turkey <i>Latif Gurkan Kaya and Richard Smardon</i> .....	222
The Role of Avocational Archaeology and History in Managing Underwater Cultural Resources: A Michigan Case Study <i>Gail A. Vander Stoep</i> .....	228
Tornado Chasing: An Introduction to Risk Tourism Opportunities <i>Heather Cantillon and Robert Bristow</i> .....	234
Community Based Open Space Planning: Applications of a GIS <i>Christian Mettey, Brian Demers, Nicole Halper, Robert Bristow, and Stephanie Kelly</i> .....	240
A Spatial Analysis of Wilderness Campsites in Lyell Canyon, Yosemite National Park <i>Steven R. Lawson and Peter Newman</i> .....	245

### Management Presentation

Interpretation Programming in the NYS Forest Preserve Campgrounds: Successful Consensus Building, Partnership, and Regional Management <i>W. Douglas Fitzgerald</i> .....	251
Don't Be Thru-Hiking; Start Uhiking <i>Kirk D. Sinclair</i> .....	256
Using Technology to Develop Connections Between Individuals, Natural Resources, and Recreation <i>Wen-Huei Chang, Carolyn H. Fisher, and Mark P. Gleason</i> .....	260
Monitoring Visitor Satisfaction: A Comparison of Comment Cards and More In-Depth Surveys <i>Alan R. Graefe, James D. Absher, and Robert C. Burns</i> .....	265

### Roundtables

The Forest Service's Recreation Agenda: Comments on the Roles of Research and State and Private Forestry in the Northeast <i>Thomas A. More and Mark J. Twery</i> .....	273
Development of a Use Estimation Process at a Metropolitan Park District <i>Andrew J. Mowen</i> .....	276
Nature Speaks - An Exploratory Study of Nature as Inspiration <i>Will LaPage</i> .....	278
Great Gulf Wilderness Use Estimation: Comparisons from 1976, 1989, and 1999 <i>Chad P. Dawson, Mark Simon, Rebecca Oreskes, and Gary Davis</i> .....	283
New England's Travel & Tourism Markets: Trends in the Geographic Target Markets in the 90's <i>Rodney B. Warnick</i> .....	289

**Founder's Forum**

Notes on My Trip Through Nebraska, or Some Alternative marketing Principles for Parks and Recreation  
*Alan R. Graefe* .....301

**Index of Authors** .....307

# **Management Presentation**

# INTERPRETATION PROGRAMMING IN THE NYS FOREST PRESERVE CAMPGROUNDS: SUCCESSFUL CONSENSUS BUILDING, PARTNERSHIP, AND REGIONAL MANAGEMENT

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**Abstract:** The focus of this paper concerns how an established program was modified to better support the mission of the sponsoring agency. As an introduction, the NYS Forest Preserve and the Department of Environmental Conservation's role is discussed. Formal educational programming has taken place in the Forest Preserve campgrounds since the 1930's. The present Interpreter Activity Program is a direct outgrowth of earlier offerings. It is based on an established list of goals set forth in 1996 by DEC campground managers. Formation of a partnership between the Bureau of Recreation and the Bureau of Environmental Education has helped to meet these goals. Program development and administration is guided by a steering committee with a strong emphasis on consensus building. The committee process has worked well and goals have been reached. New initiatives have been developed and attempted. Daily activities are offered using seasonal personnel with on-premise oversight. Regional management of the program allows for consideration of local interests and leads to acceptance of the program goals. Staff members are hired on the regional level and establish strong working relationships with local managers. A blend of both recreational and interpretive programs are offered, leading to a high level of customer satisfaction and accomplishment of program goals. Special offerings such as the Junior Naturalist Program are extremely popular with camping families. Program evaluation is accomplished via surveys, on-site visits, and analysis of reported data. Reasons for success of the program are explored in this paper along with a look to the future.

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## Introduction

Outdoor recreation programming can be different things to different people. For some it may be macaroni necklace making or a spirited game of staff versus campers volleyball. Still others may prefer a guided walk filled with interesting facts about the natural world. At campgrounds in New York State's Adirondack and Catskill Forest Preserves, the Department of Environmental Conservation has developed a balanced approach to programming. Every year, over 25,000 people with an assortment of interests find something of value from the daily activities offered. The Interpreter Activity Program provides a high quality, organized, recreational, educational, and environmental awareness experience for campers and day users. Eight campgrounds offer formal programming from the end of June to Labor Day. Additional campgrounds offer activities through the *Junior Naturalist Program* and the *Outreach project*.

Outdoor programs have an extensive history of success at DEC campgrounds. In 1996, the Department embarked on the remake of the long standing Interpreter Activity Program, with the goal of creating a program that aligned itself more closely with the mission of the agency. The new offering has been successful, due in large part to the partnership formed between two different bureaus within the Department. This partnership, along with productive consensus building and regional management, have enabled the agency to produce a well-liked nature based program. Campers have fun and at the same time return home with a greater environmental awareness.

## Historical Background

As a setting to this subject it is useful to gain a perspective on the Department of Environmental Conservation's role in the administration of recreational activity within the Forest Preserve. The structure of outdoor recreation management varies from state to state. In New York State, it is additionally complicated by the involvement of two separate agencies. The Office of Parks, Recreation and Historic Preservation administer most of the Park Districts in the state. The exceptions are the Adirondack and Catskill Forest Preserves. In these two unique areas the Department of Environmental Conservation administers recreation facilities. To comprehend the reason for this, an understanding of the NYS Forest Preserve is helpful.

Based on concern about destructive logging practices, the NYS Legislature created the Forest Preserves in 1885. The protection of the Adirondacks and Catskills was further strengthened in 1895 with the enactment of Article 14 of the NYS Constitution. The strong Constitutional protection of the state lands within the Adirondacks and Catskills has held up well over the 100 plus years of its existence. Management of the Forest Preserves was passed on from the original Forest Commission to the Forest, Fish and Game Commission to the Conservation Department and finally to the present Department of Environmental Conservation.

Visitors to NYS will find that the character of recreational facilities within the Adirondack and Catskill Forest Preserves is different from that of facilities in the rest of the state. This character of development is in no small way the result of trying <sup>1</sup>"to conserve and protect (the Preserves) natural resources and scenic beauty," as required by Article 14.

## History of Interpretation in DEC Campgrounds

The practice of providing interpretive programs at Forest Preserve Campgrounds can be traced back to 1935. The following are excerpts from the 1935, 1936 and 1937 <sup>2</sup>*Conservation Department Annual Report to the Legislature*. 1935 - "Educational Work. In co-operation with the New York State College of Forestry at Syracuse University, the Department last season inaugurated educational work along nature lines at the Fish Creek Pond Campsite. This work is felt to have been very successful, and without exception the campers at Fish Creek were enthusiastic in their support of it. It is hoped that the work

may be extended to other of the larger campsites in 1936. The College of Forestry furnished the services of Mr. Louis Wessel as nature guide, a type of work in which Mr. Wessel had had previous experience at some of the National Parks, and the Conservation Department furnished the facilities for carrying on the work including the construction of nature trails, tent platforms for Mr. Wessel's headquarters and for the nature museum. The latter played an important part in the work as it contained many native specimens identified and labeled by Mr. Wessel.

The Department also constructed a rustic amphitheatre which was used not only by Mr. Wessel for his evening lectures and campfire talks but also frequently by the campers themselves in staging impromptu entertainments. This amphitheatre was named the Alexander Macdonald Amphitheatre in honor of former Conservation Commissioner Alexander Macdonald, a life-long resident of Franklin County in which Fish Creek Ponds Campsite is located, and was dedicated with appropriate ceremonies on August 28th.

Most of the credit for the success of this venture goes to Mr. Wessel who was affectionately known to campers as "Uncle Louie." His unflinching zeal and devotion to the work made failure impossible. A similar amphitheatre was constructed at Hearthstone Point camp site."

In 1936 Mr. Marvin Wilson was the camp naturalist at Fish Creek Pond Campsite. The following excerpt reflects the Department's feelings about the program:

"The two years of experience in this work has clearly demonstrated its value and the desirability of extending it to include campsites in other areas. Probably a total of four additional set-ups such as that at Fish Creek would cover the entire Forest Preserve area in the Adirondacks and Catskills in a satisfactory manner."

The table below from 1937 summarizes the program for the three years it was conducted. There is no reference to this program after 1937.

	1935	1936	1937
Number of evening programs....	51	51	43*
Total attendance.....	16,510	25,420	31,402
Largest attendance.....	1,300	1,300	950
Number days museum was open..	58	55	59
Total visitors to museum.....	6,965	7,505	6,990
Miles of nature trails available...	3	3	3
Number of users.....	3,000	3,500	4,100
Number of organized field trips..	9	9	12
Attendance.....	336	440	806"

In the 1960's and early 1970's, a Forest Preserve Interpretive Program was conducted by the Division of Educational Services in cooperation with the Division of Lands & Forests, which operated the DEC campgrounds. Each Interpreter conducted programs at three campgrounds, traveling between them each week. Three staff worked in the Adirondacks; one in the Catskills.

Campgrounds that offered the programs included:

- Fish Creek Pond/Rollins Pond, Meacham Lake, Cranberry Lake
- Roger's Rock, Lake Luzerne, Hearthstone Point
- Moffitt Beach, Northampton Beach, Golden Beach
- North/South Lake, Devil's Tombstone, Woodland Valley

The program ended due to budget cuts in 1976. Throughout this period, campers continued to stage programs at various campgrounds on an informal level. During the late 1970s & early '80s, Paul Smith's College students held occasional programs at the Fish Creek Pond Campground Amphitheater.

**Programming - 1982 to 1996.** In 1982 a pilot Interpreter Activity Program was started at Fish Creek Pond Campground. From that point the program evolved and grew into offerings at seven locations. Fish Creek Pond/Rollins

Pond, Meacham Lake, Moffitt Beach, Cranberry Lake and Nicks Lake in the Adirondacks, Mongaup Pond and North/South Lake in the Catskills.

**After the 1996 Season.** On October 3, 1996, twenty-two members of the Division of Operations and one representative from the Bureau of Environmental Education met in Lake George, NY to discuss the future direction of the program. At that meeting a partnership was formed between the Bureaus of Recreation and Environmental Education. The later offered assistance with training, recruiting, and campground programming, while the former would maintain administration and management of the program.

#### Establishing goals, partnerships, building consensus

The October 1996 meeting was facilitated by the DEC's training coordinator. Goals were established, discussion at the meeting involved how to best administer the program. It was decided that a committee would be formed to oversee and develop the program. Committee members were designated from each working circle, Central Office and the Bureau of Environmental Education.

## Goals of the Interpreter Activity Program

The goals of this program are to provide educational and recreational opportunities for the enjoyment of campers that:

- Are compatible with the Forest Preserve management.
- Heighten awareness, appreciation, and understanding of the environment.
- Foster proper recreational use of the Forest Preserve and its facilities.
- Promote understanding of the Department and its programs.

In addition to establishing the goals stated here, a list of tasks was created for the Committee to accomplish. Among these were:

- Find job titles that were appropriate to the duties of the staff and paid a competitive wage.
- Establish an internship program that would be manageable and affordable.
- Develop training that help meet the goals of the program.
- Revise of the existing Program Guide.
- Determine the supplies, materials and equipment necessary to conduct activities with an interpretive focus.
- Research and develop a Junior Naturalist Program.

Bureaucrats everywhere would probably agree that a good way to foul up a program and stifle enthusiasm is by forming a committee. Although the committee process is widely used in government organizations, it can be a cumbersome system to use when trying to develop new initiatives. The Department of Environmental Conservation's Interpreter Activity Program breaks that stereotype. Believe it or not, two bureaus from the same agency can work together and produce quality programming for the public.

Establishment of the committee helped ease the partnership formation between the two bureaus. The committee process allowed everyone to come to the table with an equal voice. Each working circle utilizing the program in their campgrounds provided representation. This allowed for a true sense of program ownership which ultimately transferred into success.

### **Program Management and Application**

As illustrated by the tasks listed above, the committee's function is program development and guidance. Two major undertakings have been the creation of appropriate staff training courses and the development of a Junior Naturalist Program. To accomplish these responsibilities, two separate working groups were formed.

1. The **Training Sub-Committee** is made-up of two representatives from each bureau. They plan a four day, pre-season training held annually at Paul Smith's College. This consists of field based, hands-on sessions. The location is ideal due to the college's outdoor setting, with the

Adirondack Park Visitors Interpretive Center adjacent to the campus and Fish Creek Pond Campground (DEC's largest) only 16 miles away. Sessions include topics such as Leading Interpretive Walks, Fishing and Conducting Evening Activities.

2. A team to guide the ongoing development of the **Junior Naturalist Program** was formed as the program grew beyond the capabilities of just a couple of people. This team consists of recreation personnel, artists, naturalists and other professionals. Each year a unique workbook (*Journal*) and a new patch are created. Journal modules and patch designs will be reused on an eight year rotation.

The Committee is now in the fourth year of overseeing the IAP. The first three years were successful, with new concepts and methods continuing to be developed. The partnership between the two Bureaus continues to flourish.

**Regional Administration** - Each working circle manages the program within their own campgrounds. This includes staff hiring and program monitoring. In this manner, managers maintain local control and ensure quality programming. This has been a key element to success. A program such as this requires support from the ground up. A sense of ownership is critical for the program to function properly. Central program control over large geographical areas like the Adirondacks and Catskills can result in negative impacts. Local management has worked well during the first three years of the Interpreter Activity Program.

**Staffing** - At each campground the Interpreter Activity Program staff consists of one or two Environmental Education Assistants and one intern.

### **Basic Qualifications for EEA**

Candidates for the position of Environmental Education Assistant must have successfully completed two years of college training in Natural Resources, Natural Sciences, Environmental Education, or a closely related field. Full time work experience in Environmental Education may be substituted on a year for year basis in lieu of formal education.

"Environmental Education" is defined as teaching about or interpreting the natural world, the principles of ecology, natural resources management, and environmental quality management. It deals with the interrelationships of plants, animals, and the non-living environment and emphasizes human interactions with these components.

Experience in the following areas are desirable: outdoor recreation skills and leadership, natural resources interpretation, dealing with people, supervision, writing/word processing, program planning/development, use of audio visual equipment, sports leadership/organization, and group entertainment. Certificates in CPR, First Aid, and Basic Water Safety are recommended. Qualifications for interns are similar, but only one year of college is required.

### **Recruiting and hiring - what has worked, what hasn't.**

**Environmental Education Assistants** - The majority of the EEA positions are filled annually by returning candidates or by previous program interns. At a pay rate of \$10.34 per hour plus housing there has been little difficulty filling these positions with highly qualified persons.

**Interns** - In the first year of the revised program only three interns were recruited. At that time compensation consisted of \$75 per week food allowance plus housing. Alternatives had been investigated, such as using Empire State College or the Student Conservation Association. These and other recruiting services would have cost approximately \$2,500 per intern with the candidate still only receiving about \$50 to \$75 weekly. Given the cost of these options, it was decided in the second year that interns would be paid a wage of \$210 per week plus housing. For a ten week season, interns would then earn \$2,100. Over 30 students applied that year, nearly 60 applications were received the following season. Academic integrity of the internship is maintained by assigning academic coordination to the Chief of the Bureau of Environmental Education, since that bureau has worked with numerous interns over the years.

**The Summer Season** - The Interpreter Activity Program is designed to enhance the campground experience. The program's interpretive goals are to make campground users more aware of the Forest Preserve setting in which they are camping, to raise their appreciation and understanding of the many elements that make up the Preserves, and to encourage attitudes of stewardship toward these public resources. Activities are conducted in a recreational setting and are designed to be enjoyable, recreational and educational. The program's purpose is to provoke an interest in learning more about the natural resources of the Forest Preserves. Offerings are varied and balanced, consistent with the purpose of the DEC. The program does not attempt to organize activities for the camper's entire stay. The aim is to enrich their Forest Preserve experience and perhaps be a highlight of their vacation.

Two to four activities are offered daily at each of the eight campgrounds. While nature based programming is the emphasis, some activities of a more general recreation character and pure entertainment are also offered. A balanced approach is critical. At Fish Creek Pond Campground, staff have found that some interpretation can be worked into most programs, but around 40% of activities need to be just plain enjoyment. Volleyball would most likely fall into this category and is always a popular event.

### **Three Special Programs and Offerings**

3. **The Junior Naturalist Program** has become extremely popular with our customers. In the three years it has been offered, a total of 7,509 journals were distributed with 4,775 children completing the journal and receiving a Junior Naturalist patch. Program participation and completion increased by 126% in the second year and another 25% in the third year. In addition to the seven IAP campgrounds, seven other facilities offered the program. These are referred to as

JNP Satellite Facilities. This use of the JNP at Satellite sites has enabled us to reach many children that would otherwise not receive the benefit of the program.

Returning camping families now look forward to this program. They anticipate new journal activities and new patch designs. The Junior Naturalist Program is a great tool for exposing children to the natural world. In addition, it achieves an outstanding level of customer satisfaction. The formation of an inter-bureau team to produce new materials on an annual basis has worked well. There is a continual improvement in the quality of the journals and patches. The IAP Committee has made specific recommendations to the team regarding the need to present new modules every year. With our base of returning customers, it is necessary to keep the program fresh.

The 2000 patch features the Sugar Maple, thus portraying a NYS symbol for the third time. Future designs will continue to feature New York State symbols such as the Lady Bug and Brook Trout.

Due to the high quality of the JNP, other agencies and groups have requested use of the program. A group of State Parks (OPRHP) in the Thousand Islands Region used the first JNP journal as a model to develop their own program and materials. Their final product utilized the strengths of our program, but was customized to be more appropriate to their local area. This past summer, the *Conservationist* featured a full color pullout section of the Bluebird module from the 1999 journal. Both of these uses of the JNP materials have been good methods to better utilize the work put into development of the program. This has also resulted in a larger number of citizens benefitting from the program. These outgrowths are a genuine example of the value of the JNP. To foster a continuation of this type of material use, specific guidelines have been recommended by the committee and approved by Central Office. These guidelines will preserve the integrity of the JNP as it is offered at the campground level, while at the same time allowing materials to be shared with others.

4. **Adventure Discovery Packs** - A day pack containing family activity suggestions, small field equipment and field guides is available at each campground. Campers can sign these out on a daily basis. Although actual use was low, the packs were enjoyed by the campers who used them. Despite low utilization of the packs, this opportunity will continue to be offered, as it is an excellent method for families to interact with nature. Little staff time is required to make the packs available.

5. **Outreach** - For a second year, existing IAP staff traveled to nearby campgrounds to conduct activities. There were six campgrounds that received the benefit of the *Outreach* project; 664 campers attended a total of 63 activities presented on 28 program days. This is a good method to expose more of our customers to the natural environment without the cost of a full scale set-up. The *Outreach* project will continue much as it has for the last two seasons. Additional interns at selected IAP sites would allow for

*Outreach* activities at an increased number of campgrounds. This method of expansion may be considered if additional growth is desired in the future. Concerns with the *Outreach* project are transportation difficulties and reduction of staff time at the main campgrounds.

### Program Evaluation, Expansion, and Change

Every camping party at each campground receives a Camper Comment Card to rate their stay. Included on the cards are remarks about the IAP. The following are excerpts:

- **From Mongaup Pond:** "Jill, the recreation coordinator, was great! Very helpful and friendly."
- **From Fish Creek Pond:** "Recreation staff was great. Canoe guide was excellent - kids had fun."
- **From Moffitt Beach:** "Excellent program! We feel that Dan Connor did a great job with the recreation program." "I really liked the rec. program, it was excellent!"
- **From Cranberry Lake:** "We really enjoyed your DEC Recreation Program - very informative." "Our daughter received her Jr. Conservation Patch (JNP), and it made her day!"

The program undergoes continual internal review. Seasonal staff members are given the opportunity to evaluate training sessions and near the end of the program season they are requested to complete a comprehensive year end evaluation. Regional managers observe activities and meet with staff at the campgrounds on a regular basis. Their observations are collectively reviewed each Fall. Throughout the off-season, the IAP Committee meets to plan for the next summer.

Improvements and changes have been made regularly throughout the last four years. The most notable expansion of service to the public has been through the *Outreach* project and use of the Junior Naturalist Program at satellite facilities. During the 2000 season the IAP will be expanded to include Luzern Campground in the southeastern Adirondacks.

In December of 1999 the entire staff from both the Bureau of Recreation and the Bureau of Environmental Education met for a brainstorming session on how to broaden the partnership which has been established. A number of ideas surfaced which may prove to be of mutual benefit.

### Summary

In a world of advancing technology, it will be important for this program to stay current. At this point, equipment for program presentations is being upgraded. With the strong bond formed between seasonal staff members, electronic communications are being enhanced so that program experience and knowledge can be easily shared. As with most things, technical changes will probably have an effect on this program. The challenge will be to adjust to this change, while at the same time maintaining an outdoor, nature based program, not letting technology detract from hands-on learning.

After three camping seasons, the IAP has effectively made the transition from a mostly recreation/entertainment program to a more balanced format. The recreation base has been maintained, while at the same time the percentage of interpretive activities has increased. The interpretive portion of the program blends elements of recreation/entertainment into the environmental education experience. This blend of activities has enabled the program to meet the goals and objectives set forth in October 1996.

Comments from our customers illustrate the positive affect of the IAP. The Department is proud of the success that has been achieved by the program. The ground work that has been established will carry over for many years to come. By working to achieve the goals of the program, the Bureau of Recreation and the Bureau of Environmental Education will continue to contribute to the Mission of the DEC.

The Interpreter Activity Program continues to expand its range of influence to an increasing number of Forest Preserve users. By giving the public an increased sense of the natural world, the program fosters a commitment to the Forest Preserve and other outdoor areas.

### NOTES

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1. 1969 Amendment to Article XIV of the New York State Constitution
  2. New York State Conservation Department Annual Report to the Legislature 1935, 1936, 1937

## DON'T BE THRU-HIKING; START UHIKING<sup>SM</sup>

Kirk D. Sinclair

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**Abstract:** Our National Scenic Trails help to protect wilderness and rural culture, while at the same time providing benefits to outdoor recreationists. Thru-hiking is an outdoor recreational pursuit that involves hiking "through" the entire length of a National Scenic Trail. A support network exists for hopeful sojourners desiring to thru-hike that captivates their interest, offers incentives, establishes a fraternity, and assists in the planning and implementation of a thru-hike. This has led to thousands of hikers congregating at the same end of a National Scenic Trail at around the same time, out of which only a few complete the journey. The majority of these sojourners drop out, but until they do both natural and cultural resources suffer from overuse and abuse. We need an alternative to thru-hiking which will promote local greenways and trails as a training ground prior to utilizing National Scenic Trails. T.R.A.I.L., Inc. promotes the concept of Uhiking<sup>SM</sup> as an alternative to thru-hiking. Uhiking<sup>SM</sup> would help take the pressure off National Scenic Trails, promote stewardship through increased user interaction with local greenways and trails, and provide a wilderness journey designed to particularly meet the needs of the sojourner. We call for the establishment of a support network for Uhiking<sup>SM</sup> with much of the same elements of a thru-hiking support network.

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Our National Scenic Trails are considered part of our natural crown jewels under the jurisdiction of the National Park Service. A National Scenic Trail generally traverses many states over a long distance. Where these trails go through some National Parks such as Yosemite (Pacific Crest Trail), Yellowstone (Continental Divide Trail), or Shenandoah (Appalachian Trail) they receive millions of visitors yearly, mostly as dayhikers. But the long distances these trails cover invite long distance hikers as well. Thru-hiking refers to the outdoor recreational pursuit of hiking "through" the entire length of a National Scenic Trail. Though thru-hiking accounts for only a small percentage of the trail use for any season in most areas along a National Scenic Trail, it accounts for a high percentage at the ends of National Scenic Trails at certain times.

The actual and potential congestion of thru-hikers at the ends of National Scenic Trails creates a natural resource management problem. Regulatory approaches such as user fees, or limiting the number of thru-hikers who can begin their journey each day, have been proposed as solutions. We introduce a new concept for wilderness recreation, Uhiking<sup>SM</sup>, as an alternative to regulation that combines incentives and education as a solution. Uhiking<sup>SM</sup> promotes the benefits for which National Scenic Trails were designed, enhances the benefits obtained from wilderness

journeys, and suggests a new paradigm for land stewardship.

### National Scenic Trail Benefits

Benton MacKaye was a forester and regional planner whose vision gave rise to the Appalachian Trail, the first officially recognized National Scenic Trail. MacKaye noticed that development in the eastern United States followed transportation corridors. In his book, The New Exploration, he referred to this development as a metropolitan invasion, and noted that the Appalachian highlands acted as a barrier to normal transportation routes and, hence, a barrier to the invasion. The purpose of our first recognized National Scenic Trail, in MacKaye's view, was to help preserve this existing barrier that could "dam the urban tide."

MacKaye suggested three benefits that would result from instituting a long-distance trail along the length of the Appalachian highlands. These are:

- protection of natural resources;
- protection of cultural resources; and
- opportunities for outdoor recreation.

The first two benefits, the protection of both wilderness and a rural culture, are indigenous to the Appalachian Trail corridor. However, continuing with a plant species metaphor, the third benefit can be considered exotic. As MacKaye prophesied in his vision, the bulk of outdoor recreationists come from the metropolitan areas outside the trail corridor, seeking those indigenous benefits no longer available to them in their own environment. These people are exotics in the sense of being outsiders "invading" the corridor to reap their benefits. Just as with plant exotics, the invasions of outdoor recreationists present a threat to the indigenous resources. Large numbers of people, even as visitors, degrade both wilderness and rural environments. As the recognition of our National Scenic Trails has increased larger numbers of outdoor recreationists have visited them in quest of a wilderness journey.

### Wilderness Journey Benefits

A variety of goals lead outdoor recreationists to attempt a long-distance wilderness journey. Many seek to meet a challenge, such as completing the entire distance of a National Scenic Trail. Intangible goals, such as self-discovery, motivate many as well. Some want an adventure, without specific concern as to the journey's end. Also less concerned about the journey's end are those who seek an alternative lifestyle, to simply get away from the "rat race."

Any of these goals can be achieved through more convenient means. There are other ways to tackle arduous challenges without leaving your job. One does not have to acquire a disgusting look and smell, soaked with dirt-caked sweat and little opportunity for bathing, while on a path towards self-discovery. Adventure can be found without doing the same repetitious act of putting one foot in front of

the other, day after day after day, for great many hours each day. One can get away from the "rat race" without requiring a 5000-calorie per day diet.

These are not trivial drawbacks, as evidenced when nine out of ten people who attempt a thru-hike on the Appalachian Trail drop out, most during the first few weeks. Why do so many make the attempt in the first place? The answer lies in the support network established by trail organizations that promote long-distance journeys.

### **The Thru-Hiker Support Network**

Many thru-hikes of the Appalachian Trail have been published. While these accounts may not be as gripping as Shackleton's Antarctica Expedition or Krakauer's climb of Everest, for a similar reason they provide the hopeful sojourner a more probable avenue to pursue a dream. After doing a little research, these hopeful sojourners find that logs are kept and patches given out in recognition of thru-hikes. Directories of hiking organizations are kept with the identifiers of which trail a member has thru-hiked. The hopeful sojourner discovers that he/she embarks not only upon a new adventure, but a new fraternity.

The hopeful sojourner proceeds to obtain planning materials that have been tailored specifically to the needs of a thru-hiker. Trail guides focus only on a particular section of National Scenic Trail, such as the Maine section of the Appalachian Trail. Companion guides provide details for all the services—showers, supplies, even handouts of free food—which can be found along the journey. Data guides provide mileages for the whole trip in one single, lightweight pamphlet.

The hopeful sojourner finally embarks upon the thru-hike and, in the case of the Appalachian Trail, soon finds a trail elaborately blazed—so that even the guidebook or data guide is unnecessary—while shelters exist at frequent intervals. With such a support network encouraging a specific endeavor no wonder thousands of people begin a thru-hike, and no wonder thousands drop out after having unrealistic expectations. Yet before thousands drop out of an Appalachian Trail thru-hike, places such as Springer Mountain, Georgia feel the full brunt of both their numbers and inexperience.

### **Problems Caused by Thru-Hiking**

Something as long as the Appalachian Trail requires more than one season to hike. This suggests an optimum timeframe for completing a thru-hike, one that helps the thru-hiker avoid areas that receive much snowfall during the cold seasons. On the Appalachian Trail thousands of hopeful sojourners converge upon Springer Mountain to begin their thru-hikes in the months of March and April, late enough to avoid heavy snow in the Smoky Mountains yet early enough to avoid snow in the northernmost states. Appalachian Trail lands a few hundred miles north of Springer Mountain suffer from this congestion of thru-hikers. Trash, bootleg campsites, human wastes, and eroded trail are among the litany of natural resource abuses

caused by too many people in the same area at the same time.

Abuses to cultural resources result as well. Some thru-hikers have acted as if the services listed in their companion guides are an entitlement, rather than a gesture of good will offered by locals. The Appalachian Long-Distance Hikers Association (ALDHA) has initiated an Endangered Services Campaign to offset the services now being withdrawn by indigenous people fed up with the antics of thru-hikers rudely taking their services for granted.

Ironically, a problem of neglect also results from the emphasis upon thru-hiking. As more attention and resources become focused upon National Scenic Trails, less becomes available for local greenways and trails. Yet these are the areas most in need of our attention. The health of our environment depends not upon how we treat isolated pockets of preserved wilderness, but how we all learn to care for our own backyards everywhere. While MacKaye had a good idea in conceiving his "dam" to the urban tide, we should not abandon our consideration for the natural resources within metropolitan areas.

Trail organizations are aware of the problems being caused by too many thru-hikers. They also are aware that long-distance journeys provide life-changing experiences for people, who then contribute to the future support and protection of a National Scenic Trail. Thus, the support network for thru-hiking continues. These combined consequences of overuse and protection created a Catch-22 situation that led National Park Service managers toward regulation as a solution. During the spring of 1999 they limited the daily numbers of thru-hikers who could begin their hike from Springer Mountain. Regulation is nobody's favorite means of resolving a conflict. More preferable would be an alternative outdoor recreational pursuit that utilized National Scenic Trails for life-changing experiences, yet avoided the overuse that results from congregating thousands of hopeful sojourners.

### **Stewardship and Manners**

Another argument offered in support of promoting National Scenic Trails and other areas of fine wilderness is that these beautiful places will inspire us to become better stewards of the land. In theory, local trails and greenways benefit as well by the promotion of thru-hiking and National Scenic Trails because the stewardship principles learned by awe-inspired users will be later transferred to these local areas. This premise has a serious flaw, the illogical assumption that becoming good stewards best occurs away from home.

Land stewardship has much in common with good manners. Courtesy and respect provides the foundation for both, and both seek to avoid the negative impacts of being greedy and messy. If we want to provide an experience for outdoor recreationists that encourages stewardship, we can learn much from what we know about good manners.

Most of us do not bring our kids to fine public places with the intent of teaching them good manners. While the atmosphere of a quality restaurant may be conducive towards applying manners, such manners are better learned at home first for two reasons. One, the negative impacts of failing to apply manners at home affect fewer people. Two, the benefits of applying good manners at home provide more direct positive reinforcement to the learner. You can leave your mess behind at the restaurant; you have to live with the mess you create at home.

For similar reasons, National Scenic Trails should not be considered appropriate for indoctrinating stewardship values. Local greenways and trails are better venues for learning stewardship values because the consequences of failure are more dispersed, which decreases the impact in terms of extent and who is affected. The use of local greenways and trails as stewardship training grounds also provides more direct feedback for outdoor recreationists. You can leave your mess behind on a National Scenic Trail for National Park Service employees or regional volunteers to clean up. You have to live with the mess you create on a local trail, or you are more likely to be personally acquainted with the local volunteer responsible for cleaning up after you.

Thus, if we seek an alternative to thru-hiking that still promotes National Scenic Trails, we would be well served if such an alternative promotes local greenways and trails as well, especially as the training ground to acquire stewardship values in prelude to reaching the National Scenic Trail.

### **The Uhiking<sup>sm</sup> Alternative**

T.R.A.I.L., Inc., as an educational nonprofit organization committed both to providing quality wilderness journeys and protecting the quality of wilderness, proposes Uhiking<sup>sm</sup> as the alternative needed to address the problems with thru-hiking.

The U in Uhiking<sup>sm</sup> is a figurative representation of a Uhiker's journey. A section of National Scenic Trail provides the backbone for the U, while local or regional greenways and trails are utilized as approach and departure routes, forming the arms of the U. The U also signifies that YOU, the sojourner, designs a unique journey.

For example, T.R.A.I.L., Inc. will embark upon our first official Uhike<sup>sm</sup> this summer. Disadvantaged youth and adult mentors will form a community of wilderness sojourners that will canoe the Connecticut River from near the Canadian border down to Hanover, NH. There we will hook up with the Appalachian Trail, the backbone of our Uhike<sup>sm</sup>, and backpack from Hanover down to Kent, CT. From Kent we will complete our journey by canoeing down the Housatonic River to Long Island Sound. Our journey will help promote the Housatonic Riverbelt Greenway efforts currently underway.

Our Uhiking<sup>sm</sup> concept addresses several issues. It challenges the notion that National Scenic Trails are

suitable training grounds for stewardship, and alternatively promotes local or regional greenways and trails as the place for hopeful sojourners to learn both the skill and the ethics requisite to their endeavor.

A Uhike<sup>sm</sup> can be tailored to benefit the particular interests of the sojourner. Springer Mountain, a rather nondescript place, has little significance outside of being officially designated as one end of the Appalachian Trail. One can imagine hundreds of places that could serve as a more meaningful beginning or end to a long distance hike. The Uhike<sup>sm</sup> can accommodate multiple recreational pursuits, such as a combined canoe and backpack journey. The Uhike<sup>sm</sup> can be just as long as the sojourner needs. Maybe a journey of 2000 miles is too long, or not long enough.

Yet we chiefly promote Uhiking<sup>sm</sup> in the spirit of MacKaye's vision for what a National Scenic Trail can provide for society. Uhiking<sup>sm</sup> would allow the "exotic" outdoor recreationists to "invade" the National Scenic Trail corridor without threatening the preservation of indigenous natural and cultural resource benefits.

One single Uhike<sup>sm</sup>, of course, does not remedy the problems caused by thru-hiking. Uhiking<sup>sm</sup> requires a support network as well, to attract sufficient numbers of outdoor recreationists that will alleviate the impacts of thru-hiking.

### **The Uhiking<sup>sm</sup> Support Network**

Upon the return from our first official Uhike<sup>sm</sup>, T.R.A.I.L., Inc. will use the journey to help initiate our Uhiking<sup>sm</sup> support network. We will use trail, wilderness, and/or recreation conferences as forums for promoting the concept, as well as devoting our web site to that cause. T.R.A.I.L. will offer Uhiking<sup>sm</sup> patches based upon mileage (e.g., a 500-mile or a 2,000 mile patch) and keep official logs of Uhikers and Uhikes<sup>sm</sup>. In the future we will feature a "Uhike of the Year" out of those journeys brought to our attention, and arrange for the journey's account to be published. T.R.A.I.L. will facilitate a Uhiker's Conference, when enough Uhikers exist to make such an event rewarding.

But T.R.A.I.L., Inc. can not act alone in our efforts to promote Uhiking<sup>sm</sup>. We can work with existing trail organizations, such as the Appalachian Trail Conference, to set up Uhike logs of their own, to further promote the Uhiking<sup>sm</sup> concept, and to eventually downplay thru-hiking. We will work with the affiliated municipal or nonprofit agencies to draw attention to their greenways and trails used for the purpose of Uhiking<sup>sm</sup>.

A successful support network will need to go beyond such efforts even further. Trail guides with a specific National Scenic Trail as a theme need to be replaced by guides with a region of trails as the focus. Some of the volunteer labor that goes into constructing shelters with frequency along a National Scenic Trail should be diverted to the local or regional trails, with the effect of making the local trails more attractive, particularly to hopeful sojourners.

Fortunately, only the Appalachian Trail now attracts thousands of thru-hikers to a particular place and time. But the numbers of thru-hikers are increasing for other trails as well. Constructing a Uhiking<sup>sm</sup> support network will take

time. Now is the time to start, with the intent that in a few years the flood of thru-hikers can be significantly diminished in some places, and effectively prevented in others.

## USING TECHNOLOGY TO DEVELOP CONNECTIONS BETWEEN INDIVIDUALS, NATURAL RESOURCES, AND RECREATION

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**Abstract:** Information technology is here. How we as natural resource providers, researchers and users decide to use it responsibly is up to us. This study presents the facts of information technology and how to use this technology to develop connections between individuals, natural resources, and recreation. Three categories that were explored are (a). an overview of information technology and recreation and tourism, (b) National Park Service interpretation programs, and (c) computer-based learning and education programs.

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### Introduction

Most Americans cannot imagine their lives without some form of technological interaction. Communication, education, and research have been advanced through technology. But how can technology fit with America's cultural, historic, and natural resource heritage? This question is explored in the following three categories: an overview of information technology and recreation and tourism, National Park Service interpretation programs, and computer-based learning and education programs.

Most National Parks provide an on-line tour for potential visitors. Therefore, some interpretation of the parks is done before they reach the site. However, it is important to distinguish between simply providing information versus interpretation on the web. Visitors to National Park Services are expecting an educational, exciting and stimulating experience. Interpretation has traditionally accomplished this through a talk given by a naturalist or ranger, displays of photos and artifacts created on-site or through slide shows, among other methods. However, technology has changed the way interpretation is presented. The example provided will be using research technology during interpretive programs at Isle Royale National Park.

The computer-based training program is used as a major tool for educational programs and distance learning. Nature centers, gardens, and parks are increasingly using

computer based programs to teach youth about the natural environment. However, how can one combine technologies with the natural environment so that youth learn the difference between the out of doors and what is portrayed on a computer screen? An example is provided from the Michigan 4H Children's Garden.

### An overview of IT

Information technology (IT) is a broad subject of managing and processing information. The first section of this paper is to provide an overview of information technology and its applications in the field of recreation and tourism. Because IT changes so rapidly, new applications are available everyday. The example provided today maybe obsolete tomorrow. Managers of recreation and tourism should update their knowledge of IT and be informed of the latest applications.

### Facts of IT

To realize what IT is and what IT can do for us, it is helpful to see what are the impacts of rapid creation and adoption of IT on the global market. Information technology has been a buzz term for the past decade and is one of the most important components of management systems. The following facts are provided to illustrate how IT has become part of our life in a very short period of time.

- Between 1995 and 1998, IT accounted for about 8% of U.S. GDP and contributed on average 35% of the nation's real economic growth (US Department of Commerce, 1999).
- 56% of U.S. companies will sell their products online by 2000 (NUA Internet survey, 1999).
- 50% of the U. S. workforce will be employed by industries that are either major producers or intensive users of information technology products and services by 2006 (NUA Internet survey, 1999).
- 16.5 million U.S. adults have used the Internet or an online service to make travel reservations in 1999. This is up 146% from the 6.7 million adults in 1998 (Travel Industry Association, 2000).
- Revenues of on-line travel doubling each year, expected to hit \$16 billions by 2003 (Jupiter Communications, 1999).

There were only 3 million people connected to the Internet and were only 26,000 domain names in use worldwide in 1993. However, 80 million Americans were connected and approximately 200 million people worldwide in 1999. Currently, there are 5 million web sites and more than 800 million pages on the web (US Department of Commerce, 2000). All of these facts about IT point to one fact- like it or not, IT has become one of the most important forces in the market. Being a manager in the field of recreation and tourism, the question becomes not whether, but how to adapt IT as a management tool for your agency.

### Information Technology

Information Technology involves an array of modern tools that support information communication and data management. These tools include computer hardware, software, network, video and audio devices,

telecommunications, satellite conferencing, and other media. The definition of IT, according to ZDNET, is "...refers to the broad subject of managing and processing information, especially within a large organization or company. Because computers are central to information management, computer departments within companies and universities are often called IT departments. Some companies refer to this department as IS (Information Services) or MIS (Management Information Services)." (ZDNET, 2000). In short, we can say that IT is any technology that allows for the creation, management, and communication of information (Bryan and Young, 1999). In general, IT consists of four components that function as an integrated data management tool:

- Data Collection (Input)
- Data Management
- Data Processing & Analysis
- Presentation (Output)

None of these components are new inventions to the world. However, IT brings new concepts to these approaches and advances the whole process. The inventions of computer and the applications of the Internet have significantly reduced the time and cost of data collection. The Computer-Assisted Telephone Interview (CATI), for instance, has been used by many recreation and tourism agencies to collect user information. Survey through the Internet and E-mail is another example of how IT can help collecting data more efficiently.

Database management is probably one of the most important components for any recreation and tourism management. Tremendous amounts of data are regularly updated and maintained for three elements in recreation and tourism- users, programs, and facilities. The computer has replaced pencils and index cards in managing database in terms of tracking customer preferences, facilities and programs usage, updates and maintenance. Take the reservation system as an example. All the information can be saved and maintained in a central location for easier retrieval and update. By using the internet and/or intranet communication, a gate keeper of a campground in a remote area can update their inventory on her computer in real time. All the reservation information can get updated no matter if the campers call the toll free number and make reservations or just show up and make the reservation at the gate.

IT also makes data processing and analysis easier than it used to be. Today any desktop computer can perform sophisticated tasks that only mainframe could do ten years ago. Some of the most popular applications include Spreadsheets (Excel), database (Access), and statistical packages (SPSS, SAS, Systat, etc.). These programs help managers to analyze data more efficient and effective than ever.

The presentation has been better and easier because of IT. All these word processing applications have helped in preparing, editing and formatting documents. The use of PowerPoint for business presentation provides both visual and sound effects. With web pages and portable document

format files, the output can virtually target as many audiences as desired.

### IT and Recreation and Tourism

In general, IT increases productivity and efficiency, changes the way we do business, helps make better decisions, and makes the "global village" possible. The following two examples illustrate how IT has been utilized in the field of parks and recreation.

### **National Park Service- Natural Resources Interpretation**

When Americans think of their National Parks, an image of the Park Ranger is one that often comes to mind. For many visitors, the Ranger campfire program was and still is one of the main sources of information and interpretation of the Park unit that they are visiting. It can be said that Ranger interpretation remains the most public and identifiable component of the National Park Service (NPS). For the purpose of this paper, interpretation can be defined as a method for "people (to) communicate the significance of cultural and natural resources" (Knudson et al., 1999, p. 4). Traditionally, National Park interpretation has been performed by naturalists or Park Rangers referred to as interpreters. These interpreters provide programs, exhibits, and educational opportunities for the public (Mackintosh, 1986).

The Isle Royale project suggests a different educational and interpretive approach within the NPS because it involves natural resource researchers presenting the results of their research directly to the public rather than presentations by NPS interpreters. For many years, researchers in cultural resources have presented their findings directly to the public in many settings, but public presentations are more unusual for the natural resources researcher. This project is referred to as a "new-old approach" in recognition of interpretation done by researchers in other fields. For example, interpretation has been done by cultural researchers in Michigan at Fort Michilmackinac for forty years (DNR, interview 1999). There are park units that have a few presentations by researchers during a season, but none to my knowledge are attempting the numbers of programs that the Isle Royale project has already successfully accomplished. There are also a small number of NPS units that are starting to suggest an incorporation of researchers into their interpretive programs (NPS, 1999).

Isle Royale was authorized as a National Park in 1931 as one of the nation's first nature parks rather than a scenic park (Runte, 1997). Isle Royale National Park is an archipelago of 400 islands, located within the northwest corner of Lake Superior. The islands, which include the largest island in Lake Superior, vary in size from over 40 miles in length to only a few square feet (NPS, 1995). In addition to the islands, the National Park Service manages the surface of Lake Superior four and one-half miles out from the shoreline. This results in approximately 80% of the Park consisting of water (Isle Royale National Park Pamphlet, 1996). The total area of the Park is approximately 571,790 acres of which approximately

133,782 acres are land. (National Park Service, 1995). In 1976, 98% of the land area of the Park was designated as Wilderness by the federal government; this percent has since been increased to 99% (NPS, 1995). Today, Isle Royale National Park remains one of the largest federally designated wilderness areas in the Midwest. In 1980, the United Nations declared the Park an International Biosphere (DuFresne 1991). This designation is one indicator of the importance of the natural resources in this Park for the world. Isle Royale National Park is one of the least visited Parks in the National Park system, due in part to the difficulty in traveling to it. The total number of annual visitors is less than 20,000 (Isle Royale Report, 1999).

This project involves the presentation of a new format of interpretive programs on board the ship Ranger III as it crosses Lake Superior with Isle Royale National Park visitors. Ranger III is a 165-foot ship operated by the National Park Service and carries up to 125 passengers per six hour trip. This ship makes approximately 64 round trips from Michigan to Isle Royale National Park per season. Park Interpretive Programs traditionally have been offered to the visitors by a Ranger to prepare them for their visit to this wilderness National Park. These Ranger programs have presented topics such as rules/regulations of the Park, safety, and low impact camping. Since 1996, programs have been expanded to include presentations by researchers discussing the results of their research at Isle Royale. The topics of those presentations have included wolf-moose balance, climate change and loon research. The impact of these presentations by researchers on visitors' knowledge and attitudes has not yet been studied. During the summer of 1999, researchers used a large screen television and a computer to display their research directly to the public as part of their interpretive presentations. These presentations incorporating technology through the use of computers (PowerPoint) and being able to display research as it is generated is unusual in the field of interpretation. Researchers onboard the Ranger III present their data directly to the public as soon as they receive it. For example, Lake Superior water study data is collected from the Ranger III using probes. These probes are dropped into the lake and transmit their data directly to the researchers onboard who then display it to the public.

I believe this project will be of interest and benefit to at least three groups. First, the National Park Service will be able to better understand the public's ability to learn from interpretive programs and therefore be able to add to the present formats of programs being presented. The second group that could benefit are the researchers and their related institutions. They will have a better understanding of useful approaches to the public in presenting their research. Finally, the public may develop a greater understanding of and interest in the research that is occurring in the National Parks. Through that understanding, there may be a change in behaviors that adversely affect the Parks and their resources. Additionally, the public may become more supportive of the financial needs of the Park Service. A visitor to Isle Royale National Park wrote the following to the Park Superintendent, "I

believe the National Parks were created under the same guidelines as the Constitution. They were created by the people for the people. If the people do not feel welcome, they will cease to come. If they cease to come, they will cease to bring their children. These children will be the ones who will inherit Isle Royale. If they do not know her, when the time comes for funding cuts, they will not hesitate killing something they do not know" (Personal letter, 1998).

One side benefit of this research project is that it is not limited to a narrow field of interest but rather it could appeal to anyone who wants their research better understood by the public. Additionally, researchers may find it beneficial to meet with other researchers as a result of these presentations. Finally, the public may be the biggest beneficiary of this project. Last summer after participating in one of the "real time" programs, an individual exclaimed that it was the first time he had been treated like an adult in a National Park interpretive program in several years. He concluded by saying that unless you are exposed to programs that are over your head you will not learn.

#### Michigan 4H Children's Garden

Rapid technology changes and widespread use of computers are challenging the natural resources interpretive field on the traditional ways of communicating messages. Electronics and the Internet are changing the way in which communications media is presented. Children are growing up in a sophisticated world of advanced technology in which they want stimulation and excitement. Technology is being utilized more than ever as an educational tool, as a means of communication, during leisure activities, and also for fun. In a study published by Marketing Week (1998), eight out of ten seven to 17 year olds have used screen-based technology during the period of one week for playing games, accessing information, word-processing or calculation.

American youth are savvy when it comes to technology. They are aware of new products, can easily learn how to operate technological gadgets, and are accustomed to using technology as a means towards education. While many youngsters use technology for fun and games, many are utilizing the Internet and computer software for academic use. They are also becoming accustomed to learning via current technologies. Following this trend, nature centers, gardens, and parks are increasingly using computer-based programs to teach youth about the natural environment. The challenge lies in assembling the appropriate combination of technology and the natural environment so that youth can learn the difference between the out of doors and what is portrayed on a computer screen.

## Definition of interpretation

"An educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information."

—Freeman Tilden, 1957

This definition is encompassed in the interactive computer programs now being offered at the Michigan 4-H Children's Garden. The garden was established for the enjoyment and education of youth in the activity of gardening. However, many lessons related to the natural environment and science can be learned through gardening. Therefore, the garden uses itself as the original object, provides firsthand experience and learning to children and uses the computer program as the illustrative media to convey its educational message. The technology applied at the Michigan 4-H Children's Garden utilizes the principles of interpretation and has added its own technological principles of interpretation communication.

Interpretation Principles:

- 1) Relate the program to the interests of the audience
- 2) Enrich the program with knowledge of the subject being presented
- 3) Don't just talk to the audience, create a story, present the material in an artistic fashion
- 4) Stimulate curiosity of the audience, make them want to ask questions, DON'T provide all of the answers through instruction
- 5) Address the whole story, situation, and process of the subject being presented
- 6) Adapt the program to the audience

Technology is an infrastructure for communications. When combining a natural resource based program and technology keep the following ideas in perspective:

- 1) Technology should be integrated with the learning experience, not considered an "add on" to the program
- 2) Technology enhances the participants experience by providing an additional dimension of exploration of the environment they might not find by "just looking"
- 3) Technology can provide a live group experience
- 4) Technology enhances the learning experience
- 5) Technology overcomes barriers of time and space
- 6) Technology lets children use the tools a scientist would in the process of: gathering information, communication, data collection, data analysis, data presentation, and decision-making
- 7) Kids can imagine themselves as investigators (<http://www.4hgarden.msu.edu>)

The Michigan 4-H Children's Garden, on the campus of Michigan State University, uses computer-based programs to interpret the natural environment in the garden. It encompasses the principles of interpretation and the technological principles cited. Two computer kiosks resembling the garden cottage are placed in the garden, thus integrating the program in the garden setting. The design

of the program uses photos from the garden and real "plant problems" that occur in the garden. Therefore, the Plant Problems Lab computer program is using technology to interpret the immediate surrounding environment.

The Plant Problems Lab computer program leads the users through a series of decision-making steps to decide how best to treat the "plant problem" in relation to how it will affect the surrounding environment and wildlife. First, the plant problems are introduced. A disease, an insect, and a vitamin deficiency are the three categories of problems. Then ways in which to treat the problems are introduced. Do nothing, take out the plant, spray pesticides, etc. are options given to the user. Then a matrix is set up how each treatment will affect the local wildlife in the garden. A dragonfly, frog, bird, butterfly, and a person are among those affected by the treatments. When the users click on one of the treatments, the matrix responds with showing how that treatment would affect the wildlife in the garden. The results of treatment are being presented to the user, not the decision on which treatment to use. Therefore, the user can use the facts to come to their own conclusions.

The computer-based programming used at the Michigan 4-H Children's Garden is a method in which children are learning about the natural environment, while using the learning style they are accustomed to. This in turn creates enthusiasm for the subject and is also an enriching educational experience.

## Conclusion

It is important for managers in the natural resources and recreation fields to stay updated on the developments and applications of information technology. Marketing strategies on the internet are different than those utilized in traditional marketing styles. Managers need to know necessary elements to provide a connection for their customers and to create a successful program. Strategies also need to be addressed in how to make information technology friendlier for the user.

"The rapid acceleration of computer and telecommunications technologies is a major reason for the appreciable increase in our productivity in this expansion, and is likely to continue to be a significant force in expanding standards of living into the twenty-first century."  
—Alan Greenspan, 1999

Technology is here. How we as natural resource providers, researchers and users decide to use it responsibly is up to us.

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# MONITORING VISITOR SATISFACTION: A COMPARISON OF COMMENT CARDS AND MORE IN-DEPTH SURVEYS

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**Abstract:** This paper compares responses to comment cards and more detailed on-site surveys at selected Corps of Engineers lakes. The results shed light on the validity, reliability, and usefulness of these alternative methods of monitoring customer satisfaction.

## Introduction

Recreation managers often conduct sporadic customer service surveys, which provide a "snapshot" of users' satisfaction levels at a given point in time. From this baseline of information, decisions can be made regarding the management of resources, such as staffing priorities, service provision, facility maintenance and development, and so forth. All federal land managing agencies stepped up their efforts to assess recreational customer satisfaction following the 1993 Presidential Executive Order on Setting Customer Satisfaction Standards.

Recreation satisfaction can be ascertained through many different methods. Mail-back and face-to-face surveys can be expensive, time consuming, and somewhat intrusive to visitors, but offer greater opportunity to understand visitor satisfaction and the factors that may impact a visitor's

experience. Comment cards are an inexpensive, quick, and easily interpreted method of gaining information about management issues. A manager can make immediate corrections if a specific issue fails to receive high marks, or conversely, make an on-the-spot award to an employee who is mentioned as extremely helpful, friendly, or courteous. But it is difficult to assess the validity and reliability of comment cards due to the limited amount of data that are typically available.

The purpose of this paper is to compare the results of comment cards and more in-depth customer satisfaction surveys. Data were collected at U.S. Army Corps of Engineers lakes over a four-year period (1995-1998). The Corps began its customer satisfaction measurement initiative in 1995 with unstructured, semi-formal interviews of users at selected lakes. This preliminary research effort was intended to identify what is important to Corps visitors, and how satisfied the visitors were with the same attributes. The following year, various satisfaction items were tested through on-site interviews at two lakes in South Dakota (Burns, Graefe & Thapa, 1997). In 1997, a national customer satisfaction study was undertaken at ten Corps lakes in ten different states across the United States (Graefe, Burns, Titre & Absher, 1999). The following year, a similar study was implemented at three lakes near Huntington, West Virginia (Graefe, Burns, Wickham & Titre, 1999). Concurrent with these onsite studies, comment cards were distributed at selected lakes across the country during the summers of 1996 through 1998.

The analysis focuses on items that are common to both the longer, face-to-face surveys and comment cards used in the respective study areas. Bivariate correlations and multiple regression analyses were used to identify the strongest predictors of overall quality or satisfaction within each study.

**Table 1. Analysis of Corps of Engineers Comment Cards, 1996-1998.**

Comment card items	Relationship with Overall Quality Rating					
	Zero-order Correlations			Multiple Regression Results (Significant Beta Weights Only)		
	1998	1997	1996	1998	1997	1996
Safety and security	.61	.54	.47			
Park appearance	.69	.71	.61	.21	.25	.10
Restroom cleanliness	.65	.48	.59	.18		.18
Staff helpfulness	.68	.52	.45	.22	.16	
Condition of facilities	.78	.69	.67	.18	.19	.25
General park information	.68	.55	.58			
Water safety information	.70	.55	.56	.10	.14	
Value for fee paid	.72	.71	.67	.26	.29	.29
				$R^2=.77$	$R^2=.70$	$R^2=.63$

## Results

### Comment Cards

Corps of Engineers comment cards focused on eight specific site attributes and included an overall rating for the site. All individual comment card items were strongly correlated with the overall quality of area facilities and

services (Table 1). Multiple regression analysis shows which combinations of items collectively yield the strongest prediction of overall quality. In all three study years, various combinations of attributes (ranging from four to six items) produced relatively strong models of overall quality ( $R^2$  ranged from .63 to .77). Certain items dropped out of the equations because they had nothing new to

contribute beyond what was accounted for by other variables in the regression model.

The best predictors of overall quality (significant contribution all 3 years) include: Park appearance, Condition of facilities, and Value for fee paid. Other good

predictors (significant two of three years) were: Restroom cleanliness, Staff helpfulness, and Water safety information. The weakest predictors (not significant any year, although still strongly correlated) included: Safety and security and General park information.

**Table 2. Analysis of Huntington District Lakes survey items (1998)**

Satisfaction Attributes	Zero-order Correlations	Significant Beta Weights
Cleanliness of restrooms	.33	.20
Staff knowledge and ability to answer questions	.23	
Information about commercial services and rec. opportunities in the area	.21	
Value for fee paid	.37	.23
Appearance and maintenance of the area	.26	
Adequate ranger/assistance patrols	.28	.13
Roadside signs and directions	.12	-.13
Information about usage fees for the recreation areas	.20	-.15
Availability of parking spaces (car parking, boat trailer parking, etc.)	.15	
Staff friendliness/courtesy	.12	
Water safety information	.21	
Ease or convenience of paying the fee	.33	.17
		R <sup>2</sup> =.20

**On-site Surveys**

The next study examined satisfaction among visitors to three lakes in the Corps of Engineers Huntington District (East Lynn Lake, Grayson Lake and Beech Fork Lake). In this case, the dependent variable was overall satisfaction with quality of experience at the lake (a 10-point rating scale). Attributes included 12 items representing four domains (facilities, services, information, and fee program). The last domain was a new one incorporated in this study. The items were selected by lake managers in this district.

Prediction of satisfaction was not nearly as strong as for the comment card, mainly because the dependent variable is not measuring the same thing. For the comment cards the dependent variable was an overall rating included at the bottom of the list of specific site attributes. In the case of the on-site surveys, it was a separate question asking for the respondents' overall satisfaction with their experience at the lake. This question is not a direct measure of quality of facilities, services, etc., but rather is focusing on a more subjective measure of overall satisfaction with the experience.

Cleanliness of restrooms and value for fee paid were among the strongest predictors of satisfaction, which is consistent with the comment card results. Adequate ranger patrols and ease of paying the fee were also significant predictors.

The negative beta weights for roadside signs and information about usage fees appear to be an anomaly resulting from the combination of all variables in the regression. The negative sign would imply that overall satisfaction is inversely related to satisfaction with these items, which does not make sense and is opposite of the positive sign for the zero-order correlations for the same items. These coefficients should be interpreted with caution.

Basically, results reinforce the importance of restroom cleanliness and value for fee paid. They do not support the importance of: appearance and maintenance of the area, ability of staff to answer questions, staff friendliness and water safety information.

The final database examined was the 10-lake nationwide Corps of Engineers customer satisfaction study (Graefe et al, 1999). Like the Huntington study, this project involved on-site surveys with visitors at various Corps of Engineers lakes. The list of attributes in this case included 19 items representing the four domains of facilities, services, information, and recreation experience (Table 3). In addition to the 10-point overall satisfaction rating, this survey included separate measures of satisfaction with each of the major domains.

Table 3. Analysis of Ten-Lakes Customer Satisfaction Items

Satisfaction Item	Zero-order Correlation w/ Satisfaction	Multiple Regression Beta Weights (Significant Values Only)		
		Domain Specific Quality Rating	Overall Satisfaction - Reduced Model	Overall Satisfaction - Overall Model
<b>Facilities Domain</b>				
Appearance and maintenance of the area	.26	.33	.17	.13
Adequate ranger/visitor assistance patrols	.26	.16	.16	.08
Value for fee paid	.19	.13	.05	
Sufficient number of ramps/campsites/parking spaces	.21	.10	.07	.05
* Accessibility for persons with disabilities				
* This item not included because only 8% of visitors reported some sort of disability (220 of 2933 respondents).				
<b>Services Domain</b>				
Safety and security at the recreation area	.22	.19	.10	
Opportunity to offer suggestions to staff	.23	.17	.05	
Courteous and friendly staff	.20	.16	.07	
Availability of staff to answer my questions	.26	.16	.13	.10
Visibility of staff	.25	.06		
R <sup>2</sup> =.30 Quality of Facilities				
R <sup>2</sup> =.11 Facilities Items Only				
<b>Information Domain</b>				
Current and accurate information	.26	.30	.14	
Ease of obtaining information	.23	.18	.08	
Water safety information	.22	.15	.08	
General information about the area	.21	.09	.07	
Nature/historical information about the area	.17	.06		
R <sup>2</sup> =.33 Quality of Services				
R <sup>2</sup> =.09 Services Items Only				
<b>Recreation Experience Domain</b>				
Places to recreate without conflict from other visitors	.23	.25	.10	
Compatibility of recreation activities at the area	.23	.25	.15	
Opportunity to recreate without feeling crowded	.21	.06	.06	
Opportunity to recreate without interference from other visitors	.19			
R <sup>2</sup> =.41 Quality of Information				
R <sup>2</sup> =.08 Information Items Only				
R <sup>2</sup> =.24 Quality of Recreation				
R <sup>2</sup> =.07 Experience Items Only				
R <sup>2</sup> =.11 All Items				
N=2164				
N=2164				

Table 3 summarizes results of the nationwide study. The 19 satisfaction items were examined in relation to several different dependent variables. The zero-order correlations again demonstrate that all of the items were correlated to satisfaction at relatively similar levels. The correlations were again much smaller than for the comment cards, because the dependent variable (overall satisfaction) is a more global measure. The first column of regression results (domain specific quality rating) shows the extent to which the items within each domain predict a separate measure of **overall quality for that domain**. The second column (overall satisfaction – reduced model) shows how the items **within a domain** collectively predict overall satisfaction, and the final column (overall satisfaction – overall model) reports how **all of the items combined** relate to satisfaction. Taken together, these data may help in selecting items to retain for future survey instruments.

The regression models for the domain specific quality ratings were always much stronger than the ones for overall satisfaction. This is to be expected since the dependent variable is conceptually much more specific relative to the corresponding items. For some of the domains (facilities, information), these regressions show a single item that is clearly the strongest predictor of quality. For facilities, that item is the appearance and maintenance of the area (Beta = .33) and for information it is current and accurate information (Beta = .30). For the services domain, all four items were about the same, and for recreation experience the first two items were much stronger than the last two.

The regression models for overall satisfaction help to distinguish between other items within the domains. For example, in the facilities domain, adequate ranger/visitor

assistance patrols contributes more to overall satisfaction than the remaining two items. Likewise, in the services domain, the availability of staff to answer my questions appears to be a stronger item than the remaining items. Conversely, in the information domain, two items (ease of obtaining information and safety information) appear just about equal in predictive power. Choosing between these two items might be done by comparing their relative performance in the other data bases.

The items that are shaded in Table 3 are recommended for inclusion on comment cards and similar instruments. These items showed the strongest influence in the ten lakes study and in many cases showed consistent results with the other databases.

### Conclusion

Taking the various data sources into consideration, several items can be recommended for further study (Table 4). These items provide a condensed list of attributes that represent the three domains of facilities, services and information. Some of the items may be expressed in several ways, as shown in the “alternate wording” column, while still capturing the intent of the measure. Other items may not clearly represent any single domain, even though they were intended to be part of a certain underlying theme. For example, the last three items, value for fee paid, safety and security at the recreation area, and adequate ranger/visitor assistance patrols, may cut across domains. Evidence presented here suggests that these attributes are important to visitors, even if they do not fall clearly under a single dimension or domain.

**Table 4. Recommended Satisfaction Attributes for Future Studies**

Item	Alternate wording	Domain
Appearance and maintenance of the area	Park appearance Condition of facilities	Facilities
Restroom cleanliness		Facilities
Availability of staff to answer my questions	Staff helpfulness	Services
Current and accurate information		Information
Water safety information		Information
Value for fee paid		No clear domain
Safety and security at the recreation area	Safety and security	No clear domain
Adequate ranger/visitor assistance patrols		No clear domain

No items from the fee program domain (Huntington study) and recreation experience domain (10-lakes study) are included in Table 4. The fee program-related items were included in the Huntington study to accommodate a particular “hot issue” in that district. These items may be appropriate in areas with similar fee-related concerns, but do not belong on a general list of satisfaction attributes for outdoor recreation areas. The experiential items have not been included on the recommended list because this domain probably cannot be adequately measured in a comment card or brief survey format and should be included only in more elaborate customer service instruments.

Two safety-related items (water safety information and safety and security at the recreation area) showed mixed results in the regression analyses. These items are included in the recommended list because of the overall importance of safety in lake management. Further study of such items is needed to identify the role of safety in visitor satisfaction and the conditions under which safety is most critical.

Items listed in Table 4 should be considered a starter list for future customer service studies. Some of the items (e.g. water safety information) are clearly limited to water-based applications, while others may be more generic to any type of recreation area. These items might provide a “short list”

for a comment card application or a "starter list" for a more in depth study.

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