

National Education Council

Education Evaluation Coordination Team



Servicewide Interpretation and Education Evaluation Strategy

Volume Two: The Foundations
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~~***See "Volume One: The Strategy" for the following information:***~~

INTRODUCTION TO VOLUME ONE

EVALUATION AS A TOOL FOR ACHIEVING RELEVANCY IN THE 21ST CENTURY

- Regulatory Requirements
- Practical Applications

WHY DO ORGANIZATIONS INVEST IN EVALUATION?

ORGANIZATION OF THIS REPORT

PART ONE: SERVICEWIDE INTERPRETATION AND EDUCATION EVALUATION STRATEGY

THE VISIONS, GOALS, AND OBJECTIVES OF SIEES

- *Vision*
- *Goals*
- *Objectives*

PART TWO: PLANNING FOR STRATEGY DEVELOPMENT AND IMPLEMENTATION

KEY RECOMMENDED ACTIONS

PHASED DEVELOPMENT AND IMPLEMENTATION OF THE STRATEGY

Phase I: Foundation

Phase II: Integration

Phase III: Utilization

SUMMARY

PART THREE:

***FOUNDATIONS FOR DEVELOPING A
SERVICEWIDE EDUCATION
EVALUATION STRATEGY***

“How was the strategy developed (thus far)?”

Foundations

Early in the process of developing the Servicewide Interpretation and Education Evaluation Strategy (SIEES), the National Education Council's Education Evaluation Coordination Team (EECT) identified four foundational areas that would provide the information, input, and grounding needed to develop a strategy appropriate and relevant to the NPS:

- involving internal and external stakeholders and experts,
- creating a comprehensive program model,
- conducting a literature review, and
- analyzing existing evaluation projects.

The EECT analyzed and investigated these areas as a means to identify the key objectives and actions of the strategy. Assumptions about each of these areas, as well as the team's analysis, findings, and recommended next steps are discussed in the sections below. Further analysis of this draft document by evaluation experts and park managers via the Evaluation Summit and other review opportunities will continue to inform the strategy.

Foundation 1: Involving Internal & External Stakeholders & Experts

Assumption

To determine the most essential evaluation questions for the NPS to address (and therefore the most relevant and useful methodologies to use), it is critical to include the voices of key stakeholders including employees from all levels of the NPS, experts from outside the agency, park audiences, and others. Stakeholder engagement provides key input into evaluation processes, creates support and enthusiasm throughout the agency and its partners, and ultimately enhances the capacity of the NPS to make use of evaluation processes and findings.

Analysis, Findings, and Next Steps

The EECT prepared this draft SIEES document as a fundamental piece for communicating with and engaging others in dialogue on the development of this strategy. The EECT has worked closely with the National Education Council (in particular, mapping program logic in August 2005 and seeking input on the Strategy document in November 2005). An informal questionnaire was developed by the EECT and administered in cooperation with the Regional Chiefs of Interpretation and Education across the Service. The results of this survey identified on-going evaluation work, professional development needs, and key questions for evaluation.

The EECT is also working with the Education Committee of the National Park System Advisory Board to convene an Evaluation Summit, a panel of experts in interpretation and education evaluation and organizational development to review and advise on the SIEES. Through this venue, the EECT will engage the National Leadership Council, National Education Council, education partners, field interpreters, foundations, and others in finalizing the strategy.

Spring 2005 Survey of Chiefs of Interpretation: Synthesis of Stakeholder Input

In this Phase I work, eighty national park sites responded to an electronic query that posed four questions. The purpose of these questions was to gain stakeholder input to inform the development of the SIEES. The responses made it clear that the field values evaluation information and wants to increase its evaluation capacity. Responses were reviewed and summarized into the four areas enumerated below.

Understanding Visitors

Parks want to know who is and is not currently participating in their programs. Program participants include those who visit a park in person and those who access park programs virtually. Knowing the demographics of the audience can impact the types of services offered. Knowing who participates is also important because it helps the park identify who is not participating. This information may help parks reach out to underserved audiences through more effective means of communication.

In addition to demographics, parks want to know what knowledge people bring to the park experience. With this information, parks can build upon this prior knowledge and offer programming opportunities that better meet visitor needs and reach audiences at different stages of participation (before, during, and after a park program). Increased knowledge of the visitor also can affect trip planning. Parks want to help visitors build continuity between park visits and provide experiences that address visitor time constraints and seasonal patterns of visitation.

Assessing Outcomes

Parks want to know what outcomes their programs have, such as whether visitor understanding of park significance has improved, and if visitors make intellectual and emotional connections to park resources. Parks further want to understand whether visitors use these connections to make changes in their attitude or behavior since ultimately they hope to promote a stewardship or preservation ethic that may result in behavior change in relation to park resources and/or the local community. Respondents expressed a need for outcome data to inform their programming decisions.

Capacity for Planning Programs

Parks expressed a need for information that can guide them in planning the most appropriate programs, both personal and non personal. They want to know what types of programs are best for reaching certain types of audiences. With limited staffing and resources, parks want to maximize program opportunities and make informed decisions regarding the type and mix of programs. Further, parks need to know how to make effective use of evaluation results so that they can use data to support and inform decisions so that they may best meet both visitor and park expectations. Parks also wanted to know to how to better utilize volunteers and partners to increase capacity.

Capacity for Conducting Evaluation

Parks need help collecting information to improve programs and services. This help is needed in all areas of evaluation from developing valid instruments to analyzing data to communicating results to utilizing the results to make changes. Parks want to learn more about conducting effective evaluation so that they can embed evaluation as an integral part of park activities rather than an add-on activity. Once an evaluation has been conducted, parks need more effective ways to manage and share information so that others can benefit from the experience.

Purpose of the National Education Council's Education Evaluation Coordination Team

The *Renewing Our Education Mission: Report to the National Leadership Council, June 2003 (REM)* document, endorsed by the NPS National Leadership Council, directed the National Education Council to establish an Education Evaluation Coordination Team (EECT) to coordinate development of a Servicewide strategy for evaluation. The *REM* document clarified that, in this context, the term “education” is used inclusively to mean all types of life-long learning opportunities including formal and informal interpretation, interpretive media, (publications, exhibits, films, and the Internet) curriculum-based programs, teacher professional development, community engagement, and information and orientation.

As a working group of the National Education Council, the EECT serves as advisor to the Associate Director for Partnerships, Interpretation and Education, Volunteers, and Outdoor Recreation, identifying emerging issues and opportunities to unify and support the educational efforts of the agency. In accordance with the *REM* document and in concert with the NPS Office of Policy, the EECT also works in cooperation and consultation with the National Park System Advisory Board's Education Committee. The Education Committee was established in response to the NPS Director's request for the Board to advise the NPS on education.

Foundation 2: Creating a Comprehensive Program Model

Assumption

A comprehensive program model (sometimes referred to as a “logic model”) is a simple description, in chart form, of how a program’s resources and activities are related to the program’s expected outcomes. Understanding the components and logic for education programs and media is critical to determining where, when, why, and how to evaluate. When a program’s resources, activities, and impacts are identified, program managers can begin to determine what is known (for instance, through existing research or other NPS evaluation studies) about program inputs and program impact, and what has yet to be determined.

A program model “maps” the organization’s understanding of its program’s context, logic, and purposes and can be used for program development, communication, and evaluation. Program models help organizations concisely view their assets, link their resources to projected outcomes, and establish a common language.

Analysis, Findings, and Next Steps

The National Park Service did not have a logic model that described the Interpretation and Education program at the national level. The EECT created an initial draft NPS logic model in which the full array of NPS education programs was considered as a comprehensive program. During a National Education Council workshop in August 2005, a more refined version was developed. The process of developing a model was an opportunity to clarify the underlying assumptions we make about learner outcomes, to figure out how various activities and outcomes relate to one another, and how the model may be most useful to all stakeholders.

The resulting Comprehensive Program Model describes the resources, activities, and intended outcomes for NPS Interpretation and Education programs and, ultimately, their impact in support of the NPS mission. The model encompasses the broad range of educational activities typically presented by the NPS and partners.

The model will help guide the evaluation strategy for the NPS. The model will help identify which of our assumptions are actually supported by research, the gaps in our research, whether and how our professional language and assumptions translate into research methods, tools, and findings. As a framework in which all levels of educational programming can see themselves, the Comprehensive Program Model will help shape the way we connect, communicate, represent our programs, and structure our thinking about program development and implementation. Equally importantly, the Model assists us in our endeavors to assess long-term outcomes and their relationship to our mission goals. Finally, the model firmly roots education as a primary organizational purpose of the NPS.

A one-page summary, renamed NPS Comprehensive Program Model, can be found below. The detailed version of this Comprehensive Program Model can be found in the Appendix A.

NPS Comprehensive Program Model

National Park Service Interpretation and Education Program Logic Model

DRAFT v.3b (10/2/06)

Premise: If the NPS offers high quality interpretive, curriculum-based, and informational programs to a diverse public, the public will have better quality of life and will be better equipped to help preserve and protect the National Park System for future generations.



Foundation 3: Conducting a Literature Review

Assumption

A literature review identifies, compiles, and summarizes relevant research within a topic area. A preliminary assessment of existing and new preliminary literature reviews should inform the evaluation strategy.

Analysis, Findings, and Next Steps

The EECT conducted a preliminary literature review in late 2004. This review, coordinated by the NPS Social Science Program, included studies conducted by or for the NPS since 1999 that were submitted for Office of Management and Budget (OMB) clearance in compliance with the Paperwork Reduction Act of 1995 (a clearance process administered by the Social Science Program). These were primarily park-specific studies that were designed to evaluate interpretive media or personal services. The immediate gaps identified include a lack of data representing more than a specific park or program, and a clear mechanism for the application of evaluation results.

In addition, staff in the NPS Natural Resource Program Center conducted an expanded literature review in July, 2005. This effort compiled baseline information on evaluation of education and interpretation relevant to the NPS from a wide range of studies: those conducted externally as well as internally, completed studies and studies currently underway, and individual studies and compiled literature reviews.

The EECT also compiled a description of studies currently underway that relate to the NPS Interpretive Development Program (IDP). These include studies conducted by the U.S. Office of Personnel Management (OPM), the Eppley Institute at Indiana University, Clemson University, and Stephen F. Austin State University.

Preliminary findings based on these reviews of literature are summarized in Appendix C. The following steps are needed in order to more formally and thoroughly analyze and disseminate findings and trends regarding NPS education evaluation (Note: This list should focus on best practices in I&E, not evaluation best practices which is addressed in objective 1c):

- Combine the three literature reviews referenced above into one seamless document, identify initial findings and trends, determine research gaps, and recommend future steps.
- Summarize the current range and applications of evaluation processes used by the NPS.
- Identify key lessons learned from other related disciplines relevant to NPS education and interpretation.
- Highlight research that supports or demonstrates gaps in our logic and in meeting NPS evaluation needs.
- Link literature review findings to other initiatives such as the National Education Council's asset mapping effort (which addresses relationships/collaborations vs. physical/tangible items), the recent OMB Performance Assessment Rating Tool (PART) evaluation of NPS Visitor Services, and the Interpretive Development Program.

Foundation 4: Analyzing Existing Evaluations and Piloting New Studies

Assumption

Capitalizing on existing strengths and investments the NPS has in evaluation and disseminating best practices are key elements of this evaluation strategy. Indeed, there are many examples of research and evaluation projects that have taken place within all the realms of NPS Interpretation and Education programming. These can provide a real-world glimpse of what evaluation is, how it has been and can be applied in the NPS, and the valuable functions it serves. At the same time, consistent dissemination and utilization of the valuable processes, findings, and recommendations yielding from these evaluation endeavors has not been a strength. Many studies exist and provided value to the immediate program being evaluated, but since these have traditionally been individual efforts rather than part of a servicewide strategy, they were not designed during the planning or reporting stages to maximize the benefit to other parks, programs, or staff members.

Analysis, Findings, and Next Steps

Showcasing Existing NPS Evaluations: Case Studies (Phase I)

The five case studies presented in Appendix B provide a synopsis of strong, successful evaluation projects that have been conducted within and across National Park Service education and interpretation programs. These case studies were selected to represent all four of the major categories delineated in the Comprehensive Program Model:

- interpretation
- curriculum-based programs
- community engagement
- information and orientation

Further, we strived to include representation from different categories of evaluations, particularly in terms of scope and focus. Included are evaluations of:

- single park programs
- multi-park programs

Future efforts will include evaluations of:

- organizational evaluation in which the evaluation examined not just a single program but the organizational structure under which many programs were conducted
- multi-agency evaluation in which an NPS program partnered with other types of agencies to magnify the sample size and impact of their evaluation findings

The case studies illustrate the ways in which the NPS already has taken advantage of the many benefits program evaluation can offer programs and organizations. For instance, the following examples of positive actions resulting from evaluation projects are taken directly from the case studies provided in Appendix B:

- The National Park Labs (NPL) evaluation helped the Golden Gate NRA team clarify and implement the goals of the NPL project at their site, and assisted staff in developing a more focused training program.
- Santa Monica Mountains National Park continues to use the NPL evaluation instruments to evaluate and improve that program, and also now uses a similar process to evaluate non-NPL programs at the park.
- An education specialist involved in the NPL evaluation subsequently served on a leadership team for an education consortium non-profit. She was able to transfer her knowledge of evaluation to the group as they embarked on a project designing a longitudinal study to see impacts of environmental education.
- An evaluation of the NPS's Cultural Resource Partnership Programs provided baseline data on customer satisfaction to use as the program changes over time (for instance to accommodate shifts in available technology).
- The review of this evaluation also stated that knowing 1) that a program's publications, workshops, etc. are subject to evaluation, and 2) that the Customer Satisfaction results will be made public and shared with other programs tends to focus attention on producing good products in the first place.
- Findings from this study were used by senior managers to provide actual accomplishment and target information for performance management reporting and for NPS' annual Budget Justification.
- Program staff who participated in evaluations noted that the evaluation process was well worth the investment. When studies are well done the NPS gets back more than it invests, gaining new understandings, for instance, of what audience interests are, what types of exhibits are worth creating, what materials are most utilized, and what types of activities engage the widest number of visitors. One study acknowledged that evaluation often sheds light on things that we thought were clear but were not, and the fact that visitor interests are frequently different than what NPS staff and exhibit designers anticipated.

These data-based program improvements and lessons learned were important to the individual programs that were evaluated. If the processes and findings of such evaluations are centrally coordinated for better planning and dissemination, and the information made more accessible over time, they have the potential to inform a far broader audience, thus maximizing the investment in evaluation and potential for excellence.

Demonstrating and Testing the Strategy: Pilot Studies (Phase II)

The Phase I case studies summarized above (and presented in Appendix B) also form the foundation for selecting pilot evaluation projects to monitor and participate in during the second phase of the strategy. During Phase II, the I&E Evaluation Coordinator or National Evaluation Facilitation Team (NEFT) will scan the NPS for evaluation endeavors that are slated to begin soon, and select one or more projects with which to collaborate. Program staff and evaluators involved in the evaluation project would be asked to commit to coordinating the development of their evaluation plans with the NEFT so that the evaluation project meets the objectives of the Servicewide Strategy. Project managers would commit, for instance, to sharing broadly the evaluation approach and resulting findings from their evaluation projects in order to promote dissemination and use of evaluation investments. As another example, project managers might discuss PART requirements with the evaluation team and investigate how the evaluation project could better meet those requirements. Furthermore, because several simultaneous evaluation projects are being observed and supported by a single entity, there may

be some opportunities for streamlining among them. These pilot studies will help to both “field test” the strategy, and demonstrate how the strategy can begin to change the way evaluation is conducted and utilized across the NPS in a real-time case study.

Lessons Learned from Four Foundational Explorations

Development of these four foundations to the strategy—stakeholder engagement, comprehensive program model development, literature review, and analysis of existing studies—demonstrates that there are many opportunities for a servicewide evaluation strategy to help the NPS to manage information, improve program development efforts, and ultimately meet the mission of the NPS.

The following is a sampling of the “lessons learned” from the four foundational investigations:

- The field is asking pointedly for more information about visitor composition and evidence of program outcomes. Meanwhile, stakeholder respondents also want more information to guide their program planning efforts, and want to build their own capacity to conduct evaluation processes and utilize findings.
- Management and existing evaluation requirements (GPRA, PART) demand accountability.
- There is a clear chain of logic starting from Interpretation and Education program inputs and activities and leading to the final outcome of meeting the NPS mission.
- Many of the links in this chain of logic are established through existing research and evaluation efforts, and those lessons can be utilized in program design and implementation if they are made readily available.
- Many of the links in this chain of program logic have not been fully explored and NPS program developers would benefit from the collection and analysis of more data on what works.
- Ongoing evaluation is needed to monitor the processes and outcomes of new and existing programs in order to account for ever-evolving cultural context: changing demographics, evolving technologies, audience preferences, visitor patterns, etc.

From these foundations and an overarching vision, four key objectives for a SIEES emerged. In order to have a greater impact, education programs need to be effective and well-targeted. Sound decision-making about how to accomplish those programs comes from access to reliable information. Capitalizing on existing strengths within the NPS, managing evaluation information, coordinating well-targeted evaluations, sharing information widely, and, finally, assuring that staff are trained to conduct and utilize evaluation processes and findings are the building blocks for a strong culture of evaluation—and successful programs—within the NPS.

APPENDIX

Appendix A: Comprehensive Program Model, Detailed Version

N.P.S. INTERPRETATION AND EDUCATION LOGIC MODEL–DRAFT 10/31/05

Premise: If the NPS offers high quality interpretative, curriculum-based, and informational programs to a diverse public, the public will have better quality of life and will be better equipped to help preserve and protect the National Park System for future generations.

INTERPRETATION ACTIVITIES (for general park audiences)¹

| PREMISE | INPUTS | ACTIVITIES | OUTPUTS | OUTCOMES (SHORT AND MEDIUM TERM) | IMPACTS (LONG TERM) |
|--|---|--|---|--|--|
| <p>If visitors engage with effective interpretive services and media they will be more likely to:</p> <ul style="list-style-type: none"> • make a personal connection with the meanings and significance of the resource. • have an enriching park experience. • understand park resources. • become stewards of the resource. | <p>Funding from a mix of national, regional, and local sources</p> <p>Skilled NPS Staff, Partners, volunteers, and community members</p> <p>Supervision and training</p> <p>I.D.P. theory, practice, and standards</p> <p>Management of partnerships</p> <p>Interpretive partnerships (e.g. Cooperating Associations, guest speakers)</p> <p>Technology appropriate to all age groups</p> <p>Comprehensive Interpretive Planning</p> <p>Visitor services and facilities</p> <p>Content, designers and producers, media assets, knowledge of public(s), fabricators</p> <p>Wireless networks and other emergent interpretive technology</p> <p>Program evaluation of sufficient scope (internal and independent)</p> | <p>Formal Interpretation Programs (e.g. interpretive talks, conducted activities, demonstrations, or other illustrated programs)</p> <p>Informal Interpretation (e.g. roving, visitor center contact)</p> <p>Junior Ranger Program and Web Rangers</p> <p>Interpretive Media (e.g. Publications, Exhibits, Waysides, AV Programs and Films, Web and CD-ROM)</p> | <p>People participating in each type of program, service, or event (e.g. visitor contacts, attendance records)</p> <p>Programs, services, and events offered</p> <p>Interpretive media products (e.g. exhibits, websites, AV programs, brochures)</p> <p>Completed and installed media</p> <p>Geographically and demographically representative audiences, and an engaged local public.</p> <p>Programs that are aligned with visitor evaluations and expectations.</p> | <p>Participants and visitors:</p> <ul style="list-style-type: none"> • make personal connections to intellectual and emotional resource meanings • learn new information and concepts about the park or program topic, and understand the purposes, scope, and significance of the National Park system. • have an enjoyable, satisfying, memorable, and educational experience, and appreciate the recreational, historical, scientific, cultural, and economic benefits of the National Park System. • want to return to parks, visit other parks, and share park experiences with others. • care about and actively care for park resources and values. | <p>The Public:</p> <ul style="list-style-type: none"> • finds personal meaning and shared heritage in the National Park System. • understands and participates in civil democratic society, including supporting resource decisions and initiatives. • demonstrates a long-term commitment to stewardship of National Park resources. • enjoys motivating, lifelong learning opportunities. <p>The National Park System is preserved for future generations.</p> |

CURRICULUM-BASED EDUCATION ACTIVITIES (for formal learners)²

| PREMISE | INPUTS | ACTIVITIES | OUTPUTS | OUTCOMES (SHORT AND MEDIUM TERM) | IMPACTS (LONG TERM) |
|---|--|---|--|--|--|
| <p>If students participate in curriculum-based programs, they will see parks and community resources as places for recreation, enjoyment, and learning.</p> <p>If students understand the significance of park and community resources, they will become active participants in the protection of these resources.</p> <p>If teachers and leaders plan and participate in workshops and programs, they will see the NPS as a source for learning and identifying opportunities to contribute to the mission and goals of the NPS.</p> | <p>Funding from a mix of national, regional, and local sources</p> <p>Skilled NPS Staff, Partners, volunteers, and community members (e.g. tribal members, ed consortium groups, etc.)</p> <p>Supervision and training</p> <p>Content and technical resources (e.g. resource management staff, curriculum development specialists, historians)</p> <p>Planning documents (LRIP; Park, Regional, and National Ed Strategy documents)</p> <p>Training NPS staff on community perspectives and partnership work</p> <p>Optional graduate credits, CEU's and other incentives</p> <p>Program evaluation of sufficient scope (internal and independent)</p> | <p>Curriculum-based Programs (e.g. Teaching with Historic Places, Park or Program specific Curricula, Service Learning Projects, Parks as Classrooms Activities, Web modules, Distance Learning)</p> <p>Teacher Training (Professional Development) and Services (e.g. Teacher Workshops and Institutes, Fellowships, Internships, Teacher to Ranger)</p> | <p>People participating in each type of program, service, or event (e.g. teachers, youth learners, adult learners, etc.)</p> <p>Programs, services, and events offered</p> <p>Educational materials produced and distributed (e.g. curriculum-based lesson plans, traveling trunks, activity guides)</p> <p>Learners reached via accessible delivery mechanisms (e.g. assistive listening devices).</p> <p>Geographically and demographically representative audiences, and an engaged local public.</p> | <p>Teachers, and adult and youth learners:</p> <ul style="list-style-type: none"> • form their own emotional and intellectual connections with the meanings/ significance of the resource. • achieve defined learning objectives. • understand park and community resources in individual, regional, national, and global contexts. • understand the park's place within the National Park System. • understand conservation or preservation issues relevant to the park. • have an enjoyable, satisfying, memorable, and educational experience. <p>Teachers:</p> <ul style="list-style-type: none"> • understand the role that park and community resources can play in achieving educational objectives. • acquire skills and tools for engaging their students with parks as classrooms. • make continued use of the parks and community as teaching resources, sharing park and community resources with their students. | <p>The Public:</p> <ul style="list-style-type: none"> • finds personal meaning and shared heritage in the National Park System. • understands and participates in civil democratic society, including supporting resource decisions and initiatives. • practices healthy lifestyles through recreation. • demonstrates a long-term commitment to stewardship of National Park resources. • enjoys motivating, lifelong learning opportunities. <p>The National Park System is preserved for future generations.</p> |

COMMUNITY ENGAGEMENT, INFORMATION, AND OTHER ACTIVITIES

| PREMISE | INPUTS | ACTIVITIES | OUTPUTS | OUTCOMES (SHORT AND MEDIUM TERM) | IMPACTS (LONG TERM) |
|---|---|---|--|--|--|
| <p>If audiences engage in park-related experiences and dialogue, and if they receive accurate information they will:</p> <ul style="list-style-type: none"> • have the means to experience park resources enjoyably and safely • have increased awareness of park resource significance • be more likely to support park stewardship activities. | <p>Funding from a mix of national, regional, and local sources</p> <p>Skilled NPS Staff, Partners, volunteers, and community members with competency on facilitation of multiple points of view and knowledge of contemporary issues and marketing techniques</p> <p>Supervision and training</p> <p>Program evaluation of sufficient scope (internal and independent)</p> <p>Accumulated HFC and park media</p> <p>Scientific information and historical documentation and content</p> | <p>³Community Engagement</p> <ul style="list-style-type: none"> • Youth and family stewardship programs (e.g. YCC, PLC, etc.) • Programs beyond park boundaries (e.g. historic preservation, community planning, invasive species remediation) • Engagement of public and individuals in non-formal ways • Fairs and community events • Meetings/dialogue, community organization talk • Collaboration with community organizations to develop programs and media. • Citizen science and Research Learning Center activities • Partnership collaboration <p>⁴Information and Orientation</p> <ul style="list-style-type: none"> • Roving, VC information desk • Informational programs and activities including talks, seminars, lectures, etc. • Informing people of park management and critical resource issues and response. • Wayfinding materials, free publications, informational media that is digitized and/or translated into ADA accessible form, etc. • Public information (e.g. TV, press releases, magazine articles) | <p>People participating in each type of program, service, or event, including geographically and demographically representative audiences, and an engaged local public. Volunteers and volunteer hours.</p> <p>Programs, services, and events that appeal to a broad array of people.</p> <p>Informational products (e.g. maps, site bulletins, magazines, TV programs, newsletters, fact sheets, publications, databases, etc.)</p> <p>Appropriate media chosen for content, content developed or translated for media type.</p> <p>Internet hits, streaming video/interactivity on the internet, and NPS TV: A Cable access station.</p> | <p>Park neighbors and community decision makers gain understanding of park significance, resources, issues, and mission, and its values in local, regional, and national contexts.</p> <p>Underserved audiences have a stronger awareness of and connection to parks.</p> <p>Park management and staff have a stronger awareness of and connection to local communities and local organizations.</p> <p>Visitors have easy access to the orientation information they need to have an enjoyable park experience.</p> <p>Visitors have a safe park experience without creating adverse impacts to park resources and values.</p> <p>The public understands critical resource decisions, initiatives, and stewardship actions.</p> <p>Data collected through hands-on science contributes to the body of scientific knowledge.</p> | <p>The Public:</p> <ul style="list-style-type: none"> • finds personal meaning and shared heritage in the National Park System. • understands and participates in civil democratic society, including supporting resource decisions and initiatives. • practices healthy lifestyles through recreation. • demonstrates a long-term commitment to stewardship of National Park resources. • enjoys motivating, lifelong learning opportunities. <p>The National Park System is preserved for future generations.</p> |

“Scaffolding” for the Logic Model

Overall Purpose of Interpretation, Education, and Outreach Programming:

- To provide memorable, meaningful, educational experiences.
- To foster knowledge of park and community resources and their significance.
- To increase understanding of the reasons for a park’s and community resource’s existence.
- To protect park and community resources by encouraging care and visitor safety.
- To promote appreciation of park and community sites and the values they represent.

Assumptions and Underlying Tenets: *(need sorting)*

- Resources (both tangible and intangible resources, including places, objects, and events) possess meanings and have relevance.
- Non visitors do not come to parks for economic, geographic, and social/emotional/cultural reasons.
- People are seeking something of value for themselves.
- Interpretation facilitates a connection between the meanings of the resource and the interests of the visitor.
- Change can happen incrementally.
- If parks reflect the interests of diverse audiences and if staff reflects those audiences, parks visitation will become more diverse.
- If multiple points of view are sought and presented in program planning and development, a more representative audience will find the programming relevant.
- Activities of longer duration and greater depth provide more powerful and lasting benefits to the participants than shorter, less profound activities.
- NPS programs that are linked to required state curricula programs are more relevant to educators.
- Programming includes personal and non-personal services.
- Place based learning is powerful.
- There is a meaningful relationship between a park and its local community, which has other relationships with the National Park system.
- Seeks common ground between park system purpose and community desires, needs, attitudes and assumptions. Fosters trust.
- Frontline interpreters, rangers, volunteers, non-NPS staff, community members, and organizations are allocated in appropriate ratio to park visitation numbers

External Factors:

- Broader educational trends and policies influence enrollment in curriculum-based programs.
- NPS resources are more or less available depending on transportation options and accessibility.
- Cultural (e.g. more work, less vacation), economic (e.g. recession, boom), and demographic (e.g. Baby Boomers retiring) trends impact the population’s use of leisure time.
- Changing family structures, multi-generational, single parent, blended, etc.
- Our audiences are diverse, and have many different learning styles .
- Our audiences ascribe multiple meanings to resources and use resources for multiple reasons.
- Our audiences are increasingly savvy of media and technologies.

Note: This is a programmatic logic model rather than a management focused model.

DESCRIPTIONS

¹ INTERPRETATION ACTIVITIES (for general park audiences)

- Audience: General park audiences; informal learners; general public
- Learning Domains: Cognitive and affective (intellectual and emotional connections)
- Delivery Method: Personal and non-personal services. Time frame is usually a few minutes to a few hours
- Location: In or outside parks, distance learning
- Standards: See assessment rubrics for IDP modules 102, 103, 210, 220, 230, and 311
- Elements: Programs facilitate opportunities for emotional and intellectual connections between resources and visitors, are appropriate for the audience, and provide a clear focus by demonstrating the cohesive development of a relevant idea. Programs encourage dialogue and accept that visitors have their own individual points of view.

² CURRICULUM-BASED EDUCATION ACTIVITIES (for formal learners)

- Audience: Learners with formal learning objectives, and their teachers
- Learning Domains: Cognitive, affective, and behavioral, dictated by the educational goals of the institution
- Delivery Method: Personal and Non-personal services. Time frame is usually several hours to several days
- Location: In-park, in-class, and by distance learning
- Standards: See Module 270
- Elements: Links park themes to national standards and state curriculum. Involves educators in planning and development. Usually includes pre and post visit materials. Addresses different learning styles. Includes an evaluation mechanism. Provides learning experiences linked to clear objectives.

^{3/4} COMMUNITY ENGAGEMENT, INFORMATION, AND OTHER ACTIVITIES FOR TARGETED AUDIENCES

- Audience: Targeted by age, occupation, home location, familiarity with NPS, etc.
- Learning Domains: Cognitive, affective, and/or behavioral
- Delivery Method: Personal and non-personal services. Time frame is a few minutes to a few days
- Location: In-park and beyond park boundaries
- Standards: May be subject to IDP standards if interpretive in nature.

^{3/4} COMMUNITY ENGAGEMENT, INFORMATION, AND OTHER ACTIVITIES WITH TARGETED MESSAGES

- Audience: Usually a general audience, but may be targeted
- Learning Domains: Usually cognitive and behavioral
- Delivery Method: Personal and non-personal services. Time frame is usually a few minutes to several hours
- Location: Usually in-park
- Standards: See Module 340 curriculum

Appendix B: Five Case Studies Showcasing Existing NPS Evaluations

Document Title: *National Park Labs (NPL): The National Evaluation Report*

Authors, Publication Date: Brenda Jochums Slez and Elizabeth Hoermann (April 2003)

Review completed by: Elizabeth Hoermann

For more information: Elizabeth_Hoermann@nps.gov

Document summary

This publication is a summary of the evaluation of the National Park Lab program. The document provides limited discussion of the evaluation's methods, more comprehensive discussion of the evaluation's findings and things to consider for future planning. NPL was a three year project at five national parks, to establish model environmental science field experiences that foster stewardship and enhance the quality of science and mathematics education for high school students. The evaluation had four components: planning, monitoring progress toward proposed goals, assessing impact on students, and determining the program's economic efficiency.

Evaluation questions addressed in this study

- To what degree are the goals of program planning implementation with the target audiences completed by each site and by the project overall?
- To what degree has the effort of the local sites resulted in economically efficient and effective processes within National Park Labs sites and concerning the project overall?
- With what degree of effectiveness, or success, were the learning outcomes achieved within, and across, individual sites?

Primary evaluation methods

- Written quarterly self-report forms (monitoring progress of goals and program activities) from the program manager throughout the three-year project
- Program manager interviews during two field tests
- Stakeholder focus groups (partners and staff) during two field tests
- Field observations during program implementation
- Feedback forms from teachers participating in the field tests
- Posttest only, quasi-experimental comparison of students participating in NPL program and a control group at each site

Key evaluation findings

- *Achieving Goals:* The five sites achieved their goals by developing 17 field experiences with student and teacher materials, conducting multiple training opportunities for rangers, partners, and volunteers, developing web sites, and conducting a local evaluation to assess professional development and improve program components. Overall, the sites had more than 16,000 teacher and student contacts.
- *Project Management:* Dividing management responsibilities between two managers or developing a management team provides project consistency in cases of turnover and a manageable workload for individuals who have additional responsibilities.

- *Partnerships*: Partners provided expertise and resources beyond initial estimates but required a greater commitment of time for maintaining open communication, material and program reviews, and addressing changes and complexities within partner organizations.
- *Assessing Student Impact*: Attitudes about stewardship and environmental issues can be communicated through NPL programs and site-specific knowledge and application of content was clearly communicated to NPL students.
- *Economic Efficiency*: Managers, partnerships, and audience contacts were key to NPL success. Traditional notions of economic efficiency apply differently to programs that seek differing levels of stewardship development in students from the internships to. one-day experiences.

Strengths of this evaluation

- Made use of a multiple-method case study approach
- Evaluated program from planning to implementation to outcomes
- Provided lessons learned related to each of the areas of concern
- Provided an across the sites analysis of the project overall as well as individual site case studies
- Thorough and intensive
- Provided ways to sustain the projects long term

Generalizable lessons learned for NPS educational programming

- Partners can greatly multiply the efforts of NPS educational staff. But fostering and maintaining successful partnerships require strong communication and time devoted to this effort. Identifying one person to coordinate partner communication strengthened the communication network.
- Both teachers, through professional development, and students, through field experiences, benefited from these programs.
- Park programs staffed by interns, park staff, teachers, volunteers, and partners require a strong professional development program to insure high quality and consistency.
- Training for mixed audiences is very successful. Combining the partners with rangers, volunteers, and other staff provided a cross fertilization of understanding.
- Stewardship evolves over time and through a variety of methods. For example, stewardship among interns who had a depth of experience and commitment differs from a one-shot programs that establishes interest and familiarity. Both types of activities can lead to stewardship.

How can this evaluation inform the development of a national evaluation strategy for the Park Service?

- Evaluation needs to be incorporated from the beginning of the project. The evaluation plan should be established prior to starting work on the project.
- Evaluation is especially useful during planning, pilot testing, and implementation.
- Program managers should record data systematically (i.e. use of tools such as “Self -Report” forms.)
- Program managers need to allocate enough time for working on the evaluation process so as to avoid burnout and a sense of work overload.

- Evaluating process as well as outcomes provides valuable information that can improve programs.
- Evaluation data provides critical information to help sustain programs long term.

Challenges of this study

- Site-based programs were more diverse in nature than the evaluators originally thought. This created challenges in developing instruments that could be used across the five sites.
- Sites added components to their projects beyond the required elements, requiring additional commitment of time of resources – sometimes shifting resources from the originally negotiated required elements.
- Turnover of key staff and partner personnel threatened to impede progress towards NPL goals and/or necessitated additional training to complete development and implementation.
- Projects were complex, and the evaluation was more labor intensive than originally planned.
- Working with the high school population presented challenges in scheduling: arranging for field experiences, data collection, and teacher training.
- Change in state and local curriculum standards, a result of education reform, created timeline issues for some sites and the need to revise their program plan during the development phase or the implementation.

Examples of how this study was utilized

- At Santa Monica Mountains NP:
 - Park continues to use the instruments to evaluate the program and improve it and uses a similar process to evaluate non NPL programs at the park.
 - Shared the evaluation with other parks and partners and used the partnership processes as a model to put together a consortium for education planning.
- At Golden Gate NRA:
 - During the project, the evaluation helped the team clarify and implement the goals of the project; provided an outside look on things that would improve the program, and identified a need for a more focused training program.
 - The education specialist served on a leadership team for Community Resources for Science, an education consortium non-profit in the east bay (Oakland, Berkeley). The group wanted to design a longitudinal study to see impacts of environmental education. They received seed money from EPA to begin the group's work. She brought in the NPL study and evaluation. From last year – 2005, she felt it was helpful as it informed their discussion about evaluation, demonstrated the benefits of having an outside evaluator, reinforced academic elements in evaluation (context), and provided a possible model for their study.

Document Title: *Serving Customers – FY 2003: A Report on Customer Satisfaction with Selected Programs of the National Park Service’s Cultural Resource Partnership Programs*

Authors, Publication Date: Steve Hellenhorst, Michael Schuett, Steven Whisman (August 2004)

Review completed by: John Renaud, Historian; Servicewide Strategic Plan Goal Coordinator

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Document summary

This report provides a third-party objective analysis of customer satisfaction with NPS-provided, historic preservation-related technical assistance, training, and educational materials. The analysis for this report looks at publications, periodicals, workshops, conferences, etc. that NPS provides to help our partners outside the park system (identify, evaluate, and protect their irreplaceable historic and prehistoric resources. The report provided both 1) figures for the related NPS Strategic Plan Goal and 2) information to help individual program managers make decisions. The document provides limited discussion of the evaluation’s methods, and a more comprehensive discussion of findings and considerations for future planning.

Evaluation questions addressed in this study

- What is the over-all level of customer satisfaction with technical assistance, training, and educational materials as embodied in publications, periodicals, workshops, etc.?
- For each program and for each evaluated publication, periodical, workshop, etc., what is the level of customer satisfaction with the content of the publication, etc.; what is the level of customer satisfaction with the presentation of the publication, etc.; and what are some of the characteristics of the respondents to the survey questionnaire (helps to identify which targeted audience the respondent belongs to)?
- What other publication, periodical, workshops, etc. would the respondents like NPS to offer?

Primary evaluation methods

- For publications and periodicals, our third party contractor sends a questionnaire to a randomly selected stratified sample of recipients of the publications and periodicals. The questionnaire contains both multiple choice questions and narrative opportunities.
- For workshops and conferences, our third party contractor analyzes standardized evaluation forms turned in by workshop participants. The evaluation form contains both multiple choice questions and narrative opportunities.

Key evaluation findings

- Customer Satisfaction Levels High: Both collectively and (with very few exceptions) individually the publications, periodicals, workshops, etc. received very high marks from respondents for both content and presentation. The NPS Strategic Plan goal target of 90% level of customer satisfaction is routinely met and exceeded.
- Narrative Responses Helpful at Several Levels: The narrative responses that respondents provided have helped program managers improve individual and groups of publications, workshops, etc.
- Recommend Expanding Customer Satisfaction Evaluation to Cover Web-Based Materials.

Strengths of this evaluation

- Uses independent, third party contractors to select the survey recipients and to prepare the Report, protecting the respondents' anonymity, which increases confidence in the accuracy of the results.
- Separates satisfaction with content from satisfaction with presentation, giving more meaning to the quantified results and helps program managers target corrective actions where needed.
- Includes questions related to respondent characteristics to help program managers assess the satisfaction of targeted audiences.
- Asks for narrative responses help to give context to the multiple choice answers.
- Asks stakeholders for their opinions and suggestions, which creates good will.
- Program managers were provided with raw response data (without respondent identification information), allowing individual managers to sort the data as needed while limiting the report length.
- Looks at multi-year trends in addition to the single year snapshot.
- Serves both Servicewide and individual program needs.
- Addresses one of the Customer Satisfaction goals in the NPS Strategic Plan.

Generalizable lessons learned for NPS educational programming

- Protecting the anonymity of respondents to evaluation surveys improves the value of the analysis of the respondents
- Using a stratified sampling technique is statistically valid and helps to keep down the cost of the evaluation project. Sampling, however, does introduce some level of uncertainty into the results. Also, yearly variabilities and unknown external factors mean that tracking satisfaction over a number of consecutive years is a better basis for making major decisions than just a single year's snapshot.

Challenges and limitations of this study

- Evaluations of workshops, etc. are by nature censuses rather than samples, so respondent anonymity protection is not as strong. The consultants took this into account when weighting the responses.
- Program managers must use the standard questions for their workshops, conferences, etc. Improper alterations of standard question (or option) language taints survey results.

Most interesting nugget from this report

- Many programs have sought customer feedback for years. Standardizing evaluations across programs gives higher level managers a rational basis for making management decisions on a more general level.

Examples of how this study was used

- Every year we use the data from this report to provide actual accomplishment and target information for performance management reporting and for NPS' annual Budget Justification. Senior managers love to be able to report high scores to their superiors in NPS and the Department and OMB.

- Program managers read at least the sections that pertain to their programs. Programs revise individual publications, workshops, etc. based on evaluations, but it is difficult to know for sure how managers base larger program decisions on the results of this report.
- For one program's publications, a number of respondents requested more illustrations. The program manager read this and directed her staff to include more illustrations in future publications.
- Just knowing 1) that a program's publications, workshops, etc. are subject to evaluation, and 2) that the Customer Satisfaction results will be made public and shared with other programs tends to focus attention on producing good products in the first place.
- Managers are held accountable in their Performance Evaluations for meeting goal targets in the NPS Strategic Plan. Customer satisfaction relates to one of the goals in the Strategic Plan.

Other input and ideas from evaluators or programs involved in this evaluation

- Evaluation of customer satisfaction needs to be expanded to include the other types of technical assistance, training, and educational materials. For example, more and more we are shifting from hard copy to web-based educational materials.
- Once we get the web-based analysis on-line, we need to determine (from a social science perspective) whether it can reasonably substitute (at least on occasion) for seeking the satisfaction level of recipients of hard copy materials.
- By investing in this type of evaluation of an existing program, we have access to baseline data when and if we seek modifications to the program. For instance, if a natural shift from hard-copy to web-based publications ensues, we can compare customer satisfaction ratings of the same material in different formats.
- For reasons related to the development of the NPS Strategic Plan, this report focuses primarily on satisfaction with technical assistance, publications, workshops, etc. relating to cultural resources throughout the country outside the National Park System. Though we need this to assess NPS success in meeting its statutory missions to help our partners throughout the nation protect their cultural resources, the exclusion of park activities leaves a gap in our understanding of cultural resource-related customer satisfaction. According to the experts in the Interpretation and Social Science programs, currently there is no way to easily pull cultural resource-related information from the current visitor satisfaction process.
- Once we establish the system for evaluating customer satisfaction with the full range of cultural resource-related technical assistance, training, and educational materials, we need to determine the proper pattern of evaluation. On the one hand, a multiple-year trend analysis is the best way to gauge the true level of customer satisfaction (see above for the reasoning). On the other hand, if you get the same results (especially for high scores) year in and year out, you probably don't need to ask the questions each year (at least for purposes of determining the overall level of satisfaction).

Document Title: *National Park Education Programs Making A Difference: Evaluating PARTNERS, a Parks as Classrooms Program*

Authors, Publication Date: M. Monroe, J. Washburn, T. Goodale, B. Wright (June 1997)

Review completed by: Amy Powers

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Document summary

This document summarizes the evaluation of the PARTNERS program, focusing on why and how different evaluation methods and tools were used, and providing ideas and guidelines for evaluation of similar programs. The document provides limited discussion of the evaluation's findings, and more comprehensive discussion of the evaluation's methods. The PARTNERS program created a school-park relationship in which teachers and NPS educators worked together to develop a curriculum that teachers could use with or without assistance from rangers. The curricula addressed science, history, and social studies, and were also designed to encourage stewardship of National Parks. The evaluation had three components: planning, program implementation, and program outcomes.

Evaluation questions addressed in this study

- *Planning:* What topics do teachers wish to see addressed in the curriculum to be developed?
- *Implementation:* How are the summer curriculum development workshops most effectively run? How is the curricula received during field tests?
- *Outcomes:* How is student knowledge changing? What is the quality of the learning? Are students developing stewardship attitudes and behaviors toward the Parks?

Primary evaluation methods

- Written surveys for teachers in the planning stage
- Written feedback forms during the curriculum development workshops
- Field observations during curriculum implementation
- Feedback forms from students and teachers in the field
- Interviews with 40 people, including steering committee, advisory panel, coordinators
- Experimental design student survey

Key evaluation findings

- *Planning:* Teachers were seeking information about “how humans interact with the environment.”
- *Implementation:* Park staff and especially teachers valued the professional development experience.
- *Outcomes:* Students were engaged during the field trip, retained content relevant to their school unit, and were confident in their ability to explain what they had learned.

Strengths of this evaluation

- Made use of multiple methods
- Explained drawbacks and advantages to each method
- Spanned program from planning to implementation to outcomes
- Thorough and intensive

Generalizable lessons learned for NPS educational programming

- Teachers can greatly multiply the efforts of NPS educational staff.
- Teachers appear to be the primary recipients of benefits from programs such as this to develop teaching materials. Benefits to students were less apparent.
- Teachers are looking for interesting curricula and students enjoy field trips.
- Stewardship evolves over time.
- Park staff is not interested in “extra” work (i.e. rangers hoped teachers would operate more independently.)
- Long-term assessments of use and learning would be important to know, but were not a part of this grant-funded project, and rarely are.
- Despite an extensive formative evaluation process, interviews revealed that teachers’ and rangers’ expectations of the program’s implementation differed from one another. (Namely, the rangers expected teachers to implement their curriculum alone, while teachers expected to engage the rangers in activities with their students.) Their differing expectations were all expressed goals of the project, but apparently there was some breakdown in terms of collective understanding of which goals should be achieved on what schedule.

How can this evaluation inform the development of a national evaluation strategy for the Park Service?

- Mapping program logic is critical. A large number of the recommendations are about matching the evaluation to program logic.
- Evaluation is especially useful during planning and implementation.
- Program coordinators should record data systematically (i.e. use of tools such as “process watcher” forms.)
- Beware of evaluation burnout with those closest to the program being evaluated.
- Measuring student outcomes might be better accomplished with interviews, or more systematic observation.
- Incentives may be needed to improve evaluation response rates, making evaluation endeavors more fruitful and worthwhile.

Challenges of this study

- Lack of response on initial planning survey.
- Over collection of data in formative process caused burnout.
- Lack of systematic recording of observations.
- Field observations hampered by methodological and logistical constraints.
- (It was unclear from this report what methods were used to analyze qualitative interview data and quantitative student survey data. This may not be a weakness, but it is not reported in the document.)
- Teacher unfamiliarity with evaluation protocols and challenges in implementing pre/post/control design.

Examples of how this study was utilized

- The US Fish and Wildlife Service has used this monograph in their evaluation course and it has been used as a case study to help folks understand how to think about program evaluation and what you can learn from various tools.
- Additional examples to be included

Other input and ideas from evaluators or programs involved in this evaluation

- What surprised the evaluators the most was the powerful response the teachers gave about the value of the program to them as professional development. They were also struck by the challenges of meeting the school administrations' needs for showing results on state assessments and the realities of the value of one field trip in the year.
- Additional comments to be included

Document Title: *Visitor Experience and Media Effectiveness*

Authors, Publication Date: Dr. Robert Eisenberger and Dr. Ross J. Loomis (Fall 2003)

Review completed by: Sam W. Vaughn

For more information: sam_w_vaughn@nps.gov or go to <http://www.nps.gov/hfc> → Products and Services → Media Evaluation and Audience Research.

Document summary

A survey in summer 2001 of over 2500 visitors to Rocky Mountain National Park (RMNP) and Yellowstone National Park (YNP) investigated relationships between personality traits and enjoyment of park experiences. Visitors' motivations and assessment of their experiences were strongly correlated with personality traits. Traits included the need for sensory experience, cognition, affiliation, and exercise. Visitors' need for sensory experience correlated strongly with their motivations for visiting parks as well as their desire for information about sensory experiences. Suggestions for improvement of interpretive media correlated with the need for sensory experience or cognition. The design and condition of interpretive facilities strongly influenced enjoyment.

Evaluation questions addressed in this study

- Develop a basic understanding of how visitors' differing personality traits act in combination with interpretive media and facilities and other experiences to influence the quality of visitors' park experiences.
- Evaluate the effectiveness of visitor centers, interpretive media, and visitor services with different audiences.
- Develop methodologies that could be used in the future to design and evaluate media for achieving optimal visitor experience and resource protection objectives.

This study looked at how national parks can meet the needs and interests of visitors with differing personality types, and examined how these traits influenced visitor reactions to various media and other experiences. Four personality traits were assessed: the need for sensory experience (NSE), the need for information or cognition (NC), the need for exercise (EXER), and the need for affiliation (AFIL).

Need for sensory experience (NSE) was a new scale that was developed by Dr. Eisenberger and validated by this and other studies. NSE means an enduring tendency to seek and enjoy pleasant visual, auditory, and olfactory sensations and to avoid unpleasant sensory experiences. This trait may influence many individuals to come to national parks and affect the enjoyment of their park experiences.

Need for cognition (NC) refers to a desire for information and enjoyment of cognitive endeavors, including a preference for abstract thought and cognitive problem solving. NC has been extensively studied as a variable in formal and informal learning situations.

Need for physical exercise (EXER) refers to enjoyment of strenuous activities. Those with a high need for physical exercise may be especially interested in opportunities for hiking, climbing, or other active outdoor recreation.

Need for affiliation (AFIL) refers to the enjoyment that results from shared social experiences. Individuals with a high need for affiliation tend to like meaningful interactions with others. They may have an increased desire for media and other experiences that are conducive to social interaction and which provide opportunities for sharing experiences with others.

Primary evaluation methods

The primary evaluation method was a visitor survey that included quasi-experimental and experience sampling elements. Over 2500 visitors were surveyed between June and August of 2001: 848 visitors to RMNP and 1739 visitors to YNP. Visitors were contacted at entrance stations at in front of visitor centers. Those who agreed to participate filled out a short survey at the point of contact that assessed personality preferences, motivations, and demographics. During the rest of their visit, they completed a second survey which assessed their enjoyment of interpretive media and facilities and park experiences.

Key evaluation findings and implications

- This study confirmed the **relationships between personality traits and a wide variety of visitor motivations and assessments of their experiences.**
- **Desire for sensory experiences (such as viewing scenery and wildlife) was the strongest motivation for visiting these parks.**
- There was a **high degree of correlation between desire for sensory experiences and an interest in learning about them.** Interpretation may need to be closely linked with enjoyable and attractive sensory experiences. This has implications for media and program design, which media are used for which messages, and interpretive planning. Also, the value of including information with sensory experiences (e.g., exhibit labels, wayside exhibits at overlooks, trail brochures) was confirmed.
- This study confirmed the **importance of the design and condition of interpretive facilities.** Two contrasting visitor centers were studied. The Fall River visitor center at Rocky Mountain was new and attractive. The Canyon visitor center at Yellowstone was old and frequently crowded. Fall River visitors reported that the new structure was the *most satisfying experience* during their visit to the center (other experience variables were exhibits, information, and staff). At Canyon, however, the facility rated the lowest among the four variables affecting satisfaction. About half of the Canyon center visitors remarked that crowding was their least favorable experience. Interestingly, the Fall River facility also rated the highest as a *least satisfying experience*. the issue is too much noise. The design of the building interior contributes to a noisy atmosphere that is unpleasant. Clearly, design and size matter.
- **The quality of the exhibits (rated relatively high at both centers) also contributed significantly to visitors' enjoyment of the centers.** There were many ideas for improving exhibits in both visitor centers. The types of suggestions related strongly to personality traits.
- **The friendliness and helpfulness of people at information desks was the strongest visitor center experience contributing to visitors' belief that they were valued by the National Park Service.** Such perceived agency support could – through the influence of the

reciprocity norm -- increase the likelihood of visitors' compliance with regulations and general support for parks. Staffing and customer service matter.

- At both parks, the **most satisfying visitor experience was viewing scenery**. Viewing wildlife was the second most satisfying experience at YNP, while hiking was the second most satisfying experience at RMNP.
- **Orientation flyers with high-quality color photographs were rated as more interesting and enjoyable than orientation flyers with text only**. Neither version was significantly different at motivating visits to sites.
- **A large majority of respondents reported that participating in the survey was enjoyable**. Participating in the survey did not detract from -- in fact it added to -- most visitors' enjoyment.

Lessons learned or suggested for NPS interpretation/education

- There is no such thing as “the visitor.” Park visitors are diverse. Personality traits provide a relevant and useful way to segment audiences. Visitor assessment of their park experiences (including interpretive programs and media) will likely correlate with personality traits. Design of interpretive media and programs should account for diverse audiences.
- Need for sensory experiences is likely to be paramount among personality traits of visitors to natural history parks. Viewing scenery and wildlife, and hiking are likely to be primary motivations of natural area visitors.
- Effective interpretation and education in parks should provide both enjoyable sensory experiences and relevant information.
- Design, condition, and size of interpretive facilities matter. Facilities that are too small, crowded, or noisy will diminish visitors' enjoyment.

Examples of how this study was utilized

- To be completed

Other input and ideas from evaluators or programs involved in this evaluation

- To be completed

Document Title: *Sequoia Kings Canyon, Giant Forest Evaluation*

Authors, Publication Date: Dr. Harris Shettel (September 2003)

Review completed by: Sam W. Vaughn

For more information: sam_w_vaughn@nps.gov or go to <http://www.nps.gov/hfc> → Products and Services → Media Evaluation and Audience Research.

Document summary

This summative study was located at Giant Forest in Sequoia Kings Canyon National Park. Observational studies were conducted in three contiguous areas: the Big Trees Trail, the Plaza, and the Giant Forest Museum. Eight focus groups were conducted with visitors. Observations focused on actual visitor behavior, concentrating on the *attracting* and *holding power* of wayside and indoor exhibits. Focus group discussions yielded visitor reactions, suggestions, and demonstrations of messages communicated. The evaluator provided critical appraisals of many interpretive media.

Evaluation questions addressed in this study

- The observational studies assessed the ability of wayside and indoor exhibits to attract and hold visitor attention.
- Focus groups assessed effectiveness of interpretive media, support for agency messages, wayfinding, and overall visitor enjoyment.
- The critical appraisal addressed interpretive media effectiveness and related variables such as design, content, location, and appeal to visitors.

Primary evaluation methods

- Three types of evaluation were conducted: visitor observation/tracking, focus groups, and critical appraisal. Three areas of the Giant Forest complex were studied: the Big Trees Trail, the Plaza, and the Museum. Also included are recommendations from the researcher for ways that the design and/or content of the interpretive media might be improved.
- Eight focus groups recorded visitors' feelings, opinions, and suggestions relating to their experiences in the Giant Forest area.
- The evaluator contributed critical appraisals on several of the interpretive media, as well as comparing results in this study with those found in other similar venues.

Key evaluation findings and implications

Observational study: Big Trees Trail

Eight out of 13 waysides were studied. Visitor behavior was broken down into five subcategories: stopped (waited), passed by, glanced but did not stop, read, and talked. Time spent at the waysides was estimated. Gender, and size and composition of the group were also noted.

The percentage of visitors who read waysides ranged from 27% to 73%. Those who read for more than 20 seconds (even the shortest text takes about 30 seconds to read) ranged from 9% to 55%. An average of 50% of males and 57% of females spent some time reading waysides. Twenty one % of males and 29% of females spent at least 20 seconds on one or more wayside(s).

Evaluator's note: These figures correspond to what is referred to in the literature on visitor behavior as *attracting power* and *holding power*. *In that context*, these results are quite good. That is, in most museum settings individual exhibits rarely get an average of half of the visitors to approach them and a fifth of those visitors to spend a reasonable amount of time paying attention to them. However, this comparison is a weak one when one considers the unique environment in which the Sequoia waysides exist. They do not directly compete with each other, they have very high visibility, and they represent an easily accessible opportunity for visitors to get information about what is surely an outstanding visual experience. But, without comparable data from other wayside venues it is difficult to make an informed judgment about whether or not these data represent excellent, good, fair or poor results. When placed in the context of “all waysides,” my own informed guess is that they represent good results.

The study did not show *why* the results differ among waysides in attracting and holding percentages. The data tell us *what* visitors did, not *why* they did it. There are several possible factors discussed by the evaluator:

- There may be significant human-interest elements (connections) in those waysides that received the highest reading scores.
- Some of the lower scorers have technical information in the text, which may be of less interest.
- The close proximity of the wayside itself to the object or view that it deals with, and/or the inherent interest of the object/view discussed may attract visitors.
- Location, location, location: some waysides are “right in front of you” and some are not.
- The quality or attractiveness of the image(s) on the wayside may play a role in these results.
- Some panels may suffer from weathering or other physical deterioration; some may reflect glare from sunlight.
- Finally, it is well known that the writing style, format, total number of words, sentence length, and word difficulty of labels and text can be of enormous importance in the reading behavior of visitors.

Observational study: Plaza

A total of 25 visitors were observed who entered the Plaza area from the parking lot. Data from male visitors and female visitors showed no significant differences.

There seemed to be a reluctance to slow down or pause at this point to read waysides since the visitors were heading toward the museum (the “destination effect”). Three waysides at the entrance from the parking lot to the plaza received little or no attention. Once in the Plaza quite a few visitors made stops. One wayside attracted and held (long enough to read some text) almost half of the visitors; two others attracted and held about one third of the visitors. Others received far less attention, especially those out of the normal pathway to the museum.

The content of the waysides in the Plaza area was uniformly good. The writing was straightforward and in plain English. There was a high level of human-interest value in most of them.

Implication: These results and other studies should be consulted when considering placing nonpersonal media outside of visitor centers. The “destination effect” may cause less attention than

warranted by the quality of the media and the interest and relevance of the message. A related variable is placement in the line of travel: visitors may tend not to walk out of their logical pathway to get to a destination.

Observational Study: Museum

Visitors were observed unobtrusively as they moved through the exhibit area in the Museum. Twenty five males and 26 females were tracked, all of them 16 years of age or older.

Total time spent in the Museum averaged about 11 minutes; this included time spent with exhibits, in the bookstore, and talking with staff. There were 13 exhibits. The average times worked out to less than a minute per exhibit **without subtracting** the times taken for time in the bookstore and talking with staff. Given what would seem to be the main purpose of visiting the Park (to see the Sequoias) these time data are not unexpected.

Observations recorded the number of visitors who passed within sight of a given exhibit element and the number of that group who stopped to read any of the labels. The latter number is further broken down by the number who read for more than 20 seconds. Results generally confirmed that most visitors passed or glanced at most exhibits. About 59% of visitors who passed close to exhibits paid some attention to them, and nearly half read some of the text. Interactive devices were used by no more than one third of visitors observed (all at least 16 years old). Several exhibits fell short of getting the initial attention of most visitors: location, appearance, and wording were possible factors. Possible reasons for the differences and potential improvements were discussed.

Focus Group Study

Eight focus groups were conducted among site visitors. Group size ranged from 3 to 9 people. Responses are summarized:

- All participants enjoyed their visits.
- Wayfinding – most had no problems. Maps worked very well. Some visitors had trouble with road signs and finding the parking lot.
- Various exhibits were discussed, opinions and suggestions given, and content and presumed messages summarized. Some new information was communicated. There were many requests for more interactive devices.
- The Ruler ruled among outdoor exhibits – very popular with young and old.
- The role of fire in the life of the Sequoias was well understood, and some participants expressed surprise at the positive effects of fire. The notion of habitat was also communicated well.
- Responses were very positive with respect to the restoration of the Park and protecting it from commercial development. The importance of preservation was affirmed universally.
- All would recommend the Park to their friends and would like to come back sometime in the future.
- The issue of crowding came up. Some thought that it was “too crowded” but to others the Park was seen as less crowded than some other National Parks like Yosemite.
- “It really helps to see the real things out on the Trail after you learn about Sequoias in the Museum. One complements the other. One is specific and the other is more general.”
- Most that hiked the Trail read waysides and found them helpful. A couple wanted “more text.”
- Some families used this experience and other parks as teaching opportunities.
- Several noted that the information about how long it would take to hike the Trail was exaggerated. That could discourage use.

- There was support for more services for disabled and sensory impaired visitors.
- Some wanted a chance to take a picture beneath a tree.
- One group advocated text materials in Spanish, and appreciated that the Rangers they talked to spoke Spanish.

Evaluator’s Final Comments: The results reported on above generally project a very positive image of the visitor experience in all three of the venues that were studied. Visitors not only expressed their pleasure and enjoyment verbally in the Focus Groups but “physically” in the Observational study. People came to the Park to have a good time, and they were having it. Most visitors appeared to gain a good deal of new information from their time in the Park.

There are, nevertheless, a number of “soft spots” that revealed themselves in the analysis of the results. My personal bias would be to concentrate on text material: wayside, exhibit text and hands-on exhibits. Making these materials more readable, understandable, visible and interesting would help to increase the low reading times for many of them.

Lessons learned or suggested for NPS interpretation/education

- Interactive devices in museums aren’t a guaranteed winner, and often don’t work as intended, but many visitors say they like them.
- Location matters for outdoor waysides and indoor exhibits. Those out of the normal traffic pattern will likely get little attention.
- Destination matters: if visitors intend to go to a visitor center, it can be difficult to attract them to outdoor waysides on the way.
- This area provides a high quality, enjoyable, and educational experience for most visitors. Like all such endeavors, some things can be improved. Summative studies using observation, focus groups, and critical appraisals can provide valuable information on visitor behavior, reactions, and outcomes. These can lead to further improvements.

Examples of how this study was utilized

Comments by Bette Barden, Lead Park Volunteer: One thing I did find interesting was how few visitors leaving the museum headed for the trails - I would have expected more to do so. As to the use of exhibits within the museum, since we tracked adults the findings did not reflect the use by children in those groups. Virtually all the kids tried the wheel, and most adults with children left that to them. Since we didn't observe children, I'll throw in a few observations - small children liked the Fire Scar Theater (and the money box!); older children especially liked the Wheel. Personally, I think the museum does a great job - there is something for everybody, and I was impressed with how much time people spent reading the exhibits on the back wall. I think it is a great small museum. I agree that more interactive exhibits would be good for children, though I never noticed any bored children anxious to get their parents to leave.

Additional comments to be included

Other input and ideas from evaluators or programs involved in this evaluation

To be completed

Appendix C: Informal list of current, on-going evaluations within NPS and in cooperation with NPS partners as of October 2006

OMB approved studies compiled by Megan McBride, selected partner evaluations compiled by Michael Duffin, v3, 10-20-06

Please note that while this list includes a variety of different studies, most of which went through the OMB expedited review process in FY 2006, this is by no means of a complete list of on-going studies, but rather is compiled in order to present the breadth and depth of current work being done regarding interpretation and education evaluation. In addition to these specific evaluations, many visitor studies are conducted at different sites each year that include evaluations of aspects of interpretation and education services and programs.

National Park Service Interpretive Development Program Evaluation Study

WHAT: The NPS Interpretive Development Program (IDP) trains and evaluates NPS Ranger Interpreters in ten Interpretive Benchmark Competencies, including the competency which is the focus of this study: "Preparing and Presenting an Effective Interpretive Talk." If the IDP is to sustain and improve the quality of interpretation in the NPS, an evaluation of those aspects of interpretive talks which visitors find memorable and relevant is necessary. This study complies with the DOI's Training Directors Council (ITDC) guidelines in using Kirkpatrick's Evaluation model to measure the effectiveness of interpretation. It examines results of specific interpretive talks delivered by interpreters who have received various levels and types of training from the IDP and their respective parks. The purpose of the study is to identify visitors' perceptions of and to explore their responses to an interpretive talk through a telephone interview conducted six months after their attendance at a specific interpretive talk.

WHERE: MACA, SHEN, ASIS, GLAC, EVER, CHOH, FRDO, HAFE, & GETT

WHO: approximately 400 visitors who attend pre-determined interpretive talks and who completed an initial intercept questionnaire, approved in 2005.

WHEN: data collection: January 20, 2006 through July 30, 2006

HOW: follow-up telephone interviews, conducted 6-months after individuals who agree to participate attended pre-determined interpretive talks.

Adult Learning Strategies in Personnel-Based Wilderness Education Programs

WHAT: The NPS needs information about individual differences in adult learning processes and learning strategies to better tailor interpretive wilderness education programs to diverse audiences and to maximize learning outcomes. This will contribute to agency wilderness education and management goals. This study documents individual difference in learning processes by identifying adult learning strategy preferences in leading examples of NPS personnel-based wilderness education. The NPS also needs to know if learning style assessment tools are practical to use in park settings. The *Assessing the Learning Strategies of Adults* (ATLAS) and a demographic survey will be administered to the public in wilderness programs, such as wilderness-awareness hikes, talks, Leave-No-Trace low-impact programs, and staff training. Learning strategies will be identified and compared with ATLAS national norms.

WHERE: SHEN & YOSE

WHO: Adults who participated in wilderness education programs in SHEN & YOSE

WHEN: data collection: March 20, 2006 through November 11, 2006

HOW: on-site survey

Pilot Test: Northeast Region Education Program Assessment Tool

WHAT: The Education Program Assessment Tool project sponsored by NPS Northeast Center for Education Services will evaluate curriculum-based education programs at 15 Northeast Region (NER) parks. This pilot test will also inform regional staff about the quality and effectiveness of NER park education programming. Respondents include up to 75 classroom teachers and 2000 students participating in education programs at 15 identified NER parks. A mail-back teacher instrument (Instrument A) will be administered to the primary teachers in five occurrences of a program at each of the 15 participating parks. An on-site student instrument (B: history intermediate, C: natural science intermediate, D: physical science intermediate) will be administered to each student in the selected programs. The teacher instrument focuses on teacher perspectives of effectiveness and quality. The student instruments focus on evidence of program effectiveness in communicating concepts.

WHERE: Northeast Region parks

WHO: Teachers and students taking part in an education program at the pilot parks

WHEN: data collection: March 22 through November 30, 2006

HOW: mail-back (teacher surveys) and on-site (students surveys)

Evaluation of Park Communication with German-speaking Visitors at Yosemite National Park *(I heard that this study was denied a research permit by the Yosemite, so it was not done, but I am not sure.)*

WHAT: This study assesses (1) how well communications meet the needs of German-speaking visitors at Yosemite and (2) what primary interpretive message(s) these visitors learn. The study uses written questionnaires and group interviews of German-speaking visitors. Information regarding German-visitors' expectations, experiences, trip characteristics, activities, interests, and information sources will be collected and the findings will be used by park managers to improve interactions with foreign visitors.

WHERE: YOSE

WHO: Native German-speaking visitors to high-use areas of YOSE

WHEN: data collection: May 28, 2006 through August 20, 2006

HOW: on-site questionnaire and interview

Evaluation of Pilot Project on Community-based Promotion of Healthful Recreation in Cuyahoga Valley NP (Phase 1) (OMB approval pending)

WHAT: This study evaluates a project at Cuyahoga Valley National Park to promote the Park as a resource for physical activity and health benefits for school children in adjacent neighborhoods. The project is divided into two phases. The objective of this first phase is to determine children's and parents' satisfaction with a pilot program of physical activities for school children conducted in the park during summer 2006. Results of this survey will be used to refine both the marketing and content of the program for summer 2007. In 2007, Phase 2 of the project will be initiated with a formal evaluation of the program's impact on physical activity among school children in nearby neighborhoods.

WHERE: CUVA

WHO: Child participants and parents of participants

WHEN: data collection: November 1 through December 15, 2006

HOW: mail-back evaluations (surveys)

Visitor Voices: Testing Interpretive Theory, Assessing Interpretive Outcomes & Improving Interpretive Practice in the Intermountain Region of the National Park Service (year 2 of four year project)

WHAT: The NPS Interpretive Development Program (IDP) trains and certifies NPS interpretive rangers in 10 interpretive benchmark competencies. By incorporating IDP principles, park interpretive programs can demonstrate IDP certification standards. However, managers have no data to assess whether certified interpretive products achieve desired interpretive outcomes on the ground. Since it is costly to provide training, deliver programs, conduct program audits, and establish coaching relationships, it is important to ask: “Do visitors benefit from these efforts?” If so, can we measure visitor interpretive outcomes and determine whether significantly different outcomes occur with respect to key socio-demographic variables? To answer these questions, researchers will analyze data from four National Park units during the summer 2006 and/or Spring 2007 season. Researchers will identify the meanings visitors attach to park resources, the connections to resource meanings that visitors articulate after exposure to interpretive programming, whether predicted “opportunities for connection” parallel “realized visitor outcomes,” and whether significant differences occur in meanings and/or connections based on key variables.

WHERE: BIBE, GLAC, SAAN, ZION

WHO: Two groups of adults visiting the parks specified above: one group will be visitors who did not attend an interpretive program and a second group will be individuals who did attend an interpretive program.

WHEN: data collection: July 10, 2006 through March 31, 2007

HOW: on-site questionnaires

Jamaica Bay Visitors Center Station, Gateway National Recreation Area: Formative Evaluation

Exhibits are being developed for the Jamaica Bay Visitors Station. This study attempts to obtain visitor feedback during the early stages of exhibit development. The purpose of this formative study is to test mock exhibits with visitors and potential visitors to obtain feedback on the overall presentation and content of the exhibits. Interviews with visitors (families, students, and special tourists) will be conducted at the visitor center.

WHERE: GATE

WHO: Repeat groups of visitors, including school, family and specialized visitors (e.g. birdwatchers).

WHEN: data collection: May 10 through May 11, 2006

HOW: face-to-face interviews with groups

Presenting Race and Slavery at Historic Sites: Harpers Ferry National Historic Park

This project analyzes the presentation of race and slavery at Harpers Ferry National Historical Park. It extends previous studies at Arlington House Memorial and Manassas National Battlefield Park. Data will be collected through face-to-face interviews with visitors to discuss their perspectives of how race and slavery are presented at the park. The project staff will also review exhibits and interpretive presentations. A report will summarize the methodology of the study, results of the surveys, and present relevant historical scholarship pertinent to interpretation at the site.

WHERE: HAFE

WHO: All adult visitors during sampling time.

WHEN: data collection: March 31 through May 31, 2006

HOW: face-to-face interviews

Motivations for Attending Ranger-led Interpretive Activities in Yosemite National Park

WHAT: Yosemite National Park attracts 3.5 million visitors annually, 90% of whom visit Yosemite Valley. Ranger-led interpretive programs are an optimal way for visitors to better connect with the cultural and natural resources of the area and are fundamental in providing these opportunities. In designing and producing the most effective programs possible, it is important to learn about why visitors choose to attend the ranger-led programs they do. This study will survey and analyze the motivations and choice behavior of visitors attending ranger-led interpretive programs in the Yosemite Valley. Using on-site surveys at interpretive programs, the study will examine the visitors' reasons and methods of selecting a particular program. Park managers and interpretive supervisors will use the survey results to decide what actions may be taken to increase participation in future interpretive efforts, as well as improve programs for the current attending populations.

WHERE: YOSE

WHO: Individuals attending ranger-led programs.

WHEN: data collection: July 21 through September 1, 2006

HOW: on-site questionnaires

Ecology Village Teacher Camping Course Assessment Tool, Gateway National Recreation Area

WHAT: This assessment tool will evaluate the effectiveness of the newly revised 25-hour teacher training curriculum for educators bringing school classes to the Ecology Village Camping Program at Gateway's Floyd Bennett Field in Brooklyn, New York. It consists of a three-page evaluation form containing 27 questions with a five-point response scale. Teachers' experiences during the course will be evaluated, as well as their perceptions of the likely effectiveness of the program in educating students.

WHERE: GATE

WHO: Teachers who participated in the training.

WHEN: data collection: October 14, 2006 through June 30, 2007

HOW: post-training evaluations (on-site questionnaires)

Non-Visitor Use Constraints Study for Golden Gate National Recreation Area

WHAT: This study will obtain information about infrequent or non-visitor use of parklands managed by the Golden Gate National Recreation Area (GGNRA). Targeted ethnic minority groups will be Asian Americans, African Americans, and Hispanic/ Latino American residents in the San Francisco Bay Area. Constraints to park visitation will be identified using focus groups with members of these target communities. This needs assessment will occur in 3 phases with interviews being conducted in each area during a different timeframe (up to 3 focus groups per adjacent county, $n=8-9$ total groups, 12-15 people per group). Participants will be recruited through assistance of local trusted community leaders who are representative of the target groups. Invitations to participate will be sent to all interested individuals. Data gathered will contribute to the General Management Planning process (presently underway) as well as to inform park management and to assist with important community outreach and civic engagement efforts.

WHERE: GOGA

WHO: The participants for each of the three areas will be adults ages 18 and older from various economic backgrounds that have either never visited GOGA lands or have not visited in the last 2 years.

WHEN: data collection: August 1, 2006 through January 31, 2007

HOW: Focus groups

Confronting Slavery: Visitor Responses to the Interpretation of African American Experience at Kingsley Plantation, Timucuan Ecological and Historical Preserve

Kingsley Plantation is an outdoor museum with temporary outdoor exhibits within the Timucuan Ecological and Historic Preserve (TIMU). In the coming year, new exhibits have been planned for the site, and park staff members are working to develop interpretive materials to accompany the exhibits. To effectively meet the needs of a diverse and changing audience, this study addresses visitors' perceptions, beliefs, and desires regarding interpretive programming, which will help the park with interpretive planning. Characterizing the desired experience of the visitor is key to determining the type and extent of programming appropriate for each visitor segment. Using survey methodology, this study will examine visitor expectations and reactions to the experience of visiting the Kingsley Plantation. Park managers will use the survey results to determine visitor attitudes towards Kingsley Plantation, which will inform upcoming interpretive material development.

WHERE: TIMU

WHO: All adult visitors (16 & older)

WHEN: data collection: June 15 through October 31, 2006

HOW: on-site questionnaire

Chesapeake & Ohio Canal National Historical Park, Georgetown Visitor Center Formative Evaluation

The National Park Service has contracted with Edquist Davis Exhibits (EDX) to develop exhibits for the new Georgetown Visitor Center on the Chesapeake and Ohio Canal. This study is designed to provide visitor feedback at the formative stage of exhibit development. The purpose of this formative study is to inform exhibit developers of visitors' usage and attitudes toward 2-3 exhibit prototypes (e.g., text panels, interactive components, etc.). Visitor observations and short-answer interviews will be conducted at the current Chesapeake & Ohio Canal National Historic Park Georgetown Visitor Center NPS site.

WHERE: CHOH

WHO: All visitors (14 & older)

WHEN: data collection: May 28, 2006

HOW: face-to-face interviews & observations

Chesapeake & Ohio Canal National Historical Park, Great Falls Tavern Visitor Center Formative Evaluation

The National Park Service has contracted with Edquist Davis Exhibits (EDX) to develop exhibits for the new Great Falls Tavern Visitor Center on the Chesapeake and Ohio Canal. This study is designed to provide visitor feedback at the formative stage of exhibit development. The purpose of this formative study is to inform exhibit developers of visitors' usage and attitudes toward 2-3 exhibit prototypes (e.g., text panels, interactive components, etc.). Visitor observations and short-answer interviews will be conducted at the current Chesapeake & Ohio Canal National Historic Park Great Falls Tavern Visitor Center NPS site.

WHERE: CHOH

WHO: All visitors (14 & older)

WHEN: data collection: September 23 through September 24, 2006

HOW: face-to-face interviews & observations

Remedial Evaluation of New Exhibits in the Sunset Crater and Wupatki Visitor Centers

This study will examine visitor experiences with and evaluations of the new interpretive displays at the Sunset Crater and Wupatki National Monument visitor centers. Information for the study will be gathered from short interviews with visitors, supplemented by observations of visitors' use of exhibits. The study will generate both numerical and narrative data, and will build upon earlier front-end and formative evaluations previously conducted at both sites. Results of the study will be used to make recommendations for remedial actions to improve identified exhibit deficiencies.

WHERE: SUCR & WUPA

WHO: Adult visitors (18 & older)

WHEN: October 25, 2006 through May 31, 2007

HOW: face-to-face interviews

African Burial Ground National Monument 'Front-end' Survey of Potential Visitors

The National Park Service has contracted with Amaze Design to develop exhibits for an interpretive visitor center at the newly designated African Burial Ground National Monument in New York City. Amaze Design is working with People, Places & Design Research to obtain information about potential visitors at the front-end and formative stages of exhibit development. The front-end study will be conducted in two phases, and therefore there are two related applications (different methods, different time frames). The purpose of both phases is to give developers insight into potential visitors' interests and perceptions regarding the site and the subject matter. This first phase pertains to intercept interviews with potential visitors to the new interpretive center. The purpose of this study is to develop insight into potential visitors' interests, motivations and misconceptions about visiting African Burial Ground NM.

WHERE: AFBU (data collected at neighboring NPS & museum sites)

WHO: Adult visitors to historic sites and museums in NY City, including NY metro residents and tourists from outside the area.

WHEN: data collection: July 29 through September 30, 2006

HOW: face-to-face interviews

African Burial Ground National Monument 'Front-end' Focus Groups with Potential Visitors

The National Park Service has contracted with Amaze Design to develop exhibits for an interpretive visitor center at the newly designated African Burial Ground National Monument in New York City. Amaze Design is working with People, Places & Design Research to obtain information about potential visitors at the front-end and formative stages of exhibit development. The front-end study will be conducted in two phases, and therefore there are two related applications (different methods, different time frames). The purpose of both phases is to give developers insight into potential visitors' interests and perceptions regarding the site and the subject matter. This second application pertains to focus groups with designated target audiences, in order to obtain information about potential visitors (especially targeted groups of visitors) interests and experiences with/toward African Burial Ground NM.

WHERE: Brooklyn Children's Museum & City University of NY and/or Trinity Church

WHO: Special target audiences, including African descendent community members, NY City school teachers, media representatives, and community leaders

WHEN: data collection: August 15 through October 30, 2006

HOW: Focus groups

Jefferson National Expansion Memorial Interpretive Assessment

Jefferson National Expansion Memorial is engaged in the Long Range Interpretive Planning process. As part of the planning process and development of a 10-year interpretive plan, the current state of interpretation will be assessed with the intent of determining the degree to which visitors' expectations are met as well as the degree to which visitors understand/know the purpose/significance of the park resources. The study is scheduled to take place over the course of 9 months to account for seasonal visitation trends.

WHERE: JEFF

WHO: Adults visitors (16 & older)

WHEN: data collection: September 18, 2006 through August 31, 2007

HOW: mail-back questionnaire

Voyageurs National Park Visitor Center Exhibits Formative Evaluation

Interviewers will ask visitors their opinion about three exhibit prototypes. The visitors will be asked to read the exhibit text, use the interactive components, and then answer questions about their experience. The goal of the interviews is to determine if the visitors can identify the intended take-home messages of the planned exhibits.

WHERE: VOYA

WHO: Family groups with children (ages 8 to 18)

WHEN: data collection: July 21 through July 23

HOW: face-to-face interviews

Forest For Every Classroom

WHAT: A Forest for Every Classroom (FFEC) is a partnership between Shelburne Farms, the National Park Service's Marsh-Billings-Rockefeller National Historic Park and the Conservation Study Institute, The Northeastern Natural Resource Center of the National Wildlife Federation, The Green Mountain National Forest, and the Northern Forest Center. FFEC provides teachers with a year-long series of workshops in which they are immersed in field study of the forested landscape, exposed to diverse viewpoints from public and private landowners, and encouraged to transform their teaching into a community-based, real-world model. FFEC partners conduct annual evaluations, though the focus varies from year to year. Recent efforts have focused on the program replication process, designing and implementing a fellowship program, and creating a publicly available toolkit, in addition to ongoing direct investigation of program outcomes. Evaluations are conducted by an external firm.

WHERE: partners with MABI

WHO: K-12 educators, staff from partner organizations

WHEN: 2001 through current

HOW: Interviews, surveys, literature review

Trail To Every Classroom

WHAT: The Trail to Every Classroom (TTEC) project is a collaborative effort between the Appalachian Trail Conservancy, the National Park Service, and the founding partners of the Forest for Every Classroom (FFEC) program in Vermont, which serves as the model for this pilot initiative. These partners seek to promote student understanding of and appreciation for the Appalachian Trail (AT), public lands, and natural and cultural resources as assets within their communities from Georgia to Maine. The TTEC Summer Institute consisted of one week of training in the principles and practices of place-based education and service learning along the AT. TTEC hopes to increase the availability of grants available to schools and build capacity to sustain service-learning activities and partnerships into the future. Evaluations are conducted by an external firm.

WHERE: partners with ATPO

WHO: K-12 educators, community partners

WHEN: Summer 2006 through current

HOW: Interviews, surveys, document review

Appendix D: Summary: Literature Review of Interpretation, Education, and Information Evaluations and Research

A preliminary literature review of NPS interpretation and education evaluations was prepared by the Education Evaluation Coordination Team. The overall purposes of the review were to develop a summary of evaluation findings and trends and to identify research gaps. The review specifically addressed four questions:

- What does the evaluation literature tell us about NPS activity areas of interpretation and education?
- What evaluation questions were addressed?
- What are major findings and trends?
- Where are gaps in the research?

I NPS Evaluation of Interpretation and Education

A. NPS Interpretive Media Evaluations

Twenty three studies of interpretive media were summarized. Studies were obtained from the Harpers Ferry Center and NPS Social Science websites. Most media evaluations addressed visitor center exhibits. Others evaluated effectiveness of outdoor wayside exhibits or park brochures. Most media studies were commissioned by Harpers Ferry Center. Most evaluations were front-end or formative (conducted prior to or during design phase).

Front-end evaluations revealed expectations, interests, beliefs, attitudes, and motivations of likely or potential audiences. Formative evaluations were conducted on inexpensive mockups of key media elements. Focus groups experienced the mockups and discussed their reactions and impressions of effectiveness with evaluators. Subsequent changes improved the effectiveness and resilience of the media. A comprehensive evaluation assessed visitor enjoyment of park experiences in relation to motivations and personality traits, and recommended media improvements.

B. Evaluations of NPS Personal Services Programs

Seven studies of curriculum-based education programs and teacher training programs were summarized. Many studies involved multiple parks, partners, and agencies. A wide variety of methods were used to obtain results. Most studies focused on program effectiveness and goal achievement. Methods included questionnaires, interviews, tests, focus groups, and document reviews.

Four studies relating to the NPS Interpretive Development Program (IDP) are currently underway. These primarily -- but not exclusively -- cover personal services programs. These studies assess various aspects of the IDP program, test IDP theory, and seek to improve the IDP training program.

Additional evaluations have been conducted by individual parks. These were identified by a survey conducted by the EECT, but are not available in a centralized database. Most evaluations assessed the effectiveness of park-based personal services programs. Results of the survey will be summarized by the EECT.

C. Comprehensive NPS Evaluations and Visitor Research

The Visitor Services Project (VSP) and Visitor Services Card (VSC) are conducted by the NPS Social Sciences Office. The VSP conducts surveys in 10 – 15 parks each year to assess visitor demographics, activities, fiscal expenditures, and satisfaction. The VSC uses a short questionnaire distributed annually in nearly all NPS areas to assess visitor satisfaction and understanding as defined in Government Performance and Results Act (GPRA) goals. A compilation of 23 VSP surveys assessed patterns of visitor use and assessment of interpretive media, facilities, and services.

The NPS Social Science Program has produced several general studies including an annual assessment of visitor satisfaction with specific NPS program areas (e.g., cultural resources, natural resources), demographics and technology relating to visitor center use, economic impacts of park visitation, and a literature review relating to minority participation in parks and park programs.

D. External Interpretation and Education Evaluations

Nine entries consist of compilations and comprehensive reviews of thousands of studies that relate to interpretation and education. These and other related studies and compilations represent an extraordinarily valuable resource for NPS interpreters, educators, managers, and media designers. Results, methodologies, and theoretical frameworks can be applied to similar NPS situations, and help make better decisions.

II Questions Addressed

Evaluation questions have addressed audience characteristics, program and media effectiveness, and specific, placed-based questions regarding curriculum integration/education programming.

Questions about audiences included demographics, psychographics, activities, and experiences: Where do park visitors come from? How long do they stay? What do they do in parks? What are their interests? What do they know about – or want to know about – topics relating to interpretive themes?

Many questions about media and program effectiveness focused on the achievement of output and outcome objectives. They included: What changes in knowledge, attitudes, or behavior can be measured? How well do these guided hikes or exhibits work? How many people stopped at the wayside exhibits; how many paid attention; how many understood the intended messages? What components contribute to effectiveness?

Other studies included questions that corresponded to Interpretive Development Program (IDP) methods and schema: What meanings and connections did they develop? Is the Interpretive Analysis Model a precise tool? How do outcomes compare to the interpreters' intentions? How can results be compared with front-end inputs? Do visitors benefit from the park's professional development efforts in interpretation?

Some studies included research questions such as: How can the park meet the needs and interests of visitors with differing personality types? How does the effectiveness of interpretation and communication efforts correspond to contemporary communication theory?

III Findings and Trends

A variety of techniques and methodologies has been usefully employed. Front-end, formative, and summative evaluations have all proven to be useful. Focus groups are often affordable and efficient, and provide detailed information from target audiences, but generalizing or quantifying results from these studies is difficult. Surveys can be effective and can yield both qualitative and quantitative results that can be persuasive to decision makers. Survey cost and time commitments can be prohibitive, however. Observation and tracking were seldom used; these could provide cost-effective indications of media and service effectiveness. A combination of methods (e.g., interviews, focus groups, and observation) may yield the richest and most useful results.

Most findings relate to specific places, projects, and activities. Front-end and formative studies have been particularly useful, since results can be incorporated into final program or media designs. Results generally correspond to contemporary and relevant interpretation, education, communication, and recreation theories. General studies such as the VSP and VSC show high levels of appreciation and enjoyment of NPS media and personal services programs. Specific evaluations that show visitor reactions to and effectiveness of specific media and program components invariably show that improvements can be made. Many results may be applicable to other parks or situations; however, this is not always true and deserves additional attention.

An example of results that may apply to other areas is a compilation of 23 VSP studies produced by the Social Science Program for Harpers Ferry Center. This compilation recorded visitor use and assessment of interpretive media and programs. Visitors to those parks used the park brochure and park exhibits most often (62% and 54% of visitors, respectively). While only 22% of visitors participated in ranger-guided programs, they ranked them as third in importance (behind self-guided tours and park brochures) and gave them the highest mean quality score.

Studies outside the NPS show that environment-based education supports life-long learning and can help develop leaders by improving motivation, skills development, career preparation, and fostering attitudes of respect and responsibility. Environment-based education programs can improve academic performance across the curriculum. Students can develop the ability to make connections and transfer their knowledge from familiar to unfamiliar contexts. Additionally, classroom discipline problems may decline.

Nearly all NPS Interpretation and Education evaluations were completed by professional evaluation consultants. All of the collaborations with non-NPS organizations that incorporate curriculum-based education into park programs have been deemed a success. Funding is a major barrier to incorporating curriculum-based programs in additional national parks. Previous funding often has come from large corporate grants.

IV Research Gaps

Few areas of interpretation or education services have been adequately evaluated. The most comprehensive evaluations -- The Visitor Services Project and Visitor Services Cards -- provide extensive information on demographics and visitor use, satisfaction, and understanding. However, the information from these studies (especially the Visitor Services Card) lacks specificity and depth required to make effective and specific program improvements in response to results. They do help identify areas where additional investigation is needed.

Many parks have conducted studies of personal services programs. These are seldom published in journals or posted on websites to make them available to others. HFC has incorporated front-end and formative evaluations into many exhibit projects that have sufficient funding; these are published on the HFC website. Evaluations of interpretive media other than exhibits are rare. Accessible summaries of any NPS evaluations do not exist, and the use of these studies beyond each particular park is not known.

The literature review indicated only two studies of community engagement topics were undertaken, both with regard to educational programming. There has been very little evaluation of informal interpretation, information services, or orientation.

Generalized visitor mapping--information on park use patterns, visitor evaluations of the park, as a whole or in part, and visitor attitudes toward selected park management issues, etc.-- should be culled for relevant information and used on a routine basis to inform the preparation of park interpretation and education evaluation studies.

Clearly, not all services can or should be intensively evaluated. Rather, a representative and priority-based sample of communication programs should be evaluated. Literature reviews and results of similar situations and projects should be used where possible and relevant in lieu of specific detailed evaluations. Consideration should be given to developing monitoring programs that can identify areas that may require more intensive evaluations.

A standard reporting format could be developed for evaluations, facilitating information sharing and ease of comparison among parks.

Appendix E: Definitions/Glossary To Be Completed

Interpretation/Education Evaluation Glossary (List of Terms)

| | |
|---------------------------------|------------------------------|
| Action Research | Post-Test |
| Affective | Pre-Test |
| Answer Choices | Probability |
| Assessment | Process Evaluation |
| Burden | Qualitative Research |
| Case Study | Quantitative Research |
| Closed-Ended Questions | Questionnaire |
| Coding | Randomization |
| Cognitive | Reliability |
| Confidence Interval | Remedial Evaluation |
| Confidence Level | Respondent Universe |
| Content Analysis | Response Rate |
| Control Group | Results-Based Accountability |
| Correlation | Sample |
| Data | Semi-Open-Ended Questions |
| Demographics | Systematic Sample |
| Empirical Research | Self-Evaluation |
| Error | Stakeholders |
| Evaluation | Summative Evaluation |
| Experiment | Survey |
| Formative Evaluation | Survey Instrument |
| Focus Group | Validity |
| Follow-Up | Variable |
| Front-End Evaluation | Visitor Experience |
| Generalization | |
| Goal | |
| Impact | |
| Indicator | |
| Inter-Coder Reliability | |
| Interview | |
| Likert Scale | |
| Margin of Error | |
| Manager Perceptions | |
| Non-Response Bias | |
| Objectives | |
| Office of Management and Budget | |
| Open Ended Questions | |
| Outcome | |
| Outcome Evaluation | |
| Paperwork Reduction Act | |
| Peer Review | |
| Pilot Test | |

Appendix F: Stakeholder Engagement Questions

Brief, open-ended pilot survey conducted via phone interview:

“The Education Council’s Evaluation Work Group is currently seeking to include a wide variety of input as it develops a strategy and plans for improving the implementation and coordination of evaluation work in the NPS. I’d like to ask you a few questions.”

Questions:

1. Please complete the blank part of this sentence:
 - “If I knew _____ about *(the education program I am most interested in/familiar with/concerned about)* I could do my job better.”
 - Variations of this question, may be used as a prompt:
 - a. What research or evaluation questions would you like to see explored?
 - b. What information do you (or your staff, etc.) need to make decisions, improve programs, or otherwise enhance your educational work (or that of the NPS)?
2. Which education program areas do you feel would benefit most from systematic program evaluation?
3. What types of evaluation activities or strategies do you think would be most useful to NPS at this time?
4. In your view, what is the most appropriate scale and/or scope for the Evaluation Team to consider when implementing an evaluation strategy? *(for instance **scale**=all parks at once vs. one park at a time; **scope**= evaluating common concepts throughout and across all or many types of education programs vs. staying focused on individual program areas such as curriculum-based or web rangers)*

Note: consider incorporating the following post-pilot recommendations into questions and process above:

- We may need different questions for people in higher management positions
- There may be some overlap with the questions depending on which way they are interpreted and the frame of reference of the respondent. (questions 3 and 4)
- We need to emphasize that the word education is being used broadly to encompass media, interpretation programs, etc before getting into the questions.
- The strategy question may be difficult to understand without giving a range of examples. The detail provided in question four was helpful.
- Add more description to question three; including a statement before the questions about the scope of education activities (especially if this is used as an e-mail survey); taking a step back to see what type of input we are seeking; and looking again at the questions to see if they capture that information.

Survey Responses *Note: This is from a sample of one interview.*

What type of evaluation info do you need as a DRD?

Need evaluation findings for credibility and to show DOI, Congress, potential funders, and others the mix of NPS ed programs. Need statistics (how many, where, etc.) and examples that show how ed programs benefit the participants.

Which program areas would benefit most from systematic program evaluation?

Programs that involve students - ones that have in-depth experiences such as the education centers, residential programs, etc. to identify the impact of these programs that touch students more than once.

What types of education strategies would be useful to NPS?

Work with the education community and through partnerships.

What is the appropriate scope? A system that parks can do at their level which can then be rolled up regionally and nationally. There is definitely a need to look at the system as a whole.

Appendix G: Abbreviations Used in this Report

EECT – Education Evaluation Coordination Team

NEC – National Education Council

NLC – National Leadership Council

NPS – National Park Service

CSI – Conservation Study Institute

NPSAB – National Park System Advisory Board

SIEES – Servicewide Interpretation & Education Evaluation Strategy

BRP – Blue Ribbon Panel

Appendix H: EECT Members and Positions

Core team:

Michael Duffin, Principal, Program Evaluation and Educational Research (PEER)

Associates

Sheri Forbes, Chief of Interpretation and Education, Mount Rainier National Park

Elizabeth Hoermann, Education Specialist, Northeast Center for Education Services, NPS

Cynthia MacLeod, Superintendent, Richmond National Battlefield Park and Maggie L.

Walker National Historic Site

Megan McBride, Senior Research Associate, Social Science Program, National Park Service

Partner

Nora Mitchell, Assistant Regional Director for Conservation Studies, Northeast Region

Director, Conservation Study Institute, NPS

Amy L. Powers, Principal, Program Evaluation and Educational Research (PEER)

Associates

Patti Reilly, Director, Northeast Center for Education Services, NPS

Sam Vaughn, Associate Manager Planning, Harpers Ferry Design Center, NPS

Julia Washburn, Co-Chair, National Education Council, NPS

Including past participants:

Nina Roberts, Education & Outreach Specialist, NPS Natural Resource Program Center

Brian Forist, Senior Research Associate, Social Science Program, National Park Service

Partner

Other reviewers, participants:

Debbie Conway, Superintendent, Klondike Gold Rush NHP

Wyndeth Davis, Servicewide Education Program Coordinator, NPS

Lakita Edwards, Education Specialist, Harpers Ferry Design Center, NPS

Chick Fagan, Deputy Chief, Office of Policy, WASO, NPS

Loran Fraser, Chief, Office of Policy, WASO, NPS

Sherry Justice, Interpretive Specialist, Lyndon B. Johnson National Historical Park

David Larsen, Training Manager, Interpretation, Education, Recreation & Conservation

Stephen T. Mather Training Center, Co-Chair Education Council, NPS

Corky Mayo, Program Manager, Interpretation and Education, WASO, NPS

Dan Ritchie, Chair Education Committee, NPS Advisory Board