BEYOND THEORY: APPLYING ENVIRONMENTAL INTERPRETATION IN THE U.S. NATIONAL PARKS

by

Shannon J. McClelland

A Thesis: Essay of Distinction
Submitted in partial fulfillment
of the requirements for the degree
Master of Environmental Studies
The Evergreen State College
June 2002

This Thesis for the Master of Environmental Studies Degree

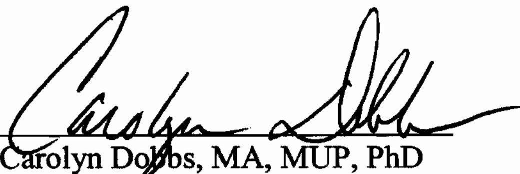
by

Shannon J. McClelland

has been approved for

The Evergreen State College

by



Carolyn Dobbs, MA, MUP, PhD
Member of the Faculty

Jean MacGregor, MS
Member of the Faculty

June 28, 2002
Date

ABSTRACT

Beyond Theory: Applying Environmental Interpretation in the U.S. National Parks

By
Shannon J. McClelland

The national park system in the United States has a unique opportunity to instill in its visitors an environmental ethic as they are surrounded by the shear wonder of nature. Since its inception, a central mission of the National Park Service has been to educate its visitors and to inspire a stewardship ethic for the continued protection of the parks. Interpretation is the vehicle in which the National Park Service conveys its message to the visiting public. As environmental issues increase in their abundance and severity, the role and message of interpretation in national parks is increasingly more important. *Goals for Program Development in Environmental Interpretation* developed by Douglass Knapp and Trudi Volk (1997) were used as a guide to evaluate the current policy and stance of the National Park Service on interpretation, in addition to the practice of interpretation in the national parks as explained by those who work in the field. My analysis reveals that effective environmental interpretation, as outlined by Knapp and Volk (1997), have not been fully adopted in policy or practice. Several recommendations and suggestions for future research are discussed.

TABLE OF CONTENTS

Introduction....1

Methods....6

Chapter 1: National Parks....8
- History....8
- National Park Service....14
- Constraints to the System....19
- Value of the national park system....21
- Summary....23

Chapter 2: Interpretation....24
- What is interpretation?....24
- History of interpretation in the national parks....25
- The guiding principles of interpretation in the National Park Service....35
- Interpretation training in the National Park Service....38
- Benefits of interpretation....40
- Constraints to the interpretive services....42
- Summary....47

Chapter 3: Environmental Interpretation....48
- History of environmental interpretation in the national parks....50
- Environmental education and environmental interpretation....54
- Current theory regarding the goals of environmental interpretation....61
- Summary....69

Chapter 4: Analysis and Recommendations....70
- Analysis of current National Park Service documents....70
- Analysis of responses from NPS interpretation employees....82
- Recommendations....84

Chapter 5: Concluding Remarks....87

References....89

Bibliography....93

Appendices....95

LIST OF FIGURES

Figure 1: The Norris Museum, at Yellowstone's Norris Geyser Basin....................29

Figure 2: Publicity for Ranger Activities, Circa 1939..33

Figure 3: Post WWII Ranger Programs...34

Figure 4: EE Subset Model...57

Figure 5: EE Intersection Model...58

Figure 6: Behavior Flow Chart...63

LIST OF TABLES

Table 1: Essential Benchmark Competencies for Interpreters..............................39

Table 2: The NPS Interpretive Equation and the 15 Principles................................39

Table 3: A Comparison of Formal and Informal Learning Settings........................56

Table 4: A Comparison of Captive and Non-captive Audiences............................60

Table 5: Categories of Interpretation Principles, Goals and Objectives....................62

Table 6: Categories of Interpretive Objectives Related to Behavior Change Variables...63

ACKNOWLEDGEMENTS

I would first like to thank Carolyn Dobbs for agreeing to be my faculty reader for this immense undertaking. Her experience and knowledge concerning national parks was very helpful. I am sincerely grateful to Jean MacGregor, who volunteered her time to read and comment on my work. Her vast expertise and passion in environmental education inspired me to pursue this topic in the first place, and her comments and support were invaluable throughout the process. I also appreciate the time and hospitality of Dee and Ross Toucher, and the insights of Tom Thomas who worked in education and for the Park Service his whole life. I would also like to thank Norm Bishop and the present and former employees of the National Park Service who agreed to participate in this study. I am grateful to the technical support staff of the CAL, including Janet, Duncan, Jon and Renee, for all the assistance and expertise they provided. I appreciate the support and fellow commiseration of my thesis "support group"—Pam Edwards, Cassandra Moore, and Krystal Kyer. And last, but by no means least, I wish to thank Cathy for her seemingly endless support, understanding, and love during this process and always.

INTRODUCTION

This thesis investigates the current objectives and practices of environmental interpretation in the U.S. national parks, and whether these address advocating an environmental ethic that will be carried by visitors beyond the park boundary. My analysis compares a current theory of environmental interpretation (which includes behavior change objectives) with what is occurring in the national parks and in current National Park Service interpretation documents. I make an argument for the need for a more conscious commitment by the National Park Service to embrace the practice of environmental interpretation and the role it can play in developing an environmentally literate society.

A significant component of this thesis reviews the origins of national parks, the National Park Service (NPS), and the practice of interpretation. I strongly believe that in order to suggest feasible and appropriate solutions, it is crucial to have a historical perspective of the setting in which the problem occurs (national parks), the agency responsible for enacting change and proposing solutions (NPS), and the field in which the solutions will occur (interpretation).

In general, determining whether or not the current practice of a particular field is commensurate with a current theory is important for several reasons. First, it is important to assess the feasibility and compatibility of current theories when they are applied in practice. Theories that are not applicable to the fields they analyze are no more than academic exercises. Second, if the theory is feasible but *not* being applied, then it, too, remains an academic exercise. It is important to discover why the theory is or is not

being applied in the field. Third, it is important to evaluate current objectives and practices for the field and, if needed, alter them to achieve the desired results. Fourth, and most importantly, it is imperative to align current objectives and missions with the practice that will achieve them—otherwise, good intentions will be only that, intentions.

As these generalities are applied to the field of environmental interpretation in the national parks and to its current theory, the stakes are high. The national parks have a unique opportunity to awaken a conservation ethic in their visitors because they (1) are places where people may develop increased concern for nature through contact with the natural environment; (2) provide opportunities for visitors to learn about natural systems and contemplate their role in those systems; (3) are some of the few remaining relatively undisturbed natural places where visitors can experience an alternative to degraded environments; and (4) provide learning opportunities to visitors who have come for leisure and to seek out new experiences (Negra & Manning 1997). While national parks are not the only places where this learning can occur, they certainly have a unique advantage in achieving these goals. The national parks attract hundreds of thousands of visitors each year who come to experience the parks, and those visitors will encounter staff who are there to serve the general public. Richard West Sellars (1997) said it best when he said:

> Whatever benefit and enjoyment the national parks have contributed to American life, they have undoubtedly intensified the aesthetic response of millions of people to the beauty and the natural history of this continent—a response that could then be pleasurable honed in more ordinary surroundings closer to home. This benefit defies quantification, but surely it has had some consequences of immense value, both for individuals and for the nation.

The means for creating the environmentally literate society Sellars speaks of is through education in the form of interpretation—specifically, environmental interpretation. The burden of creating an environmentally literate society should not fall entirely on the national park system; however, parks should be a central component in a larger strategy of fostering a national conservation ethic. It is, therefore, crucial to analyze the current practice and objectives of environmental interpretation in parks to determine if these align with what the current theories conclude about behavior change methods. The continued existence of the national park system depends upon a society that values the protection of natural areas. However, the parks are no longer islands. The consumptive actions taken by society outside the boundaries of the parks are having negative ramifications on the environment inside the park boundaries. The connection between protecting areas classified as national parks and protecting the environment outside of these areas must be conveyed to the park visitors. Environmental interpretation is the appropriate means to articulate this connection.

The process of determining, evaluating, and criticizing objectives for interpretative programs has a history as old as the field itself. There has never been a "golden age" of interpretation in which visitors were receiving the ideal quantity and quality of interpretive messages. The reasons for this are many and are discussed in the following pages. The dialogue concerning what the main goal of interpretation should be has spanned decades—changing with the political and emotional climate of the times. Participants in the dialogue have included presidents, Department of the Interior personnel, NPS Directors, NPS interpreters, other interpretation professionals, citizens, nonprofit national park support organizations, and academics—to name but a few. It is

my intention, in writing this thesis, that this dialogue will continue and will strive to produce a unified set of directives and practices for environmental interpretation in the national parks of the United States.

Chapter 1 discusses the setting and agency in which the problem and solution will occur—the national parks and the NPS. This chapter begins with a history of the national parks themselves; followed by the history, current structure and mission of the National Park Service; the constraints to the system as a whole; the value of the national park system; and a summary of the chapter.

Chapter 2 discusses the field in which the change to a stronger commitment to the practice of environmental interpretation will occur— the division of interpretation in the national parks. This chapter includes sections on the definitions of interpretation; a history of interpretation in the national parks; the guiding principles of interpretation in the NPS; interpretation training in the NPS; the benefits of interpretation; the constraints the interpretive services face; and a summary of the chapter.

Chapter 3 discusses the field that will emerge after the National Park Service embraces the unique role they can play in fostering a environmental ethic—environmental interpretation. This chapter draws distinctions between interpretation and environmental interpretation, and between environmental education and environmental interpretation; chronicles a history of environmental interpretation in the national parks; outlines a current theory regarding the goals of environmental interpretation; and includes a summary of the chapter.

Chapter 4 analyzes the current practice and objectives of environmental interpretation in the National Park Service, and includes my recommendations for the

National Park Service as they implement future environmental interpretation programming in the national parks.

Finally, Chapter 5 contains my final thoughts on the current situation of environmental interpretation in the national parks, and the questions that need to be asked in the future.

METHODS

The majority of the research effort in writing this document involved an extensive literature review utilizing books, journal articles, web sites and official National Park Service documents. The subject matter ranged from the mission of the National Park Service and appropriate use of the national park system, to behavior modification theories and their relevance to public education. The issues are complex and the resources containing information on these topics are vast. However, I found little information of the specific application of environmental interpretation in the national parks for the purpose of instilling an environmental ethic. Hence, I chose exactly that topic for this thesis.

In order to assess the current policy and practice of environmental interpretation in the national parks I divided my analysis into two sections—current stance and policy on the goal of interpretation in the national parks as stated in official National Park Service documents, and the actual practice of environmental interpretation in the parks as discussed by those who work in the field. Both of these were compared and contrasted to the current theory of effective environmental interpretation.

Because this is an Essay of Distinction Thesis (which does not involve generating new data, but rather reexamining existing data or information to create a new perspective on a problem), I went beyond the basic parameters in order to collect information from practitioners in the field of interpretation in the national parks. The only way to assess the current situation, I felt, was to question those who do this work everyday. Due to time constraints, I was only able to question a few park interpreters from each of the three

national parks in Washington State—Mount Rainier National Park, North Cascades National Park, and Olympic National Park. This is clearly a limitation, but as it is only one element of my analysis I feel this effort is still valuable and will provide a starting point for those wishing to research this specific area further.

Throughout my research and investigation into environmental interpretation in the national parks, I was only concerned with the intent and message of interpretive programs and services offered to the general adult visitor. That is to say, I did not examine the goals of interpretation programming offered to children, school groups, organized field trips, etc. My interest was in what the "average" adult visitor, who drove into the park and spent at least one day exploring the park, would be exposed to as far as interpretation messages.

NATIONAL PARKS

In order to address problems and recommend solutions, it is vital to have an understanding of the setting and agency in which the problems occur. The following is a discussion of the history and foundation of the national parks, the organization and mission of its caretakers—the National Park Service—some of the constraints that work against the protection of our parks, and the value of the "crown jewels" to the national and international community.

History

It has been said that tracing the origin of the national park idea is like nailing jelly to the wall (Everhart 1983). Although similarities to a national park existed in ancient Greece, Rome and Persia, the idea of providing both protection and use of a public space is a relatively modern concept (Everhart 1983). The exact origin (and motive) of the national park idea, however, is subject to debate.

One account of the genesis of national parks became an integral part of national park folklore and tradition, and is known simply as the campfire discussion (Sellars 1997). In September 1870, an expedition set out from Helena, Montana, to explore an area, known as Yellowstone, that had been the source of fantastical tales from trappers and early mountain men. Heading the expedition were General Henry D. Washburn, Nathanial P. Langford and Lieutenant Gustavus C. Doane. As the trip neared its end and the party was seated around the campfire, they spoke of the spectacular sights they had seen over the course of the month's exploration. After considering the possible uses of

the area and the profits that could be made from tourism, they rejected the idea of private ownership. Instead it was suggested and agreed that Yellowstone's awe-inspiring natural wonders should be preserved for all to see in the form of a public park. Subsequent articles and speeches by the members of the party following their return home, and scientific explorations the following year which were documented in photography and sketches, helped to generate widespread public interest in Yellowstone (Everhart 1972). In a report to Congress, Doane exclaimed, "As a country for sightseers, it is without parallel; as a field for scientific research, it promises great results; in the branches of geology, mineralogy, botany, zoology, and ornithology, it is probably the greatest laboratory that nature furnishes on the surface of the globe" (Everhart 1972). On March 1, 1872, a year and a half after the Washburn Expedition, President Ulysses S. Grant signed the Yellowstone Park Act establishing the world's first national park.

A decidedly less romantic view of the origin of Yellowstone National Park and the beginning of all parks, entails less-than altruistic motives on the part of the Washburn Expedition. Corporate influence and the opportunity for a business venture have been said to be the genesis for the expedition and the ensuing campfire discussion. Eager to extend its tracks further west into the Montana Territory in the hopes of monopolizing the northern and easiest route into Yellowstone, Northern Pacific Railroad Company met with Langford in Philadelphia in June of 1870—three months before the expedition (Sellars 1997). Financially backed by Northern Pacific, Langford headed to Montana and successfully promoted the expedition. As the word spread about Yellowstone after the expedition party had returned, Jay Cooke, Northern Pacific financier, lobbied to ensure that the country comprising Yellowstone would be controlled by the federal government

and not by private investors. He reasoned that a government "reservation" would prevent "squatters and claimants" from gaining control of the areas' most scenic features (Sellars 1997). Government control would be easier to deal with, Cooke continued, so it was "important to do something speedily" through legislation (Sellars 1997). Success for Northern Pacific came speedily indeed: the Yellowstone bill was introduced on December 18, 1871, and enacted the following March.

An historical account of the birth of the national parks is incomplete without a discussion of what some call the "true" first national park—Yosemite. Forty-niners, heading back east after failing to strike the Mother Lode, gave accounts of the beauty of the valley they called Yo Semite. The first white man discovery of the valley occurred in 1851 by soldiers, and although it was proclaimed by Horace Greely in 1859 to be the "greatest marvel on the continent," the general public of the time had seldom, if ever, heard of Yosemite (Everhart 1983). A scandal in which a Californian entrepreneur stripped and reshaped the bark of a giant sequoia, then exhibited it for a fee in Eastern cities and eventually London, enraged many who were concerned about the threat to these unique forests (Everhart 1972). Although President Abraham Lincoln signed a bill on June 30, 1864, transferring jurisdiction of Yosemite valley and a grove of giant sequoias to the state of California, there is no evidence that the legislation was the result of careful planning or even public support (Everhart 1983). The congressman who introduced the legislation said only that "certain gentleman in California, gentlemen of fortune, of taste, and of refinement" had suggested the action (Everhart 1983). That was apparently enough as the legislation passed Congress without debate, establishing

Yosemite under the unprecedented stipulation that the land "shall be held in public use, resort and recreation, shall be held inalienable for all time" (Everhart 1983).

Whether Yosemite or Yellowstone was the first national park (or Hot Springs which was set aside in 1832, "for the future disposal of the United States"), it is clear that the climate of the country before either was established was anything but a conservation ethic. At the end of the eighteenth century, the Romantic Movement in Europe fostered a new attitude toward nature. The view that nature was harsh and oppressive was changing to the idea that it was a place to experience beauty and self-restoration. The philosophical minds of the times, David Thoreau and Ralph Waldo Emerson, who espoused the ideals of transcendentalism, found an eager audience as the effects of industrialization in New England towns became apparent. As small, pretty villages were turned into sooty factory towns, the populace listened as Thoreau and Emerson proclaimed that a return to nature was the only salvation (Worster 1979).

Also influencing the support for a national park movement was the country's desire to establish a national identity in the global community (Runte 1979). Looking to compete with the ancient cities, cathedrals and castles of Europe, the United States found the symbols of its national identity in the numerous areas of natural beauty. Yet in the mid-nineteenth century, the connection between transcendentalism and a burgeoning national identity based on national features did not translate into a conservation movement. That is not to say there were not individuals, such as John Muir, who were proponents of a conservation/ preservation ethic; however, there was no organized public belief to set aside the natural wonders as a protective park. The belief of infinite resources and an endless expanse of land fostered a manifest destiny response in settlers,

rather than transcendentalism inspired conservation land ethic. Alexis de Tocqueville, who traveled in the United States in 1831 in search of primitive country, encountered many who could not understand his craving for wilderness nor his disinterest in the pursuits of the time—land speculation, timber stealing and the killing of Native Americans in the name of progress (Everhart 1972). According to de Tocqueville, Americans had a different set of values, they were "fixed upon another sight…the march across these wilds, draining swamps, turning the course of rivers, peopling solitudes, and subduing nature" (Everhart 1972).

As the West became settled and the idea of an endless frontier faded, the American public began to see the value in protecting the nation's areas of natural beauty and wonder. Also of prominent influence was the role tourism played. The 1872 Yellowstone legislation represents a declaration that tourism would be important in the economy of the newly expanded American West (Sellars 1997). The Act established a portion of the public domain where non-consumptive use was the goal, with unrestricted use of private enterprise and exploitation of natural resources prohibited (Sellars 1997).

Americans had learned an early lesson in the consequences of despoiling their natural wonders from the disastrous experience at Niagara Falls. Around 1800, tourist promoters slowly accumulated the land around the falls. Travelers were hustled and harassed and, by 1860, there was no point on the U.S. side from which to view the falls without first paying a fee (Everhart 1983). The uncontrolled commercialization and defacement of Niagara Falls became America's first environmental disgrace and resulted in international embarrassment (Runte1979; Everhart 1983). The success of the new tourist economy and its investors, America had learned, depended on the preservation of

scenic areas. As the federal government accepted this role of management, businesses like Northern Pacific began to see the appeal of investing in the tourism trade in protected areas.

Realizing that national treasures in need of protection included areas other than wilderness expanses, in 1906 the park concept was expanded as Congress passed two pieces of legislation to indicate the change. In response to stories of looting and destroying ancient Indian civilization in the Southwest, Congress passed the Antiquities Act—providing legal protection against the damage or removal of any historic object from the public lands of the United States. Additionally, the Antiquities Act gave the president the power to declare any lands owned or acquired by the federal government a national monument if the area contained historic landmarks, historic or prehistoric structures, or objects of historic or scientific interest (Everhart 1972). On the heels of this legislation was the establishment of Mesa Verde National Park—not only to protect its natural landscapes but, more importantly, to set aside the greatest collection of archeological ruins in the Southwest (Everhart 1972).

Before 1900, park legislation did nothing more than declare the lands for public use and prohibit private ownership of the land. It cost very little to nothing to designate the area (especially at a time when the frontier seemed endless), and no laws were included to protect the resources or enforce the regulations (Everhart 1983). Yellowstone received no appropriations from Congress, believing that somehow the park could be self-sustaining. Congress appointed the first superintendent without financial resources for a staff or a salary (Everhart 1972). It was not long before those visiting Yellowstone realized that it would not survive the increased vandalism to its natural features unless

there was an authority to govern it (Everhart 1983). In 1886, the Secretary of the Interior asked the Secretary of War for assistance with managing the parks, and thus began the thirty-year control of Yellowstone by the United States Calvary.

The National Park Service

By the fall of 1914, the national parks were in desperate need of an administrative leader. The 13 national parks and 20 national monuments were under the control of civilian and military superintendents, who operated under loosely defined rules and were supervised by various secretaries of the Department of the Interior who typically had little time for the parks (Everhart 1972). Pressure starting in 1912 from a group of national park enthusiasts prompted President Taft to declare that a unified, professional agency should replace the current practice of haphazard management of the parks. The president sent a message to Congress that year urging them to establish a "Bureau of National Parks" (Everhart 1983). Gifford Pinchot, among others, felt that the creation of a national park department was redundant. Instead, he argued, the Forest Service—who was already familiar with balancing visitor recreation and conservation—could carry out the work (Sellars 1997). A chance occurrence in 1914 secured the establishment of a national park agency, that which was outside the control of the Forest Service. Franklin K. Lane, Secretary of the Interior in 1914, was looking for a man to administer the national parks under the Interior's watch when he received a letter from an old college friend Stephen T. Mather. Mather had recently visited Yosemite and Sequoia National Parks and sent a letter of complaint about the horrible conditions of the parks—impassable trails, cattle grazing and opportunistic lumberjacks. Mather's protest

garnered a quick response from Secretary Lane: "Dear Steve, If you don't like the way the national parks are being run, come down to Washington and run them yourself" (Everhart 1983). Mather, 47, a borax salesman and self-made millionaire and philanthropist was an avid outdoorsman who often retreated to the wilderness to escape the pressures of business (Everhart 1983). Although Mather had a profound love of the wild country, he already had several interests to occupy his time and was reluctant to accept Lane's offer. Aware of Mather's reputation of a freewheeler and figuring he would not want to get tied down in the procedural red tape of a federal bureaucracy, Lane offered his personal aid Horace Albright to be Mather's assistant (Everhart 1972). Although both men were hesitant, Mather's enthusiasm grew as he pictured the possibility of creating a professional organization to administer the parks. His enthusiasm was contagious—"I couldn't resist him," Albright recalled later (Everhart 1972).

In January 1915, Mather was sworn in as an Assistant to the Secretary of the Interior. He and Albright had an enormous task ahead of them—starting with convincing Congress to pass a bill to create a National Parks Bureau. President Woodrow Wilson signed the National Parks Act on August 25, 1916, establishing the National Park Service.

In the interim between the creation of Yellowstone National Park and the establishment of the National Park Service, nearly half a century had passed. The result was an enormous organizational hurdle: funding and staffing the new bureau, obtaining substantial increases in appropriations from Congress for the existing national parks and monuments (now totaling 35), orchestrating a nationwide publicity campaign to generate

public interest and support for the parks, improving concessionaire-run tourist facilities (hotels, camps, etc), and garnering additional support from Congress to establish new parks and defeat bills attempting to designate substandard areas (Everhart 1983). Mather's charisma and Albright's legal skills proved to be a very effective combination in moving the direction of the National Park Service forward and toward the high standards that the Service strives for today.

The National Park Service is currently responsible for overseeing and protecting 384 parks (NPS 2001). The parks comprise a wide variety of settings and consist of over 20 different classifications including national park, national monument, national preserve, national historic site, national historical park, national memorial, national battlefield, national cemetery, national recreation area, national seashore, national lakeshore, national river, national parkway, national trail, and others.

Organization of the National Park Service

The National Park Service (NPS) is a hierarchical organization that begins with the director in Washington, D.C., and ends with the many individuals working at the park level (Appendix 1). As is common with most federal agencies, the NPS is divided into three levels of management: the central headquarters in Washington, D.C., from which policy originates, the regional offices (7) which are responsible for local coordination of the parks, and the individual parks (384). Each park has a superintendent, which is the top management position at the park level. Once compared to a captain of a ship, the authoritative freedom of the superintendent has been curtailed in recent years (Everhart 1983). However, the prioritive direction a park takes depends largely on the personal

directives of the current superintendent (Thomas, personal communication, February 9, 2002). The role of park superintendent is still the most coveted position in the NPS (Everhart 1983).

The next management level up is that of the director of the various regional offices. Because the national park system is geographically scattered throughout the nation, regional offices provide direction and support to those parks nearest its location. The regional offices presumably have a better understanding of the specific needs of the parks in the vicinity than does the distant central office; however, the degree to which the authority of the national director is delegated to the regional office directors or superintendents varies with each director's style of leadership (Everhart 1983). Mather and Albright were strong administrators, and that pattern has continued throughout the years (Everhart 1983).

There is a tendency for the regional office to become the middle link in handing down policy decisions to individual parks in such a way that assures that each park's needs are being met. It is described by Everhart (1983) as the "position lying between two mountains of conceit." The conceit of the park staff is that no one understands the condition under which they must operate; while the conceit of the central office is that its policy directives are a form of "divine intervention" (Everhart 1983). Thus the role of the regional office is humble, yet crucial.

The responsibility of the National Park Service is immense and necessitates a large workforce. The Service employs 15,729 permanent employees, 5,548 temporary or seasonal employees, and Volunteers in Parks (VIP) contributes over 90, 000 volunteers (NPS 2001).

Mission of the National Park Service

The legislation that established the National Park Service, also called the Organic Act, articulated the mission or purpose of the new bureau:

> The service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations...by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

While this is still the mission of the Service, the Service's purposes have evolved over the years and now entail leadership responsibilities and functions that are external to the physical boundaries of the park system (NPS 1993). The National Park Service's contemporary role is broad as it strives to preserve, protect and convey to the public the meaning of the natural and cultural resources under its control. The Steering Committee for the Vail Agenda in 1993 identified six strategic objectives that comprise the twenty-first century vision for the National Park Service (NPS 1993):

Resource Stewardship and Protection—The primary responsibility of the NPS must be protection of park resources.

Access and Enjoyment—Each park unit should be managed to provide the nation's diverse public with access to and recreational and educational enjoyment of the lessons contained in that unit, while maintaining unimpaired those unique attributes that are its contribution to the national park system.

Education and Interpretation—It should be the responsibility of the NPS to interpret and convey each park units and the park systems' contributions to the nation's values, character, and experience.

Proactive Leadership—The NPS must be a leader in local, national, and international park affairs, actively pursuing the mission of the national park system and assisting others in managing their park resources and values.

Science and Research—The NPS must engage in a sustained and integrated program of natural, cultural, and social science resource management and research aimed at acquiring and using the information needed to manage and protect park resources.

Professionalism—The NPS must create and maintain a highly professional organization and work force.

Although stated more explicitly in the National Parks Service Act of 1916, the basic elements of the national park idea were contained in the Act of 1872 and provided the guiding philosophy for Yellowstone and all the parks to follow. As the Service strives to meet the original goals contained in the Organic Act, it also fills many other roles as well: "guardian of our diverse cultural and recreational resources; environmental advocate; world leader in the parks and preservation community; and pioneer in the drive to protect America's open space" (NPS 2001(a)).

Constraints to the system

As the Service attempts to work towards its mission on a daily basis, there are many constraints that work against it and the system of parks. The park system now comprises 384 parks, covering 83.3 million acres (NPS 2001). The authorizations of new bills to create more parks do not provide the additional funds and positions needed to

open the areas for public use (Everhart 1983). In 1979, one year after a bill passed that added eighteen new parks to the system, Congress reduced the number of full-time Service employees and cut the operating budget by $40 million (Everhart 1983). As the budget continues to be cut and more parks are added, the only recourse is to rearrange the existing staff to provide coverage for all the parks (Everhart 1983). This has been a reality for the parks for over 20 years. With the goal of eliminating the federal deficit, the budget for the National Park Service is being reduced to levels of funding inadequate for essential operations and maintenance. Yet the constant pressure to protect areas of national history and beauty, and thus make them parks, comes from the public and conservation groups alike.

Because the Service is a federal agency, it is susceptible to the political climate of the current presidential administration. It has not always been subject to the politics of the time, however. After the ceremony of swearing in Steven Mather as the first Director of the Service in 1916, Secretary of the Interior Lane casually remarked, "By the way Steve, I forgot to ask you, what are your politics?" (Everhart 1983). It was Lane's way of saying that the Park Service would not be subjected to political pressures and that Mather, a republican, was welcome in Woodrow Wilson's democratic administration (Everhart 1983). Mather went on to serve under three presidents, and for more than fifty years no director was ever removed as a political measure (Everhart 1983). That tradition was broken in 1972, when Richard Nixon became president and personally gave the order to fire Director George Hartzog (Everhart 1983). The selection of the Director of the National Park Service has been a political assignment ever since, coinciding with changing administrations almost without exception. The current director is Fran P.

Mainella who, on June 4, 2001, was nominated by President Bush and confirmed by the U. S. Senate on July 12, 2001—making her the first woman director in the history of the National Park Service.

The Vail Agenda recognized the many strengths of the Service, but also observed that many employees and observers perceive that problems exist that work as roadblocks in accomplishing the mission of the Service (NPS 1993):

> ...[G] ood job performance is impeded by lowered educational requirements and eroding professionalism; that initiative is thwarted by inadequately trained managers and politicized decision making; that the Service lacks the information and resource management/research capability it needs to be able to pursue and defend its mission and resources in Washington, D. C and in the communities that surround the park units; that the mission and the budget is being diluted by increasing and tangential responsibilities; that there is a mismatch between the demand that the park units be protected and the tools available when threats to park resources and values are increasingly coming from outside unit boundaries; and that communication within the Service repeatedly breaks down between field personnel and regional and headquarters management.

The result of these perceptions is that the National Park Service faces not only morale and performance problems, but also that these can threaten the agency's capacity to manage and protect park resources (NPS 1993).

Value of the national park system

> The national park system has the potential to bring together landscapes, places, people and events that contribute to unique ways to the shared national experience and values of an otherwise highly diverse people.
>
> *The Vail Agenda*, 1993

Newton B. Drury, Director of the NPS from 1940-1951, once observed that national parks are set aside not solely to preserve scenic landscapes and historic places, but rather they provide a greater return because of their unique value in "ministering to

the human mind and spirit" (Tilden 1957). The worth of the national parks to the nation transcends the physical benefit of preserving land and biodiversity. John Muir wrote in 1898:

> Thousands of nerve-shaken, overcivilized people are beginning to find out that going to the mountains is going home: that wilderness is a necessity; and that mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but as fountains of life (qtd. in Tilden 1957).

Although Muir's observations occurred over one hundred years ago, his words still hold true for many visitors today.

Polls done in the late 1980's showed that a surprisingly large proportion of Americans have visited the national parks and remember them—and the NPS—with affection and admiration (Conservation Foundation 1986). Moreover, the public expressed a higher respect for experiences in national parks than in any other publicly owned recreation areas (Conservation Foundation 1986).

The spacious and majestic scenery being preserved in parks such as Yellowstone, Sequoia, Yosemite and the Grand Canyon aroused a strong sense of patriotism and romanticized pride in America at the creation of each—and that pride still remains today. Especially in these tenuous times as Americans are seeking an alternative to the everyday, chaotic world, the value of parks plays an even more important role. An example of this role was evidenced during the aftermath of September 11, 2001. A press release from the Secretary of the Interior Gale Norton announced that on Veterans' Day weekend all parks would waive their entrance fees "to inspire national unity, hope, and healing" (U.S. Dept. of the Interior 2001). It was hoped that the gesture would allow Americans the opportunity "to seek solace and inspiration from the Nation's [sic]

parks…" (U.S. Dept. of the Interior 2001). In his book, *The National Parks*, Freeman Tilden spoke of the feelings of protection the parks instill in those who visit them:

> The Romans had their lares and panates—their protective and benevolent household and neighborhood gods. At the risk of being to precious about it, I should say that perhaps our American lares and panates can best be discovered in the national parks (Tilden 1968).

Many eloquent speakers have said it in many ways since the origins of the parks themselves, but the message is the same: The national parks have value beyond the shear benefit of saving open spaces. These wondrous places have the capacity to draw hundreds of thousands of visitors a year from across the globe, and have the potential to connect people with the natural world. And while they cannot do the job alone, national parks have an important role to play in creating an environmentally literate society.

<u>Summary</u>

Although its origins are debatable, the foundation of the national park system is the protection of the nation's rich historic, cultural and natural environments. The National Park Service acts as the system's caretaker, with its central mission to leave the parks "unimpaired for future generations." One role the Service plays in aiming to achieve that mission is that of environmental advocate. From the time of their inception to present day, the national parks have inspired, renewed, relaxed and impressed its visitors through their natural wonders—what better atmosphere to advocate the protection of the Earth's resources than to those immersed in its benefits?

INTERPRETATION

Interpretation is the vehicle in which the National Park Service conveys its message to the visiting public. The following is a discussion of the various definitions of interpretation, a history of interpretation in the parks, the purposes of interpretation as outlined by the National Park Service, the training process of interpreters in the Service, the many benefits interpretive services provide to the public and the parks, and finally, the constraints that work against interpreters in the Service as they attempt to reach the public with their message.

What is interpretation?

Interpretation is a service provided to visitors at parks, forests, wildlife refuges, and other recreation areas. Though visitors to these areas primarily come for relaxation, inspiration, and/or recreation, many are also interested in learning about the area they are visiting. Interpretation provides insight into the cultural and natural resources of the area and thus, provides the visitor with an even more meaningful experience. Therefore, interpretation is the communication link between the visitor and the resources (Sharpe 1982).

Interpretation has been defined in several ways. Freeman Tilden, often seen as the "father of interpretation," describes interpretation as "[a]n educational activity which aims to reveal meaning and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information" (Tilden 1957). Harold Wallin, former Chief Naturalist for the Cleveland

Metropolitan Parks, believes interpretation is the "helping of the visitor to feel something that the interpreter feels—a sensitivity to the beauty, complexity, variety and interrelatedness of the environment; a sense of wonder; a desire to know. It should help the visitor develop a feeling a being at home in the environment. It should help the visitor develop perception" (Wallin 1965). Don Aldridge, of Scotland, defined interpretation as "...the art of explaining the place of man in his environment, to increase visitor or public awareness of the importance of this relationship, and to awaken a desire to contribute to environmental conservation" (Aldridge 1972).

However, Tilden (1957) believed the "true" interpreter will not be satisfied with a dictionary definition, but will go "beyond the apparent to the real, beyond the part to the whole, beyond a truth to a more important truth." Although the definitions vary, it is clear that the goals of interpretation are many. An historical perspective will give a better understanding of the foundations and the purposes of the contemporary practice of interpretation in the national parks.

History of interpretation in the national parks

Long before interpretation was institutionalized by the National Park Service, and in fact, before the Service existed, John Muir, in 1871, recorded in his notebook, "I'll interpret the rocks, learn the language of the flood, storm and the avalanche. I'll acquaint myself with the glaciers and wild gardens, and get as near the heart of the world as I can" (Mackintosh 1986). Although Muir's use of *interpret* refers to personal understanding rather than communication, it has been cited as the first use for its later adoption by the National Park Service (Mackintosh 1986).

After Muir eloquently described the wonders of the parks in his early writings, the first phase of interpretation in the parks was the task of the U.S. Army. After the Calvary gained control of Yellowstone in 1886, some of the soldiers stationed in the Upper Geyser Basin took it upon themselves to explain the thermal features to visitors, as there were no other means for visitor inquiry (Mackintosh 1986). These early interpretive talks, known as "cone talks," were severely lacking in scientific accuracy, but provided entertainment for the park visitors (Mackintosh 1986). The "cone talks" were no worse than the explanations from the commercial sources in the park, which were economically motivated (Mackintosh 1986). Guides working out of the hotels were, by regulation, not to charge a fee for their services; however, an accomplice of the guide would be a "visitor" and give a large tip at the end of the talk and encourage others to follow his lead (Shankland 1954).

Improvements in early interpretation efforts came after the turn of the century. The Wylie Camping Company, which offered tent accommodation to visitors to Yellowstone, staffed teachers who, among other duties, gave lectures and campfire programs—although the motivation for providing these services is not clear (Mackintosh 1986). This trend was also evident in the future site of Rocky Mountain National Park. Enos Mills, a forefather in the practice of natureguiding, promoted and led guided hikes with a purpose to foster appreciation of the natural values of the area (Brockman 1978). In 1904, 1st Lt. Henry F. Pipes, a surgeon with the U.S. Calvary stationed in Yosemite, designed a path labeled with 36 species of plants near Wawona; but unfortunately, it did not last as it was discovered to be on private property (Mackintosh 1986). The following year, Frank Pinkley, custodian of the Casa Grande Ruin Reservation (later to become

Casa Grande National Monument) in Arizona Territory, pioneered museum interpretation with an exhibit of pre-historic artifacts collected from an archeological excavation in the ruin (Mackintosh 1986).

Of the early public education attempts, the largest audiences were reached through publications. In 1911, Laurence F. Schmeckebier, the clerk in charge of publications for the Department of the Interior, asked the superintendents of the larger parks to submit information on access and accommodation to be made into a series of handbooks (Mackintosh 1986). A second handbook, promoted by Schmeckebier and written by scientists from the Smithsonian Institute and U.S. Geological Survey, interpreted major features of the parks (Mackintosh 1986). Titles included *The Secret of the Big Trees: Yosemite, Sequoia, and General Grant National Parks* (1913) by Ellsworth Huntington; *Origin of Scenic Features of Glacier National Park* (1914) by M.R. Campbell; *Mount Rainier and Its Glaciers* (1914) by F.E. Matthes; and *Fossil Forests of Yellowstone National Park* (1914) by F. H. Knowlton (Mackintosh 1986). Although under the guise of public education, these publications were part of an Interior Department effort to build public support for the parks and political support for the creation of a bureau to manage them (Mackintosh 1986).

In 1916, Robert Sterling Yard, hired by National Park Service Director Steven Mather to handle park publicity, produced *The National Parks Portfolio*—a beautifully illustrated publication financed by 17 western railroad companies who were profiting from park tourism (Mackintosh 1986). Two hundred and seventy-five thousand copies were printed and handed out free of charge to prominent Americans, including members of Congress (Mackintosh 1986). The introduction of the publication was written by

Secretary of the Interior Franklin Lane who wrote, "It is the destiny of the national parks, if wisely controlled, to become the public laboratories of nature study for the Nation [sic]"(Mackintosh 1986). While the surge in national park publicity was grounded in economic and political motives it, nevertheless, advanced the prospect of an educational purpose for the parks.

The National Park Service was established in 1916, and began operations the following year with Yard as the unofficial chief of the Service's "education division"—a non-Service position, though Mather continued to pay his salary (Mackintosh 1986). A second edition of *The National Parks Portfolio* was published in 1917 under Yard, and included additions on the lesser known parks and monuments that were left out of the first edition (Mackintosh 1986). That year the Service also distributed more than 128,000 park circulars, 83,000 automobile guide maps, and 117,000 pamphlets titled *Glimpses of Our National Parks*, in addition to 348, 000 feet of motion picture film delivered to schools, churches and other organizations (Mackintosh 1986). In his annual report for 1917, Mather re-enforced his actions and declared "one of the chief functions of the national parks and monuments is to serve educational purposes"(Everhart 1983).

A letter from Secretary Lane to Mather in 1918 constitutes the Service's first administrative statement of policy, and reiterated Mather and Lanes' belief in parks as educational laboratories: "The educational, as well as the recreational, use of the national parks should be encouraged in every practible way" (Mackintosh 1986). Although Lane and Mather endorsed an educational purpose for the parks, not everybody shared their view. Yard describes some of the obstacles he faced during the Service's first years:

> Educational promotion wasn't much of a success at first. No one in Washington took any interest in it except Mr. Mather, spasmodically;

> Congressman smiled over it; and with a very few exceptions the concessionaires opposed it. Somebody politically influential on the Pacific Coast slammed the whole idea of education in the national parks by letter to his Senator who called up Secretary Lane about it, and Lane phoned down to Mather that he'd better go slow on that unpopular kind of stuff. Thus the cause passed under a heavy cloud just as things were beginning to look hopeful. But I still kept my title, and hammered away as inconspicuously as possible (Mackintosh 1986).

Without the financial support of Congress in the form of park appropriations, financing education in the parks during the 1920's largely came from outside sponsorship. Private philanthropy from the Carnegie Foundation and the Laura Spelman Rockefeller Memorial, as well as others, provided much needed grants to be put towards museum development and other educational activities (Mackintosh 1986). Figure 1 illustrates an example of an interpretive museum funded by the Rockefeller family.

Figure 1: The Norris Museum, at Yellowstone's Norris Geyser Basin

Source: NPS Historic Photograph Collections (Pictured in Sellars 1997)

Organizations such as the National Parks Association (now called the National Parks Conservation Association) and the Sierra Club provided publicity and educational talks inside the parks (Mackintosh 1986). Much of the interpretation that was happening in the parks at the time was undertaken by outside parties—usually university professors, teachers and scientists.

As these privately funded and often voluntary services began to increase in popularity, the Park Service initiated the first reasonably comprehensive interpretation programs in Yosemite and Yellowstone in 1920 (Mackintosh 1986). [It is important to note here that in its initial stages the National Park Service interpretive program lacked a distinctive name which adequately described its primary goal (Brockman 1977). The term *interpretation* did not come into general use until the late 1930's—even after it was overlooked as a possible designation at a meeting of the National Park Educational Advisory Board in 1930 (Brockman 1977)]. The Yosemite Free Nature Guide Service included guided hikes, evening campfire talks and film-illustrated lectures (Mackintosh 1986). Dr. Harold C. Bryant, the director of the Nature Guide Service, reported the first season a success: "The response has been so great that we are sure there will be sufficient demand not only to continue the work in Yosemite National Park but to extend it to other parks" (Brockman 1978). That year, Superintendent Horace Albright of Yellowstone made Ranger Milton P. Skinner the Service's first officially designated park naturalist—the original title for interpreters (Mackintosh 1986).

Although there was still no federal funding for educational related activities in the parks, museum development on the backs of privately funded grants was soon to follow. In 1920, Mather's annual report called for "the early establishment of adequate museums

in every one of our parks" to exhibit flora, fauna and minerals of the area (Mackintosh 1986). While this idea blossomed, some wanted to take the idea of educating visitors to new heights. Herman C. Bumpus, who had been the first director of the American Museum of Natural History in New York, was heavily involved in the development of museums in Yosemite and promoted the idea of a "focal point" lookout facility, believing this is what park museums should represent:

> The controlling fact governing the development of educational work in the national parks is that within these reservations multitudes are brought directly in contact with striking examples of Nature's [sic] handicraft. To lead these people away from direct contact with Nature [sic]...is contrary to the spirit of the enterprise. The real museum is outside the walls of the building and the purpose of the museum work is to render the out-of-doors intelligible. Is it out of this conception that a smaller specialized museum, the trailside museum, takes its origin (Mackintosh 1986).

Other national parks followed the lead of Yosemite and Yellowstone and began offering interpretive lectures, guided hikes, publications, exhibits and information booths (Mackintosh 1986). To support and encourage these park programs, Mather made Ansel Hall chief naturalist of the Service's Education Division in 1923, which had its official headquarters at the University of California at Berkeley (Mackintosh 1986). The Education Division developed administrative plans for the educational activities of each individual park in cooperation with the park superintendents and naturalists (Bryant & Atwood 1936). Mather voiced strong support for the Education Division and gave it the function of overseeing and setting standards for hiring park naturalists (Mackintosh 1986). To provide better training to early interpreters, the National Park Service and Harold Bryant founded the Yosemite School of Field Natural History in 1925. The seven-week course offered in the summer was limited to 20 students, and the prerequisite

for enrollment was a minimum of a two-year college education (Mackintosh 1986). Sixty percent of the program was spent in field observation, a distinction that set it apart from traditional academia (Mackintosh 1986). Many seasonal and permanent Service interpreters were trained at the school, which operated each summer (except during the war) until 1953 (Mackintosh 1986). The importance of the program was summarized by Clark (1949) in an unpublished doctoral dissertation about interpretive programs in the parks:

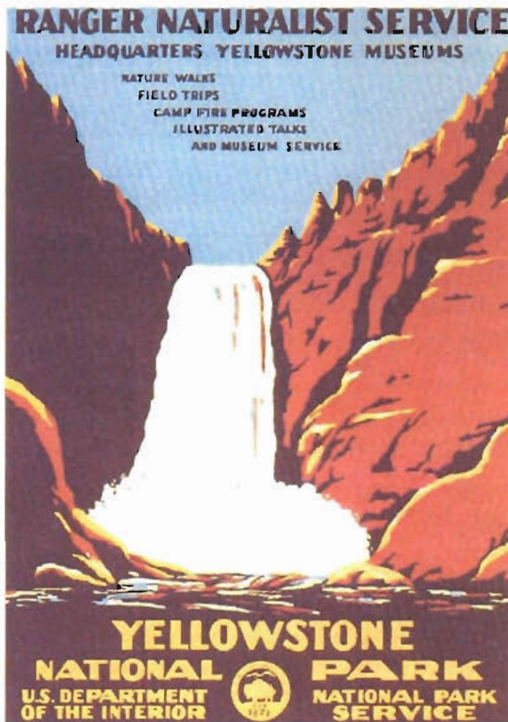
> While it is true that earlier work in the direction of nature guiding and public interpretive service had been carried on in several of the national parks, the Yosemite Program marked the beginning of carefully directed and planned public contact work which was to spread throughout the national parks and become the most direct and most important function of the [S]ervice.

In 1928, at Mather's urging and realizing the importance of advancing the educational possibilities of the parks, Secretary of the Interior Roy O. West appointed the Committee on Study of Educational Problems in the National Parks (Bryant & Atwood 1936). The committee recommended a permanent educational advisory board, established the next year; and also called for an appointment of a Park Service education chief that would have headquarters in Washington (Bryant & Atwood 1936). The committee's advice was heeded and, in 1930, Harold C. Bryant was appointed assistant director of the new Branch of Research and Education (Bryant & Atwood 1936). As assistant director, Bryant was in charge of all educational activities, with Wallace W. Atwood, Jr., in charge of earth science education. A year later, Verne E. Chatelain joined the division as assistant director for historical and archeological education; thus fulfilling

the committee's vision for the Branch of Research and Education (Bryant & Atwood 1936).

Park interpretive programs, in both state and national parks, enjoyed a period of expansion in the 1930's through the availability of emergency federal funds and public

Figure 2: Publicity for Ranger Activities, Circa 1939



Source: NPS 1939

works agencies such as the Works Progress Administration (WPA) and the Civilian Conservation Corps (CCC) (Sharpe 1982). An example of publicity provided by WPA for the "ranger naturalist service" at Yellowstone is illustrated in Figure 2. The Branch of Recreation, Land Planning, and State Cooperation of the National Park Service appointed recreation planners who assisted seventeen states in starting naturalist programs (Sharpe 1982). Unfortunately, most of these programs were terminated with the onset of World War II and did not make a quick recovery after the war—despite large visitor attendance in the parks (Sharpe 1982). Figure 3 illustrates large, postwar attendance at ranger-led activities.

Figure 3: Post WWII Ranger Program

Source: NPS Historic Photograph Collections (pictured in Sellars 1997)

Although the role of education seemed to be gaining in status as it was given a place in the organization of the National Park Service, the function of naturalists/interpreters was not well received by superintendents and rangers. Despite the formal training the Yosemite School provided, candidates with solid qualifications and training were not plentiful and interpretive programs sometimes suffered (Mackintosh 1986). Some of the early interpreters had been academically trained scientists and could not relay information to the visitors in a way that was digestible. Although ineffective interpreters such as these were dismissed, many academics did not view park naturalists with respect or recognize the difficulty of their task. Franck Brockman (1977), an interpreter for Mount Rainer National Park since 1928, remembers it as follows:

> Science had not gained the status typical of recent years, and early Park Service naturalists were often considered to be impractical "scientists." Conversely, true scientists of that time, though respecting the zeal and dedication of park naturalists, were well aware of their limited scientific backgrounds. So, in a sense, early National Park Service naturalists were neither fish nor fowl. They

> often lacked the respect of their coworkers and had limited status in the true scientific community. Not uncommonly they were referred to by their associates as "nature fakers," "posy pickers," or "Sunday supplement scientists."

Because of these beliefs, integration of interpreters into park management was a slow process. Harold Bryant, on an inspection trip of the parks in 1935, reported to Director Arno B. Cammerer that the requests to place naturalists in "key positions" had not been carried out by the superintendents (Mackintosh 1986). In addition, he saw "little gain in effort to make the naturalist an expert…on all matters pertaining to education and natural history," and found that "the chief criticism of the naturalist service…[was] still that of shallowness of background…"(Mackintosh 1986). Although these trends continued with interpreters feeling out of the mainstream of the organization, from the 1930's on few doubted the importance of interpretation and its significant role in the mission of the National Park Service (Mackintosh 1986).

The guiding principles of interpretation in the National Park Service

> Our function lies rather in the inspirational enthusiasm which we can develop among our visitors—an enthusiasm based upon a sympathetic interpretation of the main things that the parks represent, whether these be the wonder of animate things that the parks represent, whether these be the story of creation as written in the rocks, or the history of forgotten races as recorded by their picturesque dwellings.
>
> Education Division of NPS (1929)

Freeman Tilden's six principles of interpretation, included in *Interpreting Our Heritage* (1957), became the bible for all interpreters. These six have been expanded over the years and in their work *Interpretation for the 21st Century* (1998), Larry Beck

and Ted Cable added nine more to Tilden's original six. The objectives for interpretation are as follows—listing Tilden's first:

1. Any interpretation that does not somehow relate to what is being displayed or described to something within the personality or experience of the visitor will be sterile.
2. Information, as such, is not Interpretation. Interpretation is revelation based upon information, but they are entirely different things. However, all interpretation includes information.
3. Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical or architectural. Any art is in some degree teachable.
4. The chief aim of Interpretation is not instruction, but provocation.
5. Interpretation should aim to present a whole rather than a part, and must address itself to the whole man rather than any phase.
6. Interpretation addressed to children (up to the age of twelve) should not be a dilution of the presentation to adults, but should follow a fundamentally different approach.
7. Every place has a history. Interpreters can bring the past alive to make the present more enjoyable and the future more meaningful.
8. High technology can reveal the world in exciting new ways. However, incorporating this technology into the interpretive program must be done with foresight and care.

9. Interpreters must concern themselves with the quantity and quality (selection and accuracy) of information presented. Focused, well-researched interpretation will be more powerful than a longer discourse.
10. Before applying the arts in interpretation, the interpreter must be familiar with basic communication techniques. Quality interpretation depends on the interpreter's knowledge and skills, which should be developed continually.
11. Interpretive writing should address what readers would like to know, with the authority of wisdom and the humility and care that comes with it.
12. The overall interpretive program must be capable of attracting support—financial, volunteer, political, and administrative—whatever support is needed for the program to flourish.
13. Interpretation should instill in people the ability, and the desire to sense the beauty in their surroundings—to provide spiritual uplift and to encourage resource preservation.
14. Interpreters can promote optimal experiences through intentional and thoughtful program and facility design.
15. Passion is the essential ingredient for powerful and effective interpretation—passion for the resource and for those people who come to be inspired by the same [resource].

Interpretation training in the National Park Service

In 1995, the National Leadership council of the National Park Service adopted a ten-year plan for the training and development of Service employees (NPS 1999). It included the Employee Training and Development Strategy, which defined 16 career fields in the NPS, and developed over 225 essential competencies for the various jobs within each field. A set of Universal Essential Competencies (now called Universal Competencies) was also developed and applies to all employees in the Service (NPS 1996). This is the first time the Park Service has attempted to define essential competencies for all its employees (NPS 1996). The purpose of the plan is "(1) to provide definition to Park Service employees and their supervisors about essential competencies required for them to perform their jobs at the entry, developmental, and full performance levels; (2) to give employees insights into the full spectrum of job requirements in the Service so they can better plan their careers; and (3) to enable the Service's Training and Development Community to base its programs on essential needs identified by employees and supervisors" (NPS 1996). The National Park Service's Interpretive Development Program is a training initiative to foster interpretive excellence based on the Employee Training and Development Strategy, and was developed through the input of over 300 interpreters (Dahlen et. al. 1996). The program identifies eleven competencies for park interpreters to attain and demonstrate. These competencies are listed in Table 1.

Table 1: Essential Benchmark Competencies for Interpreters

Entry Level:
--Interpretation and the NPS Mission (Module 101)
--Effective Informal Visitor Contacts (Module 102)
--Effective Interpretive Talk (Module 103)
Developmental Level:
--Conducted Activities
--Demonstrations and Other Illustrated Programs (Module 210)
--Effective Interpretive Writing (Module 220)
--Effective Curriculumbased Programs (Module 230)
Full Performance Level:
--Planning Park Interpretation (Module 310)
--Interpretive Media Development (Module 311)
--Interpretive Leadership: Training and Coaching (Module 330)
--Interpretive Research and Resource Liaison (Module 340)

Source: NPS 1996

The framework the program uses is a mathematical model called the "Interpretive Equation" to explain the "how and why" of interpretation (Dahlen et. al. 1996). Although mathematical in its approach, the "Interpretive Equation" is designed to provide a visual goal outcome and not to actually compute numerical values. The equation is (**K**nowledge of the **r**esource + **K**nowledge of the **a**udience) + **A**ppropriate **T**echnology = **I**nterpretive **O**pportunity (Dahlen et. al. 1996). Table 2 illustrates the model and the applicable principles.

Table 2: The NPS Interpretive Equation and the 15 Principles

Interpretive Equation: (Kr + Ka) + AT = IO	15 Principles
Kr = Knowledge of the resource	2, 3, 5, 9,11,13
Ka = Knowledge of the audience	1, 6, 7, 12
AT = Appropriate Technology	8
IO = Interpretive Opportunity	4, 10, 14, 15

Source: Beck and Cable 1998

Knowledge of the resource (Kr) seems an obvious competency; however, interpreters must not only know the tangible concepts related to the resource, but also must be aware of the intangible ideas associated with the resource. In a wilderness setting, intangible ideas represented might be harmony, balance, self-sufficiency, spirituality and others. Included in this part of the equation is the knowledge of past and present issues and controversies relating to the site, and the ability to articulate differing points of view (Beck & Cable 1998).

Knowledge of the audience (Ka) is a difficult, but crucial part of the Interpretive Equation. Without knowledge about the motivations, desires, and needs of the audience it is very difficult to reach them with the interpretive message (Beck & Cable 1998). Determining what the audience is looking for, however, is sometimes difficult to assess.

The use of appropriate technology (AT) is an important factor in delivering the interpretive message. Selecting the best technique to deliver the message comes after determining the theme (Kr) and goals (Ka) (Beck & Cable 1998).

Interpretive opportunities (IO) is the goal of the Interpretive Equation. Interpreters have no guarantee that their message will have the desired affect with every visitor. What can be controlled, through planning and presentation, is creating the optimal opportunity for the visitor to be receptive to the message.

Benefits of interpretation

The interpretive profession provides many benefits to the parks and beyond. In the forward to Tilden's second edition of *Interpreting Our Heritage* (1977), Director of the NPS Gary Everhart showed the value of interpretation when he said, "We consider

interpretation to be one of the most important single activities of the National Park Service." Sharpe (1982) compiled the following list of the benefits of interpretation:

1. Interpretation contributes directly to the enrichment of visitor experiences.
2. Interpretation makes visitors aware of their place in the total environment and gives them a better understanding of the complexities of coexisting with that environment.
3. Interpretation may broaden the visitor's horizons beyond the park or forest boundary, giving a greater understanding of the total natural resources picture.
4. Interpretation informs the public and an informed public may make wiser decisions on matters related to natural resources management.
5. Interpretation may reduce the unnecessary destruction of park property, resulting in lower maintenance and replacement costs.
6. Interpretation provides a means of moving people subtly from sensitive areas to sites that can better sustain heavy human impact, thus protecting the environment.
7. Interpretation is a way to improve public image [for the Service] and establish public support.
8. Interpretation may instill in a visitor a sense of pride in their country or in the region's culture and heritage.
9. Interpretation may assist in the successful promotion of parks where tourism is essential to an area's economy.
10. Interpretation may be effective in preserving a significant historic site or natural area by arousing citizen concern.

11. Interpretation may motivate the public to take action to protect their environment in a sensible and logical way.

If there is a need to protect the natural and cultural resources, then there is a need for interpretation. The old adage, and mantra of the National Park Service, still applies today—through education comes understanding, through understanding comes appreciation, and through appreciation comes protection. The founding principle of the national park system *is* protection. In order to arrive at the desired end result, we must support the path in achieving it. That path is education, and the means for that path is interpretation.

Constraints to the interpretive services

The value and potential of the national park system, as a means of expressing the national experience to a diverse audience, depends on interpretation to convey the message. Unfortunately, the intrinsic need for interpretation gets lost in the bureaucratic shuffle as the cost effectiveness of all aspects of park management vie for spots in the new budget allocations. In a 1972 report from the Secretary of the Interior's Advisory Board on the national park system, it was stated, "We must conclude generally…that interpretive positions, facilities, and performance are at a low point for recent decades…. On a piecemeal basis, interpretation appears to have suffered most in the competition between programs for inadequate budgets and from personnel restrictions of recent years" (Mackintosh 1986). In response, Director Hartzog ordered another Service-wide study of interpretation. Nearly a thousand employees returned a questionnaire, detailing

problem areas and offering recommendations (Mackintosh 1986). A general consensus revealed a decline in the importance and professionalism of interpretation in the Service (Mackintosh 1986). Everhart outlined several reasons for the decline in his report to the Director in 1973: organizational changes had lumped interpretation with resources management in many parks, often removing people with interpretive backgrounds from leadership; the de-professionalizing tendency of the new park technician series; increased visitation and expansion of the park system without matched funding and personnel increases for interpretation; and increased emphasis on law enforcement at the expense of interpretative positions and training (Mackintosh 1986).

The new park technician series came about in the late sixties and had disastrous effects on the morale of those in interpretation. Under the new classification system, chief interpreters in the larger parks were made staff to their superintendents, no longer supervising interpreters in the field (Mackintosh 1986). Most field interpreters were placed in the sub-professional category GS-026, and were no longer supervised by chief interpreters, but were supervised by district mangers that were also responsible for resources management—often these were rangers without interpretive backgrounds (Mackintosh 1986). Many viewed the subjugation of interpreters under the ranger division as one more step in the power struggle between rangers and interpreters—waged by park superintendents and regional directors who usually ascended the career ladder via the ranger division (Bishop, personal communication, May 28, 2002). Norm Bishop, an interpreter for NPS at the time, remembers the effect this had on interpretation: To their credit, some rangers made pretty good chiefs of visitor services. Others didn't have a

clue, or any interest in anything but raising their GS level and interpretation suffered for it (Bishop, personal communication, May 28, 2002).

Higher-level interpreters fit into the GS-025 classification of ranger—the titles of park naturalist, park historian, and park archeologist were eliminated (Mackintosh 1986). The new system also allowed less qualified people into interpretive positions and saved money by lowering their pay scale (GS level). The attempt was to place less qualified people into the less demanding jobs in interpretation—such as staffing the information desks where most of the questions revolve around the location of the nearest restroom or a certain attraction (Bishop, personal communication, May 28, 2002). The problem was the Techs, as they were called, were equally bored with desk duty and for the sake of variety were given other interpretive duties—such as nature walks—which they were unqualified for (Bishop, personal communication, May 28, 2002). This reflected badly on the interpretive services as a whole and contributed to the belief that anyone can interpret, trained or not.

The GS-025 series was primarily a career ladder for management. Because those who chose to remain interpretive specialists had little room for advancement, there was little incentive to do so. (Mackintosh 1986). To add insult to injury, interpretation was downgraded to division status in 1976 and fell off the Washington organizational chart altogether in 1983, when it was combined with several other functions under Visitor Services Division (Mackintosh 1986). Today, interpretation is one of ten departments included in the Park Operations and Education Division (see Appendix 2).

Unfortunately, twenty years later the same problems were evident in interpretation. The National Park Service's 75th Anniversary Symposium in 1991 in Vail,

Colorado, was the capstone in a yearlong effort to review the management practices of the national park system. It was comprised of individuals from the NPS, other government agencies, the nonprofit sector, universities and community members, and provided recommendations to the director of NPS for solutions to various problems the parks face. The report became known as The Vail Agenda. Strategic Objective 3 of the Agenda critiqued the field of education and interpretation in the park system (NPS 1993):

> Unfortunately, the Service commitment, and ability to commit, to a mission of proactive education and interpretation as a high priority has waxed and waned. Educational outreach is rare and not systemic, depending on the admirable initiatives of individual superintendents, rangers, and interpreters. Interpretation, meanwhile, is seen by the work force as having often been assigned a low-level priority with a 'minimum is enough' standard. In part, this reflects thinning and instability in funding and the channeling of budgets into other mandated responsibilities and functions; in part it reflects ambivalence about encouraging visitation; in part, in reflects a lack of statutory language supporting education and interpretation as core objectives of the park system.

In addition, the committee emphasized that conveying the meaning of the park's resources to the public should be seen as the central reason for the existence of the parks in the first place, and not an extraneous activity (NPS 1993). The Vail Agenda (1993) expressed concern in the delivery of this message:

> Unfortunately, there is widespread concern that the story is going untold; that without the resources, training, research, appropriate facilities, and leadership, the Service is in danger of becoming merely a provider of "drive through" tourism, or perhaps, merely a traffic cop stationed at scenic, interesting, or old places.

Nevertheless, interpretive programs have regularly been sacrificed in the face of competing demands on the system and the Service. As a consequence of staff cuts, interpretive programs often are the first to face the chopping block. In 1975, Bill Everhart stated in his *Report on National Park Service Interpretation* that "a de-emphasis

in interpretive programming does not have the striking effect upon visitors that closing a restaurant, a campground, or a gas station would have" (qtd. in Mackintosh 1986). In essence, interpretive services are seen as nonessential to park functioning. This only enhances drive-thru tourism, providing no opportunity for visitors to stop and learn more. In addition, the message this sends to interpreters is that their programs are not a priority and that any effort or innovation put to that end will not only go unrewarded, but is likely to be cut altogether.

This problem is exacerbated as interpreters are not always current in the knowledge of the fields they interpret, or even informed about park management policies (NPS 1993). One reason for this isolation from research and resource management is the heavy reliance on seasonal employees and volunteers. Over 85% of the those who work in the parks are seasonal employees or volunteers—volunteers alone accounting for nearly 81% (NPS 2001). While the volunteers and seasonals play a huge role in the continual functioning of the parks themselves, this dependence on a short-term, minimally trained and/or unpaid workforce weakens the uniformity—and sometimes the quality—of programs and information presented. Chapter 4 will discuss this further.

To make matters worse, the Service is often unable to recruit or retain qualified individuals who have been academically trained in the fields they interpret. Part of this difficulty lies in the transient nature of working for the Service. Many promotions involve transferring to different parks, sometimes at opposite ends of the country. This may not be an attractive prospect for a highly qualified individual that has a family to consider. It is not surprising, under these circumstances, that those who work for the National Park Service consider it not just an employer, but a family (Everhart 1983).

Summary

Interpretation provides a connection for the visitor to the park resources and has many clear benefits for the park, the visitor, and the nation as a whole. Even in the face of competing demands on the National Park Service, interpretation has enjoyed a long history of striving to bring the inherent meaning of the natural surroundings to the park visitor. The next chapter gives the framework that will move interpretation in the national parks to a level necessitated by the extent and severity of environmental threats not only in the parks, but to the planet itself.

ENVIRONMENTAL INTERPRETATION

Environmental interpretation starts at the park and with the visitors who use it; but unlike traditional interpretation, the basic objective for environmental interpretation is to motivate the public to take environmental reform actions once they leave the park (Brown 1971). These actions include any actions in which a change in behavior occurs that reflects an increased concern for environmental issues. One definition given by William Brown in *Islands of Hope: Parks and Recreation in Environmental Crisis* (1971) explains it as such: Environmental interpretation is that body of communications, devices, and facilities that conveys environmental knowledge, stimulates discourse on environmental problems, and results in environmental reform. A more applicable definition of the goal of environmental interpretation in the parks comes from the Council of Europe (1976): Environmental interpretation is the art of explaining the relationship between man and his environment to the general public in order to increase environmental awareness and to awaken a desire to contribute to environmental conservation.

As the awareness of ecological processes and the degradation to natural resources at the hand of humans came to the public's attention in the 1960's, many in the Service were concerned and felt that the bureau could do more to promote public awareness and action regarding environmental problems (Mackintosh 1986). Assistant Director for Interpretation Bill Everhart, writing in the December 1967 *NPS Interpreters' Newsletter*, declared that interpretation was not doing enough. Simply interpreting park

resources to park visitors was not achieving what interpretation could—and should—be achieving:

> [W]e have had a tendency to interpret a park in terms of its resources. We have not effectively carried out an educational campaign to further the general cause of conservation... Only through an environmental approach to interpretation can an organization like ours, which has both Yosemite and the Statue of Liberty, achieve its purpose of making the park visitor's experience fully significant (qtd. in Mackintosh 1986).

Although the term *environmental interpretation* was being used by people in the 1960's, the concept of using park interpretation for the greater goal of environmental awareness and reform was present in the 1950's. According to Bill Dunmire, "Progressive park naturalists in the 50's would have been perfectly comfortable with the word *ecology* and its implications, long before it became fashionable with the general public" (Mackintosh 1986). In 1953, Director Conrad L. Wirth distributed a memorandum entitled, *Securing Protection and Conservation Objectives Through Interpretation* (Appendix 3). It urged a conservation component in all interpretive programs, keeping in balance with the main theme presented. This general consciousness among interpreters is echoed in one of Tilden's six principles of interpretation in *Interpreting Our Heritage* (1957). The fourth principle states that the *chief* aim of interpretation is not instruction, but provocation [emphasis mine]. According to Webster's Dictionary, *provoke* means "to stir to a desired feeling or action" (Gove 1966). The intended desired feeling or action, in keeping with the Park Service's mission, is to evoke a conservation ethic. So while Tilden's principles have been a guiding force in the theory and practice of interpretation since 1957, the role interpretation in the parks

plays in provocation has historically been relinquished to the related field of environmental education (EE).

The following discusses the history of environmental interpretation in the parks, the link between environmental interpretation and environmental education, and the current theory of the goals for effective environmental interpretation.

History of environmental interpretation in the national parks

Assistant director of interpretation Bill Everhart's call to action in December of 1967 got results. Beginning in 1968, the Service worked with Mario Menesini, director of the Educational Consulting Service, on a project entitled, National Environmental Education Development (NEED) (Mackintosh 1986). The purpose of NEED was to develop environmental awareness and values through the application of five "strands": (1) variety and similarities, (2) patterns, (3) interrelation and interdependence, (4) continuity and change, and (5) adaptation and evolution (Mackintosh 1986). These subjects were supposed to be integrated into all subjects taught in the schools. More importantly, for the purpose of this paper, these strands were also to be included in all park interpretive programs (Mackintosh 1986). For natural resource park interpreters this approach came naturally; however, those interpreting battlefields, birthplaces, and other historic sites had a more difficult time incorporating the environmental strands into historic interpretive programming (Mackintosh 1986). Many historians thought it ridiculous to have to include them at all (Mackintosh 1986).

Among those in disagreement of the new policy was James W. Sheire, a historian for the Eastern Service Center in Washington, D.C. In a letter to the *NPS Interpreters' Newsletter* in 1970, he spoke of his frustration shared by many in his position:

> I would most respectfully ask our environmental enthusiasts to please, please leave the historical areas alone. There is nothing ecological about most of them. They were established to commemorate a significant person, event, or period in American history. They should be interpreted according to the discipline of history, not ecology (qtd. in Mackintosh 1986).

Sheire's request was not heeded as the environmental movement in the nation picked up speed as the first Earth Day approached. Q. Boyd Evison, chief of the new Division of Environmental Projects at Harpers Ferry Center, capitalized on the momentum of the national movement and increased publicity and established an Environmental Education Task Force (Mackintosh 1986). Its mission was to "expedite the establishment of an environmental education program that is integral to operations at *all* levels of the National Park Service—a program which will also assist public and private organizations concerned with the promotion of a national environmental ethic" [emphasis mine] (Evison 1970).

Training initiatives were also being proposed to prepare interpreters to meet the new directives. In 1972 another new unit, the Office of Environmental Interpretation, was added to the Washington headquarters under the supervision of Vernon C. (Tommy) Gilbert, Jr., who coordinated a partnership with George Williams College in Chicago (Mackintosh 1986). The objectives of the partnership were the "administration of a program designed to study effective EE, interpretation, and sociological aspects of park programs in cooperation with the College [sic] and participation in a related program of

undergraduate and graduate studies" (Mackintosh 1986). Although this initiative sounds rooted in promoting environmental interpretation, it actually resulted from NPS Director Hartzog's interest in bringing the Service's EE programs to urban areas (Mackintosh 1986). Whatever its intention, the program lasted only two years and according to Steven H. Lewis, trainer form the Mather Training Center who headed up the program, it did not prove to be a success (Mackintosh 1986). Although interpretive supervisors as well as trainees were involved in the program, there was no long-term follow up to see whether or not the graduates were applying their knowledge in the field (Mackintosh 1986).

Meanwhile, environmental interpretation for park visitors "had matured to a less self-conscious function" (Mackintosh 1986). This could be read as environmental interpretation provided to the visitors lacked a system-wide structure or goals and was, more or less, left up to individual interpreters. Bill Dunmire, Chief of Interpretation, viewed environmental interpretation's greatest contribution as "the injection of a new methodology—that of involving visitors in our interpretive events, not as mere spectators but as participants" (qtd. in Mackintosh 1986). He was referring to "immersion programs" being offered at various parks, including a float trip in Yosemite and a "slough slog" at Everglades National Park, that were contributing to environmental awareness (Mackintosh 1986). Dunmire goes on to say, "The new breed of interpreters are finding that the more visitors will participate by using all their senses, by making their own discoveries and by getting into the thick of any given environment, the more they will carry away from the experience" (qtd. in Mackintosh 1986). It is unclear from this ecotourism style of interpretation what was intended for the visitor to carry away from

the experience beyond just awareness, and what was actually being carried away beyond the thrill of an adventure.

As late as 1979, Assistant Secretary of the Interior Robert L. Herbst declared EE as an essential management function for every park (Mackintosh 1986). However, a back-to-basics mentality, driven by financial constraints and the belief that the Service was not up to par in its more "*traditional*" responsibilities, would put EE and other "*special*" programs at risk [emphasis mine](Mackintosh 1986). In 1982, Director Russell E. Dickenson approved and circulated a paper authored by the new assistant secretary of the Interior, Vernon (Dave) Dame, that disapproved of programs that were not directly based on park resources or that extended too far beyond the resources of the park (Mackintosh 1986). "These can be exciting programs, but our job is to interpret the resources and themes of our parks, not to function as subject matter educators or as spokespeople for special causes," Dame wrote (Mackintosh 1986). You will recall from the opening paragraph of this chapter that fifteen years earlier Everhart, chief of interpretation, complained that the Service was doing an inadequate job if all it was doing was interpreting park resources. No longer was this viewed as inadequate but, rather, it was perceived as in keeping with the mission of the Service.

The Park Service was not the only arena where a shift in environmental education took place. With the election of Regan in 1980, many environmental education programs that were launched in the 1970's dwindled or died altogether as the nation's priorities seemed to change.

Twenty years have passed and the pendulum has swung back to the 1970's and environmental education is experiencing renewed support. The following section

discusses the relationship between environmental education and environmental interpretation and the reasons it is important to a draw distinction between the two.

Environmental education and environmental interpretation

Where environmental education (EE) ends and environmental interpretation begins is hotly debated by practitioners and academics alike (Cardea, 1999; Knapp 1997; Rideout Civitarese, et. al 1997). It is, therefore, important to discuss what exactly EE is and how it differs from the practice of environmental interpretation, and what ramifications this separation holds for the parks.

What is environmental education?

The first issue of the *Journal of Environmental Education* was published in 1969 and contained an article entitled, "The concept of environmental education," which gave this definition: Environmental education should work to develop a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve these problems, and motivated to work toward their solution (Stapp et al. 1969). Amendments have been made over the years, but the essence of the proposed goals for EE have remained unchanged.

The method to achieve the goals of EE was outlined during the Tbilisi Intergovernmental Conference on Environmental Education in 1977 in what is known as the Tbilisi Doctrine. This was a UNESCO-sponsored conference of environmental educators representing 66 UNESCO-member states, plus numerous NGO's and other agencies, and is considered a landmark international gathering and doctrine (Palmer

1998). The critical objectives that resulted from the conference are as follows (Tbilisi 1978):

- **Awareness**: to help social groups and individuals acquire an awareness of and sensitivity to the total environment and its allied problems (and/or issues).

- **Sensitivity**: to help social groups and individuals gain a variety of experiences in, and acquire a basic understanding of, the environment and its associated problems (and/or issues).

- **Attitudes**: to help social groups and individuals acquire a set of values and feelings of concern for the environment and motivation for actively participating in environmental improvement and protection.

- **Skills**: to help social groups and individuals acquire skills for identifying and solving environmental problems (and/or issues).

- **Participation**: to provide social groups and individuals with an opportunity to be actively involved at all levels in working toward resolution of environmental problems (and/or issues).

The difference between EE and environmental interpretation

It seems, by definition, EE and environmental interpretation have the same goals: to create an ecologically literate, caring and acting individual—and eventually, society. Indeed their general goals are the same, but how they reach those goals and for whom those goals are intended, is where EE and environmental interpretation diverge.

EE is typically divided into two sectors—formal and informal. Formal EE takes place in the school setting, while informal EE occurs outside the schools in such places as nature centers, zoos, aquariums and parks. A comparison of formal and informal settings is outlined in Table 3.

Table 3: A Comparision of Formal and Informal Learning Settings

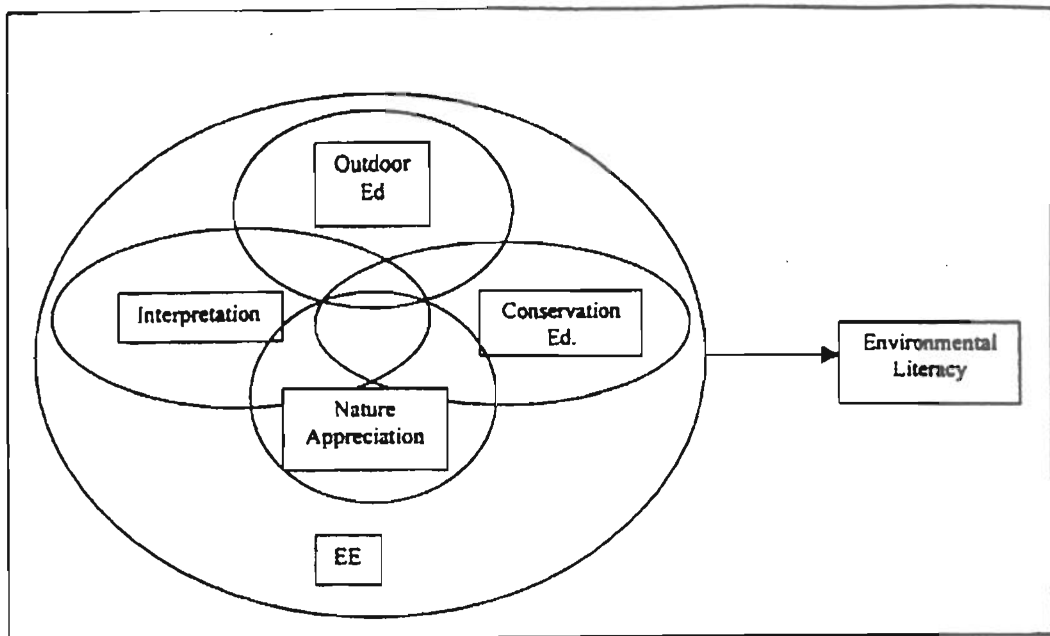
Formal	Informal
1. Takes place in the classroom	Takes place in museums,zoos, aquaria businesses,and the "field"
2. Learning conditions are prescribed	Learning is through free choice
3. Motivation is extrinsic	Motivation is internal
4. The content is prescribed	Content is variable and changing
5. Content is organized and sequenced	Content is frequently not organized or sequential
6. Attendance is mandatory	Attendance is voluntary
7. Time is standardized	Each learner decides how much time is spent
8. All students experience all content	Many kinds of objects, displays, and content are experienced
9. Learners are of similar ages	Learners are of all ages
10. Learners have similar backgrounds	Learners have diverse backgrounds
11. Communications and language are generally formal and constrained	Communications and languages are more than likely casual and diverse

Source: Adapted from Koran, Longino, and Shafer (1983)

National and global efforts in EE are usually focused on formal EE, resulting in a predominantly curriculum-based, incremental, youth-oriented program rooted in the school system (Cardea 1999).

However, in order to include the non-formal sector and recognize their role in EE, EE has often been described as an overarching umbrella—encompassing fields such as outdoor education, conservation education, nature appreciation, and interpretation. This is graphically illustrated in Figure 4.

Figure 4: EE Subset Model



Source: Cardea 1999

This representation of EE is called the subset model (Cardea 1999). Cardea (1999) outlines two problems with this model. The first concerns the holistic approach to education that EE advocates. Tilden (1957) explains the importance of holistic teaching in interpretation in his fifth principle: Interpretation should aim to present a whole rather than a part, and must address itself to the whole man rather than any phase. It seems counterproductive then to compartmentalize EE to achieve its holistic goal (Cardea 1999). The subset model implies that EE is the sum of its parts, rather than there are various fields that contribute to the work of the unique field of EE.

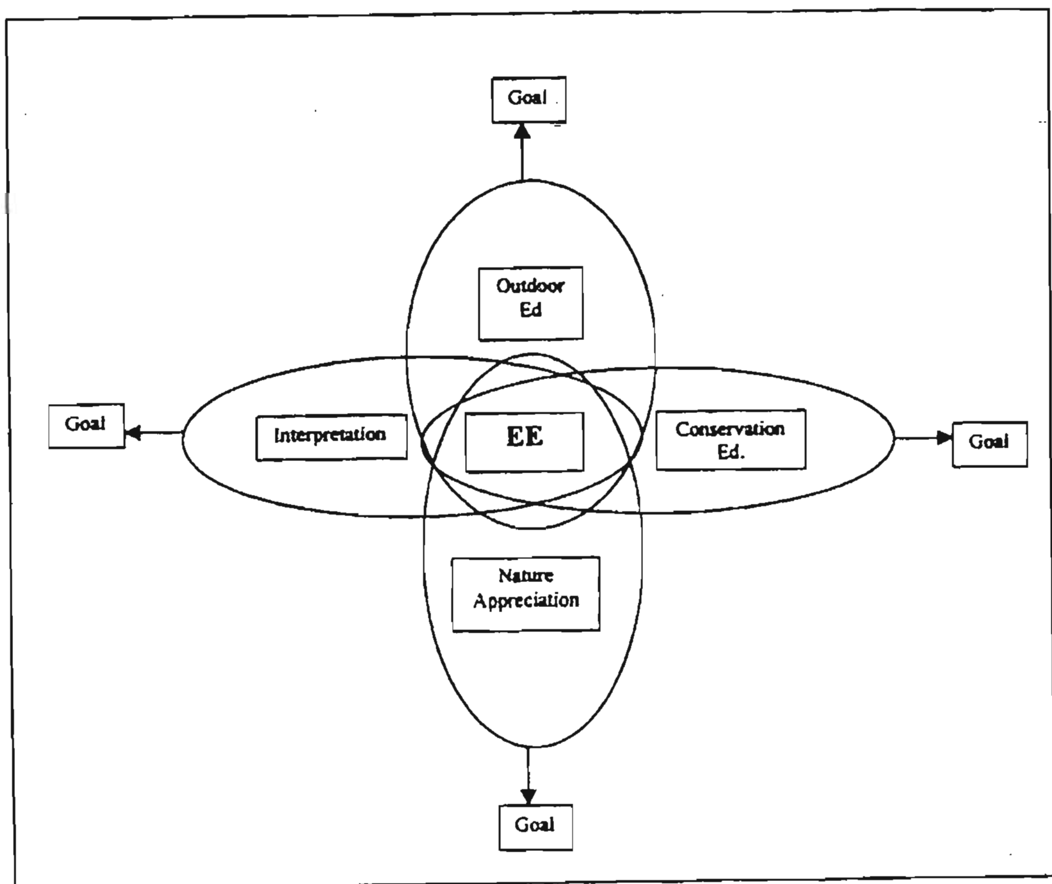
The second critique of the model is the end goal of each subset is not identical to the end goal of EE. As stated earlier, EE strives to attain an environmentally literate citizenry. That is its final goal. While each subset plays a role it achieving environmental literacy, their individual end goals differ. For example, outdoor education/therapy is focused on attaining self-awareness/healing in its participants. An appreciation and

awareness of the environment is usually a by-product of this field, but not its sole purpose.

I believe this umbrella model has resulted in many programs claiming to be EE when they are not. This frequent problem has caused the term *environmental education* to be thrown around and loosely applied resulting in over-use, misuse and, ultimately, contributing to an identity problem in the field of EE.

A possible solution to this is achieved by use of the alternative model—the intersection set model (Figure 5) (Cardea 1999).

Figure 5: EE Intersection Model



Source: Cardea 1999

The relationship this model implies is that EE is a unique entity, with an agenda and goals separate from that of the other fields involved in education and the environment (Cardea 1999). The same can be said for each of the fields. This model acknowledges the shared goals of all the fields—especially relating to EE—while maintaining the individuality of each field. Recognizing the shared goals each has with EE, but maintaining the status of a separate field helps to define individual goals in addition to shared goals for each subset.

Again, according to each definition, it does appear that EE and environmental interpretation have the same end goals. Both advocate the desire to achieve an environmentally literate society that is capable of understanding the environmental problems we face, accepting our role in those problems, and having the desire and motivation to act to achieve solutions. Are the terms *environmental education* and *environmental interpretation* then, synonymous? Not quite. The differences have to do with the typical setting each is practiced in, and the general target audience of each.

As was shown in Table 3 on page 56, formal and informal learning settings vary a great deal. As stated earlier, EE is typically a formal, curriculum based, youth-oriented program geared heavily to K-12 learners. Although there are many nonformal settings in which EE programs are offered to youth groups (such as Girl and Boy Scout troops and through religious youth programs), the predominant professional practice of EE is aimed at formal K-12 learners and teachers.

Environmental interpretation, however, resides entirely in the non-formal learning domain. No assumptions can be made about prior knowledge or preparation the diverse groups of visitors have had before they enter the park. It is uncertain how long visitors

will stay, what types of interpretation they will choose to partake in, or what their motivations are for doing so. A crucial difference between formal and informal learning settings is whether the audience is there by choice or not. The formal EE setting usually has a captive audience; whereas, environmental interpretation is presented to a non-captive audience. In his book, *Environmental Interpretation* (1997), Sam Ham illustrates this point with the following table:

Table 4: A Comparision of Captive and Non-captive Audiences

Captive	Non-captive
1. Involuntary audience	Voluntary audience
2. Time commitment is fixed	Time commitment is not fixed
3. External rewards are important	External rewards are not important
4. Must pay attention	Do not have to pay attention
5. Accept formal academic approach	Will not accept formal academic approach
6. Will make effort to pay attention even if bored	Will switch attention if bored
7. Motivation examples	Motivation examples
Grades	Interest
Diplomas	Fun
Certificates	Entertainment
Licenses	Self-enrichment
Jobs	Self-improvement
Money	A better life
Advancement	Passing time (nothing better to do)
Success	
8. Typical setting	Typical setting
Classroom	Parks, museums, reserves, etc
Job training	Extension programs
Professional seminar	TV
Courses required for licensing	Movies
	Radio
	Reading
	Computer

Source: Ham 1997

All these factors contribute to an experience differing from that of the formal learning setting. Consequently, the needs and problems of those who practice environmental interpretation differ from those encountered by formal EE educators.

Is this issue just a case of semantics? Some have argued it is, but many more contend that it is important to more fully distinguish the identities and practices of both fields. When there is confusion by those who practice environmental interpretation and

EE about the role and identity of their discipline, defining objectives, fostering optimal practices, and evaluating outcomes are compromised. The following section outlines the current objectives for environmental interpretation.

Current theory regarding the goals of environmental interpretation

An article in *The Journal of Environmental Education* in 1973 stated, "One of the major difficulties in evaluating the effectiveness of interpretation is the frequent absence of clearly articulated objectives" (Putney & Wagner 1973). This remained the case for nearly 25 years. In the late 1990's, however, a new group of theorists attempted to clarify and describe goals for the field of environmental interpretation.

In 1997, Douglas Knapp and Trudi Volk published an article entitled, "The identification of empirically defined goals for program development in environmental interpretation." Unlike Tilden's principles, which were the result of one man's experience and insight, Knapp and Trudi's work was derived from consultation with a panel of experts in the interpretive field who analyzed the goals outlined by the authors and validated them. The goals they developed will be my guide as I evaluate the current policies and practices of environmental interpretation in the national parks. Following is a discussion of the study by Knapp and Volk and their findings.

Determining goals for environmental interpretation

In order to determine the past and present identity of interpretation, Knapp and Volk conducted an extensive literature review that resulted in 19 documents that contained various principles, goals, and objectives for interpretation (1997). Further

analysis produced 101 key interpretive directives that Knapp and Volk sorted into 15 categories (Table 5).

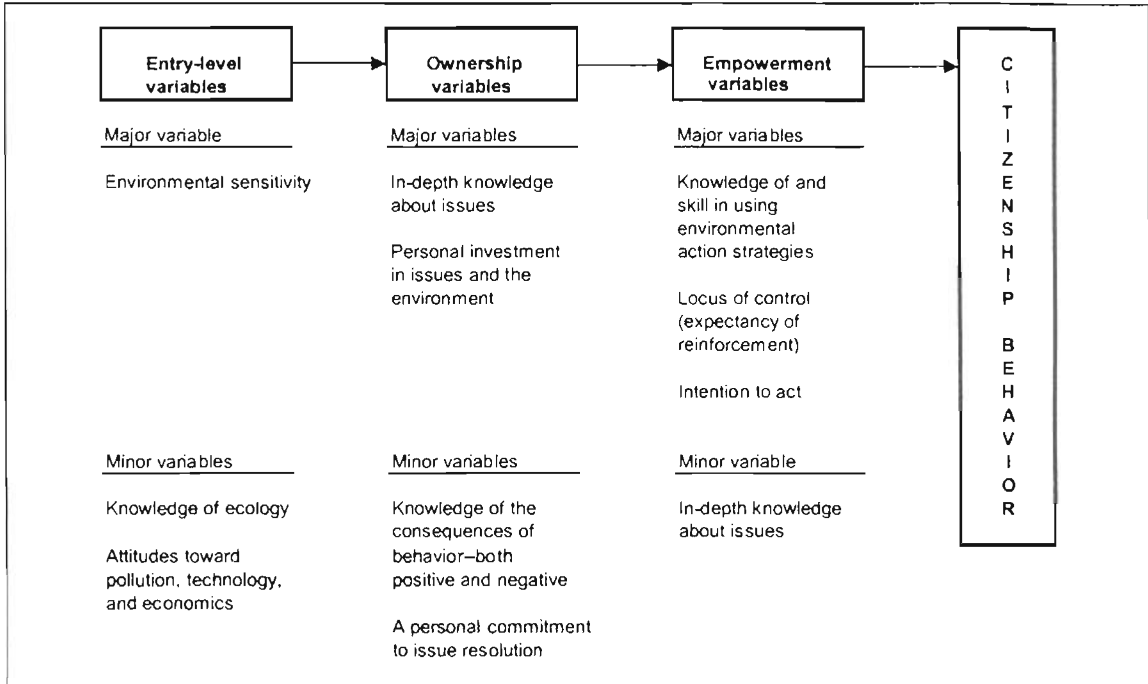
Table 5: Categories of Interpretation Principles, Goals and Objectives

Categories of key interpretive objectives	No. of citations in literature search
1) Behavior change	22
2) Appreciation of site	9
3) Understanding of site	8
4) Awareness of site politics	8
5) Information	8
6) Environmental awareness	7
7) Enjoyment	7
8) Awareness of site	4
9) Stimulate/inspire	4
10) Visitor orientation	4
11) Fulfill management goals	3
12) Recreation	2
13) Visitor feedback	2
14) Environmental education	2
14) Miscellaneous	11
Total	101

Source: Knapp & Volk 1997

The importance of goals related to behavior change in the field of interpretation is illustrated in the overwhelming majority of listings. The behavior change goals ranged from on-site behaviors (preserving park resources) to off-site behaviors (promoting preservation and/or conservation) (Knapp & Volk 1997). As a framework to develop environmental interpretation goals related to behavior change, Knapp and Volk used the Hungerford and Volk (1990) model of variables involved in responsible environmental behavior (Figure 6).

Figure 6: Behavior Flow Chart



Source: Hungerford & Volk 1990

The citizenship behavior represented in the model can be closely linked with behavior change elicited from the interpretive field (Knapp & Volk 1997). This relationship is illustrated in Table 6.

Table 6: Categories of interpretive objectives related to behavior change variables

Entry-level variables	Ownership variables	Empowerment variables
Appreciation of site	Environmental awareness	Behavior change
Understanding of site		
Awareness of site politics		
Information		
Enjoyment		
Awareness of site		
Stimulate/inspire		
Visitor orientation		

Source: Knapp & Volk 1997

Five of the categories of directives (environmental education, visitor feedback, recreation, fulfill management goals, and misc.) could not be classified into the behavior-change model (Knapp & Volk 1997). These five categories represent a total of 20 of the 101 key objectives analyzed (20%). Eight of the ten categories of key interpretive directives related to entry-level variables. These eight categories represented 52 of the key interpretive objectives (51%). Thus, the majority of past and current objectives in interpretation reflect basic awareness aspects (Knapp & Volk 1997). Twenty-two key interpretive objectives contained empowerment variables (22%). The smallest representation of interpretive directives was associated with ownership variables, including only 7% of the total key directives (Knapp & Volk 1997). As is illustrated in Table 6, environmental awareness was the only category of interpretive directives that included the ownership variable. Despite the small amount of key interpretive objectives related to this variable, the strong relationship between ownership and behavior change deems inclusion of this variable in the framework of program development goals for environmental interpretation (Knapp & Volk 1997).

Noticing that the majority of past and present variables in interpretation reflect only basic awareness of information and virtually no variables relate to behavior change, Knapp and Volk aimed to fill this gap by developing goals of environmental interpretation that would result in visitors becoming deeply aware of and active in environmental issues.

Goals for Program Development in Environmental Interpretation

Because the goal of environmental interpretation can be considered desired environmental behavior, Knapp and Volk thought it necessary to develop a framework of goals for environmental interpretation that has similarities to the behavior change model (Knapp & Volk 1997). The synthesis of interpretive directives within the Hungerford and Volk (1990) environmental behavior model may ultimately cause changes in the knowledge, attitudes, and/or behavior in a visitor to a natural resource park (Knapp & Volk 1997). The following are the Goals for Program Development in Environmental Interpretation (Knapp & Volk 1997):

LEVEL 1—Entry-level goals

Component A: This level seeks to provide visitors with sufficient resource site information to permit them to be knowledgeable about aspects of the resource site.

Goals at this level are formulated to provide opportunities for visitors to become cognitively aware of ecology/natural history of resource site, cultural history of resource site, and other pertinent characteristics (i.e. layout of park site, visitor amenities, etc.).

Component B: This level seeks to provide visitors with experiences that promote an understanding/comprehension of resource site information.

Goals at this level are formulated to provide opportunities for visitors to conceptualize the ecological relationships between the resource site and its immediate environment, the cultural relationships between the resource site and the immediate community, and other pertinent topics related to the resource site (i.e. economic relationship of resource site to region).

Component C: This level seeks to provide visitors with sufficient knowledge to permit them to become aware of the resource management policies and goals of the resource site.

Goals at this level would offer experiences in interpretive programs that help visitors gain information pertaining to current resource site management policies and make visitors aware of the effect these management policies have on the resource site.

Component D: This level seeks to provide visitors with experiences that promote an empathetic perspective toward the resource site.

Goals at this level would offer experiences to resource site visitors that foster an appreciation for the resource site and enhance the enjoyment of the resource site.

LEVEL 2—Ownership goals

Component A: This level seeks to develop a cognitive awareness of how visitors and their collective actions may influence the quality of the natural resource site. It further seeks to develop an awareness of how these same individuals may influence the quality of other environments.

Goals at this level would offer experiences in interpretive programs that would conceptualize how visitor activities influence the resource site and its environment and how environmental problems and issues can occur through these interactions.

Component B: This level provides for the knowledge necessary to permit visitors to investigate and evaluate natural resource site issues.

Goals at this level would offer experiences in interpretive programs that develop the knowledge needed to identify resource site issues, the ability to analyze these resource site issues with respect to their ecological and cultural implications, the skills needed to investigate and evaluate resource site issues, and the ability to use this knowledge and these skills to identify, investigate, and evaluate other environmental issues.

LEVEL 3—Empowerment goals

This level seeks to develop skills necessary for visitors to take positive/responsible environmental actions in regard to resource site issues.

Goals at this level would offer experiences in interpretive programs that develop the ability to identify and evaluate solutions to resource site issues, the ability to evaluate these solutions in regard to their cultural and environmental implications, the ability to differentiate the types and levels of actions possible in regard to solving resource site issues, the ability to apply these action skills to resource site issues, the ability to use this knowledge to apply these action skills to other environmental issues.

These goals reflect the inclusion of 80% of the past and current interpretive directives. According to Knapp and Volk (1997), the most powerful use of their model for program development in environmental interpretation is in offering experiences that represent all three levels in a sequential hierarchical order. They caution that use of the model does not, of course, guarantee positive environmental behavior change, but provides opportunities for stimulating this attitude or change in visitors (Knapp & Volk 1997). Knapp and Volk state that their end goal for the set of goals is to change behavior toward the environment—it is not their sole objective for interpretation, but a predominant one (Knapp & Volk 1997). Furthermore, it is an outcome that must be guided by established learning theory and not by "personal conjecture" (Knapp & Volk 1997). Without goals, objectives, or both which are based on meaningful theory, evaluation of the field is hindered (Knapp & Volk 1997).

Validation of goals for environmental interpretation

Knapp & Volk (1997) submitted their proposed goals to a panel of experts in the field of interpretation (see Appendix 4 for a list of experts). Representatives from the private sector as well as government agencies that practice interpretation, including the U.S. Forest Service and the National Park Service, were included in the panel.
A total of 18 experts were chosen to evaluate the goals using a subjective-objective written format that included a yes/no response as well as space for comments (see Appendix 5 for evaluation instrument). Each expert was asked to evaluate each goal statement in terms of its importance as an outcome for an environmental interpretive program, and its effect on changing resource-site visitors' environmental knowledge,

attitude, and/or behavior (Knapp & Volk 1997). Of the eighteen evaluations sent out, thirteen were returned completed or partially completed (72%) (Knapp & Volk 1997).

Following the evaluation, Knapp and Volk (1997) integrated the input of the experts into the existing goals to create the validated Goals for Program Development in Environmental Interpretation. The majority of experts believed that the program goals represented important outcomes for environmental interpretive programs (Knapp & Volk 1997). The response of each goal received a 62%-100% approval rating, and no goal received less than a 2 to 1 approval majority of the respondents (Knapp & Volk 1997).

Although there was strong support for the framework of goals developed by Knapp and Volk, it is important to look at the approval patterns that emerged. All of the outcomes in Level 1—Entry-level goals received overwhelming support (Knapp & Volk 1997). This is not surprising in that the goals contained in this level have historically been the objectives of interpretation—informing visitors about topics such as ecology, natural history, cultural history and site information, and also promoting feelings of empathy toward the park's resources. The first three goal statements contained in Level 2—Ownership goals also received high approval ratings. These statements concentrate on awareness of issues related to the parks' resources and related environmental problems. However, the remaining goals in Level 2 focus on environmental issue investigation and evaluation and received less approval rating. The panelists who did not give this goal a high rating felt that interpreters lack the time to investigate resource site issues and would, therefore, be ill equipped to pass on that awareness (Knapp & Volk 1997). The approval of the goals in Level 3—focusing on empowerment—were lower than entry-level goals, but were consistent with the approval ratio of the issue

investigation goals (Knapp & Volk 1997). The dissenting three or four experts stated that action outcomes would be difficult to achieve, given the time constraints of an interpretive program; and concern was also expressed over the political nature of promoting action in park visitors (Knapp & Volk 1997). The only other consistent comments from the experts dealt with the particular interpretive medium that would be used to achieve the goals—the type of program would influence certain outcomes, the actual potential of the site for each outcome, and the type of participants would influence the outcome (Knapp & Volk 1997).

Summary

Environmental interpretation moves beyond traditional interpretation in that its goal is to motivate the visiting public to take positive environmental action on pressing issues outside the park boundary. Although related to the field of environmental education, environmental interpretation typically encounters a different audience composition and occurs in a different learning environment and, therefore, the goals for environmental interpretation must reflect that crucial disparity.

The objective of Knapp & Volk (1997) was to develop a set of goals that those in the field of environmental interpretation could use in an attempt to change park visitor behavior. The next chapter will use Knapp and Volk's (1997) *Goals for Program Development in Environmental Interpretation* as a rubric to determine if the goals outlined in policy by the National Park Service and the actual practice of environmental interpretation is consistent with the current theory of effective environmental interpretation for visitor behavior change.

ANALYSIS AND RECOMMENDATIONS

As discussed previously in the chapter on methods, my analysis involved the examination of two sources of information—current Park Service documents that dictate the practice of interpretation in the parks and responses to questionnaires administered by mail to 12 Park Service professionals who work in interpretation at the park level. The following is my analysis of both the written documentation and the actual practice of interpretation in the National Park Service. In both situations, I was looking for evidence of environmental interpretation as it has been described in the last chapter to see whether or not environmental interpretation in the national parks aligned with validated goals for effective environmental interpretation.

Analysis of current National Park Service documents

To evaluate the current priority that the NPS has given to interpretation in general, and environmental interpretation specifically, I analyzed the current documents that either included overall management objectives for the Service or those that list objectives for interpretation. To gain context as I considered comments from practitioners of interpretation in the parks, I was interested in what was being said about interpretation in the documents that direct the actions of all those who work in the parks.

The system of documentation that dictates policy and procedure for the parks themselves is called the Directives System and is comprised of three levels: Level 1—*Management Policies*; Level 2—Director's Orders; and Level 3—consists of reference manuals, handbooks and other instructional materials. For my analysis I chose the *2001 Management Policies*, the most current Director's Orders pertaining to interpretation, and

the 2001 report from the National Park System Advisory Board. The following is a discussion of the results I found in reviewing these documents.

2001 Management Policies

The *Management Policies* guide the administration of the park system and are a result of the knowledge acquired in 84 years of park stewardship by the Service (NPS 2001(b)). The document is 132 pages in length and replaces the 1988 edition. Hundreds of individuals in the Service contributed in creating the policy guidelines, and the public and other organizations that have an interest in the parks have also had a chance to review and comment on the policies. Adherence to policy is mandatory unless otherwise stated from the secretary of the interior, the assistant secretary of the interior, or the director of the National Park Service. Robert Stanton, the director of the National Park Service in December 2000 when *Management Policies* was completed, stated the importance of the guidelines (NPS 2001(b)):

> One thing we must all agree on is that we can best accomplish our mission when we speak with one voice. That is how these *Management Policies* help us—they give us the tools to be consistent in our approach to decision making [sic] and problem solving. ... In this new millennium, let us speak with one voice in support of park resources and values, and work together on the critical matters and questions that come before us.

Section 6 of Chapter 1 in *Management Policies* is titled "Environmental Leadership" and begins by stating that the Park Service has an "obligation as well as a unique opportunity to demonstrate leadership in environmental stewardship" (NPS 2001(b)). It continues by saying, "Touching so many lives, the Service's management of the parks must awaken the potential of each individual to play a proactive role in

protecting the environment" (NPS 2001(b)). There is no further instruction included as to *how* to awaken this proactive role in visitors, but the section does include a statement saying that environmental leadership "will be demonstrated in all aspects of NPS activities" (NPS 2001(ab)). For more direction in which areas of park management this will occur, a list is provided that includes interpretation and education as one area for demonstrating environmental leadership. Yet, even though the language is strong in promoting environmental leadership and interpretation is linked to that end, the only reference to other chapters in *Management Policies*—provided at the end of the section—is not to Chapter 7 on interpretation, but rather to Chapter 9 on facility planning and design. The definition of environmental leadership provided in the glossary of the document is, "advocating on a personal and organizational level best management practices and the principals of sustainability, and making decisions that demonstrate a commitment to those practices and principals" (NPS 2001(b)). While park facilities can demonstrate a commitment to the practice of sustainability through their design, interpretation can demonstrate a verbal and structural commitment to the principals of sustainability by providing education to the visitors. The lack of reference to the chapter on interpretation seems to indicate that the Park Service does not view interpretation as playing a key role in demonstrating its environmental leadership. Yet, on its Environmental Leadership website that displays information about the "Greening of the National Park Service," it shows a figure that includes interpretation and education in the environmental leadership matrix (see Figure 7).

Figure 7: Environmental Leadership and Interpretation

Source: NPS 2001 (c)

Including interpretation in one place but not the other is not only confusing—and seemingly contradictory—but, worse, by not including it in the management practices there are no directives on how to become environmental leaders. In addition, the inclusion of only one chapter to refer to for ways to adopt environmental leadership practices, even though it mandates that all Park Service activities should include such practices, shows a narrowness of scope and disparity between objective and method.

Section 4 of Chapter 3 shows the same inconsistency between desired outcome and means for achieving that outcome. The chapter discusses land protection issues in the national parks and Section 4 is titled, "Addressing Threats from External Sources." The final paragraph of the section focuses on damage to park resources from sources far beyond the park boundary—such as air and water pollution—and the correct action to take in such situations. The procedure it mandates is to identify and address these concerns in the general management plan of each park and other planning documents, so the "result will be enhanced public awareness of the far-reaching impacts of these threats, and an increased likelihood of remedial actions by those who are responsible" (NPS

one Director's Order and one reference manual, no reference was made to interpretation. To not include interpretation in a public awareness effort is, in my opinion, a severe oversight.

Chapter 7 of *Management Policies* is entitled, "Interpretation and Education." It is five pages long and the second shortest chapter—the longest is twenty pages in length. The opening paragraph starts with the purpose of National Park Service interpretation and includes the goal of "foster[ing] the development of a personal stewardship ethic" (NPS 2001(b)). It is not specified whether this personal stewardship ethic is supposed to take place both inside and outside the park boundary, or only inside the park boundary. This is an important point because clarity of mission breeds clarity of method. It does state the goal for interpretative programming in the Service in order to foster this stewardship ethic: The Service's programs will do this by forging a connection between park resources, visitors, the community, and park management (NPS 2001(b)). This, however, leaves out a crucial factor in stewardship—the how. How can the visitors express a stewardship ethic? Once a connection is made between the visitor and the resource, the visitor is not given any tools to act on the newfound ethic. This is problematic for the parks if they want the results of stewardship, and for the visitors if they are to feel as if they can contribute in a meaningful way.

The next paragraph in Chapter 7—Interpretation and Education states that the "Service will maintain the organizational capability to deliver high-quality interpretive services" through "a well-trained staff...and continual reevaluation" (NPS 2001(b)). Again the desired results are mentioned but not the method to achieve those results.

The first section in Chapter 7 details the mandated content of interpretative programs: Each park's interpretive and educational program will be grounded in (1) park resources, (2) themes related to the park's legislative history and significance, and (3) park and Service-wide mission goals (NPS 2001(b)). It goes on to say that in keeping "within the context of the park's tangible resources and the values they represent," interpretation "will encourage dialogue" but accept that visitors will have their own points of view and will come to their own conclusions (NPS 2001(b)). The insistence that interpretation speaks only of park resources implies that parks are unique entities outside the harm of the greater ecosystem. This informs people of the current environmental issues the park may be facing and how the Service is tacking those problems; but, by letting visitors come to their own conclusions, the larger questions of how these issues became problems in the park and how to solve them at their source goes unanswered. It is a passive approach to environmental problem solving, instead of an active approach that adopts a strategy to prevent future problems.

One possible loophole in addressing the cause of controversial environmental issues in parks comes in Section 5.5 as it states, "Acknowledging multiple points of view does not require interpretive and educational programs to provide equal time, or to disregard the weight of scientific or historical evidence"(NPS 2001(b)). This should allow interpreters to feel comfortable discussing issues in which scientific evidence supports human-related causes.

Although the term *environmental interpretation* is never used throughout the document, Section 5.3 specifically discusses resource issue interpretation. This section has to do with contentious decisions of park mangers as they make choices about on-site

resources, and the effect of those decisions on other agencies or communities. It does not deal with conservation issues as a whole or the current problems the nation's natural resources face. Interestingly, it does include a sentence at the end of the section in favor of public education to reduce resource threats (NPS 2001(b)):

> The education of residents and officials of gateway and neighboring communities, the region, and the state(s) surrounding a park about resource issues and broad initiatives is often the most effective means of eliminating resource threats and gaining support for the Service's policy choices.

This inclusion is inconsistent with the original statement about environmental leadership and with the section on external threats to park resources. Although it states here that public education is the most effective means for achieving the desired outcome of resource protection, public education is left out entirely in the section on environmental leadership and the section on external threats to park resources—both of which involve resource protection. It is also interesting to note that the chapter on interpretation contains no reference to the introduction section on environmental leadership.

As stated in Chapter 7, one goal of interpretation is to promote a stewardship ethic towards the resource (i.e. a desire to protect the resource), yet when a specific Park Service objective declares its end result to be resource protection, interpretation is not included in the method for achieving that outcome. I believe this inconsistency results in a mixed message from the administration to the practitioners as to role interpretation should play in achieving environmental stewardship among visitors..

Director's Orders

A Director's Order is not as straightforward as it sounds. A draft order is usually crafted by a specific program office having particular expertise on the subject matter included in the order, and then is distributed by the NPS Office of Policy for a 60-day Service-wide review (NPS 2001(d)). Comments are then sent back to the program office in which revisions are made and, if necessary, distributed for a 14-day review (NPS 2001(d)). After the revision process is complete, the Director's Order finally reaches the director for approval. The purpose of a Director's Order is to provide operational policies and procedures to supplement *Management Policies* and can include a wide range of topics (NPS 2001(d)).

Directors' Order #6 pertains to interpretation. I was unable to obtain this order because, although it is apparently available within the Service, according to the website it has not yet been completed. Its 60-day review period closed May 7, 2001, yet there is no further update as to whether it has been approved or sent back for revision. Clearly it was approved, but in the time that it was being reviewed, interpreters were using policy that was over a decade old. In the absence of Director's Orders, employees are instructed to adhere to the old system of Guidelines until the new Director's Order is issued. In the case of interpretation, the Guideline is called "Interpretation and Visitor Services" and was last issued in December 1986. So, while the process of transferring the old system to the new system was to have been completed in December 2000, interpreters were relying on guidelines that were fifteen years old. By continuing to use outdated information in policy, the Park Service disregarded the knowledge and insights that were gained in the field of interpretation through research efforts over the last fifteen years. Unfortunately, I

am unable to analyze the specific document—Director's Order #6—for policy direction on environmental interpretation.

National Park System Advisory Board report, 2001

The National Park Service Advisory Board published a report in July 2001 entitled, *Rethinking the National Parks for the 21st Century*. This report is in response to a request by the director in December of 1999 to "develop a report that should focus broadly on the purposes and prospects for the National Park System for the next 25 years" (NPS 2001(e)). The Board is a congressionally chartered body of twelve citizens appointed by the secretary of the interior (NPS 2001(e)). The concept of the Board was established in 1935 under the Historic Sites Act and its role is to provide advice on matters relating to operations in the parks themselves, and to management in the National Park Service (NPS 2001(e)). The report is 16 pages in length and is divided into ten sections, including an introduction and conclusion.

The introduction of the report contains a small paragraph that, in essence, is the driving force behind the recommendations that follow in the body of the report. It states (NPS 2001(e)):

> The public looks upon national parks as a metaphor for America itself. But there is another image emerging here, a picture of the National Park Service as a sleeping giant-beloved and respected, yes; but perhaps too cautious, too resistant to change, too reluctant to engage the challenges that must be addressed in the 21st century.

This statement of purpose or rather, a change in purpose, is important to note because it opens the way for a break from the status quo. The National Park Service is rooted in tradition, and that is not to say that all the traditions are outdated or need to change; but it

is saying that the Park Service needs to take a new direction in the way it operates and prioritizes if it is to meet the needs of an evolving nation and planet.

It goes on to say that the nation and parks are faced with human-induced environmental degradation issues and that respected voices should be "confronting these issues—voices that can educate and inspire..." and the National Park Service should be one of these voices (NPS 2001(e)). The first recommendation addresses the education of the public on these issues as it states that the National Park Service should "[e]mbrace its mission, as educator, to become a more significant part of America's educational system by providing formal and informal programs for students and learners of all ages inside and outside park boundaries" (NPS 2001(e)). It continues by saying, "Education should become a primary mission of the National Park Service. Budgets, policies, and organizational structure should reflect this commitment" (NPS 2001(e)). This recommendation speaks to the current restraints of environmental interpretation in the parks as discussed in the last chapter. Budget, policy and the structure of the Park Service should reflect its commitment to interpretation as a means to achieve its mission as educator and, in so doing, could address the environmental degradation issues and their causes that the Board recommends.

The common thread of increasing the Park Service's role in public education is weaved throughout the document. The following are excerpts that speak to the frequently addressed goal of education by the Board (NPS 2001(e)):

> Parks can help us understand humanity's relationship to the natural world...[and] remind us that we are part of a large and infinitely complex living system (middle of *Section I: Building Pathways to Learning)*

> [Learning] is a life-long undertaking, our formal education marking only a beginning point. Parks offer citizens of all ages opportunities strengthen their connections to the environment (last sentence in *Section I*).

> The service should present human and environmental history as seamlessly connected. How one shaped the other is the story of America; they are indivisible (bullet header in *Section II: Bringing America's History Alive*).

> Both within and beyond park boundaries, the Service should play a larger role in alerting the public to the conditions of our watersheds and along our coasts (buried in the middle of *Section III: Protecting Nature, Protecting Ourselves*).

> Marine protected areas, like upland parks, will only be saved in the long run by the enlightened support of the public (last paragraph in *Section III*).

> The Park Service should think beyond the vision of maintaining sustainable parks to encourage sustainable communities and ecosystems with the parks as a part of them (last sentence in *Section III*).

> By caring for the parks and conveying the park ethic, we care for ourselves and act on behalf of the future. The larger purpose of this mission is to build a citizenry that is committed to conserving its heritage and its home on earth (very last sentence of the document in *Conclusion*).

Although these recommendations align with the goals of environmental interpretation, interpretation is not mentioned as a suggested means to achieve these goals. The inclusion of interpretation could have further provided the blue print the Service needs to carry out the Board's advice.

Other suggestions by the Board that can be applied to interpretation include promoting stewardship not only inside the park boundaries, but outside as well. To this end, the Board suggested the Park Service work extensively with all stakeholders

including gateway communities, federal and state agencies, cities, counties, tribes, the private sector, and even other countries (NPS 2001(e)). Including all the stakeholders addresses the reality that parks are not islands—ecologically or politically—and the need to continue to expand the vision of the Service's mission to include help from outside sources. Interpretation could benefit from additional connections and support from outside organizations and agencies.

The Board also addressed the internal support needed if the goal of a strengthened education mission is to be realized. It stated, "Educating its workforce is crucial, and a much larger share of organizational resources must be devoted to continuing education and professional development" (NPS 2001(e)). The *Interpretive Development Plan* as discussed in Chapter 2 has begun to fill this need for interpreters; although, one critique of the plan is there is no mention of environmental interpretation in the training program. Increasing training opportunities and professional development is essential in preparing the interpretive workforce, but it is important not to sacrifice content in the face of quantity in these offerings. Including environmental interpretation in the training program will give trained interpreters the tools to effectively address the other educational concerns the Board has mentioned.

It is my hope that the 2001 report by the National Parks Advisory Board will not only prove to be an exercise in documenting problem areas, but that it will provide the Service with the new direction it needs to seek solutions.

Analysis of responses from NPS interpretation employees

As mentioned in the beginning of this chapter, I contacted interpretation professionals at each of the three national parks in Washington state and distributed—via electronic mail—a questionnaire asking about the practice of environmental interpretation at the park level (Appendix 6). Out of 12 contacts I received 8 questionnaires back, ranging from partially completed to entirely complete. All but one employee wished to remain anonymous so I will not directly quote any of the responses, but I will discuss the overall themes present in the responses.

All of the respondents reported that the term *environmental interpretation* is not used in the National Park Service. The term *interpretation* is used to describe all interpretation regardless of the setting or message. This is consistent with what I encountered in my research of NPS documents.

When asked what guidelines dictated the practice of interpretation in the parks, many listed specific park plans in addition to national policies and Director's Orders. *Management Policies* was listed a few times, but it was interesting to note that a listing for the National Park System Advisory Board report, *Rethinking the National Parks for the 21st Century*, appeared only once under the question about guidelines, and appeared only once again under a question concerning the National Parks Service's role in developing an environmentally literate society. It's unfortunate that this document did not register more in the questionnaires as I feel it lays the groundwork for advancing positive change in interpretation in the national parks.

The discrepancy about fostering stewardship but not "preaching advocacy," was echoed with regularity throughout the responses—corresponding to the same

contradiction present in the NPS documents I analyzed. Only one respondent recognized and commented on the clear double message in promoting interpretation to foster stewardship, but not to promote behavior change, influence visitor values, or advocate for a specific cause—these, apparently, are referred to by the NPS as *Interpreganda*. A few comments mentioned that these were the activities for non-profits to undertake, not government agencies funded by taxpayers. Fostering stewardship *is* advocating a specific cause, *is* hoping for a specific behavior change, and *is* influencing visitor values. And yet, all respondents agreed that environmental interpretation in the parks should promote environmental behavior that carries beyond the park boundary.

Only one respondent felt that the NPS is falling short of the goal to change behavior and should articulate a stronger position. I found the lack of critical comments towards the Park Service surprising. Out of eight questionnaires, I felt that only two were assessing interpretation in the national parks honestly—including both praise and areas for improvement. The others seemed to be defending their role in the Park Service mission and careful to not say anything too controversial. One respondent even cautioned that we should not turn the National Park Service into someone's political pawn. I would argue it already is and has been since it's inception, and it's up to the dedicated individuals the comprise the Park Service today to decide which type of policies will dictate the future direction of the parks and the agency.

The following section outlines my recommendations for the future of environmental interpretation in the national parks—drawing on the previous comments I received from interpretive practitioners in the field, along with the problem areas I feel exist in the NPS policy documents I analyzed.

Recommendations

The following are my recommendations as to the steps that should be taken to make effective environmental interpretation a more centralized thread and a priority in the national park system:

1. ***Mission:*** *The National Park Service should courageously embrace its role as environmental leader and advocate, using interpretation to its fullest potential in this regard.*

   While the National Park Service is not solely responsible for developing an environmentally literate citizenry, they do have a unique advantage as caretakers of some of the most spectacular natural places in the world. Interpretation in these settings is an excellent vehicle to advocate natural resource protection and conservation.

2. ***Policy Support:*** *The National Park Service should adopt policies at the national level that specifically include environmental interpretation as a means to achieve environmental stewardship goals for the visiting public.*

   It is crucial to draft policies that stipulate how the National Park Service is to achieve the goal of environmental steward, and that environmental interpretation will be mandated to lead the way. Without specific direction in policy, there will be no specific and uniform action to that end.

3. ***Financial Support:*** *The commitment to education as a primary role of the National Park Service should be directly related to the financial priority given interpretation.*

   Capital investment in interpretation reinforces the commitment by the agency to the goals of interpretation, and monetary priority should be given to interpretive staffing needs rather than to capital projects.

4. ***Professional Status:*** *Professional status and advancement opportunities for interpreters should reflect this priority and will result in the equalization of the Ranger career ladder and the Interpretation career ladder.*

   The professional equalization of rangers and interpreters will demonstrate the National Park Service's commitment to interpretation, and that its practitioners are valued for their role in the mission of the NPS.

5. ***Goal Clarification:*** *Draw a distinction in policy and in training between environmental interpretation, historical interpretation and cultural interpretation.*

   While similarities exist between them, the end goals of each and the means to achieve those goals vary and should reflect that difference to ensure exactness of purpose.

6. ***Professional Development:*** *Include environmental interpretation in interpreter training—using the most current theory of effective environmental interpretation.*

   Articulating specific directives, dictated by current research, for environmental interpreters to achieve is important for consistent practice in the field and is aligned with the current training system of Universal Competencies.

7. ***Program Content:*** *All environmental interpretation programs should convey the connectivity of the natural world and humanity's effect on the system—both inside and outside the park boundary.*

   The National Park Service needs to take a more assertive role in educating the visiting public in environmental problems that affect the park, the surrounding area, the nation, and the world. Environmental problems know no boundaries and should be treated as such. Environmental interpretation programming should be the vehicle to reflect these scientific realities.

8. ***Partnerships:*** *The National Park Service should continue forming partnerships with outside agencies and organizations to aid in environmental interpretation efforts in the national parks.*

Since the origin of the National Park Service Interpretation Division, partner agencies and organizations have provided financial and personnel support for interpretation in the national parks. The National Park Service should continue to foster these relationships and seek out new ones to aid the Park Service in achieving its mission as environmental leader and educator.

CONCLUDING REMARKS

I set out to determine whether or not interpretation in the U.S. national parks was delivering an environmental conservation message that will result in behavior change in the average adult visitor. I first wanted to determine if the national parks were an appropriate arena for this type of advocacy and whether or not the National Park Service considered it as part of their central mission. In both cases the answer was a resounding yes—historically and currently.

My next question was whether or not environmental interpretation is occurring in the parks, and if it isn't why not. This was much more difficult to ascertain. From a practical point of view, it would be impossible to visit each park in the system to evaluate the programming and speak with its practitioners. I attempted this on a small scale and still found it difficult to pin down exactly what was occurring day to day in interpretation at specific parks, and what type of programming the average visitor would come into contact with. Because of this difficulty I focused my efforts at the national level—what directives in interpretation are being passed down in the form of policy and training that dictate what is occurring day to day in the parks? I found this to be more enlightening. I believe the National Park Service would like to embrace its role as environmental leader and conservation advocate, but is under enormous pressure to stick with business as usual policies and to not rock the political boat. I am afraid that this will change only at a point of crisis.

Our nation's parks are already experiencing the effects of environmental degradation, both from sources inside and outside the park boundary. To what extent this

damage has to occur before the National Park Service and the nation as a whole takes a stand to continue the protection of these unique places is anybody's guess. I fear the threat to the Arctic National Wildlife Refuge in Alaska is just the beginning in an attempt to reverse the protective status of places with extractive natural resource potential—and this includes most of our parks.

I strongly believe educating the public as to the benefits of conserving the earth's resources and the negative ramifications we will face if the consumptive practices of our society continue is the best chance we have at saving the parks—as well as areas not already designated for protection.

The question I'm left with is this: If committed people who are trained to interpret natural surroundings are educating visitors in some of the most beautiful natural areas in the world and are *not* receiving the financial and political support to continue their work to protect these areas, the areas that effect them, and to instill an environmental ethic in their visitors, what is a more effective learning environment to create an environmentally literate society?

REFERENCES

Aldridge, D. (1972). Upgrading Park Interpretation and Communication with the Public. Paper presented at the Second World Conference on National Parks Yellowstone and Grand Teton National Parks, WY, USA. Sir Hugh Elliot (ed.). U.S. Library of Congress.

Beck, L. & T. Cable. (1998). *Interpretation for the 21st Century: Fifteen Guiding Principles for Interpreting Nature and Culture*. Champaign, IL: Sagamore Publishing.

Bishop, N. Personal interview. 28 May 2002.

Brockman, C. F. (1977). *Evolution of National Park Service Interpretation: A Chronology*. Seattle, WA: University of Washington, College of Forest Resources.

--- --- (1978). Park naturalists and the evolution of the National Park Service interpretation through WWII. *Journal of Forest History*, January issue, p26.

Brown, W.E. (1971). *Islands of Hope: Parks and Recreation in Environmental Crisis*. Washington, D.C.: National Recreation and Park Association, Inc.

Bryant, H. C. & W.W. Atwood, Jr. (1936). *Research and Education in the National Parks*. Washington, D.C.: Department of the Interior, National Park Service.

Cardea, G. D. (1999). *Environmental Education and Environmental Interpretation: A Comparision, Contrast and Synthesis*. Unpublished master's thesis, Prescott College, Prescott, AZ.

Clark, W. F. (1949). *The Interpretive Programs of the National Parks: Their Developing, Present Status, and Reception by the Public*. Unpublished doctoral dissertation, Cornell University, Ithaca, NY.

Dahlen, D., D. Larson, S. Weber, & R. Fudge. (1996). The process of interpretation: Fulfilling the mission through interpretive competencies. National Association for Interpretation Annual Conference.

Everhart, W. C. (1972). *The National Park Service*. New York: Praeger Publishers.

--- --- (1983). *The National Park Service*. Boulder, CO: Westview Press.

Evison, Q. B. (1970). EE—Where we stand. *National Park Service Interpreter's Newsletter,* March issue, p3.

Gove, P.B. (ed) (1966). *Webster's Third New International Dictionary.* Springfield, MA: G & C Merriam Co.

Ham, S. (1992). *Environmental Interpretation: A Practical Guide for People with Big Ideas and Small Budgets.* Golden, CO: North American Press.

--- --- (1997). Environmental education as a strategic communication: A paradigm for the 21st century. *Trends*, vol. 34 issue 4, p4.

Hungerfold, H.R. & T. L. Volk (1990). Changing learner behavior through environmental education. *Journal of Environmental Education*, vol. 21 issue 3, p8.

Knapp, D. (1997). Environmental education versus environmental interpretation. *Legacy*, vol. 8 issue 3, p10.

Knapp, D. (2000). The Thessaloniki Declaration: A wake-up call for EE? *Journal Of Environmental Education*, vol. 31 issue 3, p32.

Knapp, D. & T. Volk (1997). The identification of empirically derived goals for program development in environmental interpretation. *Journal of Environmental Education*, vol. 28 issue 3, p24.

Koran, J., Longino, S. & L. Shafer (1983). A framework for conceptualizing research in natural history museums and science centers. *Journal of Research in Science Teaching*, vol. 20 issue 4, p325.

Mackintosh, B. (1986). *Interpretation in the National Park Service: A Historical Perspective.* Washington, D. C.: U.S. Department of the Interior.

National Park Service (1939). Works Progress Administration publicity. Artist Unknown. Post card replicas available in NPS visitor centers.

--- --- (1993). *National Parks for the 21st Century: The Vail Agenda.* Vail, CO: U.S. Department of the Interior.

--- --- (1994). *National Park Service Straegic Plan : Vision.* Washington, D.C.: U.S. Department of the Interior.

--- --- (1996). Essential Competencies for NPS Employees. Retrieved on May 18, 2002 from www.nps.gov/training/npsonly/npsescom.htm.

--- --- (1999). Universal Competencies. Retrieved on April 14, 2002 from www.nps.gov/training/univcomp.htm.

--- --- (2000). NPS Organizational Charts. Retrieved on March 12, 2002 from www.nps.gov/refdesk/.

--- --- (2001). NPS Park Net—FAQS. Retrieved on February 10, 2002 from www.nps.gov/pub_aff/e-mail/faqs.htm.

--- --- (2001(a)). NPS Park Net—Our Mission. Retrieved on February 10, 2002 from www.nps.gov/legacy/mission.html.

--- --- (2001(b)). *2001 Management Policies.* Retrieved on April 28, 2002 from www.nps.gov/refdesk/mp/index.html.

--- --- (2001(c)). Greening of the National Park Service. Retrieved on May 7, 2002 from www.nps.gov/renew/.

--- --- (2001(d)). Directors Orders. Retrieved on May 8, 2002 from www.nps.gov/refdesk/Dorders/.

--- --- (2001(e)). National Park System Advisory Board report. *Rethinking the National Parks for the 21st Century*. Retrieved on May 5, 2002 from www.nps.gov/policy/report.htm.

Negra, C. & R.E. Manning (1997). Incorporating environmental behavior, ethics, and values into nonformal EE programs. *Journal of Environmental Education*, vol. 28 issue 2, p10.

Palmer, J. (1998). *Environmental Education in the 21st Century: Theory, Practice, Progress, and Promise.* New York: Routledge.

Putney, A.D. & J.A. Wagner (1973). Objectives and evaluation in interpretive planning. *Journal of Environmental Education*, vol. 5 issue 1, p43.

Rideout Civiterese, S., M.H. Legg, & D.M. Zuefle. (1997). More thoughts on the differences between environmental interpretation and environmental education. *Legacy*, vol. 8 issue 6, p10.

Runte, A. (1979). *National Parks: The American Experience.* Lincoln, NB: The University of Nebraska Press.

Sharpe, G.W. (1982). *Interpreting the Environment.* New York: John Wiley & Sons, Inc.

Shankland, R. (1954). *Steve Mather of the National Parks*. New York: Alfred A. Knopf Publishing, Inc.

Sellars, R.W. (1997). *Preserving Nature in the National Parks*. London: Yale University Press.

Stapp, W., D. Bennet, W. Bryant, J. Fulton, J. MacGregor, P. Nowak, J. Wan, R. Wall, & S. Havlick. (1969). The concept of environmental education. *Journal of Environmental Education*, vol. 1 issue 1, p30.

The Conservation Foundation (1985). *National Parks for a New Generation: Visions, Realities, Prospects*. Washington D.C.: The Conservation Foundation.

Tbilisi Intergovernmental Conference on Environmental Education (1978). *Toward an Action Plan: A report on the Tbilisi Conference on Environmental Education*. Paper developed by the FICE Subcommitte on EE. Washington, D.C: U.S. Government Printing Office.

Thomas, T. Personal interview. 9 February 2002.

Tilden, F. (1957). *Interpreting Our Heritage*. Chapel Hill, NC: The University of North Carolina Press.

--- --- (1968). *The National Parks*. New York: Alfred A. Knopf Publishing, Inc.

--- --- (1977). *Interpreting Our Heritage, Second Edition*. Chapel Hill, NC: The University of North Carolina Press.

U.S. Department of the Interior (2001). Press Release—October 4, 2001. Retrieved from www.nps.gov/deva/freedays.htm.

Wallin, H.E. (1965). *Interpretation: A Manual and Survey on Establishing a Naturalist Program*. Management Aids Bulletin No. 22. Arlington, VA: American Institute of Park Executives National Recreation and Park Association.

Worster, D. (1979). *Nature's Economy: The Roots of Ecology*. Garden City, NY: Anchor Press/Doubleday.

BIBLIOGRAPHY

Absher, J.D. (1997). Introduction: Interpretation as communication. *Trends*, vol. 34 issue 4, p2.

Basman, C.M. (1998). The soul of interpretation. *Legacy*, May/June issue, p?.

Christiansen, J. (1990). Visitors come to parks to enjoy themselves. *Journal of Interpretation Research*, vol. 14 issue 2, p10.

Ham, S.H. & E.E. Krumpe. (1996). Identifying audiences and messages for nonformal environmental education—A theoretical framework for interpreters. *Journal of Interpretation Research*, vol. 1 issue 1, p?.

Holsman, R.H. (2001). The politics of environmental education. *Journal of Environmental Education*, vol. 32 issue 2, p4.

Hwang, Yeong-Hyeon; Kim, Seong-Il; & Jeng, Jiann-Min (2000). Examining the causal relationship among selected antecedents of responsible environmental behavior. *Journal of Environmental Education*, vol. 31 issue 4, p19.

Ise, J. (1961). *Our National Park Policy: A Critical History.* Baltimore, MD: The John's Hopkin's Press.

Knapp, D. (1995). Moving beyond Tilden: Producing behavior change goals for environmental interpretation. *Legacy*, vol.6 issue 1, p20.

--- --- (1996). Evaluating the impact of environmental interpretation: A review of three studies. *Coalition for Education in the Outdoors: Third Research Symposiam Proceedings.* Coalition for Education in the Outdoors.

Knapp, D. & E. Barrie (1998). Ecology versus issue interpretation: The analysis of two different messages. *Journal of Interpretation Research*, vol. 3 issue 1, p?.

Kimmel, J.R. (1999). Ecotourism as environmental learning. *Journal of Environmental Education*, vol. 30 issue 2, p40.

Machlis, G.E. (ed). (1986). *Interpretive Views.* Washington, D.C.: National Parks Conservation Association.

--- --- (1989). The devil's work in God's country: Politics and interpretation in the 1990's. *Journal of Interpretation*, vol. 13 issue 5, p4.

Makruski, E.D. (1978). *A Conceptual Analysis of Environmental Interpretation.* Unpublished doctoral dissertation, Ohio State University, Columbus, OH.

Morgan, J.M, Absher, J., Loudan, B. & D. Sutherland (1997). The relative effectiveness of interpretive programs directed by youth and adult naturalists in a national forest. *Journal of Interpretation Research*, vol. 2 issue 1,p?.

Moorcroft, T.A.; Desmarais, K.H.; Hogan, K. & A.R. Berkowitz (2000). Authentic assessment in the informal setting: How it can work for you. *Journal of Environmental Education*, vol. 31 issue 3, p20.

Moseley, C. (2000). Teaching for environmental literacy. *The Clearing House*, v. 74 issue 1, p23.

National Park Service (1991). *The National Parks: Shaping the System*. Washington, D.C.: U.S. Department of the Interior.

--- --- (1996). *National Park Service Strategic Plan: Final Draft*. Washington, D.C.: U.S. Department of the Interior.

Orr, D. W. (1992). *Ecological Literacy: Education and the Transition to a Postmodern World*. Albany, NY: SUNY Press.

Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods*. Newbury Park, CA: Sage Publications.

Pierssene, A. (1991). *Explaining Our World: An Approach to the Art of Environmental Interpretation*. New York: Routledge.

Sakofs, M. (1984). Interpretive programming: Opportunities to promote political action. *Journal of Environmental Education*, vol. 15 issue 4, p1.

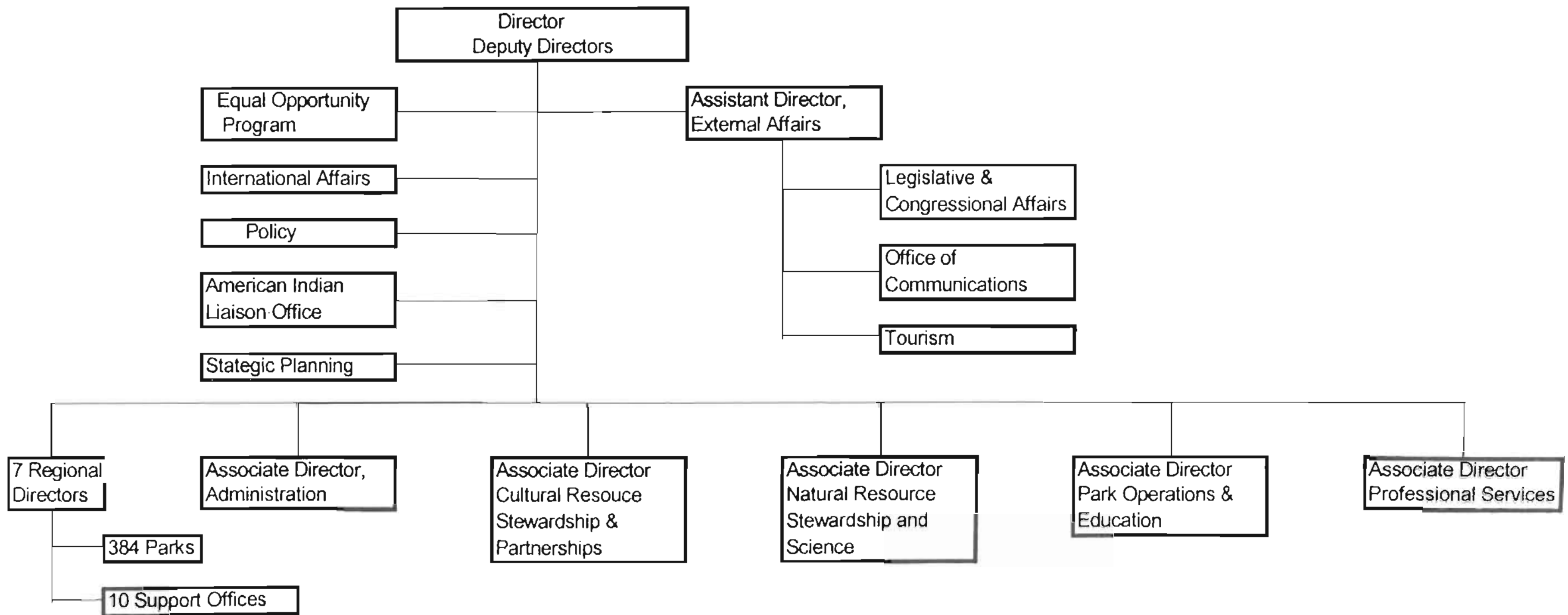
Uzzell, D. & R. Ballantyne (eds) (1998). *Contemporary Issues in Heritage and Environmental Interpretation*. London: The Stationary Office.

Whatley, M.E. (1995). *Interpreting Critical Natural Resource Issues in Canadian and U.S. National Park Service Areas*. Denver, CO: U.S. Department of the Interior.

Woodhouse, J.L. & C.E. Knapp. (2000). Place-based curriculum and instruction: Outdoor and environmental education approaches. *ERIC Digest*. December issue.

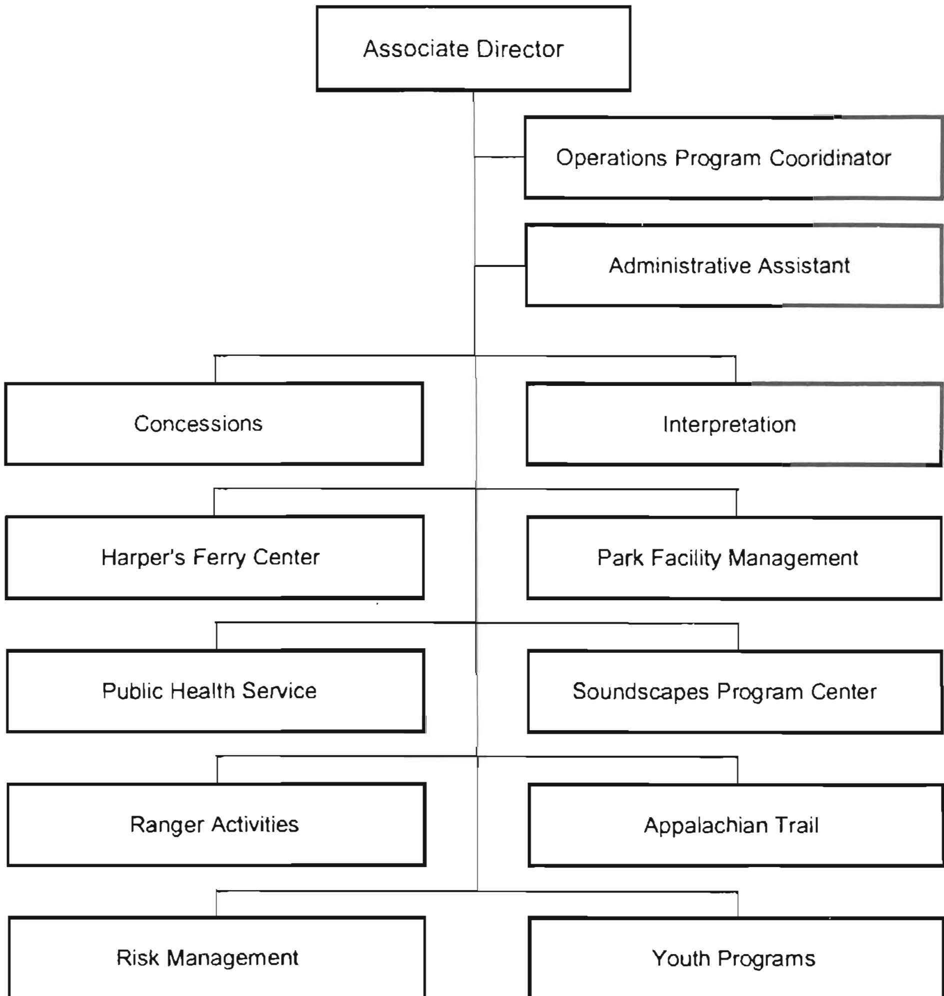
Yerkes, R. & K. Haras. (1997). Outdoor education and environmental responsibility. *ERIC Digest*. October issue.

APPENDIX 1



Source NPS 2000

APPENDIX 2



Source: NPS 2000

APPENDIX 3

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Washington 25, D. C.

In reply refer to:
R1815 WASO-N

FO-54-53

April 23, 1953

Memorandum

To: All Field Offices

From: Director

Subject: Securing Protection and Conservation Objectives Through Interpretation

Area Operation recommendation #95 relating to interpretation as an offensive weapon in preventing intrusion and adverse use of areas administered by the Service was approved on December 18, 1952. The present memorandum defines more specifically the objectives of this recommendation, it attempts to place this protection theme in its proper perspective in relation to the interpretation of natural and historic features, and suggests ways in which this program may be put into effect.

A. BASIS FOR PRESERVATION AND PROTECTION THROUGH INTERPRETATION

The interpretive program serves the two basic objectives of the Service as defined in the Act of August 15, 1916 establishing a National Park Service. These purposes are: To provide for the enjoyment of areas administered by the Service, and to use and conserve them so as to leave them unimpaired for the enjoyment of future generations. The first of these objectives is served directly as the interpretive program provides for the visitor the background of information necessary for his fullest understanding, enjoyment, and appreciation of these areas. It is the second of these basic objectives - conservation and protection - that is the subject of this memorandum. The interpretive program has a real obligation and opportunity, based upon law and policy, to contribute to preservation of the areas as well as to their enjoyment by the public. The present concern is the manner in which the interpretive program may serve the conservation and protection objective.

B. WAYS IN WHICH INTERPRETATION AIDS PARK CONSERVATION

1. It gives the visitor the facts of nature and history. The importance of interpretation of nature and history per se as a factor in park conservation is not to be discounted. While the primary objective is service to the visitor, park conservation is served concurrently. The process is very simple - YOU are most interested in and concerned about those things with which you are most familiar and in which you are most experienced. The park visitor is no different. Give him sufficient understanding of the features and values of parks and monuments, and lead him to identify himself with the park through his own experiences, and he then has the knowledge to understand the problems of park conservation, and a personal interest that will lead him to do his part in their proper use and conservation. In brief, the objective is: protection through appreciation, appreciation through understanding, and understanding through interpretation.

2. It gives the visitor some guiding principles of park management. Interpretations of facts are usually patterned by previous knowledge, or prejudices. A forest scene may suggest lumbering quite as readily as forest recreation. To lead the visitor into an interest in and an understanding of park objectives, as contrasted with other perhaps more familiar patterns of thinking about land resources and use, he must be given a background of park philosophy as well as a background of natural history. The origin and growth of the national park idea; the principles, policies, and objectives of national park use; some of the obstacles encountered in attaining those objectives; how a park is managed; and the source of authority and resources for that management - all of these are part of the background of national parks and monuments that the visitor must have for full understanding. Interpretation provides the facts of natural history and history, but is not complete until it relates those facts to the use and conservation objectives of parks and monuments.

3. It points out specific ways in which the visitor should participate, to his own greater benefit, in proper park use and conservation. The application of general principles to specific situations is not easy for most people. They approve of the principle that it is fine to have bear and deer in their natural environment, but do not see that hand-feeding of the animals is a violation of that very principle. The visitor often requires some specific instructions regarding his own behavior. Fire prevention, proper relationship of man and wildlife, protection of geyser

and cave formations, cleanliness of camp, trail, and roadside, and good and safe outdoor behavior, are among the things that can be treated directly, using specific examples, in the interpretive program. Officials of each area will need to survey their own program and problems to determine which matters of this kind need to be and can feasibly be presented. In this, as in all else, the visitor should be given, not an admonition, a warning, or a mere statement of rule or regulation, but a clear relation of the matter to the facts of natural history. Tell him why! If you convince him of the soundness of your reasons, he will be more likely to comply.

4. It uses examples from the park and its environs to illustrate lessons in park use and conservation. Facts are truths, principles are guides, but an interpretation is a pattern of thought, an hypothesis. Demonstrate by example that the pattern is sound. Following are examples of demonstrable situations.

(a) Predator control has resulted in injury to game and ranges.

(b) Once overgrazed, Yakima Park has not fully recovered in 35 years.

(c) Olympic and Rainier stand in sharp contrast to the deteriorated scenic quality of surrounding cutover areas.

(d) Wilderness and wildlife resources of Glacier National Park are values which must be accounted for in determining costs of dams on the North Fork.

(e) Sequoia, Kings Canyon, and Yosemite watersheds as they exist today are indispensible to San Joaquin Valley economy.

(f) Flood and silt from Green River adversely affect Mammoth Cave.

(g) Hetch Hetchy Valley is badly needed for recreational use today, but is unavailable.

(h) Grasslands of Mesa Verde, Big Band, Wind Cave, and Petrified Forest are reference plots, invaluable in the study of the restoration of neighboring range lands.

These are but a few of the illustrations, drawn from the park scene, easily appreciated by the visitor, that can be used to dramatize and to give purpose to the principles of park use and conservation.

5. It identifies major continuing threats to park integrity. In the long run, park protection will not be accomplished merely by enlisting the cooperation of the park visitors while they are in the areas. Fires can be controlled, meadows restored, formations guarded, and ruins stabilized, and yet park values may be lost through encroachment from the outside. The park visitor, a citizen and part owner of the System, has the right to know that what he values and enjoys today can be lost to him, and he has the right to know how this can come about. Dams, power developments, lumbering, grazing, hunting, mining encroachments and the like are a continuing danger to the whole national park idea. There are always existing threats of such encroachments. Alternates, involving proper use of non-Service lands, usually exist. Service officials should be informed on these matters so that the facts may be presented as occasions arise.

The interpretive program, as a rule, cannot deal with each threatened encroachment in detail, but it is proper, and perhaps even an obligation, that the interpretive program identify in appropriate ways current threats. This can be done without argument, without stating conclusions, and without making strong recommendations. If the interpretive program prepares the ground by developing an interest and knowledge of park values and an awareness and appreciation of park objectives, it can be anticipated that the visitor will himself react favorably to information on existing threats of encroachment.

C. PLANNING THE CONSERVATION ASPECTS OF AN INTERPRETIVE PROGRAM

Some of the aspects of the program outlined herein are now in effect in the field. There are many gaps, however, and what is done is largely without coordinated direction. Following are some suggestions that may be helpful in analyzing and giving force and direction to such a program in an area:

1. Survey the possibilities. What general principles, policies, and objectives best fit into the local area interpretive theme? What specific park use or conservation problems of local importance can be pointed out? What object lessons from the area can be used to illustrate problems of

land use or conservation? What dangers of encroachment to this or other Service areas can be identified concurrently with the local area interpretation?

These questions will suggest those items which should be planned for coverage in the interpretive program. Specific items, falling logically within the scope of the area interpretive theme, are preferable to an attempt at broad, general, all-inclusive coverage.

2. Plan the method of treatment. Just as a balanced interpretation of natural and human history is planned, plan also how, when, and where each phase of the conservation theme defined above will be handled. Which items can be presented as a part of the existing talk or guided trip program? Do any of the items suggest exhibit treatment? Do existing exhibit labels identify the facts of conservation? Do the area publications treat of the protection or conservation of the specific subject discussed? The answers to these questions will suggest the place of each conservation item in the area interpretive program.

3. Assign responsibility. Tie the conservation items to specific activity assignments. A talk on wildlife, for example, is a logical place to explain wildlife policy. Make this phase of conservation, then, a definite part of a wildlife lecture assignment, or of a bird walk. There is one very important factor to consider in making such assignments. More than in any other phase of planning, the varied capabilities of the interpreters must be considered. Most men can relate park history and development, most can outline general park objectives, and can make specific mention of local protection and park use problems. Greater experience and background is required to effectively interpret the local land use and conservation case histories, but the greatest care must be exercised in making assignments in which there is a possibility of misinterpretation of Service policy, practice, or intent, or of attitudes and relationships with industry or other agencies. Comparatively few seasonally employed interpreters may be judged sufficiently experienced and grounded in park policy, and of sufficient skill and tact to venture into this broader field. Be fully aware of the capabilities of each interpreter, and never exceed their limitations in your assignments or expectations.

D. SOME CAUTIONS AND ADVICE

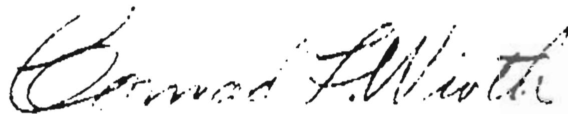
1. The interpretive program deals in the facts of natural and human history. The interpretation of the park scene is still the basic job. Interpret the natural or historic scene, but give that interpretation a conservation implication. Make the facts of nature and history tell the conservation story, but keep the conservation theme in balance with the interpretation of natural and human history.

2. Conservation interpretation invites logical reasoning. Do not preach, lecture, argue, editorialize, or labor to convince, and do not overdramatize. Casual and simple statement of facts and principles, presented naturally, simply, and positively, is effective, but a labored effort to convince will defeat the purpose. Avoid personal opinion, but make the facts of natural history point to their own conclusion.

3. Conservation interpretation is brief and specific. Select a few points, a few examples, and stress these, and let the entire conservation treatment occupy but an exceedingly small part of any presentation. A few planned words at the right time are sufficient.

4. Conservation interpretation is fair. Avoid criticisms of industry or of other agencies, and do not purposely disregard facts that may not be favorable. Dams, power developments, irrigation systems, lumber, minerals, and grass are all required by modern civilization. Recognize that such development and use is necessary, and that other agencies function quite properly in the fields of such use and development. At the same time emphasize that the national parks and monuments are not the proper places for that type of land use. Lumbering, power developments, mining, grazing, and the like are foreign to the entire use concept of national parks and monuments, and are activities which have the power to completely nullify recreational and inspirational values of these areas.

5. The conservation interpretation objective is a simple one. That objective is: to give the visitor a personal knowledge of park and monument values, such an appreciation of park principles and objectives, and such an awareness of his own responsibility, that he may take intelligent action, whether it concerns his own behavior in the parks, or whether it involves other action after he leaves. Every citizen must formulate his own conclusions on conservation matters, but he is entitled to know the facts, principles, and specific situations affecting conservation as they may be observed and interpreted in a national park or monument.



Director

841 1041

Source: Mackintosh 1986.

APPENDIX 4

Validation Panel

Mr. David Cherem—Interpretive Consultant

Mr. David Dahlen—Interpreter for Harpers Ferry National Historical Park

Mr. Tom Danton—Interpreter for Saguaro National Monument

Dr. Michael Gross—Professor in the College of Natural Resources at the University of Wisconsin at Steven's Point

Mr. Nell Hagadorn—Chief of Interpretation for the U.S. Forest Service

Dr. Sam Ham—Professor in the College of Forestry at the University of Idaho

Mr. John Hanna—Interpreter for Inside/Outside Consulting Firm

Dr. Doug Knudson—Professor in the College of Natural Resources at Purdue University

Mr. Bill Laitner—Interpreter for Everglades National Park

Ms. Julie Marcy—Interpretive Specialist for the U.S. Army Corps of Engineers

Dr. Gary Mullins—Professor in the College of Natural Resources at the Ohio State University

Dr. Gail VanderStoep—Professor in the Department of Parks and Recreation at Michigan State University

Mr. Chris White—Coordinator of Interpretative Services for the U.S. Army Corps of Engineers

Source: Knapp & Volk 1997

APPENDIX 5

Evaluation Instrument.

Goals | Evaluation

Do you agree, as an expert, that this goal represents an important outcome for an **environmental** interpretive program?

Entry-Level Goals

1. Component A: This level seeks to provide the visitor with sufficient resource site information to permit him/her to be knowledgeable about aspects of the resource site.

Yes-- No --

Comments:

2. Goals at this level are formulated to provide opportunities for visitors to become cognitvely aware of:

a. Ecology/natural history of resource site.

Yes-- No--

Comments:

b. Cultural history of site.

Yes -- No --

Comments:

c. Other pertinent site characteristics, e.g., management strategies, demographics.

Yes -- No --

Comments:

3. Component B: This level seeks to provide the visitor with experiences that promote an understanding/ comprehension of the meaning of resource site information.

Yes-- No--

Comments:

4. Goals at this level are formulated to provide opportunities for visitors to conceptalize:

a. The ecological relationships between the resource site and the immediate community.

Yes -- No --

Comments:

b. The cultural relationships between the resource site and the immediate community.

Yes -- No--

Comments:

c. Other pertinent topics related to the resource site, e.g., economic relationship of resource site to region.

Yes -- No--

Comments:

5. Component C: This level seeks to provide the visitor with sufficient knowledge to permit him/her to become aware of the policies and goals of the resource site.

Yes -- No--

Comments:

6.Goals at this level would offer experiences in interpretive programs that:

a. Help visitors gain information pertaining to current resource site management policies.

Yes -- No--

Comments:

b. Make visitors aware of the effect these management policies have on the resource site.

Yes -- No --

Comments:

7. Component D: This level seeks to provide the visitor with experiences that promote an empathetic perspective toward the resource site.

Yes -- No --

Comments:

8.Goals at this level would offer experiences to resource site visitors that:

a. Foster an appreciation for the resource site.

Yes-- No --

Comments:

b. Enhance enjoyment of the resource site.

Yes-- No --

Comments:

Level 2--Ownership Goals

9. Component A: This level seeks to develop a cognitive awareness of how visitors and their

collective actions may influence the quality of the natural resource site. It further seeks to develop an awareness of how these same individuals may influence the quality of other environments.

Yes-- No--

Comments:

10. Goals at this level would offer experiences in interpretive programs that would conceptualize:

a. How visitor activities influence the resource site and its environment.

Yes-- No--

Comments:

b. How environmental problems and issues can occur through these interactions,

Yes -- No --

Comments:

11. Component B: This level provides for the knowlegde necessary to permit visitors to investigate and evaluate natural resource site issues,

Yes-- No--

Comments:

12. Goals at this level would offer experiences in interpretive programs that develop:

a. The knowledge needed to identify resource site issues.

Yes -- No--

Comments:

b. The ability to analyze these resource site issues with respect to their ecological and cultural implications.

Yes-- No--

Comments:

c. The skills needed to investigate and evaluate resource issues.

Yes -- No--

Comments:

d. The ability to use this knowledge and these skills to identify, investigate, and evaluate other environmental issues.

Yes-- No--

Comments:

Level 3--Empowerment Goals

13. This level seeks to develop skills necessary for visitors to take positive/responsible environmental actions in regard to resource site issues.

Yes-- No--

Comments:

14. Goals at this level would offer experiences in

interpretive programs that develop:

a. The ability to identify and evaluate solutions for resource site issues.

Yes -- No--

Comments:

b. The ability to evaluate these solutions in regard to their cultural and **environmental** implications.

Yes -- No --

Comments:

c. The ability to differentiate the types and levels of actions possible in regard to solving resource site issues.

Yes -- No --

Comments:

d. The ability to apply these action skills to resource site issues.

Yes-- No--

Comments:

e. The ability to use this knowledge to apply these action skills to other **environmental** issues.

Yes-- No--

Comments:

Goals Evaluation

Do you believe, as an expert, that this goal is important in effecting knowledge, attitude, and/or behavior Entry-Level Goals change in a resource site visitor?

1. Component A: This level seeks to provide the visitor with sufficient resource site information to permit him/her to be knowledgeable about aspects of the resource site.

Yes -- No--

Comments:

2. Goals at this level are formulated to provide opportunities for visitors to become cognitvely aware of:

a. Ecology/natural history of resource site.

Yes -- No--

Comments:

b. Cultural history of site.

Yes -- No --

Comments:

c. Other pertinent site characteristics, e.g., management strategies, demographics.

Yes-- No --

Comments:

3. Component B: This level seeks to provide the visitor with experiences that promote an understanding/ comprehension of the meaning of resource site information.

Yes -- No--
Comments:

4. Goals at this level are formulated to provide opportunities for visitors to conceptalize:

a. The ecological relationships between the resource site and the immediate community.
Yes -- No --
Comments:

b. The cultural relationships between the resource site and the immediate community.
Yes -- No --
Comments:

c. Other pertinent topics related to the resource site, e.g., economic relationship of resource site to region.
Yes -- No --
Comments:

5. Component C: This level seeks to provide the visitor with sufficient knowledge to permit him/her to become aware of the policies and goals of the resource site.
Yes -- No--
Comments:

6.Goals at this level would offer experiences in interpretive programs that:

a. Help visitors gain information pertaining to current resource site management policies.
Yes -- No --
Comments:

b. Make visitors aware of the effect these management policies have on the resource site.
Yes -- No --
Comments:

7. Component D: This level seeks to provide the visitor with experiences that promote an empathic perspective toward the resource site.
Yes-- No --
Comments:

8.Goals at this level would offer experiences to resource site visitors that:

a. Foster an appreciation for the resource site.
Yes -- No --
Comments:

b. Enhance enjoyment of the resource site.
Yes-- No --
Comments:

Level 2--Ownership Goals

9. Component A: This level seeks to develop a cognitive awareness of how visitors and their collective actions may influence the quality of the natural resource site. It further seeks to develop an awareness of how these same individuals may influence the quality of other environments.

Yes -- No--

Comments:

10. Goals at this level would offer experiences in interpretive programs that would conceptualize:

a. How visitor activities influence the resource site and its environment.

Yes-- No--

Comments:

b. How environmental problems and issues can occur through these interactions.

Yes-- No--

Comments:

11. Component B: This level provides for the knowlegde necessary to permit visitors to investigate and evaluate natural resource site issues.

Yes-- No--

Comments:

12. Goals at this level would offer experiences in interpretive programs that develop:

a. The knowledge needed to identify resource site issues.

Yes-- No --

Comments:

b. The ability to analyze these resource site issues with respect to their ecological and cultural implications.

Yes-- No--

Comments:

c. The skills needed to investigate and evaluate resource issues.

Yes-- No--

Comments:

d. The ability to use this knowledge and these skills to identify, investigate, and evaluate other environmental issues.

Yes-- No--

Comments:

Level 3--Empowerment Goals

13. This level seeks to develop skills necessary for visitors to take positive/responsible environmental actions in regard to resource site issues.

Yes-- No--

Comments:

14. Goals at this level would offer experiences in interpretive programs that develop:

a. The ability to identify and evaluate solutions for resource site issues.

Yes-- No--

Comments:

b. The ability to evaluate these solutions in regard to their cultural and environmental implications.

Yes-- No--

Comments:

c. The ability to differentiate the types and levels of actions possible in regard to solving resource site issues.

Yes-- No--

Comments:

d. The ability to apply these action skills to resource site issues.

Yes-- No --

Comments:

e. The ability to use this knowledge to apply these action skills to other environmental issues.

Yes-- No--

Comments:

Source: Knapp & Volk 1997