



Forest Service

Northeastern  
Research Station

General Technical  
Report NE-255



# Proceedings of the 1998 Northeastern Recreation Research Symposium

April 5-7, 1998  
Bolton Landing, New York

Resource Management ♦ Innovation ♦ Pets ♦ *Whitewater Kayaking*  
*Skiers* ♦ Teamwork ♦ Visual Quality ♦ *Harbor Excursion* ♦ Parks  
Persuasive Communication ♦ **Hunting** ♦ Stewardship ♦ **History**  
**Backpackers** ♦ *Windstorm* ♦ Boaters ♦ Clearcut ♦ **Spiritual Values**  
Gender ♦ Wildlife ♦ ECONOMIC IMPACT ♦ Crowding ♦ Anglers  
Race ♦ **MUSEUMS** ♦ Preservation ♦ *Snowmobilers* ♦ Visitor Fees  
National Forests ♦ **MOUNTAINS** ♦ Sense of Community  
Resource Development ♦ Income ♦ Environmental Values  
Response ♦ **Exploring** ♦ Satisfaction ♦ INTERACTIVE CD-ROM  
Cultural Landscapes ♦ Resort Towns ♦ **Trails** ♦ Partnerships  
Volunteering ♦ Age Groups ♦ Urban Parks ♦ Open Space ♦ *Lakes*  
Distance Learning ♦ *Rivers* ♦ Trends ♦ Attitudes ♦ *Bicycle Tourism*  
Seacoast ♦ *Conferences* ♦ Rail-Trails ♦ Wilderness ♦ **Internet**  
Student Internship ♦ Recreation Research ♦ Motivation ♦ Visitors

## **Northeastern Recreation Research Symposium Policy Statement**

The Northeastern Recreation Research Symposium seeks to foster quality information exchange between recreation, tourism, and resource managers and researchers throughout the Northeast. The forum provides opportunities for recreation and tourism research managers from different agencies, states, and government levels, as well as those in the private sector to discuss current issues, problems, and research applications in the field. Students and all those interested in continuing education in recreation and tourism management are particularly welcome.

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# Proceedings of the 1998 Northeastern Recreation Research Symposium

April 5 - 7, 1998



*On Lake George in Bolton Landing, New York*

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**Public Sector Recreation  
Administration & Management**



## CONSERVING OPEN SPACE IN NEW YORK STATE

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**Abstract:** The Conserving Open Space Plan identifies which open spaces and historic sites should be saved for New York State's future and describes how these resources can be conserved and managed in a sensible and affordable way. It is prepared jointly by the Department of Environmental Conservation and the Office of Parks, Recreation and Historic Preservation. The paper describes the purpose and the content of the plan and the process utilized in the development of the plan. Recommendations and points of consideration are provided for the various steps of the planning process.

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### THE PLAN

New York State has completed the second revision of the State Open Space Conservation Plan, entitled "Conserving Open Space Plan". The initial Plan was authorized by a 1990 Act of the State Legislature. It was prepared through a joint effort by the Department of Environmental Conservation (DEC) and the Office of Parks, Recreation and Historic Preservation working with nine Regional Advisory Committees (RACs) appointed jointly by the State and local governments. The initial Plan was approved in 1992 and updated in 1995.

The 1998 Plan builds on the 1995 Plan. It is the blueprint for conserving the State's natural and cultural resources. Similar to past versions, the Plan proposes which open spaces and historic sites should be saved for New York State's future and describes how these resources can be conserved and managed in a sensible and affordable way. The Plan does not confine itself to public land acquisition, but recognizes several methods of protection. Encouraging private land stewardship is a most important part of this.

Since Governor's Pataki's adoption of the 1995 Plan, substantial progress has been made in implementing the Plan. The Environmental Protection Fund, fully funded at \$100 million a year, now contributes more than \$30 million

annually to the conservation of priority projects listed in the Plan. The 1996 Clean Water/Clean Air Bond Act provides an additional \$150 million for State land acquisition and farmland protection programs; \$50 million for the improvement of State park facilities and \$50 million for the municipal park program administered by OPRHP.

Of the 90 priority projects listed in the 1995 Plan, several have been permanently conserved and many others are in various stages of consideration and negotiation. Various projects have been advanced by working closely with non-profit conservation organizations.

Among the conservation successes are: the 339-acre Sanctuary property adjacent to Montauk State Park on the fork of Long Island; in partnership with the Town of Oyster Bay, protection of 5.2 acres of their waterfront; an agreement to acquire the 24-acre St. Francis Seminary on Staten Island; through a cooperative effort with the Open Space Institute, acquisition of the 2,000-acre Hubbard parcel at Clarence Fahnestock State Park in the lower Hudson River Valley; through the efforts of the Trust for Public Lands and the Open Space Institute and funding partnership between New York State, New Jersey, federal and private funds, acquisition of 15,280 acres (\$55 million) of Sterling Forest; acquisition of the 14,000-acre Whitney Park parcel in the Adirondack Mountains; acquisition of 403 acres at Green Lakes State Park in central New York; protection of 900 acres of the Northern Montezuma Wetlands; and, the acquisition of the 106-acre Woodlawn Beach south of Buffalo on Lake Erie.

The 1995 Plan listed 90 priority conservation projects statewide. The 1998 Plan update incorporates a number of revisions to this list, resulting in a new list totaling 131 priority projects. In addition, the Plan identifies geographic areas which require special open space conservation protection; policy recommendations needed for an effective open space conservation program; budget recommendations; recommendations for a primary funding strategies; and funding sources.

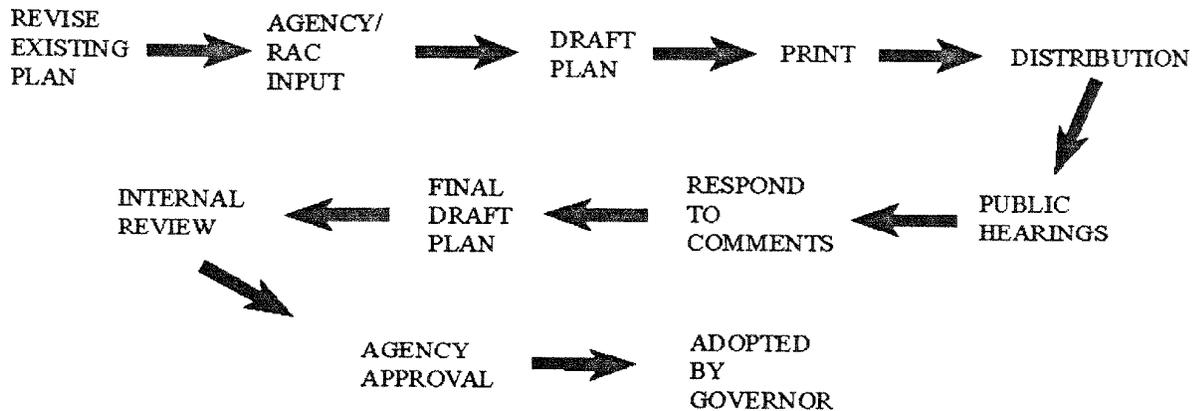
### THE PROCESS

The Planning Team followed a plan update process that integrates the State Environmental Quality Review (SEQR) requirements and the planning process into a single process (Figure 1). The entire process required approximately 18 months to complete. Although the process may appear to straightforward, there are many elements that have to be considered within each step of the process. It is important understand the relationship of all these elements to make the process go smoothly. Failure to do so can result in significant delays.

### PROCESS ELEMENTS

The following are some of the elements that should be considered in developing a workplan for updating and producing a plan:

Figure 1  
Planning Process



**COORDINATION**

The Open Space Plan was prepared in a cooperative effort by the Department of Environmental Conservation and the Office of Parks Recreation and Historic Preservation. A single coordinator was identified to oversee the entire process along with individual agency coordinators. The "Planning Team" was comprised of representatives of various bureaus and regional offices within each agency. As a result, the team was comprised of representatives from varied agency programs and three distinct work locations.

The following are items to be considered:

- Commitment by the agency, demonstrated by formally establishing a team.
- Developing a workplan that is achievable by the team, both collectively and individually.
- Developing an agenda prior to each meeting.
- Providing adequate meeting space.
- Considering travel times to get to meeting location (start and end times).
- Taking minutes of the meetings and documenting decisions.
- Commitment of staff time throughout the process.
- Commitment of funds to produce the document.

**INTERNAL REVIEW**

There are various levels of reviews that were required during the preparation and adoption of a plan. Each level of review requires time, not only to provide adequate time for review, but also in addressing the comments received. Some considerations are:

- Identifying who will review the document, when will they be available to review the document and if they require a "signoff" before the document can progress.
- Different levels of review may exist with the organizational structure of the agency.
- Time will be required to prepare and distribute draft material and to collate and respond to comments.

- Establish a deadline for responding to comments.
- Unanticipated delays may exist that you have no control of.

**PREPARATION AND PUBLICATION**

It was important to determine how the document would be prepared and printed early in the update process. This will save considerable time and effort further along in the process and usually involves staff outside the Planning Team.

Points to consider are:

- One person should coordinate the processing of the draft and final document.
- Identification of the word processing format that will be utilized.
- Identification of maps and graphic material and the bureau (person) who has the capability of producing them.
- A single editor provides consistency in style.
- Time required for the bidding process, if necessary.
- Proofreading from a technical perspective.
- Turnaround time from a printer.
- Preparation of the printing specifications.
- Cost considerations - size, binding, color, photographic, foldouts, etc.

**PUBLIC INPUT**

Public input is an important part of the planning process. In the preparation of the Open Space Plan, extensive effort was made to obtain statewide input. For the current updating effort, 3,500 draft plans and 1,500 summaries were produced and distributed. Start developing a mailing list of government officials, interest groups and individuals early in the process. Determine how will require a full plan, a summary or just a notice of the hearing. Comments on the draft were primarily received from the Regional Advisory Committees, public hearings and written responses.

#### *Regional Advisory Committees (RAC)*

Nine Regional Advisory Committees were established to provide advice to the DEC and OPRHP on the open space conservation program. Each RAC consists of at least thirteen but not more than twenty-three appointed members. Members are chosen for their knowledge of and concern for land preservation, conservation, historic, cultural, recreation and acquisition interests. The total number of local government appointees for a RAC cannot exceed one-half of the committee's membership. The Committees meet continuously and provide advice and recommendations on policies and priorities, studies and assessments, setting guidelines for project selection, the consideration of economic impacts, the ecological value of projects, the recommendation of properties to be considered for conservation and acquisition, and other relevant matters.

Some items to consider are:

- Guidance and participation from the regional agency staff is important for the success of a RAC.
- Clear identification of their roles and responsibilities, information needed and the format for reports is important for the success of the RACs.
- Listen to what they have to say.

#### *Public Hearings*

Twelve public hearing were held within two days across the state to obtain a full range of public input. This required a considerable level of preparation and coordination with agency regional staff. Prior to the formal public hearing, informational workshops were conducted. A "Planning Team" person was assigned to a hearing as a resource person. The regional administration officials conducted the hearings. There were over 260 testimonies received at the public hearings.

Some items to consider are:

- Distribution of the draft plan - who gets a copy.
- Providing adequate review time for the public prior to the hearing.
- Providing adequate notification of the hearings.
- Meeting all legal requirements for notification of public hearings.
- Selecting site locations (handicapped accessible, room size, parking, etc.)
- Developing presentation material (slides, video, handouts, etc.)
- Avoiding holiday and religious dates.

#### *Written Comments*

The public had the opportunity to provide written comments up to the end of the comment period. During this period over 340 written submissions (letters, etc.) were received. Many contained comments on various sections of the plan. A significant number of submissions can be expected to arrive near the close of the comment period.

#### *Response to Comments*

It is important to develop a system to address the comments received. For this planning effort, there were over 600 testimonies and written comments received during the public participation process. Each testimony and written statement was given a number and each substantive comment coded to a section of the draft plan. The comments were then collated, summarized and a response developed. The plan was revised as necessary. This is a time consuming and tedious task but one that is critical to the process. Some changes may require input from higher level decision makers.

#### **SUMMARY**

A team approach was utilized to update the State Open Space Plan. It required good coordination and cooperation between two agencies and the team members. It is important to take a holistic approach in establishing a workplan and timeline. It is equally important to realize that not everything will happen as planned and there will be unforeseen delays. Likewise, the project may be your top priority and not that of someone whose input is critical to the process. The coordinator will have to recognize the strengths and constraints of the team members as well as looking a few steps beyond where the process is currently at. Remember, timetables can only be adjusted within a given timeframe. A good plan to do a plan will result in a successful product.

## RECREATIONAL, SCENIC, AND EXISTENCE VALUES IN CONSERVATION EASEMENTS HELD BY PRIVATE LAND TRUSTS IN THE NORTHEAST

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**Abstract:** Conservation easements are a growing aspect of ownership of the natural landscape. These less than fee interests in land enable private land trusts to protect and promote desired open space values. Recreational, scenic, and existence values are commonly addressed in conservation easement agreements. A sample of conservation easement deeds provided by private land trusts in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and New York demonstrates the specific items necessary in providing these values. The flexibility of conservation easements and diverse goals of both landowners and land trusts allow these values to be divided, shared, or retained. In addition to specific clauses related to providing recreation and scenery are supporting clauses that address the related question of liability. Description of the ways in which these values are addressed and supported shows the potential for further use and improvement of conservation easements.

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### Introduction

Conservation easements are one means of altering open space values. Each of these less than fee ownership interests in land is defined individually in a deed. The versatility of conservation easements allows their use to ensure the continued existence of current values, modify values in ways that the grantor (landowner) and grantee (easement recipient) find acceptable, create new values, or extinguish potential uses outright. While the conservation easement concept is becoming increasingly well known and recognized, understanding of the specific details is lacking. To date, there has been little empirical research into the exact content of conservation easements.

The American Farm Bureau Federation has sponsored a study of conservation easements held by private land trusts throughout the nation. The goal of this study is to understand and define conservation easements and how they affect private landowners' use and enjoyment of the land. One logical segment of this study is an overview of recreational, scenic, and existence values of open space.

The northeast region of the United States is the home to the greatest concentration of private land trusts in the United States.

Three important values of open space arise from its recreational, scenic, and existence potential. Existence values hinge largely on prevention of development. Conservation easements are usually perpetual, guaranteeing that natural processes can be the dominant agents of change to these values for all time. Recreational and scenic uses can be enjoyed by different parties and in different manners, depending on the access granted and the activities allowed. Details of the conservation easement deeds often determine the identity of users, timing or their use, and activities they are allowed. Changing the mix and potential of these uses on private property with a conservation easement can alter both the land's market value and utility to the landowner.

### Methods

A mail questionnaire and a request for a conservation easement deed were mailed to land trusts and related organizations nationwide. Using the *1995 National Directory of Conservation Land Trusts* as a reference, the targeted group consisted of every organization that listed conservation easements as one of their land protection methods. The term "land trust" includes actual land trusts, conservancies, museums, and other private organizations that secure conservation easements. In addition to a series of questions about the type of acreage and number of conservation easements by land use type, each organization was asked to submit a copy of a conservation easement deed. Specifically, land trusts were asked to send a deed that they regarded as representative of the goals of the organization.

The content of the conservation easement deeds was analyzed and divided into four distinct categories. These categories are affirmative rights, restrictions, reserved rights, and terms, conditions, and other provisions. Affirmative rights are those things the grantee is allowed to do on or with the protected property. Restrictions are those things that the grantor is prohibited from doing on, to, or with the protected property. Reserved rights are those uses of the property retained by the grantor. Terms, conditions, and other provisions are the rules and procedures providing the framework of the agreement. Additionally, the state of origin of each deed was noted.

The deed content variables in each of the four categories were identified. Within each of these categories, the variables were further grouped into non-exclusive categories. Among these categories are those focus on in this paper – recreation, scenery, and existence. A further step in the analysis was to divide results by region. Results from New York and the New England states are used in this paper.

### Limitations

The results of this study must be properly categorized before their presentation. Separating variables from the

context of the deed in which they appear limits our understanding of them. The links between the variables and the protected land, as well as clues about the goals of the grantor and grantee, are lost. Occasionally restrictions will seem preposterous and reserved rights trifling, though these concerns must have been very real to those who created the agreement. The trade off in presenting a summary of deed information is this unavoidable detached view.

The data and results are insufficient for making make direct projections about the entire population of conservation easements held by private land trusts. The variability of conservation easements, even among those held by a single land trust, is such that a very large sample is necessary to connect particular variables to the large land areas involved. With this in mind, that data used in this study is a sampling of deed content that is representative of some of the goals of private land trusts and landowners. It provides a partial insight into conservation easement deed content as it relates to timber, development, and amenities in the northeast.

### Results and Discussion

The usable response rate to the mail questionnaire was 27.5%. The response rate to the request for deeds was somewhat lower, at 20%. This lower response rate was expected because some of the land trusts contacted have yet to acquire any conservation easements. Responses mirrored the distribution of conservation easements around the country, with the largest number coming from the northeast, followed by those from the West Coast. Among respondents from northeastern states, deeds were received from land trusts in Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont.

Restrictions rule out actions and activities that the grantor and grantee deem threatening to the protected property. These restrictions are intended primarily for the landowner, and in particular for landowners subsequent to the original grantor. Future landowners might view conservation differently than the grantor landowner and the grantee, so the essence of protecting the property is constraining their uses. A summary of restrictions is shown in Table 1.

Protecting existence values requires keeping the land in an open space state. Specific restrictions for accomplishing this are those preventing development, most notably the construction of new residences. Related restrictions rule out improvements such as roads, wells, and utilities normally associated with residential development. Further restrictions affecting existence values deal with alteration of surface water and topography and the introduction of non-indigenous flora and fauna.

Scenic restrictions concentrate on unsightly items, along with a few provisions for building setbacks and logging guidelines. Unsightly items are defined as structures that might otherwise be compatible with open space protection of the land. This includes the color and landscaping of

permitted structures and other items such as solar panels, outdoor lighting, patio furniture, and abandoned automobiles.

Table 1. Restricted activities, actions, and structures in conservation easements held by private land trusts in the northeast.

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#### Existence Restrictions

- Commercial, industrial, residential, or institutional activities
- Non-indigenous flora and fauna
- Property shall remain free of taint
- Alteration of water courses
- Alteration of surface topography

#### Scenic Restrictions

- Aesthetic guidelines for logging
- Timber harvesting buffer zones
- Dumping
- Visual or olfactory nuisances
- Abandoned vehicles
- Compost piles
- Mobile homes
- Structures must be landscaped
- Earth-tone roofs and surfaces
- Outdoor lighting
- Solar panels
- Cell phone towers
- Parking limits
- Patio furniture
- Building setbacks
- Windmills

#### Recreation Restrictions

- Posting and other actions to restrict public recreational access
- Third party right-of-ways
- Recreational motor vehicles
- Bicycles and tricycles
- Hunting, fishing, and trapping
- Firearms
- Fires
- Commercial camping
- Foot travel only
- Seasonal use of tents
- Radios
- Bows and arrows
- Generators
- Campers
- Camping structures, bridges, picnic tables, and signs
- Swimming pools
- Recreation or play equipment
- Race courses

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Recreation involves access, activities, and improvements. Recreation restrictions placed in conservation easements address all three of these items. Some deeds prohibit the landowner from posting the land or otherwise discouraging

public recreation use. Restrictions on activities tend to limit uses to low-impact types of recreation. Hunting, fishing, and trapping are obvious points of contention that vary from one deed to the next. Recreation restrictions on improvements underscore the ban on certain activities through the absence of facilities.

Affirmative rights are those things the grantee is allowed to do on or with the protected property. Access to the property is the most important item conveyed under these rights. This access can be for the grantee itself, or for the general public. The affirmative rights section spells out the reasons for this access. The most common one is the right to make compliance inspections of the property, though access is granted for other reasons as well. Despite the popularity of conservation easements as a means of ensuring current land uses remain intact, affirmative rights granted in the agreements often create new land uses. A summary of affirmative rights is shown in Table 2.

Table 2. Affirmative rights of the grantee for activities, actions, and structures in conservation easements held by private land trusts in the northeast.

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<b>Existence-related Rights</b>
Identify, protect and preserve various natural features of the property
Act to preserve or conserve the natural components of the property
Monitor and manage flora and fauna
<b>Scenic Rights</b>
View the property from public roadways and waterways
Access to scenic vista points on the property
Maintain scenic views from roadways
Maintain scenic vista points
<b>Recreation Rights</b>
Use of trail corridor right-of-way
Access via water corridors
Right to restrict public recreation access
Right to establish rules of recreation access
Hiking
X-country skiing
Snow shoeing
Hunting
Fishing
Nature study
Running
Picnicking
Low impact outdoor recreation
Maintain and relocate trails and bridges
Maintain, repair, replace, or remove existing shelters

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Affirmative rights relating to existence values generally involve flora, fauna, and the natural features of the property. Grantees are sometimes allowed to identify these features and subsequently to take action necessary for their protection. Grantors take something of a risk in allowing

this process to take place after the easement is granted. If natural features and rare species are identified prior to the grant, the actions necessary for their protection can be discussed and negotiated. If grantees are given an open-ended right to take undetermined protective actions, the grantor risks the uncertainty of knowing if these actions will be compatible with their own uses. Other deeds give the grantee the right to monitor and manage flora and fauna.

Grantees occasionally receive affirmative rights allowing them to maintain scenic vistas for public enjoyment. More commonly, the right to view the property from public roads and waterways is granted. Though granted as an affirmative right, it is doubtful viewing the property from the public domain is something within the grantor's providence to exclude. A connected right that is clearly affirmative is that of managing vegetation on the property to ensure views from public roadways remain unobstructed.

Affirmative rights for recreation are a means of creating new land uses, as public access may have been specifically prohibited prior to the grant. In some areas of the northeast, allowing public recreation use of the property changes its character for all time. Access is generally limited to corridors, such as trails, roads, and waterways. Most of the activities allowed can be characterized as low-impact, such as hiking and cross-country skiing. Allowing hunting and fishing is uncommon, as grantors often retain these rights exclusively. The right to build and maintain recreational improvements are generally limited to the corridor theme, including new trails and bridges.

Reserved rights preserve the uses and options that the grantor wishes to retain. The reserved rights section makes the grantor's intended uses for the property obvious. These rights are implicitly compatible with the purpose of the conservation easement if the grantee is willing to accept their inclusion. A summary of reserved rights is shown in Table 3.

There are relatively few reserved rights attributable to existence and scenic values. The grant of the conservation easement itself is overt evidence of the grantor's convictions about the existence value of the property. Management of vegetation is an item of interest both for existence and scenic purposes. A modest number of grantors reserve the rights of mowing and cultivation for the protection of rare native flora. Many grantors reserve rights for the management of vegetation, but few for the express purpose of protecting rare native flora. Scenic reserved rights are limited to clearing of vegetation in maintaining views.

Reserved rights for recreation are divided into many variables. Again, the three important subsections are access, activities, and improvements. Apart from concern over their own activities, some grantors who allow public recreation as an affirmative right reserve the right to regulate such access. This control is prudent, as predicting the exact patterns and intensity of public recreation use can

be difficult. Other access concerns involve clearing new trails and right-of-ways to recreational improvements. Some deeds reserve only the rights to undefined low-impact recreation or all recreation uses compatible with the stated restrictions. Cautious grantors reserved many specific activities, perhaps to ensure their interpretation as compatible with other sections of the agreement. Improvements include everything from the right to build second homes to tennis courts to nature observation blinds. Reserved development rights to build homes, as well as accessory structures and utilities, are an often unpublicized aspect of conservation easements. Many grantors reserve development rights for the use of their heirs.

Table 3. Reserved rights of grantors for activities, actions, and structures in conservation easements held by private land trusts in the northeast.

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<b>Existence Rights</b>
Mowing and cultivation for the protection of rare native flora
<b>Scenic Rights</b>
Clearing and thinning vegetation to maintain views
<b>Recreation Rights</b>
Deny access to rule violators
Emergency vehicle use
Right to grant limited public access
Limit, control or make rules for public recreation use
Clear new right-of-way to tent site
Hiking, running, x-country skiing, and snow shoeing
Horseback riding
All consistent outdoor recreation activities
Snowmobiles
Fishing
Shellfish and marine worm gathering in tidal mudflats
Lease the property for recreational use
Charge the public for primitive camping
Cut and gather firewood for on-site use
Second home construction
Accessory recreation structures
Swimming pools
Tennis courts
Sand and gravel extraction for recreational improvements
Construct fences, benches, nature observation blinds, docks, signs, and gazebos
Satellite dishes
Interpretive structures
Build ponds
Tents and tent platforms

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Terms, conditions, and other provisions are a collection of clauses found in conservation easements serving as the framework of the agreement. Many contingencies are contained in this section of the deed. Careful examination of them reveals several items that impact the existence, scenic, and recreational values of protected properties.

A clause found in many conservation easements specifies that any uncertainty encountered over the meaning of the agreement will be interpreted in favor of conserving the

property in its natural and open scenic state. In light of the uncertainty embedded into many conservation easement deeds through conflicting rights and careless wording, a clause of this type is an added safeguard to existence values. A stronger approach is taken by the baseline data report clause. It requires preparation of a baseline data report the property. The grantor and grantee must agree upon the final contents of this report. This report then serves as a benchmark in judging violations and requiring restoration.

Liability is always a concern when the public is granted recreational or scenic access to private property. Nearly all conservation easements collected in this study contained a clause in which the grantor indemnifies and agrees to hold the grantee harmless for any losses suffered in connection with use of the property as specified in the easement agreement. A much smaller number of deeds have a reciprocal clause in which the grantee indemnifies the grantor.

Some grantors wish to ensure their privacy by reserving all of the recreational uses of the property. Often this intention results in a statement that nothing in the deed will be construed to grant to general public access to the property. Since grants are transactions between private landowners and private land trusts, the deeds sometimes contain a clause stating that no public ownership interest in the land arises from the grant of the easement.

#### Summary and Conclusions

Conservation easements enable private land trusts to protect and promote desired open space values. Recreational, scenic, and existence values are important topics in conservation easement deeds. A sample of conservation easement deeds provided by private land trusts in northeastern states shows the specific manner and importance of addressing these values. The flexibility of conservation easements and diverse goals of both landowners and land trusts allows these values to be divided, shared, or even ignored. Existence values are most often protected by ensuring future development is compatible with the open space character of the land. Scenic values are either retained by the grantor or shared with the public and supporting rights allow the grantor or grantee to manage vegetation to preserve views. Allowing public recreation access to the property creates a new land use. When public use is allowed, it is usually limited to low-impact activities in specific corridors. When new and uncertain patterns of recreation use are likely to result from access, well-constructed agreements allow either the grantor or grantee to respond and manage this use. In addition to specific clauses related to providing recreation and scenery are supporting clauses that address the related question of liability. Descriptions of how existence, scenic, and recreation values are addressed and supported show the potential for further use and improvement of conservation easements.

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**Education Issues in Recreation**



## EXPLORING THE VIRTUAL WORLD OF RECREATION: DISTANCE LEARNING ON THE INTERNET

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Abstract: University faculty have a long history in the use of electronic media for classroom instruction. For example, leisure studies' faculty have had access to travel reservation data over telephone lines and satellite dishes for many years. More recently, faculty have begun to utilize the Internet for interactive instruction. The leisure studies' student of today explores foreign destinations by surfing the Internet. The student can obtain foreign currency exchange rates or tropical weather reports from online sources. Live camera connections allow the virtual skier to see if snow is on their favorite mountain slope. Recreators seek this information instantly and make informed judgments on vacation choices. This paper seeks to explore the vast potential of the Internet for teaching recreation courses in college. The Internet is a tremendous tool that allows students new and exciting ways to become informed. It is possible to fully explore an academic discipline and still field questions and create dialogue by way of electronic access.

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### Introduction

Internet growth is measured by the doubling of host computers (or Domains) every year since 1993 (Thoen, 1997). This growth has provided those in the academic community an enormous potential for instructional material. For example, geographer Ken Foote at the University of Texas has provided online lessons for several years now (Geographer's Craft, <http://www.utexas.edu/depts/grg/gcraft/contents.html>).

Yet, some caution that faculty may be rushing into a computer revolution without fully understanding the implications of "going online" (Hill, 1996). Are we simply trying to keep up with the ever changing world that expands and shrinks simultaneously? The Earth expands as we become linked via the Internet and are able to explore regions and places previously unavailable without taking a safari to some distant jungle. But it shrinks as well, since the time to get this virtual field trip is shorter and shorter with the advent of faster modems and graphic compression ratios.

Computers are tools that allow leisure studies faculty exciting ways to inform a highly demanding audience (Avedon, 1991). We have become a graphically oriented

society and one that depends on "sound bytes" to get the bulk of their information. The multimedia capability of the Internet allows us to visit distant places to learn about the recreational opportunities. Information this current is unavailable in any contemporary text book. This manuscript seeks to explore the vast potential of the Internet for distance learning of recreation geography and provides a relevant example currently found on the web.

### Background

The Internet is the useful and practical way to employ distance learning to an off-campus student population. A recent survey (Syllabus, 1997), found that 67% of all undergraduates have access to e-mail and the Internet. With these technological advances in communications, students can elect to take some Internet based courses. These courses may have the flexibility to be undertaken at any time and fit the students' work schedule.

Historically, faculty have incorporated multimedia presentations with slides and 16 mm movies. More recently, with computer technology and the presentation software available on the computer, one can produce quick and easy "overhead" style lectures. Often these types of classroom presentations are limited by a linear form of information, that is building step upon step to draw a particular point of view.

PowerPoint™ or ToolBook™ are a few of the contemporary software packages available for teaching, yet each must be recognized for certain limitations. For example, ToolBook produces excellent presentations for instruction, although the time and effort to produce a single lesson often precludes the use in all but limited applications. ToolBook is further limited since it requires massive hard disk space for the material (graphics, sound and movies) and thus limits its use on certain types of multimedia computers with a Bernoulli type drive or writable Compact Disks. PowerPoint, while not as powerful as ToolBook, does provide the instructor an easy format to produce lesson material quick and efficiently. While it offers multimedia capabilities like ToolBook, PowerPoint is still dependent on hardware should massive data storage for multimedia files be needed.

Multimedia presentations are widely used in many classes around the world. Yet, while there have been improvements to the presentation software and hardware available to teaching faculty, the technology is still highly hardware and software dependent. A standard dilemma facing educators today is the lack of a standard platform to prepare multimedia presentations. Often one cannot take everything needed along to every classroom (Solomon, 1994). It was not until 1996, as Fraser (1996) notes, that the Internet had multimedia capabilities with the introduction of Netscape 3.0 and the plug-ins available, making multimedia widely available on the web. Netscape 4.0 is now the standard, less than one year later. Now educators have the standard platform Solomon warned about: the Internet.

To improve classes and utilize computer technology, faculty ask the students to start their study on Internet Pages specifically prepared for various lecture topics. The wealth of material related to recreation on the Internet is enormous and far beyond the financial ability of any department's budget to support. Homepages designed to augment teaching allow students to explore a particular theme via the Internet. By writing the Hypertext Markup Language (HTML) or script for use on the Web, the instructor is no longer confined by the constraints of hardware and software and can introduce leisure studies to many students on or off campus. This is an important distinction since it allows the Internet to be incorporated in both traditional lectures as well as independent studies outside the normal classroom.

Those less familiar with computers can elect to purchase canned web page design software to produce instructional material, e.g., Web Course in a Box (madDuck Technologies). Many institutions now have web page design assistance online or on campus, a less costly alternative (Schutte, 1996). Netscape Communicator™ is an example of another program for web page creation and is free for educators.

The advantage to the Internet type of multimedia presentation is that resources are found worldwide, and therefore reduce the monetary expenditures necessary to acquire data. In fact, the preponderance of some types of data on the Internet, especially current tourism-theme data, is so widely available, the faculty who do not incorporate it in their lectures are put at a disadvantage.

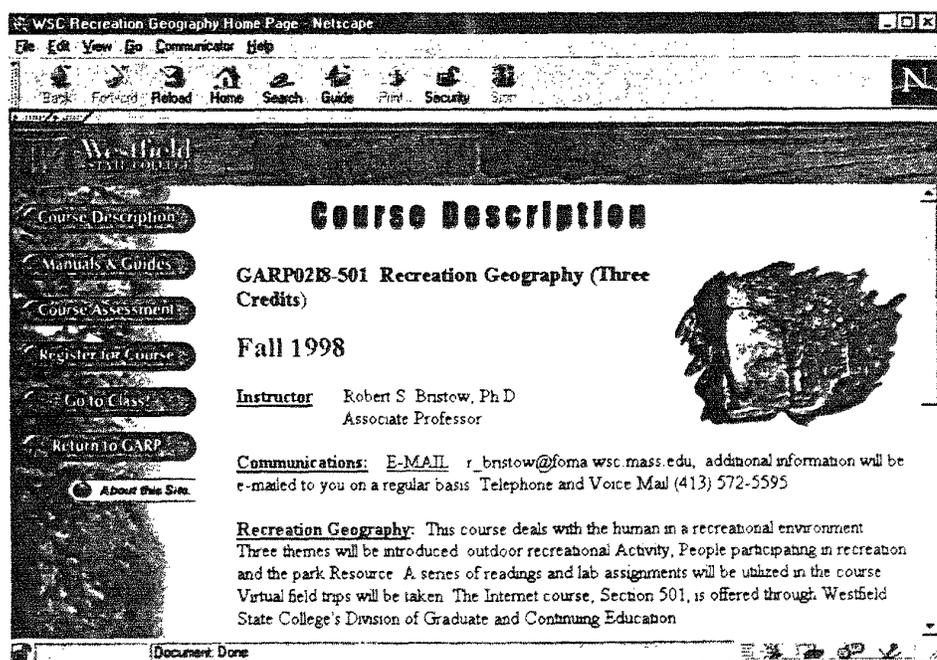
### Internet Distance Learning

Distance learning is a process that allows students and faculty to access resources. The American Council on Education (1996) defines distance learning as the

“separation of place and/or time between instructor and learner, among learners, and/or between learners and learning resources.” Any interaction between the participants is typically done through one or more forms of media. Internet Distance Learning utilizes the Internet and e-mail for all interactions between all parties involved.

While numerous distance learning opportunities are available on the web, none are specifically designed to teach recreation geography. A summary of distance learning sites inventoried at the World Lecture Hall (<http://www.utexas.edu/world/lecture/>) has the selection broken down into 90 disciplines. In each discipline there are several web courses listed. However, many courses identified in this distance learning index provide only the rudimentary materials to supplement classes, that is, perhaps a course outline, reading list, and sample exams. While these efforts provide excellent resource material for instruction, since they typically support a regular lecture class, they are truly not exploring the full potential of a distance learning opportunity. Therefore this paper will describe the elements to prepare and design an Internet Distance Learning class that is 100% administered via the electronic media.

The preparation of any course material for distance learning begins around the course outline and standard lesson plans. For example, in the class Recreation Geography, one way to understand the subject is to break it down into four units. In this example, recreation geography is the study of people, participating in a leisure activity at a park resource. The interaction among the three elements drives the fourth section, a discussion of planning and management of recreation opportunities. With these four themes in mind, Recreation Geography Online evolved (Bristow, 1998). Figure 1. displays the opening Homepage as viewed in a browser.



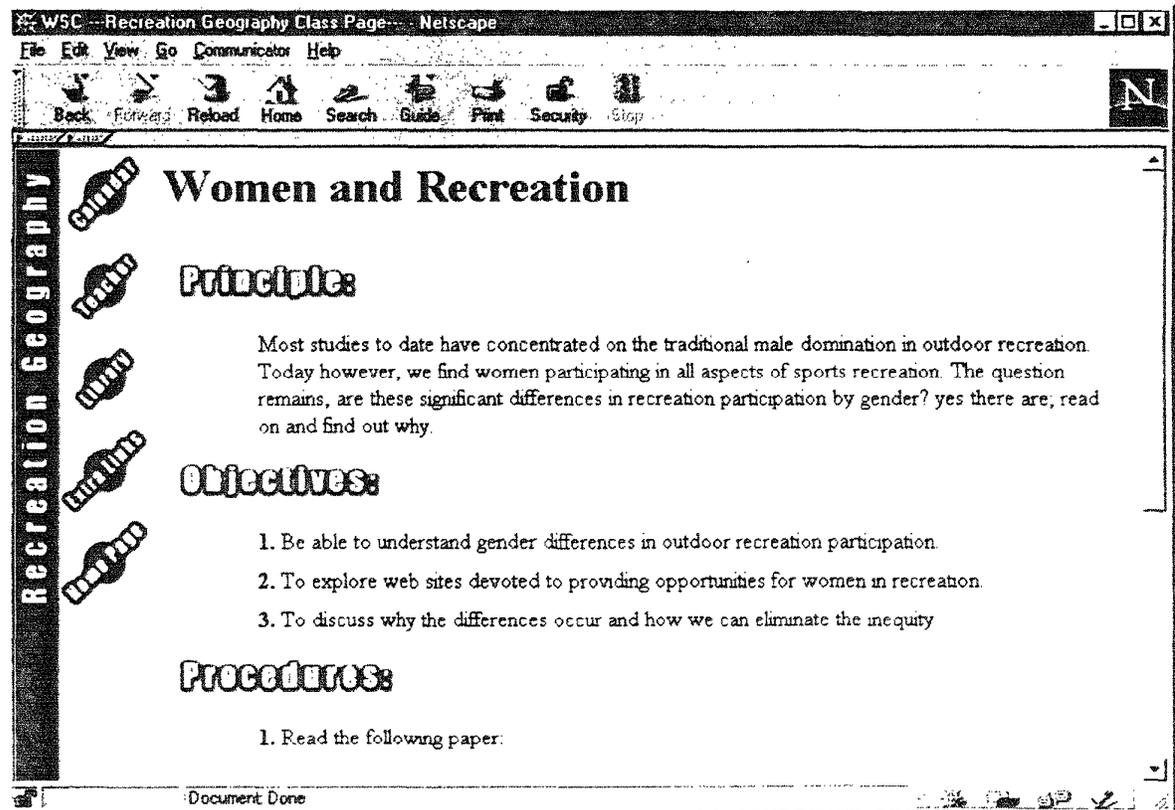
Upon accessing the online class, the reader is faced with a course description that provides an overview of the contents and other important issues. An introductory statement is also found detailing the differences between distance learning opportunities and a regular classroom experience. From this initial point, some "buttons" link the student to important pages. For example, one will find information mundane yet essential to all web based courses, such as e-mail, Internet navigation and searching, as well as information on how to cite Internet sources for the required papers and other assignments. Additional information in this section includes pertinent explanations of student regulations and other campus related documentation like bulletins and course offerings. This section is crucial for all distance learning modules since it is likely that all users will seek information about campus policies and procedures.

Another important section deals with Course Assessment and Evaluation. Here the distant learner will find information regarding class work grading and other forms of feedback. Encouragement of any feedback is necessary, since the dynamic nature of Internet distance learning is

still in an early stage of development (Shaeffer and Farr, 1993).

The beauty of the Internet is the freedom of information. All material is available to anyone having Internet access around the world. However, registered students will gain an important link to fellow classmates and the instructor by subscribing to a special RecGeog Listserv, which provides e-mail distribution and forwarding for all in the class. Students are thus able to communicate with fellow students via e-mail. Lewis and Hedegaard (1993) saw online communications between the instructor and students as a vital element for any distance learning project.

Since the material is set up in a series of lessons or modules, the course outline links the student to the specific sections of the course. A variety of loops and returns help the student in navigating the web. Since the pages are written in a Frames format, when a student "leaves" the Recreation Geography Online site, (s)he are still linked to the instructional material. Figure 2 illustrates an example of one of the modules that introduces recreation and gender issues.



Other than normal "Hard Copy" text books and journal articles, most reading originates from Web sites worldwide. Where material was not available from an Internet source, one can utilize the excellent recreation research available from public documents of various government agencies. In the case of Recreation Geography Online, the excellent research papers found published in the *Northeastern Recreation Research Symposium Proceedings* have provide resource material for modules that lack Internet links.

Grading over the Internet is determined by weekly written assignments (25% of total grade), a recreation demand survey and a recreation supply survey (25%), a term paper (25%) and participation (25%). All assignments are distributed via e-mail. Participation in the RecGeog Listserv reduces apathy as well. The RecGeog Listserv enables the students to communicate with the other students via e-mail and to conduct online debates on a variety of issues. While exams are not part of this online course, interested readers are referred to a variety of online examination software available. For example, QuizPlease (MoneyTree Software, 1997) might serve the needs for courses requiring tests.

To keep the student progressing on a regular schedule, a posted timetable is available and provides an overview of the course. Deadlines, while more flexible than a standard classroom instructional period, are maintained to monitor progress. Information on how to contact the instructor is found at all levels of the online course to insure quick and easy access to ask questions. You do not want the student to have to search for this information!

#### Assessment

In order to assess the value of the course, students were asked at the end of the semester to grade all elements of the online class. There were two evaluations. Both forms were distributed via e-mail and found online, and were to be returned electronically to college administrative staff. The responses were not available to the instructor until after the grades had been submitted. The first evaluation was contractually required. This end of term evaluation identified the students' perception of the instructor's style of teaching with declarations of agreement or disagreement of statements describing the course. On statement eight, the student rated how well they believed the class "was well organized." All responses were found in the Strongly Agree or Agree categories.

A more descriptive and verbal critique was also administered and allowed written comments. Again this evaluation took place via e-mail. Since there were no lectures in the online course, feedback about the reading assignments was sought. Students were generally positive about the reading assignments. The end of semester comments uncovered these findings related to online reading assignments:

"The material was "real life", very interesting."

"(I would add) more content where possible. I think the material was good, but I'm sure it'll get more better once Internet Distance Learning is widely accepted"

"I think (professor) provided a great amount of information on the course throughout his lesson plan and with the available links."

"(I would grade the readings) "A" overall. There were a few readings that were really long and time consuming. But overall the reading was just fine."

"(I would add to the course) more, in depth look into these (park) areas."

"Most of the readings were very interesting and helpful."

"The readings were interesting, unique and informative. Professor provided literature not just for course work but tried to incorporate interesting, real topics."

Obviously, student motivation and interest will influence how receptive they are to a particular topic. Since many of the papers were research based and included tables of statistics, some students felt the material was dry. However, it was felt that some of the readings should be research based and provide a view into the science of the discipline. Further, real-life applied research illustrated how one could study the geography of recreation.

#### Discussion

As faculty continue to update and research topics we teach, they are constantly seeking ways to get the information to the student and provide that forum to think. Count the times a faculty member has said "I wish I could do this on this software" or "I wish this book had a chapter on recreation demand surveys!". The same is true with contemporary multimedia packages in that they only allow the student to think along the same lines the author of the multimedia package thought. Static multimedia packages written by a team of authors stymie the student from asking the "what if" question. However, in a dynamic and interactive mode available on the Internet, the student can ask "what if" and explore the avenues that they discover. Moreover, they can seek and receive feedback along the way. So while society thrives on the excitement of the moment, the Internet can keep up to speed with the ever-changing thirst of our students. Saba (1996) recognizes that social change drives distance education more than any other factor in today's world. And we as educators must keep ahead of the pack.

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# THE EFFECTS OF ENVIRONMENTAL COURSEWORK ON STUDENT PERCEPTIONS OF THE ENVIRONMENT

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**Abstract:** A trend throughout the country is to combat the general lack of public knowledge about the natural environment by incorporating broad-based environmental education in schools. An example of this trend is including environmental education as part of the general education coursework at the college/university level. This study examined the effects of such coursework on students attitudes toward, perceived importance of, and complexity of thinking about a specific natural resource issue; the Endangered Species Act. Using a pre-test post-test control group design, students were presented with a description of the Endangered Species Act at the beginning and end of a multi-section general education English course, five sections of which focused on environmental issues, and five which didn't. After reading the description of the Act, students were asked to write an essay describing and defending their attitude toward the Act. Measures were obtained of specific and general attitudes, perceived importance, and importance of the Environment relative to other national issues such as the Economy, Crime, National Defense, and Education. The environment-based coursework did not influence attitudes toward the Endangered Species act, perceived importance of the Endangered Species Act, general environmental attitudes, nor the importance of the natural environment related to other national issues. However, the integrative complexity of writing about the Endangered Species Act significantly increased for those students in the environment-based sections, while it did not increase for those students in sections that did not emphasize the environment.

## Introduction

There is a growing tendency for the public to become involved in the management of natural resources. Accompanying this increased involvement is a general lack of understanding, on the part of the general public, of how naturally occurring ecosystems function. More specifically, a study of state of Washington K-12 educators suggested that they tended to have "liberal" attitudes toward environmental issues, highly negative attitudes toward non-preservation based NCO and private companies, and relatively low knowledge regarding many of the issues for which strong attitudes were held. A growing number of such educators are incorporating environmental education into their curricula at all levels of education. However, unless these educators have greater levels of environmental knowledge and understanding,

much of what is taught to students is either incorrect or contains bias. One way of combating this lack of public knowledge is to incorporate more broad-based, balanced environmental education into general education coursework at the college/university level. The goal of this study was to examine the effects of balanced environmentally based coursework on students' perceptions of the environment. Objectives addressed to accomplish this goal were:

1. To identify a specific environmental issue to be used to examine student perceptions and attitudes.
2. To identify specific sections of the Introductory Writing Course (English 101) that focus on environmental issues.
3. To determine the effects of the environmentally based coursework on the ability to think critically about a specific environmental issue.
4. To determine the effects of the environmentally based coursework on students' attitudes toward a specific environmental issue.
5. To determine the effects of the environmentally based coursework on students perception of the importance of a specific environmental issue.
6. To determine the effects of the environmentally based coursework on students' general environmental attitudes.

## Research Design

Sections of the university's Introductory Writing Course (English 101) were used to assess the effects of environmentally based coursework on student perceptions of the environment. Prior to the Fall 1996 semester, five English 101 classes were selected as part of the experimental group. These classes were selected due to their balanced focus on environmental issues (confirmed by an analysis of course syllabi prior to the class). In addition, five English 101 classes that did not focus on environmental issues were selected to serve as a control group. A pre-test post-test control group design was used to examine the effects of balanced environmentally based coursework on perceptions of the environment (Campbell & Stanley, 1963). Below is a description of the design.

Table 1. Research Design

	Pre	Treatment	Post
	Fall 1996 Semester	English 101 Class	Fall 1996 Semester
treatment group:	$Y_{b1}$	$X_e$	$Y_{a1}$
control group:	$Y_{b2}$	$X_n$	$Y_{a2}$

$Y_{b1}$  represents the measurement of students enrolled in an environmentally based English 101 course prior to the beginning of the course.  $Y_{b2}$  represents the measurement of students who are enrolled in an English 101 course that does not focus on the environment.  $X_e$  represents the completion of an environmentally based course while  $X_n$  represents completion of a non-environmentally based course.  $Y_{a1}$  (experimental group) and  $Y_{a2}$  (control group)

represent the measurement of the students after completing their respective English 101 courses.

#### **Development of the Research Instrument**

Below is a description of the environmental issue used to assess the effect of coursework on student perceptions of the environment and the operationalization of the study variables.

#### ***Environmental Issue***

Given the broad nature of issues related to environmental literacy, it was necessary to identify a specific environmental issue from which the effect of the curriculum on student perceptions can be extrapolated. The issue used in this assessment was the Endangered Species Act of 1973. Prior to completing the questionnaire, respondents were asked to read a description of the Endangered Species Act.

#### ***Study Variables***

In order to assess the effects of the environmental curriculum on student perceptions of the Endangered Species Act (ESA), several study variables were identified. These include:

1. Critical thinking ability regarding the ESA;
2. Attitudes toward the ESA;
3. Perceived importance of the ESA; and
4. General attitudes toward the environment.
5. Importance of environment relative to other national issues

***Critical thinking.*** Critical thinking was evaluated using the concept of *integrative complexity* (Tetlock, 1983). Integrative complexity is a value-neutral cognitive style, characterized by two components: *differentiation* and *integration*. Differentiation is implied by the recognition of different dimensions within a given issue. Integration is indicated by the recognition of trade-offs, syntheses, and higher order concepts relating the various dimensions of an issue. Subjects were provided with a general description of the Endangered Species Act and asked to write a narrative about what they think about the policy. This narrative was to include a discussion of (1) what they perceive to be the key dimensions of that issue (positive and negative aspects surrounding the issue), (2) their attitude toward that issue, (3) and why they hold that attitude. The level of integrative complexity was measured using a specific coding methodology described in the *Integrative Complexity Coding Manual* (Baker-Brown, Ballard, Bluck, de Vries, Suedfeld, & Tetlock, 1992). This coding allows for a 7-point interval level scale with increasing scores representing increasing complexity of writing.

***Attitude toward the issue.*** Attitude toward the Endangered Species Act was operationalized as the students' attitudes toward supporting the policy. Attitude was measured using three 7-point Likert-type scales. Students were asked if they felt that supporting the ESA would be (a) good or bad, (b) positive or negative, and (c) valuable or useless (Eagly, Mladinic, & Otto, 1994). An index of these three items

was created by computing the overall mean score. Such multiple measures of attitude are used in order to increase the validity of the attitude index..

***Perceived importance of the attitude.*** The perceived importance of attitudes toward the Endangered Species Act was assessed by asking six questions. Using 5-point unipolar scales from "not at all" (+1) to "extremely" (+5) subjects were asked (a) how important is the ESA to you personally? (b) how important is it that you know as much as possible about issues related to the ESA? (c) to what extent does the ESA have a direct affect on your life? (d) to what extent is it easy for you to think of ways that ESA directly affects your life? (e) to what extent do your opinions on ESA reflect your personal values? and (f) to what extent are your beliefs about ESA based on what you believe is morally right and wrong? These six items were combined into a single index measuring the students' perceived importance of the Endangered Species Act.

***General environmental attitude.*** General environmental attitudes were measured using a 15-item "New Environmental Paradigm" scale (Dunlap & Van Liere, 1978). Using a 7-point Likert-type scale, students were asked the extent to which they "strongly", "moderately", "slightly" or "neither" agreed or disagreed with each statement.

***Importance of general issues.*** Students rated the relative importance of several issues that are of concern in this country today. Students were asked to rank from 1 (the most important) through 5 (the fifth most important), the relative importance of the issues of education, crime, the natural environment, the economy, and national defense.

***Background Information.*** Students were asked to provide background information about themselves, including their sex, race, and residence they grew up in (in the pre-semester questionnaire administration). On the post-semester questionnaire administration, students were asked the extent to which environmental issues were covered (a) in this class (English 101) and (b) other classes they had taken. Responses were on a 5-point scale of "not at all" (0) through "extremely" (+4).

#### ***Analyses***

The writing of the English 101 students, about the ESA, was analyzed by students in the English 508, a graduate-level course on the evaluation of writing. Prior to analyzing the English 101 writings, the graduate students were trained in assessing integrative complexity. Each writing sample was scored by two separate raters, with the final integrative complexity score for each individual being the sum of the two scores. Results were analyzed using SPSSPC+ (Norusis 1992). To determine the effect of coursework on critical thinking, attitudes, personal importance of the environmental issue, and general environmental attitude, repeated measures analysis of variance were conducted. In addition to course focus (experimental versus control groups), sex and residence were included in each analysis as independent variables to

determine potential moderating effects of these factors. Wilcoxin matched-pairs sign test was conducted to determine the effects of the coursework on the importance of the natural environment relative to other national issues. Other analyses were conducted, where appropriate to supplement the above analyses. The default significance level was  $p \leq .05$ .

### Results

A total of 205 usable responses were obtained. This included 99 from the experimental group and 106 from the control group. Prior to analyses, tests were conducted to address the reliability and validity of key aspects of the data collection. Reliability analyses using Cronbach's alpha ( $\alpha$ ) were conducted for indices that were created including (a) the integrative complexity scores, (b) the perceived importance of the endangered species issue, and (c) the attitude toward the Endangered Species Act. A minimum Cronbach's  $\alpha$  of .60 is required for reliability (Nunnally & Bernstein, 1994). For the assessment of integrative complexity, the two raters for each writing sample were reliable with a Cronbach's  $\alpha = .75$  for the pre-semester writing and  $\alpha = .83$  for the post-semester writing. This supports combining the scores into an overall measure of pre-semester integrative complexity and post-semester integrative complexity. The importance indices were also reliable for both the pre-semester ( $\alpha = .77$ ) and post-semester ( $\alpha = .80$ ) assessments. Attitude indices for both the pre-semester and post-semester assessments were reliable as well ( $\alpha = .91$  and  $.90$ , respectively).

In addition to the reliability of the integrative complexity scores, the validity of group categorization (experimental versus control) was tested. Respondents indicated the extent to which environmental issues were covered (a) in this class (English 101), and (b) other classes they had taken. Using independent samples t-tests, the experimental group indicated significantly higher environmental coverage in the English 101 class than did the control group ( $m = 3.20$  versus  $1.04$ ;  $t = 7.86$ ;  $p < .001$ ). This validated the breakdown into experimental versus control group. For the second question, there was no significant difference between the extent to which individuals in the experimental group addressed environmental issues in classes not covered by this study versus those in the control group ( $m = 1.46$  versus  $1.10$ ;  $t = 1.24$ ;  $p = .219$ ). These results strengthen any perceived effects of environmental coverage for the experimental group.

### Description of Respondents

The mean integrative complexity score for the pre-semester assessment was 5.97 (on a scale of 2 to 14) while the mean post-semester score was 7.02. The overall attitude toward the Endangered Species Act was slightly to moderately negative, with a mean score of 2.14 on the pre-semester assessment (on a scale of 1 to 7 and 4 being a neutral midpoint) and 2.37 on the post-semester assessment. Overall, the Endangered Species Act was perceived as a moderately important issue for both the pre-semester assessment ( $m = 1.70$  on a scale of 0 to 4) and the post-semester assessment ( $m = 1.76$ ).

### The Effects of Coursework on the Ability to Think Critically about an Environmental Issue

Repeated measures analysis of variance was conducted to determine if the environment-focused English 101 classes influenced the complexity of thought about the Endangered Species Act. In addition, sex and residence were also included in the analysis to determine if these factors influenced perceptions of the ESA. None of the within-subjects interactions involving sex or residence were significant. There was a significant interaction between the time that integrative complexity measures were taken (pre-semester versus post-semester) and the group (experimental vs. control group) ( $F = 48.65$ ;  $p < .001$ ). A second repeated measures analysis was conducted to determine if the experimental group class sections were different in their effects on integrative complexity. There were no significant differences in changes in integrative complexity across class sections of the experimental group ( $F = 0.76$ ;  $p = .518$ ). All sections of the classes in the experimental group increased in their integrative complexity scores. In summary, these results suggest that (a) the environment-based coursework did increase the complexity of writing about the Endangered Species Act and (b) the effect was consistent across all courses with an environment based subject. Figure 1 is a graphic presentation of the effects of coursework on integrative complexity.

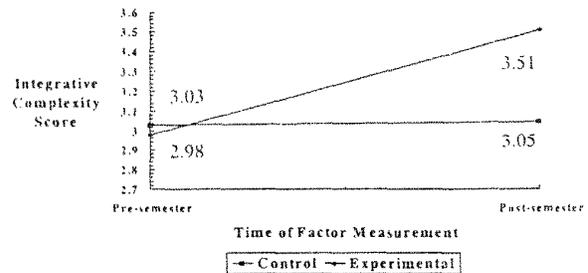


Figure 1. The Effect of Coursework on the Integrative Complexity of Writing about the Endangered Species Act

### The Effect of Coursework on Issue Importance, Environmental Attitudes, and Importance of National Issues

In addition to the effects of the environment based coursework on integrative complexity, the study also examined the effects of the coursework on the issue importance, general environmental attitudes, and relative importance of national issues, moderated by sex and residence.

### Issue Importance

No interactions related to sex or residence influenced the perceived importance of the issue. The control and experimental groups did not change their perception of the importance of the ESA as a result of the coursework ( $F = .01$ ;  $p = .921$ ).

### Attitude Toward the Endangered Species Act

Similar to the effects on issue importance, the effects of the coursework on attitudes toward the ESA were examined, viewing sex and residence as potential moderators. There were no significant effects of the environmental based coursework on attitudes toward the ESA ( $F = .47$ ;  $p = .495$ ).

### General Environmental Attitudes

The control and experimental groups were compared on their pre-semester responses to all of the general environmental attitude questions from the NEP scale (Dunlap and Van Liere, 1978). There were no differences between the two groups on any of the items, suggesting that the groups were the same. Then, independent t-tests were conducted to compare experimental and control groups on post-semester responses to the general environmental attitude items. The groups differed on only three of the post-semester items. The experimental group disagreed more strongly that the earth is approaching the limit of the number of people it can support ( $m = 2.07$  versus  $3.22$ ;  $t = 3.42$ ). The experimental group also believed more strongly that human ingenuity will insure that the earth does not become unlivable ( $m = 5.47$  versus  $4.30$ ;  $t = 3.04$ ) and that the balance of nature is strong enough to cope with the impacts of modern industrial nations ( $m = 5.87$  versus  $4.81$ ;  $t = 4.17$ ).

### The Relative Importance of National Issues

Table 2 presents the effect of coursework on the relative importance of national issues for the control and experimental groups separately. Issues used included education, crime, the natural environment, the economy, and national defense.

Table 2. The Effect of Coursework on the Relative Importance of National Issues - Results of Wilcoxin Matched Pairs Sign Test

	Mean Rank		z-value
	Pre-Semester	Post-Semester	
<i>Control Group:</i>			
Education	1.60(1)	1.56 (1)	0.62
Crime	2.96(3)	3.03 (3)	0.52
The Environment	2.82 (2)	2.75 (2)	0.49
The Economy	3.01 (4)	3.19 (4)	1.02
National Defense	4.28 (5)	4.29 (5)	0.11
<i>Treatment Group:</i>			
Education	1.21 (1)	1.21 (1)	0.00
Crime	3.50 (4)	3.14 (3)	1.35
The Environment	2.21 (2)	2.64 (2)	1.07
The Economy	3.29 (3)	3.21 (4)	0.12
National Defense	4.79 (5)	4.79 (5)	0.00

Wilcoxin matched-pairs signed-ranks test was used to determine if the rankings of each national issue changed as a result of the coursework. For both groups, there was no significant change in the ranking for each issue. For the control groups, there was also no change in the order. For

the experimental group, the only change from pre-semester to post-semester rankings was the switching of the crime (3rd ranked issue pre-semester and 4th post-semester) and economy. This however would not be considered significant given the relatively moderate to low average rankings for both issues. Overall, the most important issue was Education, followed by the Natural Environment, Crime, the Economy, and National Defense.

### Discussion

#### Summary and Conclusions

Overall, environmentally-based coursework appeared to have a significant effect on the ability of students to think critically about a specific environmental issue. In this case, students who completed an English 101 class that focused on the environment wrote essays about the Endangered Species Act that exhibited greater complexity of thinking than did those students whose English 101 class did not focus on the environment. These results are strengthened in that there was no difference in the integrative complexity scores between the experimental and control groups prior to the start of class. There were no significant effects of sex or residence on these results.

The Endangered Species Act was perceived as a moderately important issue. This did not differ across study group or with the administration of the English 101 class. Similar results were found for attitudes toward the Endangered Species Act. For all groups and both questionnaire administrations, the general attitude toward this Act was moderately negative. Again, there were no significant interactive effects due to sex and residence.

All groups perceived the natural environment as an important issue relative to education, crime, the economy, and national defense. Students saw the environment as the second most important national issue, behind education. For all groups and questionnaire administrations, crime and the economy were seen as slightly less important than the natural environment. All groups rated national defense as the least important national issue. These results were consistent for both stages of the assessment.

There were few differences between the experimental and control group on responses to general environmental attitude items. The control group was (a) more likely to agree we are approaching the limit of the number of people that the earth can support, (b) less likely to agree that human ingenuity will insure that we do not make the earth unlivable, and (c) less likely to agree that the balance of nature is strong enough to cope with the impacts of modern industrial nations. Although these differences are few and represent only differences in strength of similar beliefs and not differences in belief direction, they suggest a small tendency for individuals who took an environmentally based English 101 course to place slightly more trust in the ability of humans to effectively manage natural resources

#### Other Observations

There are several specific observations that address the results described above. While these do not necessarily

represent weaknesses of the assessment that was done, they do represent other issues that should be considered in the future. These observations are those made by the author alone and may not represent all the issues, identified by others, that should be addressed in future assessments.

1. The sample was very heavily weighted toward students who reported being white. In fact, the classes in this aspect of the study contained no African Americans or Native Americans and very few Hispanics and Asian Americans. As a result, no analyses on the effects of ethnicity were conducted. Future research in this area should focus on insuring that a representative number of students of a variety of ethnicities are represented.
2. This assessment was limited to perceptions of the Endangered Species Act of 1973. Future research should address other environmental issues, either singularly or as a group, to insure the results obtained were not an artifact of the specific issue addressed.
3. The primary focus of this assessment was to examine the effects of general course content on perceptions of the environment and an environmental issues. Future assessments should focus on comparisons of different pedagogies used to present environmentally-based content.

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## MOTIVATION TO VOLUNTEER AT SHAVER'S CREEK ENVIRONMENTAL CENTER

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**Abstract:** The study provides descriptive information as to who volunteers at environmental education centers. The sample consisted of 30 volunteers from the Shaver's Creek Environmental Education Center of The Pennsylvania State University. Volunteers for this study were asked to indicate the extent to which a list of 28 motives factored in their decision to volunteer for the environmental education center. Results showed volunteers are motivated by the importance of teaching others, the need to feel like they are making a difference, to gain experience in a field they may choose for a future career, and the chance for an excellent education experience. One-way analysis of variance showed significant effects of demographic variables on various motives to volunteer. By understanding which motives are most important to volunteers and how demographic variables affect these motives, managers may improve recruitment and retention of volunteers.

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### **Introduction:**

Financial constraints on non-profit organizations such as environmental education centers have increased the importance of volunteers and the tasks they perform. Knowing what motivates a person to volunteer for environmental education centers can make a big difference in areas such as volunteer recruitment. Research has been conducted on volunteers and their motivations in human service organizations such as hospitals (Zweigenhaft, Armstrong, Quintis, and Riddick 1996) and social services (Cnaan and Goldberg-Glen 1991). Information from past research is valuable but there is a need to understand motivations of volunteers at environmental education centers. The purpose of this study is to determine the characteristics of environmental education volunteers, what the primary motivations for volunteering are, and whether there is a relationship between certain demographic variables and motivations for volunteering.

Literature on environmental education volunteers is quite sparse, but the literature on volunteer management and the motivation to volunteer (MTV) very comprehensive. Management of volunteers and related issues are now considered to be sub-disciplines of public administration, yet they are also interdisciplinary, with the greatest portion of the literature being published within the last 30 years (Still and Gerhold, 1997b). Before discussing the MTV

literature and what has been written in relation to environmental education volunteers, several important points about volunteers should be discussed.

Voluntary service can be divided into two broad categories: "formal" volunteer work in which the volunteer activity is carried out through an organization, and "informal" volunteer work that is engaged outside of the "formal" organization (Fischer, Mueller, Cooper 1991). Volunteers can be categorized as "habitual," meaning they volunteer on a routine basis whether that is weekly or monthly (Cnaan and Goldberg-Glen 1991), or "occasional" meaning they participate in voluntary activity more infrequently or on an as-needed basis.

A successful volunteer program is often based on an accurate understanding of the motivations and psychology of volunteers by full-time employees or volunteer coordinators (Still and Gerhold, 1997b). Schafer (1980) believes that in order to keep volunteers motivated, the rewards for their service must be the same or greater than the costs. Numerous studies over the past three decades have followed the social exchange theory and tried to categorize MTV factors into two categories (altruistic/egoistic). The following are findings from important studies conducted in this area.

Gidron's (1978) study of volunteers at mental and health institutions found that the "rewards" of volunteer work varied by age. Younger volunteers believed learning and self-development to be more valuable than older volunteers. Older volunteers considered opportunities for increased social interaction of greater value than did younger volunteers. The sample of volunteers studied, however, believed that their work was generally done for the benefit of others.

In studies focusing on demographic variables influence on volunteering, American Red Cross volunteer MTV factors were shown to be influenced by age, gender, and marital status (Gillespie and King, 1985). In Fitch's (1987) study with college students, a 20-item scale was used to assess different reasons for volunteering. The findings were evenly spread between altruistic (such as "helping others"), egoistic (for example "to learn new skills"), and what was called "social obligation" (the idea of repaying a debt to society) motives. In another college student study, Fitch (1991) measured "service" volunteers with two other groups: individuals who were "involved" with social activities, and individuals who were "uninvolved" in social or service work. Utilizing Gordon's Survey of Interpersonal Values, service volunteers were significantly different from other groups. Demographic factors between the groups were not significantly associated with level of student volunteerism or activity while women and religiously oriented students were more likely to be involved with voluntary service.

MTV factors in human services were thoroughly reviewed and analyzed by Cnaan and Goldberg-Glen (1991). After reviewing over 30 studies, they concluded that there were

at least 28 well recognized motives for volunteering (each having been mentioned in at least five studies). Cnaan and Goldberg-Glen (1991) concluded that: "volunteers are both altruistic and egoistic," and they "do not distinguish between types of motives," rather they "act on both." This "unidimensional" finding calls into question previous notions of the two or three distinct category models of MTV (Zweigart, Armstrong and Quintis, 1996).

Exactly why people volunteer remains unresolved, and may never be fully understood. Volunteers may not completely understand themselves as to why they volunteer, or potentially they are unable or reluctant to articulate their motives (Zweigart, Armstrong, and Quintis, 1996).

No empirical studies could be found specifically related to the topic of environmental education and volunteerism. Because of this, this study will seek to determine the characteristics of environmental education volunteers, what the primary motivations for volunteering are, and whether there is a relationship between certain demographic variables and motivations for volunteering. Because MTV

has important implications for recruitment, management and retention of volunteers, a clearer understanding of MTV is needed.

**Methodology:**

This study used the Motivation to Volunteer Scale created by Cnaan and Goldberg-Glen (1991). The scale (Table 1) uses 28 well recognized motivations from over 30 studies (each motivation being mentioned a minimum of 5 times). Each respondent was asked to indicate to what extent each motive contributed to their decision to volunteer. Respondents were asked to rate each item on a scale of 1 (*not important at all*) to 5 (*very important*). Data for this study was collected as part a mailback questionnaire between July and August 1997. A total of 30 surveys were returned from the original 60 that were mailed out. A series of one-way analysis of variance were performed to determine which motivations were affected by the demographic variables income, marital status, number of times volunteered last year, previous volunteer work, member of a pro-environmental group, and gender.

Table 1: Motives to Volunteer and Their Relatives Importance

Motive	Mean	SD
1. Opportunity to do something worthwhile	4.533	.819
2. Broadening horizons	4.400	.913
3. Excellent educational experience	4.233	1.072
4. It creates a better society	4.200	1.030
5. Provide challenging activities	4.167	.949
6. Opportunity to vary activities	4.167	1.019
7. Feel better about oneself	4.066	.868
8. Opportunity to work with different age groups	3.667	.922
9. Improve one's own attitude on life	3.600	1.162
10. Opportunity for relationship	3.600	1.162
11. Agency can provide more for less	3.517	.949
12. Adhering to agency goals	3.300	1.417
13. Able to relate to clients from own experience	3.200	1.214
14. Opportunity to change injustices	3.200	1.374
15. Experience in providing service	3.133	1.357
16. Practical experience towards employment	3.033	1.731
17. No one to carry out volunteer work	2.967	1.272
18. Previous contact with professional from this agency	2.967	1.325
19. Free time	2.793	1.264
20. Agency is prestigious	2.500	1.074
21. Opportunity to return fortune	2.483	1.298
22. People in community volunteer	2.233	1.194
23. It is God's expectation	2.167	1.315
24. Continuing a family tradition	2.033	1.245
25. Employer/ school expect it	1.793	1.146
26. Loneliness	1.767	1.194
27. Nothing else to do with time	1.700	1.207
28. Knowing a client of this agency	1.633	1.034

**Results:**

The final sample size was 30 from the original 60 that were mailed out. The demographic breakdown of the respondents showed an even split between females (15) and males (15). The average age was 37.3 for respondents with

a range of 20 to 71. Most individuals in this study had a high degree of education with 26 out of 30 (87%) having had a college degree or higher. Respondents had a large degree of variation in income from less than \$5000 to over \$100,000. This is not surprising due to the fact

at least 28 well recognized motives for volunteering (each having been mentioned in at least five studies). Cnaan and Goldberg-Glen (1991) concluded that: "volunteers are both altruistic and egoistic," and they "do not distinguish between types of motives," rather they "act on both." This "unidimensional" finding calls into question previous notions of the two or three distinct category models of MTV (Zweigart, Armstrong and Quintis, 1996).

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10. Opportunity for relationship	3.600	1.162
11. Agency can provide more for less	3.517	.949
12. Adhering to agency goals	3.300	1.417
13. Able to relate to clients from own experience	3.200	1.214
14. Opportunity to change injustices	3.200	1.374
15. Experience in providing service	3.133	1.357
16. Practical experience towards employment	3.033	1.731
17. No one to carry out volunteer work	2.967	1.272
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Table 2. List of Motives to Volunteer and Independent Variables

MTV	Gender	Pro-Environmental Group	Previous Volunteer Work	Number of Times Volunteered last year	Marital Status	Income	Education
1. Opportunity to do something worthwhile	.193	.860	2.564	3.446	1.293	.268	1.806
2. Broadening Horizons	.800	.008	.049	.800	.070	1.490	4.738*
3. Excellent educational experience	5.688*	4.742*	.347	.717	.342	.023	.039
4. It creates a better society	2.084	4.129	.008	2.084	2.326	.084	1.403
5. Provide challenging activities	.036	1.217	.225	.325	5.507*	2.455	.107
6. Opportunity to vary activities	.281	1.049	.000	.795	1.777	.093	1.112
7. Feel better about oneself	1.626	.814	1.927	3.027	.150	.977	7.704*
8. Opportunity to work with different age groups	.152	.017	.979	.152	1.124	.018	.916
9. Improve one's own attitude on life	.000	.140	.295	.000	.034	.016	1.395
10. Opportunity for relationship	.884	4.300*	.054	.884	.034	.202	1.395
11. Agency can provide more for less	.230	.761	.833	4.776*	.795	.075	.455
12. Adhering to agency goals	.016	.079	.493	4.134	.041	.201	.006
13. Able to relate to clients from own experience	.087	.613	6.445*	2.365	.056	5.893*	.006
14. Opportunity to change injustices	1.813	10.248*	.525	.275	.044	1.798	.772
15. Experience in providing service	5.318*	.005	6.154*	.282	1.252	.016	.465
16. Practical experience towards employment	.897	.008	.328	.536	1.927	.087	1.397
17. Not to carry out volunteer work	.020	.167	.180	.020	.017	.161	1.177
18. Previous contact with professional from this agency	.018	.449	9.268*	6.526*	3.457	1.802	.449
19. Freetime	.001	.539	2.491	2.359	.008	2.706	.265
20. Agency is prestigious	3.833	.728	.000	.714	.000	1.551	.030
21. Opportunity to return fortune	.614	.419	5.363*	13.807*	5.766*	.907	3.803
22. People in community volunteer	.023	.098	.023	1.151	.006	.587	.031
23. It is God's expectation	.168	.053	.473	1.593	.542	.109	1.464
24. Continuing a family tradition	.529	.016	2.492	1.055	.018	.634	.012
25. Employer/school expect it	2.673	.024	1.228	.001	.010	.057	.057
26. Loneliness	.023	1.524	1.731	4.414*	4.817*	3.373	.201
27. Nothing else to do with time	.200	10.134*	.454	1.125	4.802*	4.358*	2.269
28. Knowing a client of this agency	.030	.072	3.013	.274	.002	.122	.547

Note: Numbers in columns are the F values for the ANOVA's carried out between the independent variables and the 28 Motives to Volunteer.

Note: Tables 3 thru 9 only show the significant values for the 28 Motives to Volunteer and independent variables and are identified by the symbol \* found in Table 2.

**Categories Include:**

Gender: Male/ Female

Pro-environmental group: yes/no

Previous volunteer work: yes/no

Number of times volunteered last year: 11 or less/12 or more

Marital Status: married/ unmarried

Income: <\$24,999/ >\$25,000

Education: <=college/>=graduate

\* Significant differences are at the .05 level for Tables 2 through 9.

Table 3. ANOVA of MTV by Gender

MTV	Male: mean	Female: mean	F	P<
Experience in providing service	2.600	3.666	5.318	.029
Excellent education experience	3.800	4.666	5.688	.024

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17. No one to carry out volunteer work	.020	.167	.180	.020	.017	.161	1.177
18. Previous contact with professional from this agency	.018	.449	9.268*	6.526*	3.457	1.802	.449
19. Free time	.001	.539	2.491	2.359	.008	2.706	.265
20. Agency is prestigious	3.833	.728	.000	.714	.000	1.551	.030
21. Opportunity to return fortune	.614	.419	5.363*	13.807*	5.766*	.907	3.803
22. People in community volunteer	.023	.098	.023	1.151	.006	.587	.031
23. It is God's expectation	.168	.053	.473	1.593	.542	.109	1.464
24. Continuing a family tradition	.529	.016	2.492	1.055	.018	.634	.012
25. Employer/school expect it	2.673	.024	1.228	.001	.010	.057	.057
26. Loneliness	.023	1.524	1.731	4.414*	4.817*	3.373	.201
27. Nothing else to do with time	.200	10.134*	.454	1.125	4.802*	4.358*	2.269
28. Knowing a client of this agency	.030	.072	3.013	.274	.002	.122	.547

Note: Numbers in columns are the F values for the ANOVA's carried out between the independent variables and the 28 Motives to Volunteer.

Note: Tables 3 thru 9 only show the significant values for the 28 Motives to Volunteer and independent variables and are identified by the symbol \* found in Table 2.

**Categories Include:**

Gender: Male/ Female

Pro-environmental group: yes/no

Previous volunteer work: yes/no

Number of times volunteered last year: 11 or less/12 or more

Marital Status: married/ unmarried

Income: <\$24,999/ >\$25,000

Education: <=college/>=graduate

\* Significant differences are at the .05 level for Tables 2 through 9.

Table 3. ANOVA of MTV by Gender

MTV	Male: mean	Female: mean	F	P<
Experience in providing service	2.600	3.666	5.318	.029
Excellent education experience	3.800	4.666	5.688	.024

Table 4. ANOVA of MTV by Member of a Pro-environmental Group

MTV	Yes: mean	No: mean	F	P<
Excellent education experience	4.692	3.235	4.742	.038
Opportunity for relationship	4.076	3.882	4.300	.047
Opportunity to change injustices	4.000	2.588	10.248	.003
Nothing else to do with time	1.000	2.235	10.134	.004

Table 5. ANOVA of MTV by Previous Volunteer Work

MTV	Yes: mean	No: mean	F	P<
Able to relate to clients from own experience	3.458	2.166	6.445	.017
Experience in providing service	3.416	2.000	6.154	.019
Opportunity to return fortune	2.217	3.500	5.363	.028
Previous contact with a professional from this agency	3.292	1.666	9.268	.005

Table 6. ANOVA of MTV by Number of Times Volunteered Last Year

MTV	11 or less: mean	12 or more: mean	F	P<
Agency can provide more for less	3.143	3.866	4.776	.038
Opportunity to return fortune	1.714	3.200	13.887	.001
Previous contact with a professional from this agency	3.533	2.400	6.526	.016
Loneliness	1.333	2.200	4.414	.045

Table 7. ANOVA of MTV by Marital Status

MTV	Married: mean	Non-married: mean	F	P<
Provides challenging activities	4.571	3.811	5.507	.026
Opportunity to return fortune	1.928	3.000	5.766	.023
Loneliness	1.285	2.187	4.817	.037
Nothing else to do with time	1.214	2.125	4.802	.037

Table 8. ANOVA of MTV by Income

MTV	<=24,999: mean	>=25,000: mean	F	P<
Able to relate to clients from own experience	2.545	3.578	5.893	.022
Nothing else to do with time	2.272	1.368	4.358	.046

Table 9. ANOVA of MTV by Level of Education

MTV	<=College: mean	>=Graduate: mean	F	P<
Broadening Horizons	4.632	4.000	4.738	.038
Feel better about oneself	4.368	3.545	7.704	.010

that a wide variety of individuals ranging from students to professionals volunteer at the nature center. Volunteers in this study had volunteered previously (80%), were members of a pro-environmental group (43%), and were closely split between married and non-married individuals.

The top ranked motivations (Table 1) were either altruistic (the goal of increasing others' welfare) or egoistic (the goal of increasing the volunteer's own welfare) in nature. Much

like the Cnaan and Goldberg-Glen (1991) study, the highest endorsed item in this study was the opportunity to do something worthwhile.

In Table 2, the complete results of the analysis of Motives to Volunteer by the independent variables are given. The table highlights which independent variables have significant relationships with the Motives to Volunteer. The wide distribution of significant values shown in Table

2 suggest that the independent variables had varying affects on the Motives to Volunteer.

Females were significantly more likely ( $p=.024$ ) to seek an "educational experience" and volunteer because they have "past experience in providing service" ( $p=.029$ ) than were males (Table 3). Members of a pro-environmental group were significantly more likely ( $p=.038$ ) to "seek an educational experience", "search out relationships" ( $p=.047$ ), and "want to change past injustices" ( $p=.003$ ) than were non-members (Table 4). Individuals with previous volunteer experience were more likely to volunteer because they are "able to relate to clients from own past experience" ( $p=.017$ ), because of past "experience in providing service" ( $p=.019$ ), and "previous contact with a professional from this agency" ( $p=.005$ ) (Table 5). Next, respondents who volunteered more often (12 or more times) last year were significantly more likely to volunteer because the "agency can provide more for less" ( $p=.038$ ), for the "opportunity to return fortune" ( $p=.001$ ), and "loneliness" ( $p=.045$ ) (Table 6). Married respondents were also shown to be significantly more likely ( $p=.026$ ) to volunteer because volunteering "provides challenging activities" ( $p=.026$ ) while unmarried individuals were more likely to volunteer because of the "opportunity to return fortune" ( $p=.023$ ), "loneliness" ( $p=.037$ ), and "nothing else to do with time" ( $p=.037$ ) (Table 7). For income, respondents with an income above \$25,000 were more likely to volunteer because they are "able to relate to clients from own experience" ( $p=.022$ ) while individuals with incomes less than \$24,999 were more likely to volunteer because of "nothing else to do with time" ( $p=.046$ ) (Table 8). Lastly, those individuals who have an undergraduate degree or formal education were significantly more likely ( $p=.038$ ) to volunteer because they were seeking to "broaden horizons" and "feel better about oneself" ( $p=.010$ ) than were people with a graduate degree or higher (Table 9).

#### Conclusion:

The evidence from this study supports Still and Gerhold's (1997b) contention that managers of environmental education centers can benefit from an understanding of volunteer motivation by specifically designing work to meet altruistic, egoistic and social needs of volunteers. The importance of egoistic and altruistic motivations in this study is similar to Fitch's (1987) and Cnaan and Goldberg-Glen's (1991) studies which found altruistic and egoistic needs to be very important to volunteers. However, managers must be aware of the need for some volunteers to socially interact with others while volunteering. Environmental education centers can benefit by providing volunteers with opportunities to experience the following:

1. Learning from their work
2. Challenging them in activities they consider worthwhile
3. Allowing volunteers to interact with visitors so they feel as though they are positively influencing people

Managers should involve volunteers with other volunteers and full-time staff to make it a social experience at the

environmental education center. The most important point managers can take from this study is to provide each person with the chance to fulfill individual needs which may satisfy his or her motivation to volunteer. For future research, others interested in volunteers at environmental education centers may want perform a similar study with a larger sample group, create a motivation scale more suitable for environmental education volunteers, and compare motivation of environmental education volunteers with other types of volunteers as well as non-volunteers. Although volunteer research has become increasingly popular over the last 30 years, what is known about volunteers for environmental education centers is relatively insignificant. At a time when centers like Shaver's Creek increasingly rely on volunteers to support them, understanding what volunteers want and need may be the answer to some of these environmental education center's most important questions.

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## STUDENT WILLINGNESS TO PAY MORE FOR A TOURISM EXPERIENCE WHICH SUPPORTS ENVIRONMENTAL CONSERVATION

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**Abstract:** Ecotourism is a well-recognized and rapidly growing aspect of the tourism industry. Since ecotourism opportunities provide environmental benefits, economic theory implies that an ecotourism experience should cost more than a typical tourism experience (all other things held constant). Previous studies have shown that consumers are willing to pay the additional cost.

We hypothesize that Spring Break packages that focus on the natural and cultural diversity of tropical destinations would be appealing to certain segments of the college student population. The following exploratory study of University of New Hampshire students attempts to determine if they would be willing to pay (WTP) more for a tourism experience which supports environmental conservation. We use the variable WTP as a proxy for a student's likelihood to purchase a Spring Break vacation package based on ecotourism opportunities. The following objectives guide our study:

- To provide an economic analysis of ecotourism and its relationship to the college Spring Break vacation market.
- To identify which socio-economic variables best describe those college students who are willing to pay more for a tourism experience that supports environmental conservation.
- To formulate conclusions and recommendations based upon our findings, which are hypothetically targeted to travel agencies that wish to develop a marketing plan for Spring Break vacations focusing on ecotourism.

To explore a consumer's willingness to pay more for a tourist experience which supports environmental conservation, we utilized a survey which was distributed to 650 students enrolled in an *Introduction to Tourism* course

at the University of New Hampshire. This course is optional for all majors in fulfilling a General Education requirement, and it is required for all Tourism Planning and Development majors. For the past three years, the survey was distributed to all students enrolled in the class. The return rate was between 90 and 95 percent. After eliminating incomplete or incorrectly recorded response cases, our final sample size was 635 students.

A primary focus of the survey was to explore UNH students' tastes and preferences regarding tourism experiences, with an emphasis on Spring Break. Although the survey asked numerous questions pertaining to nature-based tourism, our exploration focused on only one question in this survey. Students were asked whether they would be willing to pay more for a tourism experience when they know that some of the money will be used to protect environmental resources. They could select an answer based on a 5-point Likert scale, ranging from strongly disagree to strongly agree.

We found that of the 478 cases, 386 (78.7%) indicated that they were willing to pay more for a tourism experience when they knew that some of the money will be used to protect natural resources. One objective was to determine what sort of student was willing to pay, as identified by socio-economic variable responses included in the survey. In this study, we use logit regression in the analysis of 'yes' and 'no' responses to a question of WTP. Resultant statistics indicate whether or not correlations can be drawn between the dichotomous responses and several socio-economic variables. Additionally, cross-tabulations are considered in order to develop more informative descriptions of survey results.

Based on our findings, an important sub-population of students to target would be those who have previously been enrolled (or are currently enrolled) in an environmental class. These students are more likely to understand and appreciate the significance of environmental conservation, and therefore are more likely to place a higher value on a tourism experience which supports this concept. Since a larger percentage of older students are willing to pay more for a tourism experience which supports environmental conservation, it would obviously be advisable to target older students. Older students may tend to be more mature, have more income, and have been more likely to have developed opinions based upon a broader base of general tourism experiences. Finally, our study implies that a larger percentage of females than males are WTP for an ecotourism experience. In terms of marketing strategy, a suggestion would be to develop ecotourism packages which specifically incorporate activities of interest to the female college student population.

The findings from this exploratory study might be useful to travel agencies that wish to develop a marketing plan for ecotourism-related Spring Break packages. In order to maximize marketing strategies, it is important to take into account the socio-economic characteristics of potential clients.

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## Introduction

Ecotourism is a well-recognized and rapidly growing aspect of the tourism industry. Needless to say, ecotourism has become the latest buzz word to sell a variety of tourism products. This "green bandwagon" is similar to that in the manufacturing industry, where producers know that 'green' sells. (Cater and Lowman, 1994) Since ecotourism opportunities provide environmental benefits, economic theory implies that an ecotourism experience should cost more than a typical tourism experience (all other things held constant). Consumers seem willing to pay the additional cost. According to a 1992 survey conducted by the US Travel Data Center, researchers determined that, on average, tourists would spend 8.5% more for travel services and products provided by environmentally responsible suppliers. (Cater and Lowman, 1994)

We suggest that a primary distinction can be made between those who participate in nature-based tourism and those who participate in ecotourism opportunities. The nature-based tourist simply derives benefit from the environment, whereas the ecotourist goes a step further and gives something back to, or provides benefits to, the environment. In other words, the ecotourist makes some sort of positive "economic contribution" to that nature destination. It should be noted that such economic contributions are not necessarily limited to monetary (explicit) benefits, such as a user fee or donation. Although not stated in this study, we assume the term "economic contribution" to also encompass non-monetary (implicit) benefits, such as volunteer labor or even increased awareness or concern, which in the long run will have a positive affect on environmental conservation. In addition, we define environmental conservation very broadly to include the enforcement of protection policies, environmental restoration and damage repair, and education or outreach programs, which encourage conservation practices.

A casual look at the Spring Break advertisements posted around college campuses would reveal that the Spring Break sector has not joined the green bandwagon. Most advertising schemes for these packages focus solely on the party scenes tropical destinations have to offer. Perhaps marketers assume that college students on Spring Break lack interest in anything other than alcohol and suntans. We believe that such assumptions do not hold true for all students wishing to travel over Spring Break. Perhaps another reason that ecotourism packages do not cater to the Spring Break market is that college students traditionally have small disposable incomes, which may lead travel marketers to conclude that they would not be willing to spend the extra dollars that ecotourism trips require.

We hypothesize that college Spring Break packages that focus on the natural and cultural diversity of tropical destinations would be appealing to certain segments of the college student population. The following exploratory study of University of New Hampshire students attempts to determine if they would be willing to pay (WTP) more for a tourism experience which supports environmental

conservation. We use WTP as a proxy for a student's likelihood to purchase a Spring Break vacation package based on ecotourism opportunities. The following objectives guide our study:

1. To provide an economic analysis of ecotourism and its relationship to the college Spring Break vacation market.
2. To identify which socio-economic variables best describe those college students who are willing to pay more for a tourism experience that supports environmental conservation.
3. To formulate conclusions and recommendations based upon our findings, which are hypothetically targeted to travel agencies that wish to develop a marketing plan for college Spring Break vacations with an ecotourism focus.

## Spring Break Scenario

Although the following scenario was not presented to survey respondents, it formed a guide for our interpretation of the study results, and brought them into perspective. Imagine a particular college student whose main interest regarding her Spring Break vacation is to spend it somewhere warm and sunny, away from the cold Northeast. After examining vacation brochures from several destinations, she finds two all-inclusive resort packages which are both very appealing. She narrows her choices to the "Luxury Lodge" package or the "EcoLodge" package. After careful research, she determines that both packages offer equally beautiful and tropical locations, both offer equally comfortable accommodations, and both offer equally enjoyable recreational opportunities.

However, the EcoLodge package is more expensive, for several reasons. The student finds that the EcoLodge is constructed of sustainably harvested local wood products. The EcoLodge only utilizes ecologically sound waste treatment facilities and generate their electricity by solar panels. EcoLodge's restaurant serves only locally and organically grown foods. They maintain their landscaping using organic practices. They cool their buildings without using CFC's. EcoLodge cleans its establishment using environmentally friendly cleaning products. They even contribute a percentage of their profits to a local nature preserve.

In this scenario, we are assuming that the only noticeable difference between the two resorts is the price. We also assume that this difference in price is solely due to the increased cost of sustainable management efforts. Holding all other factors constant, would this rational college student be willing to pay more for her Spring Break trip, knowing that this additional money was going towards environmental conservation?

Therefore, a consumer's willingness to pay more for environmental conservation interests us in this exploratory study. If this student placed no value on environmental conservation, theoretically she would not be willing to pay even a penny more for the EcoLodge package.

Nevertheless, if she did value environmental conservation, in theory she would be willing to pay more for the choice which supported it.

With this scenario in mind, we explored a section of a survey given to a sample of UNH students. As mentioned in our objectives, we intended to identify characteristics which might predict which UNH students would be potential consumers of ecotourism experiences - that is, a tourism experience which financially supports environmental conservation.

### Study Sample and Survey

To further explore a consumer's "willingness to pay more for a tourist experience which supports environmental conservation," we utilized a survey which was distributed to 650 students enrolled in Dr. Rob Robertson's Introduction to Tourism course at the University of New Hampshire. This course is optional for all majors in fulfilling a General Education requirement, and it is required for all Tourism Planning and Development majors. For the past two years, the survey was distributed to all students enrolled in the class, and each student was given four blank surveys to distribute to friends of their discretion. The return rate was between 90 and 95 percent, due to the fact that completion of the surveys had an effect on their grades in the class. This survey will continue to be distributed to future classes, with the intention of developing a database of nature based tourism information which can be analyzed in a multitude of ways.

A primary focus of the survey was to explore UNH students' tastes and preferences regarding tourism experiences, with an emphasis on Spring Break. Although the survey asked numerous questions pertaining to nature-based tourism, our exploration focused on only one question in this survey. Students were asked whether they would be willing to pay more for a tourism experience when they know that some of the money will be used to protect environmental resources. They could select an answer based on a 5-point Likert scale, ranging from strongly disagree to strongly agree. The middle of the scale was "neither agree nor disagree".

### Data Analysis

After eliminating incomplete or incorrectly recorded response cases, our final sample size was 635 students. In order to simplify our statistical analysis, we eliminated the 157 cases (25% of 635) where students selected the neutral response to the WTP question we chose to analyze (resulting in 478 cases). Furthermore, we collapsed the "Strongly Disagree" and "Disagree" categories into simply "Not Willing to Pay" (NWTP). Likewise, we collapsed "Strongly Agree" and "Agree" into simply "Willing to Pay" (WTP). Although this simplification of our data limits the explanatory power of our results, we felt it was necessary in order to fit our data into a dichotomous choice analysis. This was a necessary alternative, since the survey did not lend itself to a true Contingency Valuation Method analysis (that is, the survey did not ask students for a specific dollar amount that they might be willing to pay for environmental conservation).

As represented in Table 1 below, we found that of the 478 cases, 386 (or 78.7%) indicated that they were willing to pay more for a tourism experience when they knew that some of the money will be used to protect natural resources. Our objective was to determine what sort of student was willing to pay, as identified by socio-economic variable responses included in the survey.

Table 1. "I am willing to pay more for a tourism experience when I know that some of the money will be used to protect natural resources." - Response Frequencies

RESPONSE	NUMBER
Strongly Disagree	9
Disagree	83
Neither	57
Agree	324
Strongly Agree	62
<b>TOTALS</b>	<b>635</b>

Not WTP = 92 (19.3%)

WTP = 386 (78.7%)

Total = 478 (100%)

Based on this information, we hypothesized that the following variables might predict student's WTP. Following this listing, we will justify and substantively explain those variables which were statistically significant.

AGE (In years.)

GENDER (Dummy variable where Male = 1, Female = 0)

GREEK (Respondent is a member of a fraternity or sorority. 0 = No, 1 = Yes.)

OVERSEAS (Respondent has studied or traveled overseas. 0 = No, 1 = Yes.)

LANGUAGE (Respondent speaks a foreign language. 0 = No, 1 = Yes.)

ENVCLASS (Respondent has taken an environmentally related class. 0 = No, 1 = Yes.)

URBAN (Respondent lives in city, rather than a suburb or rural area. 0 = No, 1 = Yes.)

Major (Description follows.)

The final variable we wanted to include in our model was the respondent's Major, as grouped into one of four disciplines: LIBERAL (Respondent is studying liberal arts. 0 = No, 1 = Yes), SOCIAL (Respondent is studying social sciences. 0 = No, 1 = Yes), LAB (Respondent is studying laboratory sciences. 0 = No, 1 = Yes), and BUSINESS (Respondent is studying business, as inherently indicated by a "0" for the other three categories.)

As previously noted in our research objectives, our purpose in this exploratory study is to determine the socio-economic characteristics of college students which would predict if they would be willing to pay more for a tourism experience which supports environmental conservation. Therefore, our econometric analysis does not extend beyond the identification and initial evaluation of the socio-economic (independent) variables. Of course, there is much more useful information which could be derived from logit regression, yet this is beyond the scope of our

exploratory research. Further discussion of model specifics will not be elaborated upon in this report, since our regression model had little explanatory power for the data analyzed (as discussed below).

### Results

The coefficients in Table 2 below show that AGE, ENVCLASS, and GENDER are statistically significant at the 90% confidence level. We descriptively investigated these variables further via cross-tabulations, as shown below.

Table 2. Results of logit regression to determine factors that influence WTP more for a tourism experience which supports environmental conservation.

VARIABLE	B	S.E.	Wald	df	Sig	R	EXP(B)
Age	.1654	.0914	3.2780	1	.0702	.0554	1.1799
Gender	-.6318	.2581	5.9921	1	.0144	-.0979	.5316
Greeks	-.2141	.2851	.5638	1	.4527	.0000	.8073
Overseas	-.0598	.2729	.0480	1	.8265	.0000	.9419
Language	-.1261	.2648	.2267	1	.6340	.0000	.8816
EnvClass	.5993	.2740	4.7819	1	.0288	.0817	1.8208
Urban	-.3000	.3254	.8502	1	.3565	.0000	.7408
Liberal	.2406	.3135	.5893	1	.4427	.0000	1.2721
Social	.5156	.4189	1.5147	1	.2184	.0000	1.6747
Lab	.6230	.3843	2.6288	1	.1049	.0388	1.8646
Constant	-2.0112	1.7868	1.2670	1	.2603		

Looking at effectiveness of representation is an important part of the analysis of any statistical model. If a model does not fit the range of data upon which it is based, then it will have very little use as a predictor of additional data in the future. The logistic regression carried out with the data in this study calculated the following two pseudo-R-squared values for the model: Cox & Snell - R2: .056; Nagelkerke - R2: .088. Therefore, the explanatory power of our model was inadequate for our objectives, which is not surprising for this type of cross-sectional data. The model predicted the data set less than 10% of the time. Further, calculations indicated that the significance of the model was .0039. This value indicates that we should reject the null hypothesis that the coefficient of the model equals zero.

Table 3. Cross-tabulation of ENVCLASS Versus WTP

		NWTP	WTP	TOT.
ENVCLASS				
No	Count	57	161	218
	% within ENVCLASS	26.1%	73.9%	100.0%
Yes	Count	28	168	196
	% within ENVCLASS	14.3%	85.7%	100.0%
TOTAL				
	Count	85	329	414
	% within ENVCLASS	20.5%	79.5%	100.0%

As shown by the sign of the coefficient for ENVCLASS in Table 2, a positive relationship exists between taking an

environmental class and WTP. Although our logistic regression model found ENVCLASS to be significant, we were surprised with the results of our cross-tabulation shown in Table 3. As we anticipated, a higher percentage of students who had taken an environmentally related course (86%) were WTP for environmental conservation, as compared to those who had not taken such a course (74%). Table 4 below leads to similar conclusions, with regard to gender. Of the responding females, 83% were WTP, whereas 73% of the responding males were WTP.

Table 4. Cross-tabulation of GENDER Versus WTP

		NWTP	WTP	TOT.
GENDER				
Female	Count	43	215	258
	% within GENDER	16.7%	83.3%	100.0%
Male	Count	42	114	156
	% within GENDER	26.9%	73.1%	100.0%
TOTAL				
	Count	85	329	414
	% within GENDER	20.5%	79.5%	100.0%

As shown by the negative coefficient on GENDER in Table 2, there is a negative relationship between being male and WTP. Tables 5 and 6 illustrate that, although the sample size of students above the age of 22 (i.e. non-traditional students) is small, all of those students indicated that they were willing to pay more for a tourism experience that supports environmental conservation.

Table 5. Cross-tabulation of AGE Versus WTP for Traditional College Students (Ages 17 to 22)

		NWTP	WTP	TOT
AGE	17			
	Count	1	161	218
	% within age	50%	73.9%	100.0%
18	Count	17	168	196
	% within age	19.8%	85.7%	100.0%
19	Count	25	69	94
	% within age	26.6%	73.4%	100%
20	Count	21	77	98
	% within age	21.4%	78.6%	100%
21	Count	18	68	86
	% within age	20.9%	79.1%	100%
22	Count	2	26	28
	% within age	7.1%	92.9%	100%
TOTAL	Count	84	310	394
	% within age	21.3%	78.7%	100.0%

Table 6. Cross-tabulation of AGE Versus WTP for Non-Traditional College Students (Ages 23+)

		NWTP	WTP	TOT.
AGE	23			
	Count	0	4	4
	% within AGE	0%	100%	100.0%
24	Count	0	2	2
	% within AGE	0%	100%	100.0%
25	Count	0	4	4
	% within AGE	0%	100%	100%
26	Count	0	2	2
	% within AGE	0%	100%	100%
28	Count	0	1	1
	% within AGE	0%	100%	100%
29	Count	0	1	1
	% within AGE	0%	100%	100%
35	Count	0	1	1
	% within AGE	0%	100%	100%
36	Count	0	1	1
	% within AGE	0%	100%	100%
45	Count	0	1	1
	% within AGE	0%	100%	100%
49	Count	0	1	1
	% within AGE	0%	100%	100%
TOTAL	Count	0	18	18
	% within AGE	0%	100%	100.0%

As shown by the positive sign on the coefficient for AGE in Table 2, a positive relationship exists between age and WTP. Although the student's major was not found to be statistically significant in the logit regression, we felt that a comparison of results might still reveal pertinent information to our study, and should not be completely

disregarded. Therefore, we conducted a crosstabulation of the four categories of majors, as illustrated in Table 7 below. It is interesting to note that in all four categories, a larger percentage of students are WTP more for a tourism experience which promotes environmental conservation. Of the four disciplines, the percentage of business students WTP is noticeably smaller than the other three.

Table 7. Crosstabulation of MAJOR Versus WTP

		NWTP	WTP	TOT.
MAJOR Liberal	Count	34	127	161
	% within MAJOR	21.1%	78.9%	100.0%
Business	Count	25	69	94
	% within MAJOR	26.6%	73.4%	100.0%
Social	Count	11	58	69
	% within MAJOR	15.9%	84.1%	100.0%
Lab	Count	15	75	90
	% within MAJOR	16.7%	83.3%	100.0%
TOTAL	Count	85	329	414
	% within MAJOR	20.5%	79.5%	100.0%

### Implications

The findings from this exploratory study might be useful to travel agencies who wish to develop a marketing plan for ecotourism-related Spring Break packages. In order to maximize marketing strategies, it is important to take into account the socio-economic characteristics of potential clients. Based on our findings, we suggest that agencies wishing to sell "Spring Break Ecotrips" compile an advertising campaign (i.e. direct mailing list) based on the following recommendations.

Based on our findings, an important sub-population of students to target would be those who have previously been enrolled (or are currently enrolled) in an environmental class. These students are more likely to understand and appreciate the significance of environmental conservation, and therefore are more likely to place a higher value on a tourism experience which supports this concept. Mailing lists could be derived by obtaining class rosters (from the past few semesters) from the professors who teach environmentally related courses.

Since a larger percentage of older students are willing to pay more for a tourism experience which supports environmental conservation, it would obviously be advisable to target older students. Older students may tend to be more mature, have more income, and have been more likely to have developed opinions based upon a broader base of general tourism experiences. Furthermore, an older college student may have had increased opportunities, over

the course of many years, to participate in environment-based educational curricula. Ideally, a mailing list could be compiled from a University listing of enrolled students who are over the age of 21. Another alternative would be to target student organizations geared to older students, such as the Graduate Student Organization, or the Non-Traditional Student Organization.

Finally, our study implies that a larger percentage of females than males are WTP for an ecotourism experience. In terms of marketing strategy, a suggestion would be to develop ecotourism packages which specifically incorporate activities of interest to the female college student population, yet still inclusive of male student interests. (Further research would be required in order to determine cause for an elevated percentage of women who are WTP.)

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**Policy Issues:  
Partnerships and Collaborations**



## ENHANCING TOURISM DEVELOPMENT THROUGH PARTNERSHIPS

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**Abstract:** Communities are facing tourism development issues whose solutions can often be effectively addressed through partnerships and collaborative efforts. A variety of factors influencing the need for greater use of tourism-related partnerships and collaborative efforts will be reviewed as well as factors relating to successful and less successful partnerships. Partnerships and collaborations to be reviewed are: Eastern Connecticut Nature-Based Tourism Project, Thames River Basin Initiative, and The Connecticut State Tourism Office/Tourism Districts partnership.

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### Introduction

Many communities in the Northeastern United States are facing tourism development issues whose solutions can often be effectively addressed through partnerships and collaborative efforts. Issues which can be addressed in this manner include: identifying and assessing tourism opportunities, tourism planning and development, promotion and advertising activities, assessing impacts (economic, environmental and social), encouraging community-based tourism activities, and in-service training. The current period can be viewed as one requiring increased collaborative efforts and partnerships designed to resolve a wide range of tourism development issues.

### Societal Trends

Among the factors affecting the need for greater use of partnerships, collaborations and cooperative efforts when addressing tourism development issues are:

1. economic changes in the Northeast;
2. competition for limited resources;
3. the competitive nature of the tourism industry;
4. changing demographics and an increasingly diverse population; and
5. a growth of descensus.

These create needs for people and organizations to identify common interests, and combine intellectual and financial resources when addressing mutual concerns. The United States economy emerged in 1992-93 from one of the deepest recessions since the 1930's, yet the early part of the recovery was much slower than previous post-World War II economic upturns. The past several years have seen a very strong United States and Northeastern states' economy with high growth rates, low unemployment and inflation, and a booming stock market.

The economy of the 1990's is reflected in Connecticut's experience in regaining only 76% of the 153,000 jobs lost during the 1989-92 recession (McEachern, et al). Current economic statistics tell only a part of the broader long-term economic trends affecting the Northeastern United States and its tourism industry. It remains to be seen how sustainable the current economic boom will be as the following factors influence the region's economy: limited number of additional workers available to enter the work force, future trends in inflation, interest rates and the stock market; and the long-term impacts of the Asian economic crisis.

The mid-to-late 1990's economic recovery has resulted in state budget surpluses, a lessening of the early 1990's public sector budget crisis, and strong corporate profits. How long these positive economic conditions can be maintained and how a changing economic outlook will affect the travel and tourism industry are major issues for the industry.

An interesting aspect of the current economic upturn has been the continued down-sizing of major corporations and the long period needed to recover the jobs lost during the 1989-92 "Great Recession." Despite the recent strong economic trends, the northeast economy may face long-term competition for financial resources in all economic sectors (public, private and non-profit).

The need to secure one's position in the tourism market place, obtain increased shares (or maintain existing levels) of public sector budgets, or obtain other funding can lead to increased competition among agencies and organizations, with missions relating to tourism and travel issues. Tourism firms and regions face a highly competitive environment where tourism dollars can shift among firms, attractions, regions, states and countries.

Changing demographics and an increasingly diverse population creates a need for people to understand other cultures and viewpoints. The U.S. population is becoming grayer as the median age increases. By the year 2000, over 50% of the country's population will be over 40 years old. The large baby boom cohort is reaching middle age and will reach senior citizen status during the first two decades of the 21st century (Murray, et al).

As an increasing percentage of the population comes from non-European backgrounds, it will be important for the tourism industry and public agencies to understand the diversity of values and outlooks including those pertaining to tourism. The combination of changes in the population's age patterns and ethnic backgrounds may result in different views toward tourism attractions. Partnerships and collaborations may be necessary if society is to address tourism issues in ways that consider the perspectives and interests of an increasingly diverse population.

A final factor creating a need for increased forms of cooperation is a trend toward the growth of descensus in the United States. Descensus, the antithesis of consensus, reflects differences and clashes over opinions and values (Spear and Mocker). The information age may contribute to

people having less of a common identity than has been the case in recent decades.

#### **Factors Influencing Collaborations and Partnerships**

These conditions which can cause competition, different perspectives, and at times conflicts, can also contribute to people deciding that cooperation and partnerships are appropriate methods when addressing tourism issues facing society. It is possible that the consequences of descensus and competition will cause increasing members of people to consider cooperating with others to address tourism issues.

Futurists and social commentators have identified a trend toward increased reliance upon collaboration, partnerships, teamwork and cooperative efforts. Partnerships and consortia result from a combination of factors including major societal issues that cannot be resolved by a single organization, tight budgets and the need for a variety of approaches.

To put it simply, organizations concerned about tourism will consider working together because their individual efforts will not be sufficient to have the desired impacts. Those conditions common to the 1990's which can lead to competition among organizations may also contribute to some people recognizing that the benefits of cooperation can outweigh those of competition.

Carol L. Anderson comments that partnerships involve common goals and "individuals contributing their specialization and expertise." She adds that "partnerships are created on strengths and specialities and result in win-win outcomes as complex societal issues are addressed." According to Anderson, "Partnerships are like a dance rather than a fixed relationship and this means there is a beginning and an end."

Barbara Gray has defined collaboration as "...a process in which those parties with a stake in the problem actively seek mutually determined solutions. They join forces, pool information, knock heads, construct alternative solutions, and forge an agreement." Gray identifies the growing turbulence of our environment (societal) as resulting in new problems and our inability to solve them. These turbulent conditions create needs for greater cooperation among individuals and organizations.

A major opportunity to form partnerships and collaborations comes from advancing shared visions that are "intended to advance the collective good of the stakeholders involved" (Gray). Collaboration can also contribute to bringing together expertise that would not normally be addressing a common problem. Individuals and organizations working together can also reduce project costs as well as spread costs among a larger number of stakeholders, resulting in reduced average costs per stakeholder.

Features critical to successful collaborative processes include (Gray):

1. The stakeholders are interdependent.
2. Solutions emerge by dealing constructively with differences.
3. Joint ownership of decisions is involved

4. Stakeholders assume collective responsibility for the future direction of the domain, and
5. Collaboration is an emergent process."

According to Gray, the three phases of collaborative efforts and their characteristics are:

#### "Phase 1: Problem Setting

- Common definition of problem
- Commitment to collaborate
- Identify stakeholders
- Legitimacy of stakeholders
- Convener characteristics
- Identification of resources

#### "Phase 2: Direction Setting

- Establish ground rules
- Agenda setting
- Organizing subgroups
- Joint information search
- Exploring options
- Reaching agreement and closing the deal

#### "Phase 3: Implementation

- Dealing with constituencies
- Building external support
- Structuring
- Monitoring the agreement and ensuring compliance"

Factors which provide positive influences on collaborative efforts include (Gray):

- Inclusion of all affected stakeholders and sufficient stakeholder incentives
- Appropriateness of issues and agreement on scope of collaboration
- Timing of collaborative efforts

In addition to opportunities, there are also obstacles to collaboration which can stall efforts to initiate a collaborative process or prevent successful implementation of a mutually developed project. Obstacles include: individualism, which is a common value in the United States; collaboration can be time consuming; institutional values may not place a high regard upon collaborative efforts; and a real or perceived need to compete with other organizations may override benefits from collaboration. Organizations may need to protect (and project) their identity through high levels of visibility and may not be willing to share the spotlight with others.

#### **Tourism Collaborations and Partnerships in Connecticut**

*Developing Nature-Based Tourism in Eastern Connecticut:* Early in 1994 the Northeast Connecticut Visitors' District (Connecticut's Quiet Corner) identified a need for the region's tourism industry to work with farmers and rural landowners in developing and promoting agricultural and nature-based tourism attractions. This initiated a two and a half year project which illustrates processes and benefits related to tourism partnerships and collaborations.

In March 1994 the tourism district formed the Eastern Connecticut Agricultural-Tourism Committee which was charged with initiating an agri-tourism development effort. Early members were the Northeast Connecticut Visitors' District, Connecticut Farm Bureau, Connecticut Department of Agriculture, United States Department of Agriculture and local farmers. One of the first formal activities was a workshop, "Harvesting Vacationers: Enhancing Your Agricultural Operation for Tourism," which attracted 41 participants in November 1994 and established that a significant level of interest existed to explore tourism opportunities among the district's agricultural community.

When an opportunity developed to prepare a comprehensive tourism development grant proposal, two additional partners invited to join the agri-tourism committee were the Southeastern Connecticut Tourism District and The University of Connecticut Cooperative Extension System.

A proposal was submitted during Fall 1994 to the Connecticut Department of Economic and Community Development for a Tourism Challenge Grant to address "Developing Nature-Based Tourism in Eastern Connecticut." The project's objectives were:

1. To develop awareness of agri-tourism and nature-based tourism sites in Eastern Connecticut;
2. To increase farmers and rural landowners awareness of tourism opportunities;
3. To promote the region as a family oriented tourist destination;
4. To coordinate outdoor recreational activities in two tourism districts;
5. To network with local businesses, farms, agricultural organizations, and lodgings in cooperative ventures; and
6. To increase visitation to the region while preserving its natural attributes.

Project activities were planned by members of the Eastern Connecticut Agricultural Tourism Committee with leadership provided by the Executive Director of the Northeast Connecticut Visitors District. This approach provided opportunities for all partners to share in developing project activities and products. It also allowed a variety of perspectives to be considered as the project evolved during 1995 and the first half of 1996.

A variety of activities and outcomes resulted from the work of the committee as well as individual partners. Accomplishments included:

1. An agricultural and nature-based tourism network developed through meetings and activities of the Eastern Connecticut Agricultural Tourism Committee;
2. Several thousand people learned about "Opportunities in Agricultural and Nature-Based Tourism" through articles in farm magazines, newsletters, and magazines, as well as presentations on radio programs and before farmers' organizations, tourism districts,

3. conferences and an economic summit. A field survey of fifteen agri-tourism enterprise operators provided opportunities to observe successful agri-tourism firms and to identify issues to be addressed by the Cooperative Extension System in its educational activities.
4. A guide to "Farms and Family Fun in Eastern Connecticut" was developed listing a broad variety of attractions open to tourists and residents. It is the first comprehensive listing of these attractions in Connecticut and serves as a model resource guide for tourists and tourism development organizations. It has been distributed to thousands of people looking for agricultural and nature-based attractions.
5. A fact sheet designed for farmers, "Agricultural Tourism: Opportunities for Farmers and Rural Communities," provided an introduction to income-producing opportunities, factors to consider, and where to go for additional information and technical assistance.
6. Two tourism district group sales trips to the Albany and Philadelphia metropolitan areas included the new agricultural and nature-based tourism information in promotional materials and presentations.
7. Three thousand people participated in Walking Weekend activities like guided walks, hikes and presentations covering agricultural, heritage, historical and nature attractions.
8. Over one hundred people participated in a bicycle tour of Eastern Connecticut town greens and churches, farmlands and woodlands.
9. Thirty farmers and agency staff took a bus tour of agri-tourism and farm direct marketing enterprises in Massachusetts observing a variety of small to large-scale operations.

The project illustrates a number of key factors that can contribute to successful collaborative efforts. The Northeast Connecticut Visitors District provided leadership in identifying common issues that could be addressed by several stakeholders working together. The Eastern Connecticut Agricultural Tourism Committee provided a forum for stakeholders to discuss issues and possible approaches to resolving them. The committee both preceded the State Tourism Challenge Grant Project and then served as a vehicle for collaborative activities needed to achieve the project's objectives.

The regional project brought together tourism districts, an agricultural association, state and federal agencies, and a university to address rural tourism development and promotional issues that could not be resolved individually. The process involved joint ownership of decisions and illustrated Gray's view that "Collaboration is an emergent process."

*Community-Based Tourism Development in the Thames River Basin:*

A major collaborative effort designed to identify and address conservation and resource protection needs in the Quinebaug-

Shetucket Basin was developed by the United States Department of Agriculture Natural Resources Conservation Service, Soil and Water Conservation Districts of New London, Tolland, and Windham Counties, and a broad range of partners. Formally identified as The Thames River Basin Partnership Initiative: Quinebaug-Shetucket Project, its objectives are:

"Provide the basis for a comprehensive strategy for identifying conservation and resource protection needs within the Quinebaug-Shetucket Basin; demonstrate a cooperative effort between districts in partnership with local, state, federal and private agencies/organizations to address local resource issues on a regional scale; increase public awareness of our natural resources; encourage and enhance public participation in the protection, conservation, and management of our natural resources; balance private, municipal, and regional environmental stewardship with economic development; and create a process that can be replicated throughout the state."  
(Plan of Work).

The Regional Initiative focused upon eight towns and cities in Eastern Connecticut. Each municipality borders the Quinebaug River flowing from Northeastern Connecticut to the Shetucket River in Norwich which in turn empties into Norwich Harbor. Leadership for the Initiative is provided by the three county Soil and Water Conservation Districts and the USDA Natural Resources Conservation Service. This collaborative effort also involves representatives of the eight municipalities, two tourism districts, the University of Connecticut, two state agencies, a regional Council of Governments and the Quinebaug-Shetucket National Heritage Corridor.

Planning meetings involve up to 25 participants making this a broader based coalition than the Eastern Connecticut Agricultural Tourism Committee. This provides both a wide range of perspectives as well as a less clear-cut organizational structure and decision-making process than the Eastern Connecticut Agricultural Tourism Project. The community-based tourism section of the Thames River Basin Initiative is working to assist communities in considering and achieving:

- 1) economic development through community-based tourism (agriculture, nature and heritage), and 2) sustainable development regarding the economy, environment and community.

This effort involves the University of Connecticut Cooperative Extension System together with the USDA Natural Resources Conservation Service and the Soil and Water Conservation Districts. Approaches include:

1. Surveying community leaders in the eight towns and cities regarding current tourism situations and issues.
2. Identifying the types of community-based tourism opportunities (agricultural, heritage and nature-based) suitable for the local communities.
3. Exploring obstacles to tourism and possible solutions.

4. Identifying where to obtain information and technical assistance.
5. Exploring how farmers, landowners, and communities can work together to develop sustainable tourism enterprises and activities.

This collaborative tourism project operates within the framework of the larger conservation and environmental sustainability initiative. It is unclear whether the larger initiative will continue in its present comprehensive approach. It is possible that the community-based tourism development effort could continue to evolve as an Extension education project involving current partners as well as additional ones.

#### **Marketing Connecticut Tourism:**

The major tourism partnership in Connecticut addresses marketing the state's tourism attractions and involves the Office of Tourism in the Connecticut Department of Economic and Community Development, The Connecticut Tourism Council, 11 Tourism Districts, and 4 additional tourism-related entities. This partnership was established through state legislation and policy-making and has evolved during the 1990's as the tourism and travel industry emerges as one of several major economic clusters.

Current roles and responsibilities for the state supported tourism organizations were established through state legislation in 1992 (Tourism Staff Briefing). There have been attempts to modify these roles through bills introduced in the state legislature which have not been signed into law. A bill signed into law during the 1998 legislative session authorized another study of the roles, responsibilities and funding of the 11 tourism districts.

Roles and responsibilities of the state authorized and/or funded tourism entities were described in a 1997 Tourism Staff Briefing paper prepared by the Legislative Program Review and Investigations Committee of the Connecticut General Assembly. According to the briefing report the State Office of Tourism: "mission is to enhance perception of Connecticut as tourism destination and expand tourism as contributor to economy," "serves as staff to Connecticut Tourism Council," "handles day-to-day administrative, program and operational duties related to the state's tourism efforts," and "operates 11 visitor welcome centers throughout the state."

The Connecticut Tourism Council is a "tourism policy-setting body" that "approves state strategic marketing plan and annual budget for the special tourism account." The Council also reviews the marketing plans for the 11 tourism districts. (Tourism Staff Briefing.)

Based upon a 1992 state statute, Connecticut has 11 regional tourism districts whose roles and responsibilities include:

"...to promote regions as tourism destinations in order to stimulate economic growth." Each district has a board of directors with municipality appointed directors from each town and city within the district. Representatives of tourism interests can also be appointed to the board of directors. (Tourism Staff Briefing.)

Additionally, four specified entities which also receive state funding are: "the Connecticut Convention Center Authority (in Hartford), the New Haven Coliseum Authority, the Stamford Center for the Arts, and the Maritime Center Authority (Maritime Aquarium at Norwalk)."

Most tourism-related marketing of Connecticut attractions is handled through the state Office of Tourism and the 11 regional tourism districts. This partnership provides for a combination of state-wide and district marketing and promotional activities. This arrangement has provided significant support to the growing tourism and travel industry within Connecticut.

Efforts to reduce the number of regional tourism districts and even to eliminate them entirely have appeared in the state legislature. The current arrangement provides for a state tourism office marketing campaign promoting the entire state to the New York Metropolitan area and other northeastern cities while the tourism districts promote the wide range of attractions found within the districts.

Combining a state-directed promotional campaign able to reach potential tourists in the expensive northeastern media markets together with a grassroots public/private partnership approach of the tourism districts seems to provide the best of both marketing approaches. It is possible that competition for scarce funds may be driving the efforts to reorganize Connecticut's marketing partnership.

#### Summary

A combination of factors affecting the tourism industry's consideration of collaboration and partnerships include: competition for limited resources, economic changes, the competitive nature of the tourism industry, changing demographics, and an increasing diverse population. Collaborations, partnerships and cooperative activities can help to reduce costs, share expertise and reach more potential tourists than may be achieved through individual efforts. Amy Rose indicates that the most successful partnerships and collaborations "...are those that are recognized as mutually beneficial; are based on trust; and involve the recognition of new possibilities that neither party could have achieved alone."

It is possible that the conditions causing stress within the tourism industry may create the impetus for the industry to find new ways to cooperatively address these issues.

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## AN EXAMINATION OF EFFECTIVENESS IN THE COLLABORATIVE MANAGEMENT OF NATURAL RESOURCES

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**Abstract:** Public land managers are becoming increasingly involved in alternative approaches to engage the public in land managing decisions. These collaborative approaches have provided yielded numerous outcomes and various levels of success and failure. The research that has examined these collaborative initiatives (CI) has been limited to case studies and localized issues. This study examined 30 collaborative initiatives nationwide in which the Forest Service was involved as a stakeholder. The purpose of this study was to assess outcome achievement and effectiveness of these CIs.

Using a mail survey, 671 stakeholders were queried, 276 responded. Using an open-ended measure of effectiveness, six categories emerged: **Development, Information Exchange, Organizational Support, Interpersonal Communication, Relationships/Team Building and Accomplishments.** The results of this study can provide managers and stakeholders with preliminary guidelines to examine and monitor the effectiveness of collaborative approaches to resource management in the future.

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*Funding for this study was provided by the US Forest Service, North Central Forest Experiment Station, East Lansing, MI 48823*

### Introduction

Land managers are experimenting with a number of alternative approaches involving the public in environmental planning and management. Traditional rational-planning approaches are being supplemented by more participatory approaches where a diverse set of stakeholders participate at each stage of the planning cycle. Within federal agencies, for example, a more participatory approach to managing public lands is being implemented in the U.S. Forest Service. Mike Dombeck, Chief of the Forest Service, is advocating partnerships, a philosophy of collaborative stewardship and ecosystem management for our national forests (Ghannan, 1997). Results of Citizen Roundtables discussions of the

Seventh American Forest Congress suggested changes in the way our forests should be managed. Participants recommended improving existing processes for engaging stakeholders in decision-making and the establishment of permanent advisory groups (Williams & Ellefson, 1996). This direction along with the public's continued interest and awareness of natural resource issues has led to an increase in collaborative management initiatives (Schuett, Selin & Carr, In press).

Even though the natural resource management literature is replete with anecdotal evidence either praising or criticizing participatory management efforts, little systematic research has evaluated the success of these collaborative initiatives. In general, specific factors have been identified that contribute to the success of collaborative efforts in natural resources (Selin, Schuett & Carr, 1997). Key aspects identified in measuring elements of successful initiatives suggest inclusion of stakeholders represented in the collaborative effort (Grimble & Chan, 1995; Sample, Cheng, Enzer & Moote, 1995) well-defined goals and objectives (Mattessich & Monsey, 1992), information exchange and shared decision-making (Moote, McClaran & Chickering, 1997).

The majority of the previous research has been limited to specific case studies with only a few exceptions. Williams and Ellefson (1996) examined factors leading to cooperative success in 40 partnerships. They found several key variables that contributed to keeping individuals and organizations together in a partnership such as recognition of common goals and interest in the resource, mutual respect for goals and information sharing among partners. They also identified barriers to success which included a lack of time, indifference to the issue, and fear of losing control over land decisions.

In their book, *The Power of Environmental Partnerships*, Long and Arnold (1995) investigated 12 case studies. They examined the life cycle of a partnership, illustrating a process made up of three phases: Initiation, Execution and Closure. Within these phases, they identified several factors that were important to determining success such as formulating an agenda, monitoring ground rules, and implementing actions and policies.

Current research is expanding the body of knowledge evaluating collaborative initiatives. However, with these few studies, information on this management approach is still early in its development and analysis. It is necessary to explore the impact and success of collaboration in natural resource management more critically and to evaluate this strategy for managers and stakeholders nationwide.

### Collaboration and Success Defined

Collaborative stewardship is defined as people working together, sharing knowledge and resources, to ensure sustainable ecological systems and communities ("Collaborative Stewardship Working Group: Draft Report," 1997). The impetus for this project was guided by several years of research in the area of collaborative planning with the Forest Service, i.e., Forest Service managers (Selin et al., 1997) and stakeholders (Schuett et al., in press). Using these

data, a study was conducted which examined a host of groups involved in collaborative stewardship initiatives nationwide. These collaborative initiatives (CIs) and the stakeholders were identified from a previous study with the US Forest Service (For details, Schuett et al., in press). The sample for the study consisted of 671 participants involved in 30 CIs with the Forest Service representing seven Forest Service regions.

The collaborative stewardship study examined numerous issues about each CI such as a purpose of formation, types of participants, years in existence, organizational structure, problems addressed, outcomes, and keys to successful collaboration. The focus of this paper is to report on the findings identified with successful collaboration. Success was measured by two methods. The first measure of success was specific and used the goal approach (Molnar & Rogers, 1976). Using this as a guide, an assessment was made to determine to what extent the goals of the collaborative initiative were achieved using a close-ended Likert-scaled item. The item was rated on a 1-6 scale, (1=Very effective, 5=Very ineffective; 6=Too soon to evaluate). The item asked, "In your opinion, how effective has this collaborative initiative been in fulfilling its purpose or mission?" This item linked success to achieving the CI's purpose.

The second measure was an open-ended overall measure of success based on the respondent's experience with collaborative stewardship. Respondents were asked to answer the following open-ended item, "What are the keys to successful collaboration?" In answering this item, respondents were asked to reflect and consider all their experience with collaborative initiatives.

#### **Keys to Successful Collaboration**

A mailed questionnaire, with a post card follow-up, was sent to participants. A second mailing followed, yielding a response rate of 41% (n=275). Examples of the CIs in the sample were the Applegate Partnership, The Chicago Wilderness Program, Northern Forest Lands Council, the Montezuma County (CO) Federal Lands Program, and the Quincy Library Group. The stakeholders and group members represented in each CI varied from government agencies, industry landowners, and environmental groups. A summary of problems addressed in the CIs were ecosystem management, watershed restoration, forest management, urban green space, and wildlife habitat. The scope of the issues ranged from more localized, community level concerns to issues that were more regional and national in scope. The CIs varied in how long they had been in existence, with 75% having been formed since 1990.

Results for the closed-ended item on success showed a mean score of 1.79. Almost all the respondents (n=255, 92%) felt the CI was effective in accomplishing its purpose, with 40% rating it very effective and 52% rating it somewhat effective. Twelve felt it was too soon to make this assessment and seven did not respond. Overall, the feedback by respondents was fairly positive toward the CI accomplishing its mission.

For the open-ended item, a total of more than 300 comments was collected from respondents. Content analysis was used to

examine the responses, reading the text for common themes, phrases and wording. Categories were then derived from these emergent themes. Study researchers examined the text, compared notes, and the categories were developed. The final categories were then checked by the research team and outside reviewers to assure consistency. The categories created were: **Development, Information Exchange, Organizational Support, Interpersonal Communication, Relationships/Team Building and Accomplishments.** These categories are explained in the next section, with quotes where appropriate, to illustrate the richness of these data.

**Development.** This category encompassed the formative stages of the CI. Respondents felt it was necessary to have a specific purpose, goals, and representation from all affected parties. Several respondents stated comments regarding basic necessities and things they felt were rudimentary for the CI, "...adequate preparatory staff work, sufficient lead time for homework, business-like agendas" and "...adequate operative resources and time." To illustrate similar points one respondent commented on what was needed on the onset of the experience, "good ground rules, clear goals, known and agreed upon at the start." Another referred to stakeholders, "...clearly defined roles of all parties involved and a decision making procedure understood by all involved...ensure representation from all affected stakeholders."

In **Information Exchange**, the contents were available research, informed stakeholders, and progress updates. Information exchange was reinforced by participants about what should take place in communicating to all parties in the CI and into the community. For example, one mentioned reports, "Continued periodic interaction of all stakeholders, each reporting progress." Another commented, "All parties should have some other contact than just meetings." Still another stakeholder stated these needs, "...informed representation...having an open free forum."

**Organizational Support** included such items as regularly scheduled meetings, funding, staff, and necessary resources. In keeping the CI process on track respondents felt it was necessary for specific types of support. One responded, "...facilitation at each meeting and meet often...good staff and a strong board." Another individual felt that physical resources were critical to the process, "...available funding to do the work ... plenty of coffee." Support from various levels was mentioned several times by respondents such as support between each participant, from committees, staff, and upper management. Not only was internal support deemed essentially but external support from the community and beyond was mentioned, "...the community taking an interest, broad base support...responsive federal employees."

**Interpersonal Communication** included the need for an atmosphere that permits communication within the CI. Communication involves listening, understanding, discussing, and decision-making. For example, one individual commented, "If those people come willing to listen and learn and develop mutual goals, a collaborative initiative has a much better chance at being successful." Another stated, "...valuing others' opinions or the right for them to have

differing opinions even if you don't concur with their opinion." The process of decision-making was another element that was viewed as important. According to respondents, a decision-making mechanism must be set up for the environment to work, "...most important is to require 100% consensus by all."

**Relationships/Team Building** was made up of trust, respect, and honesty. Within this category, respondents had a great deal to say about establishing trust between each other and building relationships. One respondent stated it quite clearly, "... an understanding that you must work together if you want to solve the problem." One participant stressed that the team concept was important, "...being able to work together as a team even when interests differ." For everyone, it was necessary to create an atmosphere within the CI that was honest and forthcoming among participants with all stakeholders involved. One commented on the need for openness, "...the agencies must constantly be above board and honest - no behind the scenes deals with any party!" It was clear from the comments of respondents that this facet of the CI process was an emotional and integral part of success.

Lastly, **Accomplishments** consisted of remarks on creating final reports, taking action, and evaluating the experience. All respondents were outcome-oriented with a desire for some specific achievement to occur from the collaborative initiative. The comments were very pragmatic as in the Organizational Support category. Statements by respondents showed a need for evaluation of the CI, acknowledging successes during and after the process and reporting progress along the way.

#### **Lessons Learned**

The management of our nation's renewable natural resources can often be a hotbed of emotion and controversy. A shift in values is taking place on how the public views the use and management of natural resources (Baerwald, 1991). Active participation by stakeholders and land managing agencies is becoming more and more accepted as the planning protocol for land managers nationwide. This level of interest is occurring whether problems/issues are centered in local community affairs or impacting an entire region. The public simply wants to be more involved in the decision making process.

Behan (1997) argues that our nation's forests should be taking a systems view of forest management which he feels has been a long time in coming. As these types of issues continue to emerge, whether they pertain to forests, watersheds, wildlife or economic development, it becomes clearer that solutions to problems can often be large in scope, complex to analyze and require considerable input. Due to this trend in participatory management, it is necessary to determine the benefits and pitfalls of collaborative stewardship and critique its overall effectiveness.

The information from this study provides a framework to consider when initiating or working with collaborative initiatives. From the close-ended item on success of the particular collaborative initiative, respondents felt their

initiative was fairly successful in achieving its purpose. Respondents felt positive about their involvement in each of the 30 CIs. This outcome is encouraging for the CIs examined in the study. On the global measure of success, key components emerged which are the results of the experience of each respondent in the study. The categories that evolved from the participants' comments provide a guide that can be used by managers and stakeholders to advance the planning process. Our findings identified successful factors in collaborative stewardship supporting past research already identified earlier in the paper, for example, Long and Arnold's (1995) environmental partnership case studies. This evidence supports a level of consistency in assessing and recognizing what factors contribute to the success of collaborative stewardship.

It is apparent that several things need to take place to create an atmosphere in a collaborative effort that will facilitate what respondents feel is success. Several components are rudimentary to success at the onset of the process such as identifying the actual issue and the purpose of the collective. Stakeholders must set goals, have a clear vision but also have adequate resources and time to conduct the process.

Information exchange for all parties is another important area. Careful attention must be paid to creating an atmosphere for the stakeholders and communities involved to be aware of what is taking place. Support to conduct a collaborative effort is another factor that surfaced. This important factor can be manifested in terms of staff, monetary resources and physical space. Support is also needed from upper management, if applicable, and from the stakeholder group being represented.

Hand in hand with support is communication. Respondents felt that interpersonal communication was found to be important in collaborative efforts. Communication from participants and whomever they represented, i.e., federal agencies or voluntary associations, was essential. Communication was linked to effective decision making and consensus in the group process.

Other elements that surfaced are often less tangible, dynamic, and difficult to assess such as trust, respect and relationship building. The ability to build relationships and create an environment of trust and respect is a difficult task but was viewed by respondents as critical for success. Working together to problem solve, trusting one another, and leaving agendas at home are decisive factors that enable positive outcomes to occur. Several differing interests may be present on potentially conflicting issues such as economic development or watershed management. An environment conducive for establishing beneficial working relationships is an integral part of any initiative's success. Effective leadership is also needed throughout the process to bring all these factors together and aid the members of the CI in accomplishing their purpose.

In the end, an effective collaborative initiative must produce some viable results. These results may be accomplished through progress/final reports or taking specific actions, i.e.,

halting negative legislation. For those participating in collaborative efforts, the need to determine what tangible outcomes are produced and report them, was a compelling aspect for measuring an initiative's success.

#### Future Directions

Philosophically and practically, the management of our natural resources by bureaucrats, lobbyists or even Congressional mandates has constraints. Consequently, the involvement of the general public, stakeholders, and communities must forge a positive atmosphere for effective collaboration. As Cortner and Moote (1994) point out, the trend in natural resource management is toward more direct and open participation by citizens with the manager in a facilitative role. If this management tendency continues, as we believe it will, collaborative stewardship and the CIs involved should be examined in detail and evaluated.

This study sheds some light on area that is receiving increased attention by researcher and managers alike, the evaluation of collaborative stewardship. Due to the limited amount of research and commentary on evaluating the success of collaborative initiatives, the findings in this study provide some preliminary results on what stakeholders feel are the keys to the success of collaborative stewardship. This project represented a diverse group of CIs in terms of purpose, issue, composition and geography; however, the findings are limited to the 30 CIs that were chosen and caution should be taken in generalizing to other CIs. In addition, even though the components that were identified may exist within other collaborative efforts, numerous internal and external factors can create barriers to success, such as philosophical differences, government policies, poor facilitation, and inadequate leadership (Long & Arnold, 1995).

Methodologically, research on measures of success and effectiveness beyond the two methods used in this study, would help in determining how best to assess the outcomes of collaborative stewardship. Other components of CIs must be analyzed in detail such as but not limited to the influence of organizational structure on success, barriers, and a comparison of the agency vs. stakeholder vs. industry perspective. Other research should include additional data collection, i.e., in-depth interviews and using more case studies. Longitudinal analysis involving these case studies should also be considered to compare various CIs over time.

All of this information on collaborative stewardship of natural resources should be published and reported in the appropriate outlets such as presentations, journals, and General Technical Reports. However, these data can be hard to locate and often are not distributed beyond the stakeholders involved. A clearinghouse of this information should be created, made available and publicized nationally. These details should be shared with managers and stakeholders alike in national conferences and workshops, etc.

A few meetings highlighting case studies and collaboration have taken place in the last year; a recent meeting was held at the University of Montana Law School, Missoula, MT., "Coming Together on the Land: Evaluating Collaborative

Process in Natural Resource Management." These meetings have provided a positive forum for the discussion and analysis of collaborative stewardship and will hopefully continue. Finally, there is much to learn by exploring collaborative stewardship internationally to add to a growing body of knowledge in effectively managing our world's natural resources.

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## ARCHAEOLOGY AT ALDRICHVILLE: AN EDUCATION AND RECREATION PARTNERSHIP

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Abstract: Archaeological field work requires specific training in some scientific methods. For enthused volunteers of all ages, however, it is also a recreational experience. For two weeks during the summer of 1997 26 students (ages 10-14) shared this experience at an educational summer camp called "Relics and Ruins". The camp was co-sponsored by the non-profit Hayes Foundation and the Green Mountain National Forest. It focussed on the long-abandoned, turn-of-the-century logging mill village of Aldrichville, located along the present-day Long and Appalachian Trails. Student activities were designed to reveal aspects of the villagers' 100-year-old life-style, and included performing period songs and dances, doing art projects in the class room (as well as sketches and watercolors in the woods), training in field and laboratory photography, examining deed and census records with the town clerk, and spending half of each day doing archaeology in the field. Feedback from students and their parents confirmed that these "educational" activities were recreational as well, while staff observed that this was a fun and tangible way to promote site stewardship and a sense of local history. The success of this "first annual" field school was due, in part, to the attractiveness of an alternative summer camp experience and the strength of our Partnership. We share this experience to encourage others to take advantage of public/private partnership opportunities to promote education and site stewardship through recreation. Agencies, educational institutions, and the public can all benefit from the resulting synergy.

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### The Site

Aldrichville was established and operated as a mill village by a local businessman/logger, Barney Aldrich, in the late 19th century. It is located in the Green Mountains, within the National Forest, well above the Vermont Valley just to the west which contains most of the built environment and commercial enterprises in the present-day town of Wallingford. The mill operated successfully for approximately 20 years (ca. 1890-1910), before being abandoned in favor of a new location in the valley, nearer town and the railroad. At the time of its peak operation/occupation, Aldrichville consisted of a steam-powered mill, a store, school, blacksmith shop, and roughly a dozen households (clustered in two "neighborhoods", apparently dividing English- and French-speaking families); no doubt there were numerous sheds, barns and outbuildings in the area as well. After abandonment it was reported that some of the structures were left standing for the use of hunters and other adventurers (the structures were reported to have burned in down in rather short order); at least one building is known to have been moved to town where it still stands. Long-time Wallingford residents remember structures, mill features, pieces of machinery, and parts of the old boiler still being visible even after World War II. Today the Appalachian and Long Trails (which share a common path in southern Vermont) run through the old village on what was once its main thoroughfare, now reduced to a ghostly pedestrian way; the only visible surface remains are the stone foundations for the mill, some occasional metal machinery parts, and the odd stones used as footings for house sills. Despite its long abandonment, Aldrichville has special meaning for town residents, in part because the activities pursued there represent one of the economies and ways of life their town was based on.

### The Project

The "Relics and Ruins" camp was designed to re-create the lifestyles of the folks who once occupied Aldrichville. We took a broad spectrum approach, and ultimately included art, music, dance, oral history, deed and census research, photography and archaeology as components of the program.

It was initially conceived, however, as a relatively modest attempt by a fifth grade elementary school teacher (Gardner-Baasch) to get her class interested in local history through field trips. She recruited a local historian with a personal interest in Aldrichville (Barbieri). He, in turn, knew of a consulting archaeologist (Charles) who was enthused about public archaeology projects for young people. And she, in turn, realized that Aldrichville was on National Forest Service land and should therefore involve someone from that agency (hence, Lacy).

Once this somewhat accidental team sat down to discuss ideas, it was apparent that there was more potential here than we were going to realize with just a couple of field trips with the 5th grade. It was at this point that we contacted the Hayes Foundation -- a local non-profit

educational foundation which sponsors summer camps for gifted students. They were agreeable to underwriting a camp whose goal was to learn more about the life styles and historical details at Aldrichville while learning HOW to find out, appreciating why stewardship is important -- and having fun.

Our presentation for the NERR Conference was an illustration of how Archaeology and Recreation work well together as components of an enjoyable educational experience -- presumably for people of all ages, although we focussed on youngsters. We also felt that the project was successful because it depended on partnerships, and crossed a number of organizational, disciplinary and demographic boundaries.

#### **A Typical Day**

Our typical day began with one of four special area concentrations -- art, photography, archaeology lab, or document research. Mid-morning our musician would come in for performance, dance instruction, and assistance with composing a camp song (resulting in the collaborative "Going Back to Aldrichville", performed enthusiastically for parents and friends). Lunch on the bus to the drop off point got the kids ready for the 1 mile hike along the Long/Appalachian Trail into the site, where we then excavated in one hour shifts, the alternate hour used for in-field art and photography projects, or the occasional foray into the woods looking for additional village features.

#### **Underwriting the Cost**

Having a specialist for each of the interest areas, and a student:adult ratio of 5:1, is not inexpensive. The Hayes Foundation covered full- and part-time salaries for most of the staff (for the two weeks), and provided mailings, administrative costs, and art and photo supplies. The Forest Service paid for its archaeologist, supplies, additional transportation, maps, etc. The Wallingford Historical Society contributed source materials, photos, a video camera, oral accounts and lots of enthusiasm. The Wallingford Elementary School gave us a home space and transportation. And finally, parents and staff gave quite a few volunteer days toward the effort.

#### **Results**

Results of our efforts were both tangible and intangible. Of the former, (re)discovery of sites and features; clearing intrusive vegetation; beginning a map of the area; excavating (over 4,000) artifacts; creating paintings, village reconstructions, songs, photos and more were all tangible results, reflected in a month-long exhibit at the Chaffee Center for the Arts.

Less tangibly, but no less important, we combined logic, scientific methods, oral history, art, music, documents and story-telling to recreate a point in time; add personal value to a spot on the landscape; have a first-person stewardship experience, and push us toward a better understanding of one set of historic sites -- all while having a good time!

#### **Recommendations**

Our experience confirmed two noteworthy lessons relevant to recreation managers, which is why we shared this story at the NERR conference. One is obvious in hindsight, but still worth repeating: Partnerships create more energy than the mere sum of their parts (even if your partners cannot be as generous as ours were) -- they can leverage resources, spread "the word" to more diverse publics, and promote the creative synergy that results from crossing disciplinary lines.

The second lesson (based on feedback from participants, their parents, and the staff) is that public archaeology -- at least in the form it took in the "Relics and Ruins" camp -- is viewed to be educational, yes, but primarily *recreational*. Nevertheless, public archaeology projects are usually sponsored by archaeologists (who have a particular agenda and set of expectations, heavy to data recovery); or if not archaeologists, then folks with heritage tourism interests, or educators-without-partners. It would appear that there is a large audience out there looking for just this kind of recreation experience, so it is unfortunate that it is rare to hear of recreation initiatives in this regard ---either in the academic or governmental spheres.

In closing, we encourage recreation professionals in academic or government settings to consider entering into partnerships in general, and specifically to do so in sponsoring public archaeology projects because you bring your own set of priorities and understandings to bear on such initiatives, and could help promote the message of site and environmental stewardship in a positive way.

## PHILANTHROPY AND COLLABORATIVE PLANNING: A CASE STUDY

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**Abstract:** Philanthropy and natural resource management have historically had a close but temporary relationship. Typically donations of land to private foundations, state or local government have been used for tax relief, and often sold to generate capital; at which point the relationship between donor and beneficiary is minimized. During the past ten years changes in information technology, increased investment in the stock market and more opportunities to build wealth have extensively broadened the wealth of America and have generated a larger class of individuals capable of philanthropic ventures. Collaborative planning is a process for resolving conflict and advancing shared visions with a group of diverse stakeholders (Gray, 1989). Much research has been conducted on issues involving collaborative efforts between the general public and resource managers to more effectively manage natural resources on a broad scale. It is important to recognize the value of the collaborative effort on a much smaller scale and at the community level. The purpose of this presentation was to describe the need for further research through examining the relationship between philanthropist and beneficiary, and the collaborative effort toward the management of a 400-acre tract of land in Southwest Virginia.

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The Selu Conservancy was established 1989 by the donation of roughly 400-acres of land by the Bowles family to the Radford University Foundation, Inc.. The land is situated along the Little River in Montgomery County Virginia and is 90% deciduous forest and 10% fallow pasture. This property had been passed down through the Bowles family for a number of generations prior to the gift to the Foundation by Mr. John Bowles. Over the past eight years the Conservancy has constructed a 4100 square foot retreat center, a river front facility with a 95-foot dock

and an ADA trail overlooking the Little River. Recent grants have provided funding for a native warm season grassland interpretive trail and a network of ADA trails throughout the Conservancy.

Mr. Bowles, the community at large and Radford University have been instrumental in every aspect of the design, funding and development of the Selu Conservancy. It is this collaborative relationship involving a diverse group of interests that has provided the following positive outcomes; and in turn demands further research:

1. Donor satisfaction
2. Continued and spin-off donations
3. Increased support for the agency
4. Policies that are widely supported by constituents

At the heart of this collaborative planning process was the establishment of the Selu Conservancy Steering Committee. This committee came in to being at the time when Mr. Bowles initially made this gift to the Radford University Foundation, Inc.. Members of this committee include: the Executive Director, Radford University Foundation, Mr. John Bowles, the Director of Selu Conservancy, a student, a member of the local community and one representative from the departments of Geology, Biology, Anthropology, Appalachian Studies and Leisure Services. Initially Mr. Bowles had asked a representative from each of these disciplines to express how the gift of this land would behoove their respective departments. After the results of this research was compiled, a management plan was developed with the theme of minimum impact and education for the community.

Mr. Bowles over the past nine years has been involved throughout the decision making process as a partner. One example of this is the construction of the retreat center/visitors center. Mr. Bowles helped in every phase of the construction of this center including the development of funds, design of the structure, and supplemental donations. The center was officially opened in June of 1997 and serves as a meeting place for numerous groups throughout southwest Virginia. To date, more than 1200 visitors have been to the retreat center including school groups from five counties, non-profit organizations and business people from across the globe.