EDUCATION, THE KEY TO PRESERVATION

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ABSTRACT. Wilderness education is the key to preserving our nation’s wildland ecosystems and must take its place in the forefront of wilderness management. Just as fire management cannot succeed without fire prevention, wilderness management cannot succeed without impact prevention. With such alarming environmental issues as global warming and acid rain, wilderness not only provides an important social release for the American public, but will be vital to our planet’s existence as a major natural support system. With such urgency being placed on the protection of these unique areas we cannot procrastinate any longer as this fragile resource of wilderness is deteriorating at a furious rate. Given the commitment, education will definitely be the single most significant aspect of wilderness management in the next 25 years and will be the key to preserving these natural treasures from literally being loved to death. With a culmination of in-town presentations, front desk education, innovative wilderness entry point programs, field oriented training such as the National Outdoor Leadership school, and traditional backcountry ranger educational techniques, visitor behavior can be changed and improved thus minimizing the social and biological impacts occurring in virtually every wilderness area across the country.

The information presented in this paper has derived from ten years of field experience in managing one of the most intricate units in the system, the Superstition Wilderness.

The Superstition Wilderness is a major urban interface wilderness, located in southcentral Arizona, that receives an array of excessive uses from the surrounding Phoenix metropolitan area. Over the past ten years a multifaceted educational program, fondly known as the Wilderness Information Specialist (WIS) program, has successfully preserved the natural integrity and value of this heavily visited wilderness. Since the inception of the WIS program in 1979, over 250,000 visitors have been registered and educated at the two most popular trailheads alone. Thirty-five thousand future and/or present day users have been educated.

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through aggressive in-town education efforts. Twenty-two thousand pounds of trash has been collected and removed and 3,100 fire rings destroyed and naturalized.

The WIS program and its common thread of education has conveyed to the areas visitors a new found respect, and has assisted the public in forming a positive ecological responsibility that will carry far past the reaches of the wilderness boundary. The percentage of trash found in this wilderness following the fifth year of WISdom has dropped 90 percent. The amount of fire rings found in the backcountry has plunged almost 60 percent. Vandalism of signs, intrusion barriers, and WIS trailhead camps has been reduced almost entirely. Through education this urban wilderness has a chance to withstand the heavy use that it receives and will receive in the future, as the Phoenix area continues to grow at an overwhelming rate. This paper will attempt to use the WIS success story to point out the objectives and aspects of wilderness education and will offer examples of successful programs that could be utilized in developing a wilderness education module in other areas.

WILDERNESS EDUCATIONAL OBJECTIVES

Each of these objectives should be studied and understood before implementing any type of educational program:

1. To increase visitor awareness and understanding of the Wilderness Act and the National Wilderness Preservation System.
2. To teach the visitor Leave No Trace, low impact camping skills.
3. To teach a general land ethic responsibility that will reach beyond the wilderness.
4. To increase the public's knowledge and understanding of the importance of nonrecreational uses of wilderness.
5. To make a special effort to reach young people whose minds are receptive to new ideas.
6. To create support and understanding for the wilderness natural fire program.
7. To establish positive working partnerships between the managing agency and the public.
8. To accomplish the above objectives without increasing the number of wilderness visitors.

ACCOMPLISHING WILDERNESS EDUCATION WITH LIMITED BUDGETS

Volunteers are an effective means of accomplishing wilderness education and if trained properly can accept a large percentage of the responsibility. School teachers and college students are excellent sources for volunteers and thoroughly enjoy the opportunity to teach environmental programs. With the proper direction and supervision, volunteers can accomplish grade school education, user group education, and trailhead and backcountry education. In-town programs that involve controversial issues such as mining and grazing in wilderness should be conducted by seasonal or full-time employees. Trailhead and backcountry programs should also be organized and supervised by seasonal or full-time wilderness employees, and managing agencies must make a commitment to hire full-time wilderness employees.

Start out simple when beginning an in-town wilderness education program. Develop one program for the grade school level, and one for user group education and become proficient with these presentations before adding additional materials. There is a wealth of knowledge in this field so utilize programs that have already been tested and proven successful, but develop a style that works for you and your area.
Adopt or design programs that meet specific needs of your area. In-town user group education must be geared towards each specific interest group to achieve the best end results. Grade school programs can be more general in their approach but should concentrate on audience participatory presentations as children learn more by being directly involved. Trailhead and backcountry programs should concentrate on high use areas and can progress to other areas as impacts in the high use corridors are stabilized.

**EDUCATIONAL DIVERSITY**

Educational diversification will enable the manager to reach a broader audience and will ultimately reduce resource degradation on the ground. Programs should be designed for specific age levels and specific user groups, as generic presentations tend to be vague and uninformative.

Program diversity is also attractive to the volunteer or seasonal employee who is participating in the program and will increase recruiting capabilities by offering a well rounded overall experience.

There are five logical areas that wilderness education can be accomplished. In-town, front desk, trailhead, backcountry, and nonagency field education. This section will address these five areas and will emphasize the strengths of each approach.

**In-town education**

Although it is the most challenging, in-town education undoubtedly is the most effective means of educating the wilderness user as behavioral patterns can be shaped before the visitor reaches the wilderness.

In-town programs must be well planned and practiced to provide a professional educational experience for the learner. It is difficult to excite people about wilderness in a classroom situation and programs that solicit audience involvement have a much better chance of reaching participants.

Understanding of the Wilderness Act, the Wilderness Preservation System, low impact camping practices, nonrecreational uses of wilderness, and priority rules and regulations are important components of an effective in-town presentation.

Programs should emphasize minimum impact camping techniques, and should not feature pretty scenery slides that promote use of popular areas. In-town efforts can best be achieved by developing programs in the following areas:

*User Group Education:* User group lists can be formulated by wilderness employees in the field and front desk people in the office to determine educational targets.

Outreach efforts like that of the WIS program can be implemented by sending a cover letter that explains wilderness and the problems it faces, accompanied by a brief description of presentations offered.

By sending user group information on educational opportunities, a positive message is sent expressing an interest in the organizations using wilderness and the willingness to meet with
them. It is then possible to educate these special interest groups before they enter the wilderness through a multitude of medias.

Professionally designed no-trace slide and video presentations geared towards backpacking and horse use in wilderness are available and combined with a lecture work well for boy scouts, girl scouts, hiking, and riding clubs.

Wilderness philosophy and equipment demonstrations are easily developed for groups like the Sierra Club, combining the above slide and video shows with a lecture and or gear demonstration.

The wilderness skills trail is an excellent teaching device for high school and college level groups. Participants walk through a ten-station display set up on easels and answer questions from a pamphlet relating to wilderness philosophy, no trace camping, care of cultural sites, and proper use of fire and water.

By contacting known user groups, the WIS in-town program has gained strong support for backcountry rehabilitation as many of the groups offer to assist in a variety of field projects. When user groups are properly educated before they enter the wilderness their impact upon the resource can be reduced considerably.

_Educating Young Minds:_ The WIS program focuses a large percentage of its time educating future wilderness users. Working with kindergarten through fifth grade children is fun and rewarding as the seed of environmental awareness is planted with each presentation.

Kindergarten through second grade programs feature figures like Woodsy Owl and provide the children with a positive environmental symbol that they can relate to. Participatory skills like the Impact Monster teach students at the third through fifth grade level basic land ethic skills and emphasize the wilderness concept. Unnecessary advertisement of specific areas such as the Superstitions Wilderness is avoided by emphasizing the wilderness system as a whole.

By educating these future users, the WIS program is ensuring the protection and preservation of not only wilderness, but all public lands. More detailed information relating to youth education will be provided in the progressive education section.

_World With the Media:_ Since 1982 the WIS program has taken an active role in improving relations with the media in the Phoenix area. By working closely with local newspapers and radio stations, the media has become an asset of wilderness management by running articles and radio spots on the value of wilderness and the problems it faces.

Public service announcements on radio stations, newspaper articles, and television interviews can also be used by the managing agency to educate the public on no trace camping techniques, current management efforts, land the importance of nonrecreational uses of wilderness. Topics such as wildlife habitat, scientific study, clean air, and watershed are good issues to explain nonrecreational activities in wilderness.

Advertisement of wilderness is not the goal here, and media related efforts should concentrate on the wilderness system as a whole and not specific areas. Through the media thousands of users and nonusers can be contacted and educated; don't miss the opportunity to reach such a large audience.
Front desk education

A large percentage of wilderness users write, call, or visit the office in person to purchase maps or gather information about their trip. Receptionists should take the time to discuss the most important low impact camping techniques with each visitor. These techniques should include pack it in, pack it out information, proper use of fire and water, human waste disposal techniques, and campsite selection. The information given out at the front desk must be consistent with information dispersed by backcountry, trailhead, and in-town wilderness employees and or volunteers.

Trailhead education

Trailhead education is another means of educating the public before they enter the wilderness, but is not as successful as in-town presentations because the visitor has already planned his trip and is packed accordingly.

Information sign boards are somewhat effective at trailheads and do receive a lot of use and are easily accessed for maintenance. Informative signs should be used to welcome the visitor and to convey a brief message about the concept of wilderness and how to care for this fragile resource. These signs should be positive in their approach and should not appear as a large "DO NOT" sign. Backcountry ethics, important rules and regulations, written factfully, and in-town educational opportunities are examples of information that can be used for trailhead signing.

Heavily used wilderness entry points lend the opportunity to educate and register a large percentage of the areas users. Trailhead camps can be set up outside the wilderness at popular portals where seasonal employees and volunteers can be stationed in high use seasons. A positive message can be given to each group before they enter the wilderness that emphasizes low impact camping and the philosophy of wilderness, as well as providing the public with other pertinent information.

Other duties can be combined with visitor education such as data collection, trail maintenance and repair, front country visitor contact and law enforcement. Data gathered at trailheads can provide valuable information for the wilderness manager. Registration cards can show where the majority of wilderness use originates and this can assist in targeting in-town education. Organized group lists can be kept and used to solicit volunteer assistance for field projects. Outfitter/guide use can be monitored and documented as well.

Trailhead education can be effective in changing visitor behavior if done in a positive professional manner and by utilizing updated minimum impact camping information. This management strategy can be combined with field duties, making trailhead education a productive, cost effective endeavor.

Backcountry education

In the Superstition Wilderness our experiences show traditional wilderness ranger educational techniques used in the backcountry are more successful when proceeded by in-town or trailhead education. On-the-trail contacts are found to be more productive in preventing impacts than campsite visits, where the users camp is already in place. Trailside education should be stressed as the preferred method of contacting visitors in wilderness ranger training sessions and workshops.
Backcountry personnel should converse with each group in depth on no trace camping issues and offer suggestions on campsite selection, water availability, and trail conditions, dispersing use if needed. Field employees must make a conscious effort to include education in every visitor contact and must conduct themselves as professionals. Education done in the field must be consistent with in-town and trailhead effort if the public's behavior is expected to change.

Field education

Field based educational programs such as the National Outdoor Leadership School (NOLS) and the Wilderness Education Association (WEA) are good examples of educational programs that are conducted inside the wilderness. Both programs are available to the public and NOLS is also available to land managing agencies. These field schools teach a strong land ethic and how to travel safely and comfortably in the backcountry.

Field oriented programs do a more complete job of teaching practical hands-on skills than other types of education and utilize the wilderness setting to get their learners excited about caring for the land.

NOLS has been sponsored by the Forest Service and the BLM in Arizona to conduct field wilderness management schools and has done an excellent job according to participants of these sessions. A cooperative agreement between NOLS and Region 3 of the Forest Service is in the works and would secure a permanent inner-agency wilderness training program, broadening agency wilderness educational opportunities.

PROGRESSIVE EDUCATION

Progressive programing is vital to the success of wilderness education and should promote respect for all lands, not just wilderness. Progressive education should begin in the classrooms of grade school children and continue on to the adult level through known user group education. Two programs are used by the WIS program to teach environmental education to primary grades. The Woodsy Owl program and the Impact Monster program. This section also provides an explanation of an adult user group, no trace presentation.

The Woodsy program is a twenty minute presentation performed for kindergarten through second grade classes and begins with a simple introduction which explains the role of the Forest Service as land managers by ranger number one. The kids are then asked what animal seen on television says "Give a Hoot Don't Pollute." They respond with Woodsy Owl, and in comes Woodsy with a uniformed Ranger. Ranger number two introduces Woodsy and expresses his love and respect for the outdoors. The second ranger then uses a flip chart with professionally drawn images to talk the group through four environmental subjects: littering, proper use of fire and water, and respect for plants and animals. This aspect of the program is done by asking questions and encouraging group participation. A brief group recap of the four subjects is conducted and the program concludes with the "Sack, sack, sack your trash" song, sung to the tune of "Row, row, row your boat." The kids then file up and meet Woodsy. This presentation was designed as an introduction to environmental education and proceeds the Impact Monster program.

The Impact Monster is a one hour presentation that instructs third through fifth grade classes on the wilderness concept, minimum impact camping skills, and permanent and nonpermanent impacts. It begins with a brief description of the Forest Service and duties of the wilderness ranger.
Three rangers take turns, using audience participatory skills to explain the types of uses on the National Forest and how they compare to the activities in a wilderness. A simple explanation of the Wilderness Act is followed by a brief definition of the word impact. The kids are then asked to identify things that could be found in a wilderness. As they identify rocks, trees, animals, trail signs, and water, the children are asked to emulate them using props fashioned from cardboard and colored burlap bags. A short narrated skit begins the program by explaining the food chain. A coyote chases a kangaroo rat and goes away hungry, and the rat is then caught and eaten by a red tailed hawk who swoops off his perched perch. The wilderness ranger is then introduced as a keeper of the land and applause is encouraged. The ranger points out various ecological wonders and reacts accordingly. The ranger briefly explains no trace techniques and picks a campsite, cooks his or her dinner and then beds down for the night. A not so respectful visitor enters next and completely impacts the area. The Impact Monster shoots the sign, kills the animals, pollutes the stream and builds a large fire ring. He is dressed in bright colored clothing and carries a loud blaring radio that he shuts off following his entrance. The ranger is awakened and escorts the Monster out of sight. The narrator asks the children to explain the differences in clothing, noise and overall behavior as the Impact Monster changes back into uniform.

The Impact Monster is then re-introduced as a ranger and takes this opportunity to point out permanent and nonpermanent impacts and how they can or cannot be renaturalized. The narrator concludes by thanking the participants, and urging them to take the things they learned home and to tell their friends and family. They are then asked to use this land ethic at school, in the park and at home as environmental respect must be practiced everywhere. Handouts like Woodsy book markers are distributed with an environmental education packet to teachers who are asked to utilize the materials at their leisure.

The Leave No Trace presentation is a one hour program given to boy scout troops, hiking and backpacking groups. It begins with an introduction that explains the Forest Service and an overview of wilderness management. Audience participation is an important aspect of this presentation and is used by asking the group their definition of wilderness.

Wilderness experience expectations are different and this is pointed out as a transition into the definition of the Wilderness Act. The use of nonmotorized equipment and mechanical transport is then discussed as well as the nonrecreational uses of wilderness. The twenty three minute "Without a Trace, the Wilderness Challenge" slide tape presentation is then shown.

An in-depth recap of the slides is related to the group, stressing minimum impact camping techniques and how they can reduce resource degradation. Ample time is reserved for a question and answer period and this is where the group can receive information relating to their individual experiences and needs. A brief conclusion is conducted, thanking the need for us all to work together at keeping the "Wild" in Wilderness.

WILDERNESS EDUCATION RESOURCE MATERIALS

Ideas for Wilderness Information and Education
Washington Office
Recreation Management Staff
USDA Forest Service
Box 96090
Washington DC 20090-6090
Multi-Media Environmental Education Booklet
Mesa Ranger District Office
USDA Forest Service
P. O. Box 5800
Mesa, AZ 85201-5800