

INTEGRATING TECHNICAL ROCK CLIMBING INTO PROTECTED AREA MANAGEMENT: A CASE EXAMPLE OF MINNEWASKA STATE PARK PRESERVE, NEW YORK STATE

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Abstract: In the fall of 1996, technical rock climbing was introduced as a regulated outdoor recreation activity in Minnewaska State Park Preserve, situated in the Shawangunk Mountain region of New York State. It is the first instance in which rock climbing has been sanctioned by the New York State Office of Parks, Recreation and Historic Preservation. This paper identifies key issues and associated environmental, legal and operational measures incorporated into a climbing plan, offering one model for including this type of activity in protected area management.

Background

The Shawangunk Ridge is one of the most important sites for biodiversity protection in the northeastern United States, and has been an important focal point for conservation and research for over 100 years. The Ridge forms a long, narrow corridor between the Catskill Mountains and the Hudson River in New York State, and runs southwest through New Jersey to the Susquehanna River in Pennsylvania. About 150,000 acres of this mountain ridge have been protected for conservation and recreation purposes.

Minnewaska State Park Preserve, administered by the Palisades Interstate Park Commission and the New York State Office of Parks, Recreation and Historic Preservation, is the largest publicly-owned landholding in the northern Shawangunks.

Consistent with Article 20 of the New York State Parks, Recreation and Historic Preservation Law, the overall management goal of Minnewaska is to preserve and protect the natural and cultural resources of the Park Preserve while making compatible recreational and educational opportunities available to the public.

The Park Preserve contains examples of an estimated 40 rare plant and animal species and over 20 natural communities, including the ecologically significant pitch pine (*Pinus rigida*) and unique cliff and talus vegetation. The New York Natural Heritage Program has given the Shawangunks a biodiversity rank of B1, the highest possible within the international rating system used by the program.

Statement of the Problem

Rock climbing has been a recreational activity in the Shawangunks since the 1930's. The Mohonk Preserve, Inc., a private landholding of over 6,300 acres adjacent to Minnewaska State Park Preserve, has long been one of the premier rock climbing areas in the United States.

As the sport has grown in popularity over the past few decades, the number of climbers using the cliffs of "The Gunks" each season has significantly increased, leading to greater demand for new climbing areas in the Shawangunks. The Mohonk Preserve has found it difficult to accommodate these demands; cliffs suitable for climbing are limited, and heavy climbing use has resulted in environmental degradation in some areas. Minnewaska's neighboring, relatively untouched and scenic cliffs, which offer a diverse selection of climbing opportunities, are an attractive expansion alternative.

To accommodate rock climbing within the legal framework of the Park Preserve, however, a climbing plan was needed to address an array of environmental, legal and operational concerns.

Key Issues of the Planning Process

The management plan for rock climbing at Minnewaska addresses three key issues. These are:

1. Resource Protection -- Maintaining the ecological integrity of the designated climbing area.
2. Safety and Rescue -- Accident prevention and preparation for emergency situations.
3. Administrative Operations -- Devising a management system for administering the program.

Resource Protection

Environmental conservation of the climbing area was addressed through site designation, a monitoring and mitigation program, and by encouraging low-impact climbing techniques.

A special use area known as the Peter's Kill was selected for rock climbing for three reasons:

1. An estimated 100 climbing routes of varying degrees of difficulty had been determined providing diverse and attractive climbing opportunities;
2. The site had been previously disturbed by use as a small alpine ski and camping area.
3. The area was readily accessible from the highway which intersects the Park Preserve.

"Limits of Acceptable Change" methodology has been used to develop standards for environmental monitoring and mitigation of impacts in the area (Table 1). A base line ecological survey of the area completed prior to introducing the special activity served as a frame of reference for a program of monitoring and environmental mitigation. Monitoring is conducted on a continuous basis by Park Preserve staff. A 100-car parking lot capacity and a maximum allowance of 50 climbing permits per day were designed to further control potential adverse impact on the resource.

Table 1: Potential Adverse Impacts and Mitigation Steps (PIPC/ OPRHP, 1996)

Impact	Limit of Acceptable Change (LAC)	Mitigation Step 1	Mitigation Step 2	Mitigation Step 3	Mitigation Step 4
Disturbance of raven nesting	No disturbance during nesting season	Patron education and voluntary seasonal closure of nesting area	Seasonal closure of nesting area	Permanent closure of nesting area	Reduce public access to Peter's Kill Area
Decline of protected flora	No decline	Patron education and voluntary change of behavior	Close areas supporting declining species on rotating basis	Close areas until plants recover to LAC level	Reduce public access to Peter's Kill Area
Injury to <i>Pinus rigida</i> from use as anchors at cliff summits	No loss of bark/ exposure of cambium; some "wear" permissible	Patron education and voluntary change of behavior	Protective material around impacted trunks	Install fixed anchors as recommended anchor alternatives	Reduce number of climbing passes
Decline of local fauna populations	No significant change in population sizes	Patron education and voluntary change of behavior	Voluntary closure of areas of concern	Closure of affected areas until populations return to LAC level	Reduce public access to Peter's Kill Area
Archeological resource degradation	No further disturbance of sites	Patron education and voluntary change of behavior	Use areas re-designed to avoid resource areas	Close affected areas	Reduce public access to Peter's Kill Area
Undesignated trails	Less than 3 informal trails on previously disturbed areas; none in undisturbed areas	Patron education and site restoration or re-design	Restoration and natural barricades put in place ("brushing in")	Close affected areas	Reduce public access to Peter's Kill Area
Accidents	Minor injuries; no life-threatening injuries or death	Patron safety education	Reduce access to or modify areas identified as dangerous	Close areas identified as dangerous	Reduce public access to Peter's Kill Area
Adverse visual impacts	No compacted soil/ denuded areas. No excessive visible chalk. No litter.	Patron education and voluntary change of behavior	Enforce designated trail use, restoration, clean-ups	Close affected areas	Reduce public access to Peter's Kill Area
Other impacts	Dependant upon impact type	Patron education and voluntary change of behavior	Area closure(s)	Reduce public access to Peter's Kill Area	

Climbers are asked to use minimum- impact climbing practices which preclude permanent anchors or similar fixed protection, vegetation removal, hold chipping, rock trundling, and excessive use of chalk.

Safety and Rescue

Several policy measures have been established to promote patron safety.

1. Climbers are advised to wear helmets.
2. Sport rappelling (repeated high speed rope descent) is not permitted due to the high incidence of injury associated with this activity.
3. Climbing access trails are off limits to users other than climbers to deter injuries involving untrained and inexperienced patrons attempting technical rock

climbing, and from falling rock and equipment.

4. Park Preserve ranger staff are involved with regularly scheduled emergency response training in cooperation with local and regional emergency medical and rescue agencies.
5. While a policy was adopted to restrict dangerous or environmentally damaging practices, general climbing style and techniques are left to individual preference.

Administrative Operations

1. Climbers are required to pay a \$5.00 fee for a climbing permit and sign an "Acknowledgement of Risk". A parent or guardian assumes this responsibility for climbers under eighteen years of age.

2. Climbing guides and instructors are required to obtain permits involving proof of insurance, accreditation by the American Mountain Guides Association (AMGA), NYS guide license, and attendance at a climbing orientation session conducted by Park Preserve staff.
3. Additional climbing rangers and support staff are employed to monitor climbing activities and to assist with educational and maintenance needs.
4. Informational kiosks with regulations, emergency contact numbers, interpretive information, and maps of the area are being developed. These will be located at primary access points such as trail heads.
5. Climbing regulations are consistent with those used elsewhere in the Shawangunks whenever possible. Consistent policy could reduce enforcement needs.
6. A volunteer technical rock climbing committee has been retained to advise on policy and program development.

Conclusion

Based upon the initial (1996) season of climbing operations in the Peter's Kill Area, the area management plan has been found to be satisfactory. Only minor

modifications, such as the addition of staff, increases in the amount and types of staff training, trail revisions, and use area demarcations, have been necessary to date. At present, no major management plan changes are anticipated. The program for the Peter's Kill will continue to be monitored through 1997 and future seasons.

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