

The Front Range Climbing Stewards

Mill Creek Canyon Approach Trail

Project Report

Oct. 31th 2016



Overview of the Area and Impacts of Climbing:

In Oct. of 2016 The Front Range Climbing Stewards (FRCS) in collaboration with High Mountain Institute's Gap Program (HMI) and the US Forest Service Moab/Monticello Ranger District (USFS) worked on a trail maintenance project in Mill Creek Canyon a popular climbing area in the La Sal Mountains. This report details the scope, design and methodology of the project as well as each partner's involvement in the project.

The goal of the project was to mitigate the erosive impacts of climbing in the canyon. This project focused on hardening a few key sites with the resources at hand during ten days between Oct. 4th and 14th, 2016. This goal is highly regarded by the land manager and many climbers who regularly visit the area because Mill Creek is a direct tributary to the aquifers that supply the City of Moab with culinary water. Protection of this resource is of prime importance.

Additionally, the climbing resource in the canyon is incredibly notable. The rock and the setting are distinct within Southeastern Utah and provides much appreciated diversity to climbing in the area. Primarily, Mill Creek is a sport climbing area in a region with a relative dearth of bolted routes. It's rock and routes are consistently of high quality and esthetic. Climbing in the canyon has taken place since the 1990s and has been largely protected by the local climbing community's tradition of not publishing or promoting any information on the climbing resources within the canyon.

Such lack of information has limited the amount of visitors to the area but the general characteristics of the area also effect the amount of visitation. The lack of beginner/moderate routes and committing bolt placements act as a filter. Such circumstances have kept the area

from visitation that is commonly seen in other areas around Moab such as Wall Street, Kane Creek Canyon or the famous desert towers of the area. That being said the relatively low level of visitation has impacted the landscape over the years and as word of mouth continues to expose the area to more climbers slowly over time. Generally, the nature of sport climbing access sees use in a small and focused area within the canyon. Even with relatively small visitation numbers the repeated use of these crags takes its toll on the steep slopes of the crags below.

The USFS, Utah Department of Transportation and a local climbing user group, The Friends of Indian Creek have been working to address the impacts of recreation in the area. Three years ago a plan was implemented to provide parking at the traditional access point into the canyon, build a pit toilet and a sustainable trail system into the canyon. Careful consideration has been placed to educate users to be stewards of the area and mitigate their impacts. The climbing community is asked to regulate themselves regarding parking, avoiding climbing near nesting raptors, addressing human waste concerns and avoiding using fixed ropes to access the canyon via steep and loose terrain.

A trail system was designed by the USFS and has been constructed via their crews as well as volunteer crews from the climbing community. The trail design has been prioritized to areas of heavy use and followed National Environmental Policy Act (NEPA) procedures. The trail system is complete, however, requires more work in order to be sustainable. The trail corridor has been established to much of the area's most visited walls but trail grades are steep and require structures to be added to mitigate the erosive impact of climbers accessing the area. Slowly this is being upgraded by the USFS over time.

Overview of the 2016 FRCS/HMI Trail Maintenance Project:

Figure 1 – Students developing stone work skills

The FRCS is a program of The Boulder Climbing Community (BCC), a non-profit based in Boulder, CO, with the mission of providing innovative solutions to land managers to mitigate the impacts of climbing on lands throughout the Rocky Mountain region. HMI's Gap Program is a semester-long college field course that weaves together environmental field studies with leadership and community-building curriculums in a wilderness setting.



Together FRCS and HMI collaborate to complete an in-depth restoration project at a climbing area of need. FRCS provides project design experience, technical mastery, skilled instruction, and necessary tools & equipment while HMI provides a trainable labor force (**Figure 1**) of students who are actively engaged in the interface between recreation and stewardship of our public lands. HMI staff utilizes this experience to promote a stewardship ethic within their curriculum and build future leaders within the climbing community. This cohesive approach engages the students in a hands-on curriculum where they benefit from both the recreation and stewardship of a particular area in an intensive manner.

Figure 1 – Stone Structure



Before – slick clay soil trail corridor



After – hardened trail tread & drain

FRCS and HMI approached the USFS about the potential for running a project in their district via a contact at The Access Fund, a national climbing advocacy organization. All parties communicated about the type of project we were interested in, needs in the area, general scope of work and manner to fulfill such a project. It was decided that in early October that FRCS and HMI would collaborate with USFS to complete a project at Mill Creek. Overall, the project cost \$15,000.00 including food and lodging of all staff and students, HMI & FRCS staff wages, travel costs, tools & supplies and program expenses. \$9500.00 of this total reflects the program budget of the FRCS. Both BCC and HMI raised funds to support the project and The Access Fund awarded a Climbing Conservation Grant of \$2,000 to apply to the project, course enrolment and private donations covered the rest.

Project Educational and Professional Strategy:

This is the second year that HMI and FRCS have collaborated on sizable stewardship projects. This caliber of project is not standard fare for volunteer projects. The objectives are generally large in nature and require specific technical design, organization and building skills. This collaboration revolves around the FRCS's ability to train and supervise the HMI Gap student's direct involvement in building the technical objectives. The FRCS crew's experience in design, stone work and innovative quarrying are leveraged with the HMI group's dedication and labor.

Such a strategy is uncommon from typical volunteer stewardship projects where volunteer labor is primarily utilized for low-skill tasks such as material transportation or acting as an assistant during technical building. Instead the HMI students are trained in the technical skills to complete the objectives of the project with the support and guidance of the FRCS crew. The result is that the HMI students hold greater ownership over a professional quality project and participate in a rich education experience that directly correlates with the Gap Program's curriculum as well as serve as outreach to young climbers on the importance of stewardship. Beyond the practical applications of the project the students participate in bigger-picture instruction and discussions about the project at hand and stewardship in general.

Project Objectives, Outcomes and Observations for Future:

Two sites where intensive rock structures would solve erosion issues were identified as primary objectives. The first site (**Figures 1 & 2**) involved a stair case, drain and retaining wall. The second site (**Figure 3**) was a more straightforward but extensive staircase with a minor retaining structure. Another site where adding timber risers to the steep upper approach trail (**Figure 4**) and eliminating social trails (**Figure 5**) completed the objectives for the project. Native stone was quarried and transported from the area to the work sites. Non-native timbers & hardware were provided by USFS for use on the upper approach trail. Social trails were eliminated in a passive manner by placing large obstacle rocks & native timbers in strategic locations to discourage foot traffic as well as de-compacting, scarifying & naturalizing the paths to promote regrowth.

Figure 2 – Stone Structures



Before – eroded slick slope



After – hardened staircase

Figure 3 – Stone Structures



Before – eroded slope



After – hardened staircase

Figure 4 – Timber Structures



Before – moderate sloped trail



After – Timber risers

Figure 5 – Naturalized Social Trails

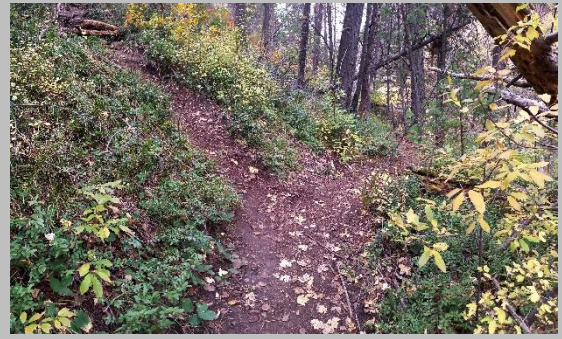


Figure 6 – Wicked Wall (within the NEPA area)



Figure 7 – Sunnyside Wall (Northside of creek)



Because of a lack of abundant stone material within the allowable harvest area (as defined by the USFS' NEPA procedures) source rock was found near the sites and quarried into desirable sizes and/or carried in from the slope above. This allowed for enough rock material to be utilized to build the structures to a quality that will last for generations without need for maintenance or replacement. The temporary social trails that were developed by transporting this source material were naturalized upon completion of the project. Project metrics are provided in **Appendix A: Project Metrics**. A total of 700 hours of labor were dedicated over the 10 workdays of the project (detailed in **Appendix B: Project Labor**).

Future maintenance for this trail system is necessary. Some 60 linear feet of trail on the upper access trail have tall timber risers that are poor condition, will likely not prove adequate in the future and are in need of proper drainage. Many linear feet of this upper trail and the auxiliary "dog approach" trail could benefit from more timber risers. In addition, two major crag areas are sites of extensive erosion: Wicked Wall (within the current NEPA area -- **Figure 6**) and Sunnyside Wall (outside the current NEPA study area, on the North side of the creek -- **Figure 7**). Both areas are denuded of vegetation, composed of bare soil and have a minimal amount of native stone available to supply the square footage of retaining structure needed to mitigate soil erosion into the watershed. Creative rigging solutions can be implemented at both of these areas in order to bring native stone in from afar (above, from the canyon rim) without extensive impacts to the riparian zone.

After talking with a representative of Friends of Indian Creek (FOIC) about the project it is our intention that future efforts and projects in the general area be coordinated with them. We believe that such collaboration will further improve the quality of projects. Their local perspective is invaluable particularly pertaining to the use of these lands. A representative from FOIC should be invited along to future site visits and be made privy to planning conversations.

Summary:

The successes of this project are significant and measurable. Not only did good sustainable work get accomplished on the trail but a strong message of the value of stewardship of our public lands was communicated to 14 neophytes within the climbing community. This is a great example of how a handful of organizations can collaborate to improve our climbing resources. The FRCS and HMI would like to thank all parties involved in this project. USFS participation in the trail concept and design is irreplaceable and their foresight into the needs of the area is much appreciated. The encouragement and insights of local climbers who were visiting the area during the project was thankfully valued. The project would simply not have been possible without the generous funders of BCC and HMI or the dedication of the Gap Program students.

Appendix A: Project Metrics

outcome	amount	unit
Trail Improved	50	L FT
Rock Step	29	#
Timber Step	27	#
Retaining Wall/Structure	121	SQ FT
Rubble Wall/Structure	21	SQ FT
Aggregate Backfill	35	CU FT
Restoration (light w/ native materials)	229	SQFT
Drain Dip	36	SQ FT
Restoration--Obstacle, Rock 100%	22	SQ FT
Move Rock by Hand	102	#

Appendix B: Project Labor

Mill Creek Canyon project		
	#	hours
FRCS Staff	3	210
HMI Staff	3	70
HMI Students	14	420
total	20	700