

The Front Range Climbing Stewards

Donnelly Canyon- Chocolate Corner Approach Trail

Project Report

Nov. 13th 2017



Donnelly Canyon Climbing Area, Indian Creek, UT

Overview of the Program:

In Oct. of 2017 The Front Range Climbing Stewards (FRCS) in conjunction with High Mountain Institute's Gap Program (HMI) organized to complete a stewardship project at Donnelly Canyon, Indian Creek. Both groups worked in collaboration with the Access Fund and the Monticello BLM Field Office to coordinate the project. The objective of the project was to address the impacts of rock climbing on the area. Costs of this project were shared amongst The Boulder Climbing Community (BCC), HMI, Willet Foundation, The American Alpine Club (AAC) and Friends of Indian Creek (FOIC). This project was the primary focus of all organizations for 10-days between Oct. 17th and 29th, 2017.

The FRCS is a collaborative program of The Boulder Climbing Community and The Access Fund, both non-profits based in Boulder, CO. The mission of the program is to provide innovative solutions to land managers in order to help mitigate the impact of climbing on lands in the Rocky Mountain region. HMI's Gap Program is a semester-long college field course that utilizes the sport of climbing to creatively weave together environmental field studies with leadership and community-building curriculums in a wildland setting.

Together the two programs work together each year to complete an in-depth trail maintenance and restoration project at designated climbing areas in 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 utilize 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 and allows them to benefit from skills obtained in an intensive manner.

Figure 1 – Student demonstrating stone work skills

Overview of the Area and Impacts of Climbing:

Donnelly Canyon is a popular climbing crag within the Indian Creek Recreation Area. Indian Creek is currently within the boundaries of the newly designated Bear's Ears National Monument. The nature of the climbing in Indian Creek is distinct along with its unique landscape. This draws visitors to the area from all over the nation and world. Climbers have visited the area for over 45 years but climbing did not really take off until the late 1970s. The area is home to thousands of reported rock climbs of varying difficulty and accessibility. Since its inception in Indian Creek, nearly 40 years ago, climber visitation has increased exponentially and occur throughout the year. Visitation is particularly high during the spring and fall when temperatures are more favorable to climbing and camping.

The continued increase of climber visits and camping has led to significant environmental impact. One of the greatest impacts related to climbing in this area is the erosion of the soils at the base areas and around the access trails to the crags. The base areas and approach trails are on loose and steep slopes, varying from 120 to 1500 feet up off the canyon floor. The soils on these slopes are fragile. They are sandy, desert soils which rely heavily on biological soil crusts, vegetation and errant rock to maintain their structure. The landscape can be forgiving and restore itself passively once disturbed, but continual and chronic disturbances cause elevated erosion issues that exacerbate quickly and cannot return to original conditions without a larger effort of active restoration.

Overview of the 2017 FRCS/HMI Chocolate Corner Trail Maintenance Project:

The goal of this project was to mitigate the erosive impacts of climbing on the Chocolate Corner access trail. This trail is one of two official trails that access the Donnelly Canyon crag and was built approximately 20 years ago by the Rocky Mountain Field Institute (RMFI). The access routes to this crag were one of the first historic stewardship projects completed in Indian Creek. Other Donnelly Canyon trails were brought up to standard in 2016 by Access Fund, RMFI and FRCS crews. Unfortunately, with no maintenance performed since the original project the Chocolate Corner segment was in a state of serious disrepair (**figure 2**). The trail was only moderately functional with numerous trail braids and structural failures. These impacts were particularly severe at the upper section of the trail close to the base of the wall.

FRCS and HMI leadership worked with the Access Fund and the Monticello Field Office to identify this project from a priority list of areas in need, then developed a general strategy to address the issues. FRCS developed the project objectives, trained, supervised and managed the progress of the project with the volunteer groups that worked on the project. HMI students took the charge and learned trail restoration design, techniques and essential strategies to accomplish the project objectives. Additionally, the Montrose (CO) High School Outdoor Club, a member of the Colorado Mountain College Outdoor Program and a handful of volunteers dedicated labor to the project under the tutelage of the trained HMI students and FRCS supervision. Please see **Appendix A** for a listing of labor totals and sources.

FRCS and volunteers used a variety of sustainable techniques to achieve both trail maintenance and passive restoration. First, the designation of a single and durable trail lessens the impact on the surrounding fragile ecosystem while promoting proper user habits. To complement this, efforts to visibly close off social trails promote passive restoration of these areas as users are no longer impact the area. Rock structures and visual cues (**Figure 3**) were carefully constructed to ensure use of the main path and allow passive restoration in impacted areas. These structures were built with locally sourced rock, quarried and transported to the worksites. Then the group utilized their new-found skills at Big Bend Boulders as part of the AAC's Moab Craggin' Classic stewardship event to build structures into the new tread alignment.

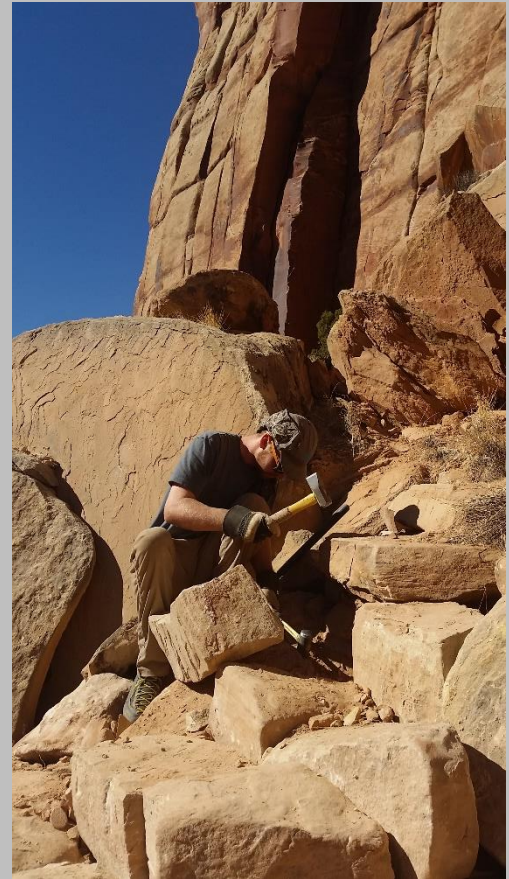


Figure 2 – Dry stack stone work



Before – eroded stairs & retaining structure



After – rebuilt and enhanced structures

Equally as important as the trail work, this project taught students from several organizations technical skills and stewardship values, which they will carry to their home communities and through their climbing careers. Finally, the presence of volunteers in the area raised awareness among climbers of the need for community involvement and good user habits.

Figure 3 – Base Area



Before – eroded slope that appears like trail



After – Retained slope with hardened surface that detracts use

Figure 4 – HMI student leadership

Project Educational and Professional Strategy:

This is the third 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 (Figure 4). 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:

The scope of the project involved two general sections: 1) the access leading to the base from the trailhead: the approach and 2) the access traversing along the base of the formation from the other access trail: the base area. The approach trail was generally functional for approximately 70% of its length as the majority of users could follow a track without major braiding. Approximately 200 linear feet below the crag, however, the trail braided drastically and erosion conditions became chronic on a large scale. The project identified four worksites on the approach trail to perform concentrated maintenance to rebuild its structures, delineated the remaining trail, then closed off and restored all erroneous social trails.

The base area consisted of a web of braided social trails and eroded slopes. There was not one clearly designated path between the Chocolate Corner area and the southern section of the crag. To address these issues, we established one functional trail between the two areas. This goal was accomplished by building retaining structures, opening up a trail corridor through the boulders (Figure 5), establishing a tread that is easily identifiable to the user and dissuading travel on easily eroded terrain. Please see appendix B for a list project metrics for both of the above sections. Unfortunately, this project was unable to address the entirety of maintenance that it required on this trail. Instead, the list of needs was addressed on a priority basis from highest to lowest and where feasible with the work plan. There are medium to low priority work objectives remaining on the trail, as well as the need for continued maintenance of the whole trail. We recommend that these areas be monitored and addressed in the future.

Figure 5 – Development of singular tread



Area before tread development



Area after opening up trail tread

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 a new generation 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. The Monticello BLM office’s willingness to coordinate needed environmental assessments before taking on projects is pivotal to addressing these impacts. The Access Fund’s dedication to being the nexus of the stewardship effort in the area is clutch and a project of this magnitude would not be possible without the contributions from the national and local climbing communities of AAC and FOIC. Furthermore the project would simply not have been possible without the generous funders of BCC and HMI or the dedication of the Gap Program students and FRCS crewmembers. Together we can address the impacts of the sport and lifestyle that we love.

Appendix A: Project Labor totals

FRCS labor, planning & development	439 hours
HMI volunteer	853 hours
Montrose HS	156 hours
Other volunteers	17 hours
Total hours	1,465
Total paid hours	439
Total vol. hours	1,026

Appendix B: Project Metrics

outcome	amount	unit
Trail Improved	244	L FT
Rock Step	79	#
Check Step	5	#
Retaining Wall/Structure	338	SQ FT
Rubble Wall/Structure	577	SQ FT
Cairn	2	#
Rock Rearrange, Delineation	102	L FT
aggregate Backfill	125	CU FT
Restoration-- Fill, Rock 50%	378	SQ FT
Move Rock by Hand	222	#
Rock Quarrying	136	CU FT

Additional Before & After photos:

Before



After



Before



After



Before



After

