

On Thursday, September 30, 10 FOSM volunteers were joined by Cibola Trails & Wilderness Manager Kerry Wood and SRD Trails Foreman Russell Berman at Dry Camp to learn and practice griphoist use. This tool can give the trail-building crew a huge mechanical advantage when pulling out stumps or (re)moving large rocks. After the practice session the volunteers and USFS personnel hiked to the work site on the Challenge Trail extension west of Dry Camp (without tools, since rain was imminent) to discuss various rockwork options for upcoming sections of new trail. Perhaps we'll use a griphoist...

Temps were much cooler than they've been, and the crew stayed bundled up during the griphoist demo.

The volunteers were Jenny Blackmore, Phil Cromer, Scott Dietrich, Byron Garner, Bruce Hansche, Jim Houle, Jeff Huser, Rich Miller, Rav Nicholson, and Steve Roholt.

Photos by Jenny Blackmore



Deciding what to move with the griphoist. You can see the wire rope in the foreground, which will be threaded through the griphoist. The bags hold other accessories. It takes time and a good deal of thought to prep the object being moved, before setting up the griphoist.



This log will work for practice. The padded straps can be wrapped around the anchor tree in the background. Every link in the system needs to be rated for (at least) the weight of the object being moved.





For a long object like this it makes sense to connect to it in 2 spots.



Attaching the griphoist's wire rope to the chain with a closeable hook. Again, each part of the system, including connecting pieces, needs to be rated for the anticipated load.



Kerry double-checks the connection while Russell and Jeff set up the anchor.



The griphoist is attached to the anchor and the wire rope gets threaded through it.





By the way, the griphoist alone weighs 41 lbs! The SRD recently purchased a more portable model which is smaller and weighs 18 lbs.



This unit has a 4,000 lb. capacity, and the smaller one is rated for 2,000 lbs. That's still a ton! Note the telescoping handle for ease of use.



Once there's tension in the system, the griphoist stays up on its own, no need to hold it up.



The crew takes turns with the griphoist to move the (practice) object. Moving a large object is a slow process!



Despite the griphoist's relative ease of use, it can still be a challenge to manually move a heavy load. (As an aside, Tractel, the manufacturer of griphoist, also makes motorized hydraulic models.) One way to create a greater mechanical advantage is to use a compound pulley system. Though it's tricky to see in the photo, here we've added a second anchor (in this case, a second tree) and a snatch block (a type of block pulley) to create a 2-to-1 pulley system. (Technically the anchors need to be right next to each other for a true 2 to 1 advantage, but let's not get too geeky ;-)) If enough anchors are available, and with enough wire rope, it's possible to create 3-to-1 or 4-to-1 pulley system or higher, hugely increasing the mechanical advantage.

Note the "triangle of death," the entire area where an object could wind up when moved, especially when working on terrain which is not level. There are many safety considerations that come with the use of this tool.

Thanks to Kerry for the instruction!