



## TECH TIP: MANUAL STAKE PULLER

### Proper Use of the Rainier Manual Stake Puller

The Rainier manual stake puller is a heavy-duty tool that is designed to efficiently pull most tent stakes when the proper techniques are used. To create the greatest leverage and minimize fatigue to the user, follow these steps:

- Users should be wearing all required Personal Protective Equipment (PPEs) to help avoid injuries.
- Connect the steel mouth to the tent stake and position the puller so it is leaning just slightly away from the stake in a near vertical position.
- Stand directly behind the puller and position both hands near the top of the handle.
- Pull the top of the handle toward your chest in a short stroke. This allows the puller to rotate on the rounded base, the mouth to grip the shaft of the stake, and pull the stake nearly vertically out of the ground.

**Note:** The stake should pull approximately 4" - 6" out of the ground on each pull stroke. If the stake raises more than 6" on the pull stroke, you are pulling the handle too far and out of the range where you are working most efficiently.

- Push the handle away from your body, back towards the stake, to its original, nearly vertical position. The bevel cut on the mouth edges allows the puller mouth to slide down the shaft of the stake without additional hand repositioning.
- Repeat the short pull and push strokes, creating a ratcheting action that lifts the stake efficiently out the ground.



### Trouble Shooting

**The mouth doesn't fit on the stake head.** Puller mouths are offered in 3 different sizes. Be sure you are using the correct size and swap it out to a larger or smaller size if needed.

**The stake won't budge.** There are many reasons why this could happen, including very hard soil, stake embedded in a tree root, etc. A simple technique to try first is to turn the stake head with a large pipe wrench. Rotating the shaft 'breaks the seal' between the stake and the soil, allowing it to be pulled. But, sometimes, additional mechanical power is needed, such as Rainier's Hydraulic Stake Puller.

**The mouth isn't gripping the stake shaft.** The cuts on the puller mouth allow it to grip the stake when pulling and slide down the shaft on the return stroke. Over time, the mouth edges can wear causing issues in both directions. Replace the puller mouth and these issues should go away.

