

Ideal Trail Tread Design & Construction: Goals and guidelines

- Full-bench design *whenever possible* — fresh-cut tread is far superior to adding soil to level-up, and will be stable longer.
- Remove brush from trail and corridor (6-8' wide, 10' high) – *see Brushing Guide*
- Tread Width Goal - 24 inches wide, flat or minor < 5% out-slope
- Protrusions $\leq 3''$ - avoid creating toe-stubbers and trip hazards
- Trail contours should be designed to efficiently shed water – look up & down trail
- Planned trail work marked with pin flags delineate the **center** of the tread

Treadwork Basics: See figures 29, 30, and 32

- Use a pickaxe, pick mattock, McLeod, or trail hoe to revise/create tread
- Create a 45 degree down-slope at the up-slope border (hinge) to stabilize the upslope and prevent sloughing (figure 29)
- Face UP trail when leveling; start work at the “hinge” and work across to the downhill edge
- Create firm surfaces without loose soil/rock
- **Remove debris and berm** on outside down-slope (a small leaf rake can be helpful in removing debris) to **prevent**:
 - ◆ Development of a water channel (trail erosion)
 - ◆ Dangers such as a false edge and tripping hazard
- Do not use a rake for final surfacing – remove **all** loose dirt
- Water & debris should shed off-trail easily without obstructions

Use the right tool* for the job and soil type:

- **Rocks and rocky/hard compacted soils:** Pickaxe, pick mattock, rock bar, sledge hammer, toothed rake, McLeod (*either side*), shovel
- **Loose rocky and soft-medium soils:** Trail hoe, Pulaski (*hoe end*), McLeod (*hoe side*)
- **Tree roots:** Pulaski (*axe end*), shovel, hand saw (**no sawyer axes**)

*Blues Crew Rogue tools (yellow/green handles) may have more than one function — choose wisely and protect sharp blades from damage

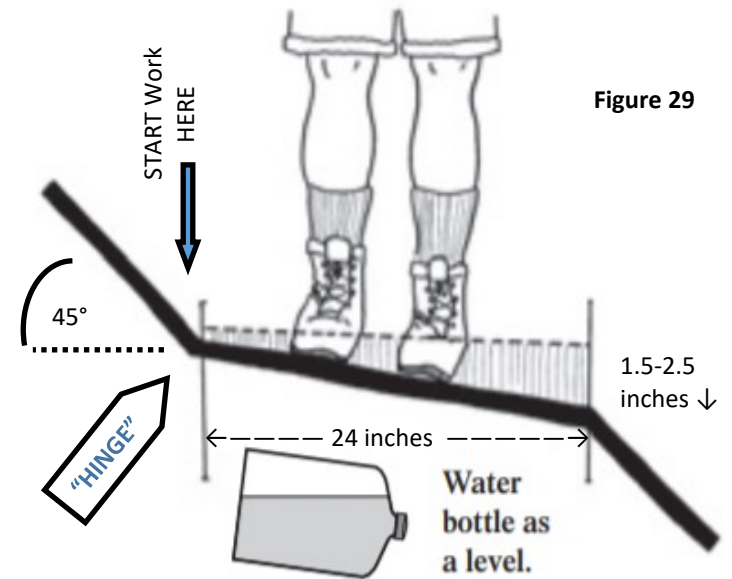


Figure 29

Slough, Berms and Trail Creep

On hillside trails, **slough** (pronounced *sluff*) is soil, rock, and debris that has moved downhill to the inside of the tread, narrowing the tread. Slough needs to be removed (figure 30). Slough that doesn't get removed is the main reason trails “creep” downhill. Hikers start walking on the outside edge of the trail and break down structure.

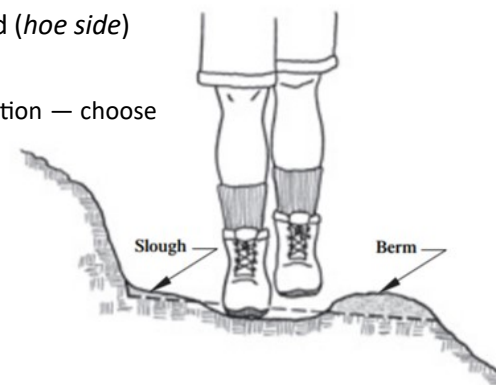


Figure 30 Remove the slough and berm, leaving the trail out-sloped so water will run off.

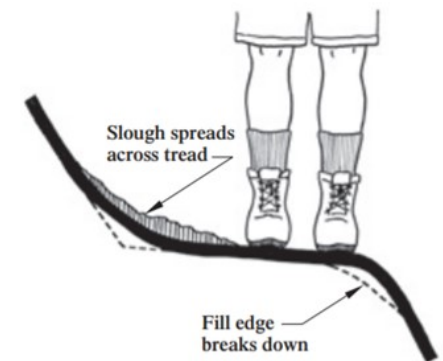


Figure 32 Tread creep—sloughing and soft fillslopes.

Reference: 2007 Edition USDA Trail Construction and Maintenance Notebook

USDA Trail Maintenance Video YouTube 27:38

Tread maintenance starts at 7:32

<https://www.youtube.com/watch?v=UOGxmsRI3Og>