

CURRENT BEST APPROACH

Procedure for Bump Grinding

Purpose

This documents the best known way to deal with root encroachment, namely, grinding down bumps with a scarifier. Cutting tree roots that cause most of the bumps at same time is recommended.

Background

Tree roots are causing most of the bumps on the trail. Roots grow under the asphalt paving and push it up and create a crack across the trail. As the roots continue to grow they cause a bump. The higher bumps are a safety hazard in that they could cause a bicyclist to crash due to losing control; bumps also cause discomfort for bicyclists and skaters. This situation is being called “root encroachment.” For more information go to www.flmisp.org and click on the Adopt-a-Trail News button and open the article on “Root Encroachment.”

A test using a rented scarifier, or pavement planer, was successfully conducted on the Little Miami trail in August 2011. The scarifier used was a walk-behind, gasoline-powered machine that cuts an 8 inch width of pavement at variable depth. See attached photo of the EDCO CPM-8 scarifier.

Pework

- Mark bumps over a quarter inch high with paint and document their location
- Recruit volunteers to help with the work—ideally 4 people so that root cutting and crack filling can be done at same time. Bicyclists and inline skaters who appreciate how bumps make for rough riding/skating are great volunteers for this work.
- Notify the DNR who owns the trail of the planned work 48 hours in advance per agreement
- Rent EDCO CPM-8 scarifier (One Stop Rental in West Chester: \$100/day + 10% damage waiver)
- Arrange for FLMSF trailer and vehicle to haul scarifier
- Check weather forecast to minimize a rainout.
- Assemble needed supplies—see attached list.

Procedure

1. Wet bumps to reduce dust generation; use blower aimed at base of scarifier to move grit and dust away from operator.
2. Set the scarifier cutting depth so that level pavement is barely scratched. Make at least 4 passes using a different spot for each pass until entire bump area is leveled, that is, no more of the bump can be removed. If scarifier labors (such as drive belts squeal) or excessively gouges the pavement, raise the cutter a few turns and make at least 2 passes; complete grinding bump at the level-pavement setting.
3. Sweep and/or blow the fine gravel and dust off the trail.
4. While doing the above have another worker dig for roots at end of bump and cut any found.



EDCO CPM-8 scarifier

Supplies

- Bump gauge board about 20-24 inches long with a pad of quarter-inch thick material on one side near both ends, and paint (ideally pavement marking paint) to mark bumps
- Gasoline for the scarifier and blower and generator
- Camera to document work
- Water and snacks for volunteers
- Whistle or air horn to alert scarifier operator about trail users
- Hearing, respiratory and eye protection and safety vests
- Broom and/or leaf blower to clean up trail after grinding
- Clipboard with log of bump locations
- Long pants and high boots/shoes for any volunteer operating scarifier
- Water and sprinkling can and 25 gallon weed sprayer
- First aid kit
- Gaiters (covers for ankles to knees)-1 pair for scarifier operator
- Cold patch and tamper and cement to fill wide cracks
- Flashing dome light
- Mattock, axe, generator and Sawzall to cut tree roots

