

Chapter 7 MAINTENANCE OF THE TRAILS IS ON-GOING

Routine scheduled maintenance throughout the year not only ensures trail safety but can increase a trail's longevity and user satisfaction. The Rails-to-Trails Conservancy (RTC) published a useful guide addressing trail maintenance titled, *Rail-Trail Maintenance and Operation: Ensuring the Future of Your Trail – A Survey of 100 Rail-Trails* which includes useful checklist for scheduling routine maintenance. Depending on the type of trail being developed, below is a list of some of the anticipated maintenance that may be required:

- Bridge inspection and repair,
- Pick up trash, empty trash cans,
- Remove fallen trees and debris,
- Replace missing and damaged regulatory and directional signs,
- Clean and repair interpretive signs as needed
- Clean rest room facilities, drinking fountains etc. Repair as needed and, when necessary, shut-down and winterize in the offseason,
- Maintain and clean parking areas. Repaint worn pavement markings,
- Clean drainage systems and modify to eliminate ponding or erosion,
- Clean and repair ditches, culverts and other drainage structures when needed,
- Graffiti removal and general maintenance of support facilities and amenities such as picnic tables, benches, etc.
- Removal of invasive species.

Greenways, rails-to-trails and particular sections of other trails may also require:

- Sweeping to remove leaves, mud, gravel and other debris,
- Trees shrubs or grass trimmed in particular areas to maintain sight distance,
- Cleaning and replacing lights (in tunnels, at road crossings and in parking areas and restrooms,
- Weed control and mowing where needed,
- Patching and repair of trail surfaces.

Keeping a log of maintenance activities provides useful records for scheduling future maintenance and estimating costs. Referencing a checklist while doing routine maintenance can help staff and volunteers make sure all are maintained and nothing is overlooked.

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Combining Resources

Intra-agency interdepartmental sharing of maintenance task could save money for trail managing agencies. Public Works Departments and Road Crews often operate specialized equipment for road maintenance. Sharing tools and equipment between departments can reduce the overall per-unit cost of maintaining paved surfaces and open trails. Inter-local agreements between the towns, cities, and counties to create a trail management program could possibly further reduce overhead and expenditures by dedicating trail maintenance equipment, materials, staff, and administration to maintain the entire trail network.

Community Participation

It is also highly recommended that the Spearhead Trails Authority fully utilize volunteer organizations who can organize work parties or adopt segments of trail for routine maintenance. Certain maintenance activities such as sweeping and blowing leaves, trimming vegetation, repainting signs, maintenance on buildings, clean-up of trails and trash pick-up, repair and maintenance on benches, picnic tables, etc can all be performed by community groups, clubs and organizations and can help cut down on the overall cost of the trails considerably.

“To date, more than 100 volunteers have donated more than 2,300 volunteer hours toward the construction and maintenance of the Allegrippis Trail System,” “The end result is a unique trail system that will benefit the region and community for years to come, including an additional estimated \$1.2 million in annual revenue into Huntingdon County.”

*- Ron Rabena, President FORL.
(See ECONOMIC IMPACT OF BIKING for more on this)*

Recommended trail surfaces:

- **Greenways and Bike Routes**

Greenways and shared-use trails are typically a minimum of 10 feet wide with two foot gravel shoulders on each side of trail (AASHTO, 1999) and can be either asphalt or concrete. The Rails to Trails Conservancy conducted a national survey of multiple trail agencies and found that asphalt trails are resurfaced every seven to 15 years, which can often be repaired in sections with just an inch or two resurfacing layer of asphalt while other sections may require a complete rebuild. Transportation Departments can chip seal roads, a relatively low cost preservation technique that creates a rough surface, reducing the variety of trail uses afforded to smoother trail surfaces.

Maintenance cost per trail mile per year:

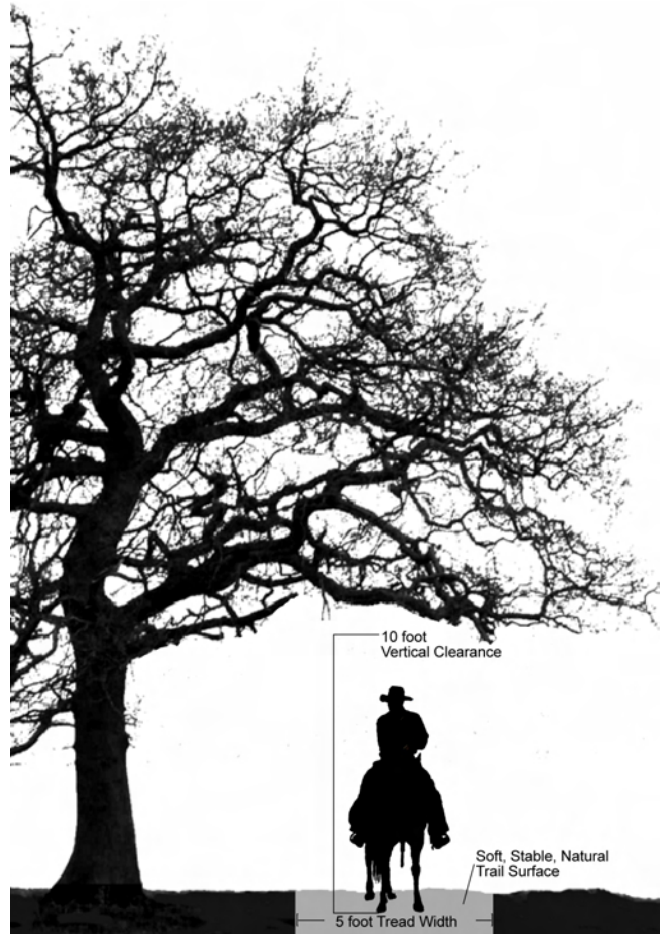
Example: The Thurston County Parks and Recreation Department in Washington spends on average \$3,900 per trail mile per year for their greenway maintenance (pedestrians and bike path). Once they complete the proposed 145 mile regional trail network, it could cost local agencies a combined \$565,500 per year. In 2007, applying a two inch layer of asphalt over a ten-foot wide section of trail in good condition cost approximately \$14.41 per linear foot, or \$76,085 per mile of trail, which figures to approximately \$10,869 per year to resurface one mile of trail with two inches of asphalt every seven years.

Equestrian Trails

Horses and their riders prefer natural surfaces over hard, paved or loose trail surfaces for stability and hoof protection. Stabilized dirt is the ideal substrate. A 5 foot wide tread with a 10-foot vertical clearance provides suitable conditions for trail riding (RTC, 2001). Consideration may be made to make some of the trails wider to accommodate wagons, which are gaining in popularity. Stumps, branches and other debris should be cleared from the trail to prevent injuries to horses and their riders.

Transporting horses is often costly and time-consuming. Riders tend not to drive distances to ride if there are only a few miles of trails. It is just not worth their time. And they often come to an area and plan to stay two or three days so a variety of trails of varying lengths totaling 30 miles or more is recommended.

Equestrian trailheads should offer restroom facilities and sufficient space for parking trucks and horse trailers, as well as ample room to move long vehicles both in and out of the parking area.



Graphic provided by the Thurston Regional Planning Council, Olympia, WA, <http://trpc.org>

They also need staging areas in which riders can prepare for group rides. Ideally mounting blocks or stumps should be located at trailheads, bridge crossing and along appropriate utility and recreation stops along the trails to assist riders who experience challenges with mounting and dismounting from their horses.

Hitching posts, tie lines and water troughs are also recommended at all rest stops and picnic areas. *Please Note: We are finding more and more riders not wishing to share water troughs and are preferring water bladders and spigots to avoid the chance of spreading germs.* Campground facilities are highly recommended to encourage multiple day trail rides which tend to draw riders from further distances, creating greater economic impact on the area.

Equestrians are the best stewards of their trail systems and the creation and continued maintenance of these trails will rely heavily on the participation of the equestrian community. Training courses should be provided to all who maintain the trail to learn the proper way to trim vegetation and dispose of organic material in a manner approved by the landowner and accepted by the Spearhead Trail Authority. Proper use of a pruner and a folding bow saw can help to maintain clear paths for the enjoyment of all.

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TRAILHEADS AND ACCESS POINTS

Access points are opportunities to link trails to the surrounding communities. The greater the frequency of access points, the more options for connecting users to their destinations. Trail access points also allow trail managers and fire crews more direct access to specific points along the trail when needed.

"...Trailheads not only offer great amenities for trail users, but are also a place to meet other people".

- Thurston Regional Trails Plan, 2007

But access points also create critical links between a community and the trails themselves and too many accesses to a trail could limit the amount of impact on a particular area. Establishing designated trailheads that often include vehicle parking, restrooms, an informational kiosk, information signs, picnic areas, shelters, drinking water fountains, bicycle racks, and garbage cans are ideal.

Crime prevention through environmental design (CPTED) is a multi-disciplinary approach to deterring criminal behavior through environmental design. It is highly recommended that SRRA consider implementing CPTED design practices when setting up their own trail systems which includes limiting the number of access points on any trail.

Signs for Multi-Use Trails :

- Informational
- Regulatory
- Warning
- Educational
- Milepost Markers (*right*)



Educational



Educational



Informational



Regulatory



Warning

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Please note:

Most of the information in this chapter came from publications by The Rail-Trail Conservancy, MBA and Thurston's Regional Planning Council. We would strongly recommend SRRA read the noted publications in their entirety and use them as guides when setting up a maintenance and management program for the Spearhead Trail System.

Other excellent publications and resources on trail construction and maintenance include:

- Lightly on the Land: The Student Conservation Association Trail-Building and Maintenance Manual (www.thesca.org)
- Professional Trailbuilders Association, www.trailbuilders.org/resources
- Trail Solutions: IMBA's Guide to Building Sweet Singletrack (www.imba.com)
- U.S Forest Serve Trail Construction and Maintenance Handbook (www.fhwa.dot.gov/environment/fspubs/index.htm)
- U.S. Forest Service Standard Specifications for Construction and Maintenance of Trails (www.fs.fed.us/ftproot/pub/acad/dev/trails/trails.htm)
- Whistler Trail Standards: Environment and Technical Trail Features (www.ownthetrail.com/TrailStandards_Whistler.pdf)

BIBLIOGRAPHY

- ¹ *Rail-Trail Maintenance and Operation: Ensuring the Future of Your Trail – A Survey of 100 Rail-Trails*, The Rail-Trail Conservancy, 2006.
- ² *Managing Mountain Biking, IMBA's Guide to Providing Great Riding*, 2007.
- ³ *Thurston Regional Trails Plan*, Thurston Regional Planning Council, December 2007.