

Ohio River Trail Council

Trail Maintenance Handbook



Prepared by:

Vincent Troia, CEO

May 2012

TABLE OF CONTENTS

| | | |
|------------|---|---|
| 1.0 | Introduction | 3 |
| 2.0 | Trail Volunteers | 3 |
| 3.0 | Overview of Trail Maintenance Responsibilities | 4 |
| 4.0 | Trail Maintenance Standards | 4 |
| 4.1 | Slough and Berm Removal | 4 |
| 4.2 | Vegetation Clearance Maintenance | 5 |
| 4.3 | Tread Maintenance | 5 |
| 4.4 | Drainage Maintenance | 5 |
| 4.5 | Special Structure Maintenance | 5 |
| 5.0 | Maintenance Safety | 5 |
| 6.0 | Emergency Access | 5 |
| 7.0 | Maintenance Schedules | 6 |
| | Table 1: Trail Maintenance Activities | 7 |
| | Appendix 1: Trail Inspection Form | 8 |

1.0 INTRODUCTION

The Ohio River Trail Council (ORTC) is focused on preserving, maintaining, protecting, developing and operating trails along the Ohio River and its tributaries in perpetuity for public use.

The proper maintenance of the Ohio River Trail (ORT) is essential for providing a safe and productive use of the facility and for continued future recreational benefit to citizens and visitors as well as protecting the financial investment that the ORTC and each community has invested in constructing the Ohio River Trail.

In order to protect the financial investment of the trail system, the Ohio River Trail Council has adopted the "Trail Maintenance Handbook." This Handbook outlines the ORTC's trail management strategy that includes maintenance and operating standards and identifies procedures and responsibilities for both the participating governments (Participants) and the ORTC.

The ORTC shall be responsible for annually evaluating trail operations in collaboration with the Participants and making recommendations on operational improvements.

The ORTC trail maintenance program provides a framework and a mechanism to maintain the trail within the political boundaries of the Participants through joint efforts rather than by separate efforts of each Participant and the ORTC. The goal is to prevent duplication of effort and to maximize cost effectiveness and thereby economically maintain the Ohio River Trail.

2.0 TRAIL VOLUNTEERS

A key component of the Ohio River Trail maintenance relies on volunteer service to build and maintain the trails. Volunteer work events are scheduled to augment maintenance duties. Special projects are also planned with volunteers to improve not only the trail surface but also to install pet stations, trail signage, benches and interpretive or educational panels along trail routes.

The ORTC is providing a significant share of the maintenance costs through membership dues, donations, fundraising events, and from local business and foundation grants, even though each municipality retains ownership of its portion of the Ohio River Trail within its limits.

In addition, the Participants intend to foster partnerships with other public and private organizations to collaborate with the Partnership for the good of all of the participating communities.

3.0 OVERVIEW OF TRAIL MAINTENANCE RESPONSIBILITIES

The following list represents the major trail maintenance tasks.

Trail Surface – The ORTC will be responsible for soliciting and entering into contracts for trail resurfacing.

Trailheads – Each Participant shall be responsible for the maintenance of the trailhead(s) within its jurisdiction. A trailhead is defined as any major point of entry to the trail that provides parking, information boards, and other trail amenities.

Low Tree Trimming – Each Participant shall be responsible for trimming trees along its segment of the corridor.

High Tree Trimming – The ORTC is responsible for high tree maintenance.

Trail Mowing – Each Participant shall be responsible for grass cutting.

Weed Control – The ORTC is responsible for herbicide spraying.

Security – Each Participant shall be responsible for the patrolling of the trail on a schedule to be determined by the Participant.

4.0 TRAIL MAINTENANCE STANDARDS

4.1 SLOUGH AND BERM REMOVAL

Slough is material that has moved downhill from the back slope and been deposited along the uphill edge of the tread. This process causes trail users to travel along the outside edge of the trail. The tread eventually narrows and moves downhill from its original location resulting in an unsafe situation. The slough must be removed to re-establish the proper back slope. The excess material may be used to fill holes in the trail tread and re-establish the out slope, or to build up the downhill side of water bars.

Berm is soil that has built up on the downhill edge of the trail tread. Berm prevents water from flowing off the side of the trail and allows water to channel down the trail causing erosion. A berm may also cause nuisance water to pool on the trail surface resulting in soil saturation. Saturated soil is damaged easily and forces trail users to detour around the area causing the trail to widen. Berms should never be constructed intentionally and should be eliminated whenever present.

4.2 VEGETATION CLEARANCE MAINTENANCE

All plants encroaching on the vegetation clearance limits of 8' above finish grade for any particular trail must be cut back. Branches should be cut close to the main stem without cutting into the branch collar. Plants being removed must be cut flush with the ground and stumps must be removed to a minimum of 12" below trail finish grade to prevent safety hazards.

4.3 TREAD MAINTENANCE

In addition to slough and berm removal, the trail should be restored to its original design condition. All loose rocks, rock points, stumps, and roots protruding from the trail surface should be removed. All holes should be filled to create a smooth, obstacle-free tread. Maintaining a proper out slope is critical to the long-term condition of the trail.

4.4 DRAINAGE MAINTENANCE

Special attention should be directed to the maintenance of drainage structures. These structures are extremely important in protecting the trail from erosion. If they are not maintained properly, the trail will be prone to erosion, and may become unsafe for public use and require extensive amounts of labor to repair.

4.5 SPECIAL STRUCTURE MAINTENANCE

Structures such as water bars, culverts, switchbacks, retaining walls, wash crossings, overpasses, bridges, etc. are rather expensive and labor intensive to construct. Proper maintenance will prolong the life of the structures and help prevent safety hazards. Structures are to be inspected annually and maintenance performed as needed.

5.0 MAINTENANCE SAFETY

The Ohio River Trail will be closed in the area of which any heavy equipment is expected to be on or near the trail, or when any maintenance activities are occurring that could be injurious to the public.

6.0 EMERGENCY ACCESS

The Ohio River Trail shall be cleared and maintained in a manner that ensures that emergency (police and fire) vehicles have access to the Ohio River Trail. If removable bollards or gates are installed all appropriate police and fire personnel shall have the keys for access.

7.0 MAINTENANCE SCHEDULES

The ORTC and the Participant will adhere to the general maintenance schedule identified in Table 1 and will take appropriate immediate actions to address any condition deemed a safety hazard.

Many of these maintenance items are dependent on the type and amount of landscaping and supporting infrastructure that is developed along the trail. Maintenance activities will be coordinated to minimize impacts to trail users and to maximize cost efficiencies by using trail volunteers.

In addition, the ORTC has developed a trails inspection form to identify, record, and respond to maintenance problems, and to keep written records of such actions and their frequency is attached as Appendix 1.

TABLE 1: TRAIL MAINTENANCE ACTIVITIES AND FREQUENCIES

| Item | Estimated Frequency |
|---|--------------------------------------|
| Asphalt surface sealing or repaving | 3-5 years or as needed |
| Bike lane markings installation, repair or replacement | As needed |
| Bike Rack installation, repair or replacement | As needed |
| Bollards, gates, and fence installation, repair or replacement | As needed |
| Bridge installation, redecking, repair or replacement | As needed |
| Brush clearing | As needed |
| Culvert and drainage channel cleaning | 1x per year or after storm |
| Culvert installation, repair or replacement | As needed |
| Dog station installation, repair or replacement | As needed |
| Drinking fountain installation, repair or replacement | As needed |
| Grade and resurface non-asphalt trail | As needed |
| Graffiti removal | As needed |
| Intersection Markings installation, repair or replacement | As needed |
| Invasive species removal | As needed |
| Kiosk installation, repair or replacement | As needed |
| Kiosk trail map, rules, and regulations replacement | As needed |
| Leaf removal | As needed |
| Lighting installation, repair, or replacement at trailheads and Tunnels | As needed |
| Litter & trash pick-up | 2x per week |
| Mowing | 2x per month (April through October) |
| Paint, stain, treat bridge deck or structure | 1x per year or as needed |
| Patrols by police agency | As needed |
| Pavement and asphalt sweeping | 4x per year or as needed |
| Pedestrian crossing signal installation, repair or replacement | As needed |
| Pavilion Installation, Repair or Replacement | As needed |
| Picnic tables and bench Installation, Repair or Replacement | As needed |
| Pothole repair on asphalt trail | As needed |
| Provide chemical toilets at trailheads and camping sites | Seasonally |
| Railroad grade crossing repair and maintenance | As needed |
| Removal of fallen trees | As needed |
| Retaining walls installation, repair or replacement | As needed |
| Sharrows installation, repair or replacement | As needed |
| Sign installation, repair or replacement | As needed |
| Sign installation, repair or replacement | As needed |
| Snow removal from asphalt trail | As needed |
| Trail edging repair or replacement | As needed |
| Trailhead maintenance or repair | As needed |
| Trash receptacle installation, repair or replacement | As needed |
| Tree pruning due to encroachment on trail | 2x per year |
| Tree, shrub, and flower planting or landscaping | 2x per year |
| Tunnel installation, repair or replacement | As needed |
| Updating materials at informational kiosks | As needed |
| Weed control by application of herbicides | As needed |

APPENDIX 1 – OHIO RIVER TRAIL INSPECTION FORM

1. INSPECTOR INFORMATION

Name: _____

Email: _____

Phone: _____

Work Hours: _____

2. SAFETY

For trail maintenance items that affect safety, please contact the ORTC at 724-728-2625 immediately. Such examples would include trees fallen over trails or washouts after a storm event.

3. TRAIL PROBLEMS

- Fallen tree
- Branches hanging over trail
- Tread washout
- Mud hole
- Pothole
- Other

4. TRAIL STRUCTURES

- Bridge
- Stairway
- Culvert
- Pavilion
- Sign
- Fencing
- Bike Rack
- Other

5. TRAILHEAD INFORMATION KIOSKS

- Kiosk structure problems observed
- Needs current park map/map faded
- Needs updated information
- Other

6. TRAIL LANDSCAPING

- Pruning
- Planting
- Other

7. TRAIL WORK COMPLETED, GENERAL OBSERVATIONS AND SUGGESTIONS
(Attach separate sheet if needed)
