# SUSTAINABLE TRAIL GUIDE 2015



### A Guide for Cost-Effective, Sustainable Trail Maintenance

January 2015 2<sup>nd</sup> Edition



Page 1 – Sustainable Trail Guide 2015

# Sustainable Trail Guide 2015

#### A GUIDE FOR COST-EFFECTIVE, SUSTAINABLE TRAIL MAINTENANCE

INTRODUCTION	3
SUSTAINABILITY	3
Overview	3
On the Trails	3
Trail Town Certified Network	3
2012 GREAT ALLEGHENY PASSAGE SUSTAINABLE TRAIL SURVEY	4
Background	4
2012 Survey	4
2012 Results	5
2015 SUSTAINABLE TRAIL SURVEY	6
Background	
2014 Survey	6
2014 Results	8
TRAIL MAINTENANCE	10
Surface Types and Maintenance	10
Drainage and Trail Erosion	10
Vegetation	11
Native Species	11
Invasive Species	••••••
Invasive Species Trees Maintenance	
Invasive Species Trees Maintenance Pesticides and Herbicides	11 12
Invasive Species Trees Maintenance Pesticides and Herbicides Trail Head	11 12 
Invasive Species Trees Maintenance Pesticides and Herbicides Trail Head Vandalism	11 
Invasive Species Trees Maintenance Pesticides and Herbicides Trail Head Vandalism Social Trails	11 
Invasive Species Trees Maintenance Pesticides and Herbicides Trail Head Vandalism Social Trails Volunteers and Partnerships	11 12 13 14 14 15

#### INTRODUCTION

This publication is based on an earlier publication, *The Sustainable Trail Guide: A Guide for Cost-Effective, Environmentally Friendly Trail Maintenance on the Great Allegheny Passage.* The first edition of this guide was published in 2013, focusing on trail maintenance along the Great Allegheny Passage Trail. With the expansion of the Trail Town Program® further into Western Pennsylvania to include: the Erie to Pittsburgh Trail, Montour Trail, Sheepskin Trail, and Trans-Allegheny Trail, the second edition has been expanded.

The Trail Town Program® staff that contributed to the first edition and this publication included Student Conservation Association Trail Town Outreach Fellows: Joe Crumbly (2012), Michelle Rupp (2012), and Courtney Mahronich (2015). The three Trail Town Outreach Fellows contributed to research and data collection.

#### **SUSTAINABILITY**

#### Overview

Sustainability is the practice of conserving natural resources to maintain the current quality of the environment while protecting it for future generations. As humans, our existence relies on the condition of our natural environment. Sustainable practices can be applied to trail maintenance to ensure the natural environment they run through and maintain them as a recreational resource for future generations.

#### On the Trails



Along the trails the Student Conservation Association Trail Town Outreach Fellows have worked to promote sustainability. Some of the projects that are included in these efforts are beautification projects. The Trail Town Outreach Fellows work with the local communities and trail organizations to complete projects ranging from debris cleanup, invasive species removal, and planting of native species. The Fellows have also created the Sustainable Supplier Guide and Farmers Market Guide for businesses and organizations to source products and foods locally. Actions such as these can help maintain and sustain a local economy. Fellows have also worked with communities to educate on recycling and recycling availability in their communities.

#### **Trail Town Certified Network**

The Trail Town Certified Network (TTCN) is an inclusive network of business and organizations along major trail corridors. Upon application TTCN members complete an assessment with a Trail Town Outreach Fellow that measures their sustainability and trail friendly practices. The Fellows promote and educate TTCN members on ways that they can increase sustainable practices within their establishments. The Fellows encourage starting small with little, inexpensive changes such as changing incandescent light bulbs over to CFLs or LEDs. Members are also given information for more dramatic changes such installation of solar panels. As of December 2014 there are over 80 members apart of the network.



To find out more information about current members of the Trail Town Certified Network please visit: <a href="http://www.trailtowns.org/best-practices.aspx">http://www.trailtowns.org/best-practices.aspx</a>.

#### 2012 GREAT ALLEGHENY PASSAGE SUSTAINABLE TRAIL SURVEY

#### Background

In 2012 three trail management groups along the Great Allegheny Passage surveyed regarding maintenance issues and practices. The three groups that were surveyed were: The Yough River Trail Council (YRTC), Westmoreland Yough Trail Council (WYTC), and the Somerset County Rails-to-Trails Association (SCRTA). From the three groups there were 19 surveys completed. The surveys were conducted in person at the trail managers group meetings. From the results collected, recommendations were made to address trail maintenance issues.

#### 2012 Survey

1. How large o (Small) 1	f an issu 2	e is dra 3	inage o 4	n your section of 5 (large)	the trail?	
2. How large o	f an issu	e is trai	l erosion	on your section	of the trail?	
(Small) 1	2	3	4	5 (large)		
3. How large o	3. How large of an issue are grass, weeds, and other plant life in your section of the trail?					
(Small) 1	2	3	4	5 (large)	,	
4. How large o	f an issu	e is time	e when n	naintaining the t	rail?	
(Small) 1	2	3	4	5 (large)		
5. What is you	r level o	f unders	tanding	relative to susta	inability and sustair	nable practices?
(Minimal) 1	2	3	4	5 (great)		
6. What is you	r level o cina the	f belief	in the ef	ffectiveness of su grass planting r	ustainable practices	on the trail, such as using less
(Small) 1	2	3	4	5 (large)		
7. What is your level of willingness to alter your methods to sustainable practices if trail longevity, environmental health, and lower total cost are the benefits?						
	Z	0	-	5 (large)		
8. What do yo	u percei	ve to be	the big	gest barrier to	oetter trail maintend	ance?
Time	Funds		Labore	rs	Other (explain)	
9. How often do you use chemicals and herbicides?						
Never	Season	ally		Monthly	Weekly	Daily
10. How often	do you i	now po	rtions of	your trail?		
Never	Season	ally		Monthly	Weekly	Daily

#### 2012 Results

Percentage of trail group members who answered each question:

Question 1	31.5% 2, 31.5% 3, 21% 4, 5% 5, 11% 1		
Question 2	42% 2, 21% 3, 16% 1, 21% 4		
Question 3	32% 1, 21% 4, 21% 3, 11% 2, 15% 5		
Question 4	28% 4, 45% 5, 11% 1, 16% 3		
Question 5	32% 1, 32% 3, 21% 4, 10% 2, 5% 5		
Question 6	37% 3, 26% 4, 21% 2, 5% 5, 11% 1		
Question 7	47% 4, 32% 3, 16% 5, 5% 2		
Question 8	32% time, 47% funds, 21% laborers		
Question 9	27% never, 5% monthly, 5% weekly, 63% seasonally		
Question 10	42% weekly, 53% monthly, 5% seasonally	Common Issues	
SCTRA:			
Question 1	43% 2, 29% 3, 14% 4, 14% 5	Drainage	
Question 2	43% 2, 29% 4, 14% 3, 14% 1	■ Time	
Question 3	43% 4, 29% 1, 14% 2, 14% 3	■ Erosion	
Question 4	57% 5, 29% 4, 14% 1	Vegetation	
Question 5	42% 3, 29% 4, 29% 1		
Question 6	43% 4, 29% 3, 14% 2, 14% 5		
Question 7	57% 4, 29% 3, 14% 5	Figure 1: Common Issues Data from	т
Question 8	29% time, 42% funds, 29% laborers	2012 Sustainable Trail Survey	
Question 9	58% seasonally, 14% never, 14% monthly, 14% weekly		
Question 10	57% monthly, 29% weekly, 14% seasonally		
YRTC:			
Question 1	40% 3, 40% 1, 20% 4		
Question 2	60% 2, 20% 3, 20% 4		
Question 3	60% 1, 20% 3, 20% 5		
Question 4	60% 4, 20% 3, 20% 5		
Question 5	60% 1, 20% 3, 20% 2		
Question 6	60% 3, 20% 1, 20% 2		
Question 7	60% 3, 20% 4, 20% 5		
Question 8	60% funds, 40% time		
Question 9	80% never, 20% seasonally		
Question 10	80% weekly, 20% monthly		
WYIC:			
Question I	42% 2, 29% 3, 29% 4		
Question 2	29% 2, 29% 1, 29% 3, 13% 4		
Question 3	29% 5, 29% 3, 14% 4, 14% 1, 14% 2		
Question 4	5/% 5, 29% 3, 14% 1		
Question 5	29% 4, 29% 3, 14% 5, 14% 1, 14% 2		
Question 6	29% 3, 29% 2, 29% 4, 13% 1		
Question 7	58% 4, 14% 5, 14% 3, 14% 2,		
Question 8	29% laborers, 42% funds, 29% time		
Question 9	100% seasonally		

Question 10 29% weekly, 71% monthly

• Accuracy is +/- 1%

According to the overall surveys completed in 2012, the greatest issues facing trails apart of the Great Allegheny Passage were drainage and vegetation. Time was cited as the most pressing maintenance problem facing trail groups and managers.

#### 2015 SUSTAINABLE TRAIL SURVEY

#### Background

At the end of 2014 a survey was sent out to trail maintenance groups and individuals along the Great Allegheny Passage, Erie to Pittsburgh Trail, Trans-Allegheny Trail, Montour Trail, and Sheepskin Trail. The goal of this survey was to evaluate trail maintenances issues along various trails throughout Western Pennsylvania, Northern Maryland, and Eastern Ohio. The survey was conducted online over two months using Google Survey. Twenty-two surveys were received from trail managers throughout the three regions. The majority of trail users maintain a combination of limestone and paved trails. In comparison to the completed in 2012, the biggest barrier to trail maintenance in 2014 is funding.

#### 2014 Survey

- 1. What type of trail do you maintain?
  - A. Pavement
  - B. Limestone
  - C. Combination of Limestone and Pavement
  - D. Other:\_\_\_\_
- 2. How large of an issue is drainage on your section of the trail?
  - A. Minor
  - B. Moderate
  - C. Major
  - D. No Issue

3. How large of an issue is trail erosion on your section of the trail?

- A. Minor
- B. Moderate
- C. Major
- D. No Issue
- 4. How large of an issue is grass, weed, and other plant life on your section of the trail?
  - A. Minor
  - B. Moderate
  - C. Major
  - D. No Issue
- 5. Is time an issue in regards to maintaining the trail?
  - A. Yes
  - B. No

6. What is your level of understanding of sustainability and sustainable practices?

- A. None
- B. Minimal
- C. Advanced

7. What is your level of belief in the effectiveness of sustainable practices on the trail? (Such as using less or no herbicide, reducing the amount of turf grass, planting natives, etc.)

A. None

B. Minor

C. Moderate

D. Major

8. What is your level of willingness to incorporate sustainable practices if trail longevity, environmental health, and lower total cost are the benefits?

A. Minimal

B. Moderate

C. Major

D. Not Willing

9. What is the biggest barrier to better trail maintenance?

A. Time

B. Funding

C. Laborers

D. Other:\_\_\_\_

10. How often do you use herbicides and chemicals?

A. Never

- B. Seasonally
- C. Monthly
- D. Weekly

E. Daily

11. How often do you mow portions of your trail?

- A. Never
- B. Seasonally
- C. Monthly
- D. Weekly
- E. Daily

12. Do you have recycling available at your trailhead?

A. Yes

B. No

C. Not available

13. IF no to the prior question, do you have any barriers preventing you from recycling?

- A. Yes
- B. No
- C. N/A

#### 2014 Results

1. What type of trail do you maintain?



2. How large of an issue is drainage on your section of the trail?



3. How large of an issue is trail erosion on your section of the trail?



4. How large of an issue is grass, weed, and other plant life on your section of the trail?



## 5. Is time an issue in regards to maintaining the trail?



6. What is your level of understanding of sustainability and sustainable practices?



7. What is your level of belief in the effectiveness of sustainable practices on the trail? (Such as using less or no herbicide, reducing the amount of turf grass, planting natives, etc.)



8. What is your level of willingness to incorporate sustainable practices if trail longevity, environmental health, and lower total cost are the

benefits?



9. What is the biggest barrier to better trail maintenance?



10. How often do you use herbicides and chemicals?



11. How often do you mow portions of your trail?



12. Do you have recycling available at your trailhead?



13. IF no to the prior question, do you have any barriers preventing you from recycling?



#### TRAIL MAINTENANCE

#### Surface Types and Maintenance

Trail surfaces can range from a variety of surfaces; the two most common for bike trails are crushed stone or pavement. Depending on the surface type of your trail, it can dictate the amount of maintenance.

#### **Crushed Stone**

Crushed stone trail is a soft surface trail that can consist of either limestone or sandstone. They are often used for their natural aesthetic appearance and are good for all season use and for various recreational activities. Crushed stone trails have a higher rate of muddiness in wet areas and can take longer time to dry out. (Boone) Another issue with crushed stone is that is susceptible to wash outs. This can happen during heavy rain or saturation of snowmelt. (Bachensky) The issues that crushed stone have can lead to more need for remediation and maintenance.

#### Pavement

Concrete and asphalt are typical materials used for paved trails. The benefit of using these options is their lifespan. Concrete trails can last up to 25 years and asphalt trails can last from 7 - 15 years. Typical maintenance for concrete and asphalt trails includes patches for potholes and cracks as well as snow and debris removal. (Rails-to-Trails Conservancy)

An alternative to concrete and asphalt is porous asphalt. Porous asphalt has a significant amount of air that is incorporated into the gravel and petroleum mixture of typical asphalt. The benefit to porous asphalt is it's low maintenance. Porous asphalt has the ability to improve drainage and accelerate snowmelt. These abilities help reduce



Photos courtesy of Corrie Parrish

overall labor, equipment, and winter plowing and in return decrease maintenance costs. There are minimal additional costs to install porous asphalt and with the lower maintenance costs, makes it a much more sustainable option. (Macdonald)

#### **Drainage and Trail Erosion**

There are two main methods to move water off a trail. One method is the trail surface can be higher in the middle and gently slope to the edges. This method would require drainage on both side of the trail. Grassy swales or drainage ditches would be effective ways to move the water into the ground. Another method is slope the trail in one direction. Water will move effectively off the trail with a cross-slope as little as 1%. This will move the water across the trail and prevent ponding. Both of these methods ensure proper drainage from the trail to the surrounding land, and ultimately increase the longevity of the trail. (Kohler)

For trails that are constructed with crushed stone, it is ideal that the grade does not exceed 5% or kept as minimal as possible to help with drainage. Trails that exceed 5% grades should consider an alternative, more stable surface such as concrete or asphalt. To help prevent washouts from occurring, dips or grade breaks should be included in the design. (Bachensky)

Piping and culverts can require a great amount of work, but can effectively move water underneath the trail. Ideally, all the water could be moved via drainage swales and natural features, but where there are areas of concentrated flow or where adjacent land is not in the trail right of way, manmade drainage structures become necessary. Pipes and culverts should be periodically checked for blockage from storm debris or overgrown vegetation in areas that the trail crosses water or drainage system is installed. (Kohler)

Preserving the natural ground cover and overall vegetation can help prevent water from reaching the trail surface. Vegetation slows water down and allows the water to seep into the soil. Bioswales are an ideal landscaping feature to help with drainage. They are designed landscapes as a natural filter that filters pollution and sediment. (Kohler) Currently, in Ohiopyle, PA bioswales are used to reduce runoff and help with drainage issues throughout the town. Bioswales do need to be kept free of invasive species for them to be fully effective.

#### Vegetation

#### **Native Species**

Native plants are identified as plants that have naturally occurred in an area or region prior to European settlement. These plants can range from ferns, club mosses, grasses, sedges, rushes, perennials and annual wildflowers. Planting with native plants can have many benefits on the habitat. (Pennsylvania DCNR)

When maintaining current or planting native species it helps bring the wilderness to urban areas. Native species attract various wildlife, insects, and birds. This will help enhance the biodiversity of the area. Once a habitat of native species has been established there is no need for maintenance. Native species do not need fertilizers, herbicides, pesticides, or watering. Using native species can reduce overall maintenance costs (U.S. Environmental Protection Agency).

#### **Invasive Species**

Invasive species are plants that are not native to the state or region. People for centuries have moved around plants. Some of these plants are moved around for beneficial reasons such as food and construction materials. At their initial introduction into an alien environment, some of these non-native species may not cause problems. For instance, Japanese Knotweed was introduced to help with erosion; over time Japanese Knotweed has taken over habitats and has become a serious problems (Pennsylvania DCNR).

Invasive plants can grow aggressive and can spread rapidly. As they grow they can displace native vegetation. Invasive species can be difficult and costly to remove since they will dominate a habitat. In their native lands, these invasive plants have natural controls such as herbivores, insects, and disease that naturally



Crown Vetch removal in Ohiopyle, PA. Photo Courtesy of Courtney Mahronich

control them from growing rapidly and taking over (Pennsylvania DCNR).

#### **Trees Maintenance**

Pruning & Removal

Proper pruning techniques lead to healthier trees. The best time to begin pruning trees is when they are young. This will help them develop solid branch structure and tree strength. As they continue to grow trees should be regularly maintenance to ensure resistance to storm damage. In the long term this can lead to less maintenance and also always the tree to build resistance to storm damage. When pruning young trees focus on dead and broken branches. (Iles)

All side branches extending into the trail clearing should be cut flush with the parent branch or stem, leaving no stubs. This is safer, lasts longer, and also allows for the wound to heal naturally. Main stems should be cut close to the ground to prevent tripping and regrowth of the plant. When replacing trees dead or damaged trees, consider replacing them with ones that have a resistance to storm damage. See figure 2 for storm damage resistant trees. (lles)

#### Storm Damage

High winds can pull down large trees and leave debris scattered across trails causing safety concerns. When evaluating damage trees, the ones that could be a safety concern should be addressed first. For safety, any storm damaged near power lines should be addressed and handled by the utility company. If major power tools or climbing is involved with repairing damaged trees a professional arborist is recommended. (lles)

When treating damaged trees, the goal is to make the wound as small as possible. Trees have a natural defense that allows them to heal with new woody tissue. (Iles) For further information on pruning techniques for new and damaged trees please visit the <u>Arbor Day Foundation</u> website.

#### **Pesticides and Herbicides**

Pesticides, herbicides, and insecticides are chemicals that are used to kill, repel, or mitigate certain insect, pests, or plants. Any of

Native Trees	Storm
	Resistance
White Oaks	Resistant
Eastern Hemlock	Resistant
Serviceberry	Resistant
Black Walnut	Resistant
Swamp White Oak	Resistant
Ohio Buckeye	Resistant
Bur Oak	Intermediate
Red Oak	Intermediate
Sycamore	Intermediate
White Ash	Intermediate
Red Maple	Intermediate
Green Ash	Susceptible
Hackberry	Susceptible

Figure 2: Susceptibility of Trees to Storm Damage

these chemicals are not a sustainable option for managing plants, pest, and insects. They seep into the water table and compound over time to create serious environmental issues for flora, fauna, and aquatic organisms. With use, they also can have harmful effects on humans as well. If you choose to use chemicals, create an Integrated Pest Management (IPM) Plan for the control and prevention of pests. You would first want to identify the species you would like to target and determine how often and where you are using these chemicals to avoid over application. In your IPM you should also include steps for prevention and control of



Goats removing invasive species in Pittsburgh, PA – Photo Courtesy of Pittsburgh Post Gazette pests going forward. (U.S. Environmental Protection Agency)

#### Alternatives

One alternative to chemicals is biopesticides. Biopesticipes are biological pesticides that are formulated using natural ingredients such as: minerals, plants, animals, or bacteria. Biopesticides are created to target specific insects or plants. Since they are not derived from synthetic materials, pose little harm to humans and surrounding ecosystems. Biopesticides are not a replacement to typical chemical pesticides and would need to be used in correlation with an IPM. (U.S. Environmental Protection Agency)

Increasingly goats have become a popular ecofriendly method of vegetation management. Goats have the ability to navigate hilly

terrain that would be unsafe for humans or machine use. They also are known to eat almost anything. They are great for removal of poison ivy, kudzu, Oriental Bittersweet, Japanese Honeysuckle, Mile-A-Minute and many more. It would take roughly 30 goats one day to clear half an acre. (Eco-Goats)

#### **Trail Head**



Rockwood Trailhead along the GAP in Rockwood, PA. Photo Courtesy of Paul G. Wiegman

Trailheads are often the first and last places trail users encounter along the trail. These are areas of high demand with visitors looking for attractive places with basic amenities. The greater use in these areas may lead to greater wear and tear on the trail, parking lots, and other features. Some of the amenities that trail users expect include restrooms, water, picnic areas, and signage.

Like other areas along the trail, drainage can be an issue. Since trailheads are welcoming areas for visitors, this is a good opportunity for an attractive drainage option. Bioswales (rain gardens) are implemented to help with toxic filtration of roof and parking lot

rainwater when concentrated in riparian areas on city streets or parking lots. Trail Towns like Ohiopyle, PA have put these gardens in their city streets, helping preserve the local river's ecosystems, and helping beautify their town's main streets. These gardens roots help with water retention, storm water run-off.

#### **Cost Considerations**

- Unit costs range from \$3 to \$10 per square foot depending on complexity of system and planting plan.
- Replaces storm sewers within parking lots.
- Reduces cost premium where parking islands are already required.
- Reduces detention volume and land area necessary for detention.

Have an effective storm water plan management including:

- Pervious pavement, and/or minimization of impervious areas like paving, concrete, etc
- Bioswales
- Use rain barrels
- Maintain vegetative buffers around streams and ponds
- Native species

A very important amenity to have at a trailhead location is signage. Visitors seek out signage for information about the trail and the area. Crucial items to include on signage would include a trail map, rules and regulations, interpretive

Kiosk Item	Percent
Tail Map	57%
Trail Rules and	55%
Regulations	
Historical/Interpretive	34%
Information	
Take-Away Brochures	31%
<b>Emergency Information</b>	27%
Trail Organization	22%
Information	
Community	13%
Announcements	
Sponsor Acknowledgement	10%
Free Listings of Trailside	5%
Services	
Paid Advertising	4%
Donation Can or slot	2%
Other	2%

Figure 3: Kiosk Contents

information, etc. Figure 3 shows top signage contents. The Rails-To-Trails Conservancy collected this information from trail mangers in the Northwest for their 2005 Rail-Trail Maintenance & Operations Guide.

Another amenity to have a trailhead would be recycling. Trail users tend to be more environmentally conscience. If recycling is available in your town it would be encouraged to place a recycling bin and arrange for pick up by the waste management company. If pick up is not available work with trail volunteers to arrange for it to be taken to recycling drop off locations. Recycling can be difficult in remote areas where populations are low and do not have a legal obligation to provide recycling.

#### Vandalism

Vandalism can happen at many trailheads and in sections of a trail. Vandalism can include sign damage, graffiti, and theft. Some ways to deter vandalism would be to install motion-sensor lighting at commonly vandalized areas. By repairing vandalism quickly it can also deter individuals from returning. (Rails-to-Trails Conservancy)

Graffiti is easiest to remove when it's not been on the surface very long. It helps to identify both the surface and graffiti material before attempting to remove it. Paint can be often removed easily from smooth surfaces such as polished stone, but porous surfaces make take more than method to fully remove the graffiti. Spray paint is very common, but other materials included crayons, chalk, markers, lipstick, and shoe polish. (Rapid Removal)

Surface Type	Removal of Spray Paint, Markers, Stencils, Lipstick, etc	
Masonry	Cleaners, power washing, poultices, paint-out	
Metal	Cleaners, power washing, scrape with razor blade, paint-out	
Glass	Razor blade, paint remover	
Pavement	Cleaners, power washing, soda blasting	
Wood	Unpainted wood – mineral spirits, power washing, sanding, paint-out	

Figure 4: Removal Techniques for different types of surfaces

#### **Social Trails**

Social trails are informal trails created by trail users leading to unofficial destinations. Social trails can destroy sensitive ecosystems and create safety issues for trail users. Once a social trail has begun, it is best to work quickly. People will remember the social path and seek it out even if preventive methods have utilized to stop use of the unauthorized trail. (Marion)

The first step is to determine if the social trail is having any detrimental impacts on the environment or hazardous to trail users. Social trails can begin to form for a variety of reasons. In the case of ATV and off-road vehicle drivers, they could be illegal users utilizing the trail as a shortcut. The GAP runs along the Youghiogheny River for a large part of its length. Trail users are possibly seeking out water or riverbank access. It may be that a designated or desired viewpoint has trees and brush blocking the scenery. In many of these cases, the social trails may be impacting sensitive areas or causing erosion by creating a trail that goes directly down a slope. In these cases where the access is illegal, dangerous, or causing habitat disruption, it is likely that the social trail needs to be closed. (Marion)

In some cases, it may be necessary to rehabilitate the area by replanting native species. On closed trails, vegetation should be planted in the early spring or fall when water is abundant in the soil. Some natural ways to block a social trail include:

• Block access with large rocks or woody debris

• Small debris such as leaves and twigs can be raked along the trail to conceal the trail

Signage with potential risks to safety and impact on the environment can be used deter usage of a social trail. In some cases, simply blocking the path with rope and a small sign asking visitors to stay off the trail may be enough to stop the social trail use. In other areas, an educational sign outlining the dangers or impacts to native plants and animals may be needed to keep people from using the path. If unauthorized usage continues, the use of regulatory signage with associated fees may be used to deter users who will not otherwise respect hazards and sensitive habitat. (Marion)

Another option would be to assess the option of creating an official trail to the designated location trail users are seeking. This solution would be applicable if there is no safety risk to visitors and the area is not located near protected plants or animals. If not, then seek out alternative route options. Place proper signage for trail users to signify the official trail route. Include information about the view or where the designated trail leads, this will create less confusion. A bench is a nice way to indicate the viewpoint without signage. Educational or interpretive signs may be posted at trailheads. (Marion)

#### **Volunteers and Partnerships**

A lot of trails rely on volunteers or volunteer groups for trail maintenance. Creating a solid volunteer foundation will help with the longevity and quality of your trail. In order for volunteers to be effective there needs to rules and guidance established by the governing entity of the trail such as trail councils or government organization. Poor results are generally the result of poor volunteer management. Establishing

a	aood	volunteer	has	many	honofits	The
a	good	volumeer	nas	many	benefits.	Ine

Level	Organizations	
Local	Community Members, Recreational Groups, Boy	
	Scouts, Girl Scouts, Schools, Churches, Local	
	Environmental Non-Profit Organizations	
State	Department of Conservation and Natural Resources,	
	Department of Parks and Recreation, State	
	Environmental Non-Profit Organizations	
National	I Student Conservation Association, Rails-to-Trail	
	Conservancy, American Trails	

Figure 5: Partnership examples and suggestions

use of volunteers can reduce overall maintenance costs, become trail users, and become stewards for the trail with the possibility of aiding fundraising. (Maryland Department of Conservation and Recreation)

There are many groups and organizations that a trail would have the opportunity to partner with for volunteers. Creating long-term partnerships with organizations will help maintain a consistent level of support and volunteers to continue maintenance of the trail. See figure 5 for examples of partnerships at different levels. Before establishing a regular volunteer base have a training program developed. The training should highlight the types of activities that they will be doing and safety. Some organizations even have volunteers' even sign a release form that establishes expectations and required training. (Maryland Department of Conservation and Recreation)

If you choose to work with temporary or youth volunteers they can be a challenge. When organizing a volunteering event that features youth it is recommended to have the event last between 2 and 3 hours. Another recommendation would be to set a goal for the day. Achieving this goal will create a sense of accomplishment for them. Make sure that safety is a priority throughout the event and go over safety measure before work begins. At the end of each event thank your volunteers for their time and highlight the accomplishments from the day. (Rails-to-Trails Conservancy)

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