

Raised walking trail | Virginia Department of Conservation and Recreation

### **Definitions**

**Trail**-A linear route on land or water with protected status and public access for recreation or transportation purposes such as walking, jogging, hiking, bicycling, horseback riding, mountain biking, canoeing, kayaking, backpacking and vehicular travel by motorcycle or all-terrain vehicles. (from Trails for the Twenty-First Century)

**Greenway-1**) A linear open space established along either a natural corridor, such as a riverfront, stream valley, or ridgeline, or overland along a railroad right-of-way converted to recreational use, a canal, a scenic road, or other route. 2) Any natural or landscaped course for pedestrian or bicycle passage. 3) An open-space connector linking parks, nature reserves, cultural features, or historic sites with each other and with populated areas. 4) Locally, certain strip or linear parks designated as a parkway or greenbelt. (from Greenways for America).

**Active Transportation**- Any form of human-powered transportation that uses physical activity to travel from one destination to another. (Active Transportation Guidebook)

According to the 2017 Virginia Outdoors Demand Survey (VODS), 43 percent of Virginians ranked trails as the most needed recreational opportunity. A higher percentage of urban residents mentioned trails as most needed. Trail facilities support many popular outdoor recreation activities, including walking for pleasure, jogging and running, horseback riding, hiking and backpacking, and bicycling (Figure 8.1). For the first time in the survey's history, the popularity of walking and running challenge-based events were polled. Nineteen percent of respondents said they participate in these events, an important source of funding for event promoters.

Figure 8.1 Participation in Trail Activities Statewide

activity	% households
Walking for pleasure	67
Jogging/running	24
Hiking/backpacking day trips	21
Walks/runs/challenge-based events	19
Paved or gravel bicycle trails	11
Bicycle touring on roads	9
Fitness trails (not jogging)	9
Equestrian Events	7
Mountain biking	6
Driving 4-wheel off road (Jeep, truck)	6
ATV or UTV off-road	6
Horseback riding	4
Driving motorcycle off road/dirt bike	2
Segway on sidewalks and paths	1
Electric-assist bicycle on road or trails	<1

Source: 2017 Virginia Outdoors Demand Survey

## Wheeled Activities

Different types of wheeled activities were included in the 2017 Virginia Outdoors Demand Survey. Results show that Virginians enjoy using trails in a number of ways and purchase or rent equipment to support their trail activities. While bicycling has the highest participation rates, motorized and ATV or UTV off-road driving is gaining popularity as more opportunities are developed.

Figure 8.2 Participation in Wheeled Activities

activity	% households
Paved or gravel bicycle trails	11
Bicycle touring on roads	9
Mountain biking	6
Driving 4-wheel off road (Jeep, truck)	6
Driving ATV or UTV off-road	6
Driving motorcycle off road/dirt bike	2
Segway on sidewalks and paths	1
Electric-assist bicycle on road or trails	<1

Source: 2017 Virginia Outdoors Demand Survey

# **Equestrian Activities**

Of the households that participated in equestrian activities in 2017 (7 percent), the vast majority (77.6 percent) engaged in trail riding. Many of the equestrian activities measured in the survey rely on both public and private trail facilities (see page 18, VODS). As private facilities are lost to development, more pressure is placed on the public sector to meet demand.

# Trail Usage

Figure 8.3 shows the top reasons trails remain one of the most popular and most needed outdoor recreation facilities—supporting a healthy mind, body and spirit.

Figure 8.3 Top Four Reasons for Using Trails

	% households
Pleasure and relaxation	88.2
Experiencing scenery and the natural environment	70.6
Health and physical training	64.8
Family and social outings	50

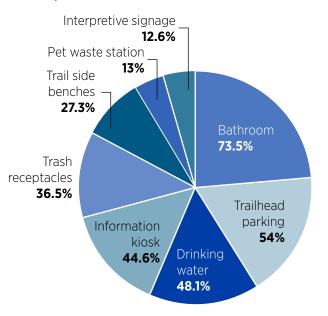
Source: 2017 Virginia Outdoors Demand Survey

# Recreational Trail Amenities

Local, state and homebuyer surveys consistently affirm the desirability of trails, but there is less information on what facilities are needed along trails. Figure 8.4 ranks the importance of eight amenities that support trail users.

Bathrooms (73 percent) are the most important amenity for trail users. Over half (54 percent) of all trail users indicated trailhead parking was important. Less than half desired drinking water (48.1 percent), information kiosks (44.6 percent) trash receptacles (36.5 percent) and benches (27.3 percent). Thirteen percent of survey responses mentioned a need for pet waste stations and interpretive signage.

Figure 8.4 Trails Amenities Considered Most Important

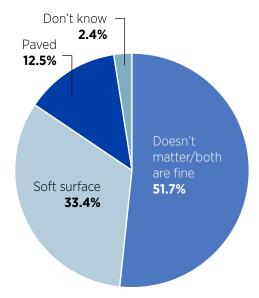


Source: 2017 Virginia Outdoors Demand Survey – Since responses could name multiple amenities, percentages were greater than 100 Trail Surfaces

## **Trail Surfaces**

Survey respondents did not indicate a strong preference for trail surface overall, but there may be strong preferences among user groups in specific settings. For example, hikers in scenic and remote areas may prefer unpaved, natural trails. Participants in wheeled activities may prefer paved surfaces. Trail planners should consider both supply and demand and short- and long-term cost constraints when determining the surface treatment for their trail project.

Figure 8.5 Trail Surface Preferences



Source: 2017 Virginia Outdoors Demand Survey

### Trail Demand Based on Regional Input

Each year during development of the Virginia Outdoors Plan, DCR staff met with outdoor recreation stakeholders, professionals and trail advocates in the 21 recreation regions to monitor progress on recreation facility development. High priority "featured" projects are listed by region in Chapter 13. Fifty-six percent of all featured projects relate to trail development.

# State Trails Advisory Committee - HB1542

Cumulative demand for trails across the state led the General Assembly to craft legislation in 2015 directing DCR to establish a State Trails Advisory Committee (STAC) to "assist the Commonwealth in developing and implementing a statewide system of attractive, sustainable, connected and enduring trails for the perpetual use and enjoyment of the citizens of the Commonwealth and future generations."

Appointed by DCR's director, the committee includes representatives from the Virginia Department of Game and Inland Fisheries, the Virginia Department of Transportation, the Virginia Outdoors Foundation, the U.S. Forest Service and the U.S. National Park Service; the director of the Chesapeake Bay Commission and non-legislative citizen members from the Virginia Outdoors Plan Technical Advisory Committee and the Recreation Trails Advisory Committee. Other members include individuals with technical expertise in trail planning, construction, maintenance, use and management. The committee meets twice a year and makes recommendations on these tasks outlined by the General Assembly:

- · Closing the gaps in a statewide system of trails.
- Funding strategies and partnerships to leverage resources for trail development.
- · Promoting and marketing trail values and benefits.
- · Developing specialty trails, e.g., old-growth forest trails.
- Encouraging and creating community and open-space linkages.
- Fostering communication and networking among trail stakeholders.
- Increasing tourism and commercial activities related to a statewide trails system.
- Encouraging involvement of organizations promoting youth activities.
- Identifying and supporting practices, standards, statutes and guidelines enhancing statewide trail planning including input from adjacent and nearby property owners.

The committee identified the following major challenges related to trail development:

 Improving the availability of grant funding for trail development.

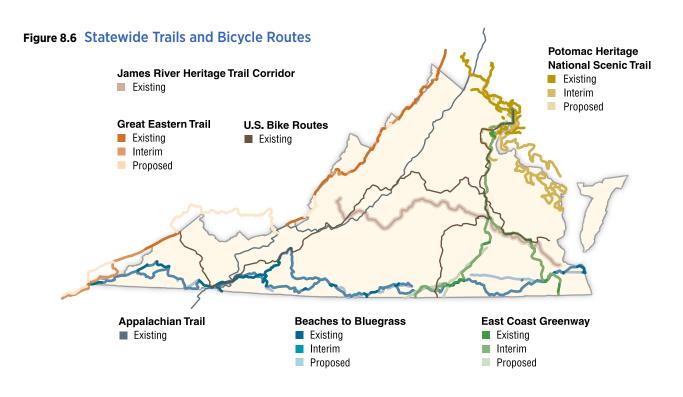
- Increasing resources for local trail development.
- Increasing funding for trail maintenance and operations, especially in rural areas.
- Providing guidance for prioritizing trail projects.
- Balancing trail user needs and conflicts including addressing surfacing to meet the Americans with Disabilities Act standards.
- Marketing trails through tourism—inside and outside Virginia.
- · Meeting stormwater standards.

# **Assets and Opportunities**

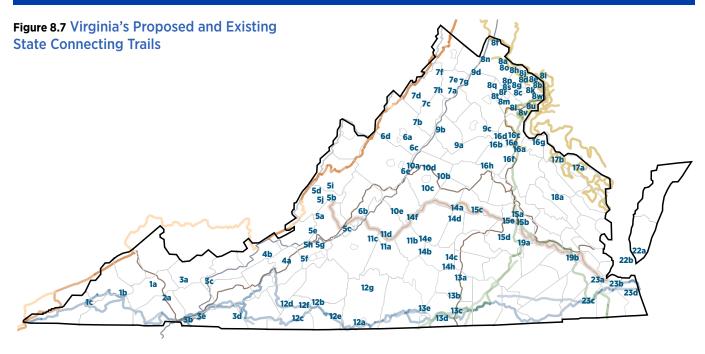
# **Statewide Connecting Trails**

In 2007, the Virginia Outdoors Plan first mapped the six statewide trails that make up the state trail system. This state system of scenic, recreation and connecting trails is described in Virginia § 10.1-204. Although mapping the statewide trails was a significant step toward the goal of connecting the Commonwealth, some areas of the state were still not connected.

The STAC requested that additional work be completed on the statewide network. The committee developed goals to fill gaps in the statewide trails system and to encourage its inclusion in local and regional plans.



Trails **CHAPTER 8** 



- Clinch River Trail 1a
- Guest River Gorge Trail 1b
- Wallen Ridge Trail 1c
- Clinch Mtn/Channels/Hidden 2a Valley Connector
- Cranesnest Equestrian Trail 2b
- Heart of Appalachia Bike Route
- 3b Virginia Creeper Trail (part)
- 3с Walker Mountain Trail
- Matthews State Forest Roads and Trails
- Grayson Highlands State Park Trails 3e
- 4a Valley to Valley Trail
- Poverty Creek/Huckleberry Connector 4b
- Craig Valley Scenic Trail 5a
- 5b Fore Mountain Trail
- Glenwood Horse Trail 5c
- 5d Jackson River Trail
- North Price/Broad Mountain Trails 5e
- Roanoke River Greenway Network Tinker Creek Greenway
- 5g 5h Carvin's Cove Trails
- 5i Douthat State Park Trails
- 5j Dry Run Trail
- Bike the Valley Bike Route 6a
- Chessie/Brushy/Buena Vista Connector 6b
- Madison Run horse/hiking trail 6c
- Wild Oak NRT 6d
- South River Greenway 6e
- Dickey Ridge Trail
- 7h Massanuttan Mountain South
- 7с Massanuttan Mountain Trail
- Shenandoah Town and County Rail Trail
- Royal Shenandoah Greenway
- Tuscarora Trail
- Route 522 pedestrian path 7g
- Shendandoah State Park Trails
- Goose Creek Trail 8a
- Alexandria Heritage Trail 8b
- Bull Run-Occoquan Trail 8c
- 8d Cross County Trail

- Custis Trail
- Hill, Hops and Vine Bike Route 8f
- I-66 Bikeway 8q
- Northern Broad Run 8h
- Pentagon Memorial Circuit Trail (911 Trail) 8i
- Pimmit Run Stream Valley Trail Pohick Stream Valley Trail 8i
- 8k
- Route 234 Bicycle and Running Trail Southern Broad Run 81
- 8m
- W&OD Connector 8n
- W&OD Trail 80
- West County Trail 8p Mill to Mill Trail
- Catharpin Greenway
- 8s Manassas Bridle Trails
- Conway-Robinson State Forest 8t Roads and Trails
- Mason Neck State Park Trails 8u
- Leesylvania State Park Trails 8v
- Capital Trail Coalition trail network 8w
- 9a Rapidan River Trail
- 9b Rapidan horse/hiking trail
- 9с Rappahannock River Trail
- Sky Meadows State Park Trail
- 10a Crozet Tunnel Trail
- 10b Rivanna River Trail
- 10c Route 20 Sidepath
- Three-Notched Trail
- 10e Route 29 sidepath
- 11a James River Heritage/Poplar Forest Connector
- Appomattox Heritage/State Forest Connector
- Lynchburg Trail System
- and Riverside extension Lynchburg Bike Loops
- 12a Angler's Ridge Trail System
- 12b Philpott Reservoir Trails
- Mayo River/Dehart Trail System 12c
- 12d Rocky Knob/Rock Castle Gorge
- Smith River Sports Complex Connector 12e
- Fairy Stone State Park Trails 12f
- 12g Route 29 bike route

- Tobacco Heritage -High Bridge Connector
- Tobacco Heritage Road Routes
- Tobacco Heritage Future Off-road Trails 13c
- 13d Occoneechee State Park Trails
- 13e Staunton River State Park Trails
- 14a Willis River Trail/Cumberland State Forest Roads and Trails
- 14b High Bridge Trail
- 14c Prince Edward State Forest Roads and Trails
- 14d Bear Creek Lake State Park Trails
- 14e Holliday Lake State Park Trails
- James River State Park Trails
- 14h Twin Lakes State Park Trails
- 15a Gillie's Creek Greenway
- 15b Cannon Creek Greenway
- 15c Powhatan State Park Trails
- 15d Pocahontas State Park Trails
- 15e James River Park Trail System
- 16a Dahlgren Connector
- 16b Virginia Central Rail Trail
- 16c Canal Path
- 16d Fall Hill Avenue Trail
- 16e Rappahannock River Heritage Trail
- Spotsylvania Greenways
- 16g Lake Anna State Park Trails
- 16h Caledon State Park Trails
- 17a Northern Neck Heritage Bike Route
- 17b Westmoreland State Park Trails
- 18a Middle Peninsula Bike Route
- 19a Appomattox River Trail
- 19b Chippokes Plantation State Park Trails
- 22a Southern Tip Bike & Hike Trail
- 22b Kiptopeke State Park Trails
- 23a Birthplace of America Trail
- 23b Elizabeth River Trail 23c Dismal Swamp Trails
- 23d First Landing State Park Trails

Trails **CHAPTER 8** 

To that end, DCR developed a Proposed and Existing State Connecting Trails map (see figure 8.7). Connecting trails were added to this map based on advisory committee recommendations. a region's featured projects, a review of historic Virginia Outdoor Plan (VOP) trail maps and an effort to reach into every planning district. Water trails are not included. To be included on the map, trails had to meet all of these criteria:

- Be at least 5 miles long (one way).
- Connect to a statewide trail directly or through another connecting trail.
- Cross barriers, boundaries or jurisdictions to connect communities or natural assets.
- Have an established management entity.
- Be identified in local, regional or state plans and have grassroots support.

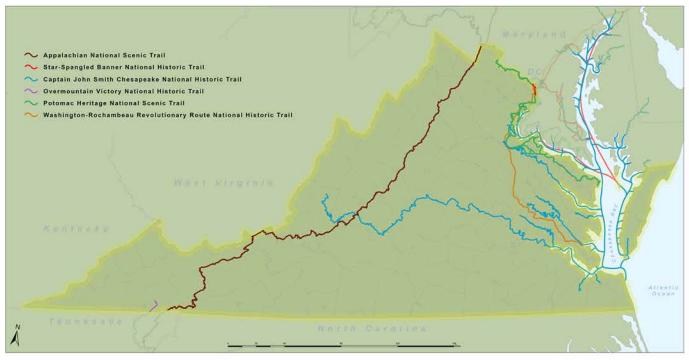
While the effort to make trail connections is ongoing, this map may help plan for future connections across regional boundaries.

## **National Trails**

2018 marks the 50th anniversary of the National Trails System Act "to promote the preservation of, public access to, travel within and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the nation." Virginia has six National Trails that offer outdoor recreation, transportation, education, enhance quality of life, economic development and heritage tourism to nearby communities.

Two national scenic trails, the Appalachian Trail and the Potomac Heritage Trail, are also scenic trails within the state trail system that meet the Code of Virginia's non-motorized requirement, and the latter employs different modes of travel. The John Smith Chesapeake National Historic Trail encompasses both land and water trail systems along Chesapeake Bay rivers and tributaries. Supporters of the Washington-Rochambeau Revolutionary Route National Historic Trail, which follows the old Kings Highway through eastern Virginia, are preparing for the 250th anniversary of the Revolutionary War. The Overmountain Victory National Historic Trail and the Star-Spangled Banner National Historic Trail have small but significant footprints in opposite corners of the state.

Figure 8.8 National Scenic and Historic Trails in Virginia









This route follows the path of a band of Revolutionary War patriots who mustered in western Virginia and eastern Tennessee and came across the mountains of North Caro to Kings Mountain in South Carolina. There they deleated itia in 1780, he



anal Towpath a s named Potoma rail, bicycling rou nd in southern



ringed Serrich ronged set of land and water trails commemorates to to British and American forces in the Chesapeake ing the War of 1812. In the summer of 1814, British in upled the Chesapeake Bay, burned public buildings and laid sleep.



Working through memoranda of understanding and cooperative agreements and task agreements, trail partners in Virginia contribute to and reflect the character of the National Trails System. Many partners, often aided by volunteers, have planned, designed, constructed and maintained trail sections; identified scenic resources; developed trip itineraries; and promoted and led tours.

### **Case Study**

The Northern Virginia Regional Commission has developed an interactive map based on a corridor analysis of the Potomac Heritage Trail through the region. This helpful tool provides information on the status of each trail segment and helps local planners close the gaps. https://nvrc.maps.arcgis.com/apps/View/index.html?appid=d1757e45167d4f9cba41fcc88193e4f7

# **Opening Private Lands to Recreation**

Where landowner concerns create gaps in trail networks, some outfitters have been successful in negotiating access to private property through guided overnight trips. In these cases, the outfitter holds liability insurance and charges a camping fee that provides income for the landowner. The outfitter is responsible for clearing up any trash and ensuring that property damage does not occur. This arrangement has provided extra income to farmers along the James River Heritage Trail.

The Southwest Regional Recreation Authority/Spearhead Trails has added hundreds of miles of trail to the Spearhead Trails system,

which is currently at 400 miles and growing at over 100 miles per year. Most of the trails are on private properties based on land-use agreements with large private landowners—primarily coal, gas and timber companies. These landowners appreciate knowing their lands are policed by Spearhead rangers, and that the recreation authority holds liability insurance in case of injuries. Also because they donate the easement or land-use agreements to Spearhead Trails, they are protected from lawsuits by trail riders. The authority covers insurance and other costs through a permit system. Written agreements with each landowner provide flexibility in trail alignment in case acreage is put back into production, making otherwise unusable land a gateway to outdoor recreation.

The area is currently experiencing around \$15 million per year in economic impact and supporting about 168 full-time jobs, primarily in the private businesses that now cater to Spearhead Trails users. Spearhead Trails not only builds and maintains environmentally friendly ATV trails, but it helps build trail economies for local towns and communities. Next year, it will open its first equestrian trails and hopes to create horse towns and economies in the near future.

State code offers protection to landowners who open their lands for recreation without a fee. In the recreational use statute, a public entity is required by statute to "hold harmless" and indemnify the landowner for the cost associated with a claim brought by an injured recreational user if the public entity has an easement or license for the use of the land by the public.

Prince William County has been actively closing the gaps through Potomac Heritage Trail segments at George Mason's Potomac Science Center, Locust Shade Park and the Neabsco Creek Boardwalk, a destination walkway through wetlands that connects residential communities to Leesylvania State Park.



Potomac Heritage Trail connecting to GMU Science Center
Prince William County Department of Parks, Recreation and Tourism



Locust Shade Park segment Prince William County Department of Parks, Recreation and Tourism



Neabsco Creek Boardwalk
Prince William County Department of Parks, Recreation and Tourism

### **Case Study**

Partnerships with Health Providers

Many parks and recreation agencies are exploring partnerships with health providers to increase physical activity within their communities.

The city of Hopewell joined the Healthy Eating Active Living (HEAL) Cities & Town's Campaign through the leadership of the Community Action Network, an initiative formed by the Virginia Department of Health's Crater Health District. In October 2017, the HEAL Campaign awarded Hopewell gold-level recognition for accomplishing its resolution goals in each of three priority areas:

- Promoting physical activity through improvements in the physical environment.
- 2. Promoting access to healthy food in under resourced areas.
- Increasing physical activity opportunities throughout the city. The goals were accomplished through city-wide programs and activities to get Hopewell residents eating better and moving more. This included a park renovation project to highlight the city's outdoor amenities and

redesign the waterfront area along the Appomattox River Trail. Through this initiative, the city has moved forward with additional park renovation projects to improve existing parks and increase use.

Efforts to increase healthy food access were spurred through a partnership with a Hopewell Girl Scout Troop. Along with the troop's help, the city established a community garden that donates fresh food to the Hopewell Food Pantry. Another Hopewell partner, the Fitness Warriors program, is working to increase opportunities for residents to be physically active. The program offers free fitness instructor training programs to the community with the understanding that instructors will adopt a "pay it forward" approach by offering their own free classes in under resourced areas in the community. These initiatives highlight Hopewell's HEAL program's successful community involvement, partnerships, and interdepartmental approach, which are essential ingredients to advancing the health and wellbeing of any community.

More information on Hopewell's HEAL initiative can be accessed through the Public Health Advocates' HEAL Cities Campaign webinar: "How HEAL Cities Are Advancing Health for All in Parks and Recreation."

## **Recommendations**

Advocacy is essential in developing a statewide trails network. The STAC met annually, since its founding in 2015, to provide input for the 2018 VOP and annual reports to the General Assembly. Goals and objectives developed during these meetings are listed below, each with an agency or partnering organization identified for implementation. The STAC, along with staff from DCR, will track implementation.

- Develop strategies to enhance trails in communities and close the gaps in the statewide system of trails as described in §10.1-204.
  - Complete a statewide trails plan to summarize the work of STAC and guide trails development and priorities for grant awards. (DCR, STAC)
  - Develop multi-state trails connectivity goals and strategies in the statewide trails plan. (DCR, STAC)
  - Encourage partnerships through Virginia Economic Development Partnership and local economic development initiatives for trails development. Assist local communities to promote trails as economic initiatives. (Virginia Tourism Corp.)
  - Identify and close the gaps in the statewide trails system and create linkages between communities and open space. Gather data from trail counters to support trails projects. (Regions, localities with the Department of Transportation [VDOT], DCR and Virginia Tourism Corp.)

- Create a central clearinghouse of information to close statewide trail system gaps. Consider an interagency memorandum of understanding to facilitate information sharing. (DCR)
- Include recreation, scenic and connecting statewide trails in local and regional plans. (Local and regional governments)
- Obtain funds for a statewide trails needs assessment showing costs for system development. (DCR, STAC, advocacy community)
- Identify existing and potential old-growth forests in each region that tie into the statewide trail system. (STAC)
- Address maintenance and operations needs at the outset of trail development. (Federal, state and local agencies)
- Connect local and regional trail providers with health partners. (STAC, DCR, Virginia Department of Health, local health partners)



Old Rag Mountain, Shenandoah National Park | Nate Dennison/Virginia Tourism Corp.

### Return on Investment - James River Park System

With more than 1.4 million visits in 2016 alone, the James River Park System is by far the most visited park system in the Richmond region. The results of an economic impact study confirmed that the James River Park System is extremely important not only to the social and health status of the Richmond region, but also to the economic status of the region. Some of the highlights of the study:

Based on the 2017 budget, every James River Park System budget dollar is related to \$60.26 in visitor spending

In interviews with local businesses, owners estimated a 32.7 percent loss in revenue if the James River Park System did not exist. For every quarter-mile closer to the James River Park System a single family property is, the property's assessed value increased by a total of \$8,963.10

- Develop creative public and private funding strategies and partnerships to leverage resources for funding trail development
  - Seek sources of funding for trail renovation and maintenance. (STAC, DCR, advocacy community)
  - Leverage funding for trails with other infrastructure.
     (Government agencies and business partners)
  - Educate localities about transportation funding for trails. (VDOT, DCR)

- Facilitate partnership and outreach with business and the private sector to enhance and build trails. (STAC or friends of trails)
- Foster programs for recognizing businesses that support trails. (DCR)
- Develop strategies for the state to encourage trail agreements through partnerships, programs and legislation. (DCR, STAC)
- Explore utility easements for trail connections.
   (DCR, planning districts and localities)
- Work with businesses to explore trail development through mitigation when impacts to resources are unavoidable. (Local and state agencies and land managers)
- Integrate approaches to promote and market trail values and benefits.
  - Obtain funding for a statewide study on the economic and other benefits of trails. (STAC)
  - Publicize and market trail-use data and other positive impacts. (DCR, Virginia Tourism Corp., local and regional trail leaders, Virginia Health Department)
- Foster communication and networking among trail stakeholders.
  - Develop a common vision for trails in Virginia. (STAC)
  - Develop a communications plan.
     (DCR, Virginia Tourism Corp., STAC)

- Expand distribution of Greenways and Trails e-news.
   (DCR)
- Establish a nonprofit statewide trails organization. (Friends of trails, STAC)
- Create a central place for trail stakeholders to share and learn, incorporating social media. (Advocacy community and statewide trails organization)
- Provide educational opportunities, e.g., trails workshops. (Regions and local governments with support from DCR and other state agencies)
- Increase tourism and commercial activities associated with statewide trail system.
  - Develop tourism branding for trails in Virginia. (Virginia Tourism Corp.)
  - Develop community strategies to sustain and expand trails and supporting businesses. (Statewide trails organizations, Virginia Tourism Corp., local governments and chambers of commerce)
  - Identify trail service gaps in regions and localities that could support new and expanding businesses. (Local governments, chambers, Virginia Tourism Corp., Virginia Economic Development Partnership with input from trails advocacy community)
  - Install trail counters and collect other data needed to identify business opportunities. (Local and regional governments, VDOT)
  - Develop an app for sharing trail data with users. (VDOT, DCR, Economic Development and Virginia Tourism Corp.)
  - Plan and conduct training to promote trail towns.
     Develop a "train the trainer" program for an annual greenway and land conservation conference to include towns along Virginia state trails and parks, Appalachian Trail, Tobacco Heritage Trail and Spearhead Trail communities. (DCR, public and private partners)
- Update the Greenways and Trails Toolbox and Trails
   Program webpage to provide practices, standards, statutes and guidelines that enhance the effectiveness of trail planning across the Commonwealth.
  - Update the Greenways and Trails Toolbox to include a trail signage plan; OHV trail development guidelines; strategies for overcoming barriers like highways, railroads and waterways; defining the corridor to reduce trespass; and best management practices for meeting stormwater standards. (DCR)

 Provide planners with resources needed to engage property owners. (DCR)

### Resources

- The Greenways and Trails Toolbox, located on the DCR website, is a helpful resource for trail development.
- Active Living Research https://www.activelivingresearch. org/taxonomy/parks-recreation
- American Trails http://www.americantrails.org/
- Outdoor Industry Association Research and Tools https:// outdoorindustry.org/research-tools/
- Pedestrian and Bicycle Information Center http://www. pedbikeinfo.org/
- Rails-to-Trails Conservancy https://www.railstotrails.org/
- Society of Outdoor Recreation Professionals technical resources https://www.recpro.org/technical-resources

# Works Cited

 Shivy, Victoria A. and Suen, I-Shian, "Economic Impact of the James River Park System," Virginia Commonwealth University, April 2017, www.jamesriverpark.org/ documents/JRPS-Economic-Impact-Study-4-17.pdf



Family hike on the Appalachian Trail | Jennifer Wampler/Virginia Department of Conservation and Recreation