

Priorities 2000

Metropolitan Washington

GREENWAYS

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Introduction

Green Space Past and Present

From the National Mall to the region's stream valley parks and outlying farmland, metropolitan Washington is characterized by natural beauty and green space. In 1791, Pierre L'Enfant laid out the District of Columbia between the Potomac and Anacostia Rivers with 17 park reservations, open space for memorials, civic art, institutions, and broad park-like streets and avenues creating a network of green space. This network was expanded in the late 1800s with the designation of Potomac Park, Rock Creek Park and Anacostia Park.

In 1901, the McMillan Plan established a vision for a regional green space network by extending parklands from the District to Great Falls and Mount Vernon and designating a series of scenic parkways along the Potomac River, Rock Creek and Fort Circle. Today, the regional green space network is supported by the 1997 Extending the Legacy plan and the many open space and comprehensive plans developed throughout the region. These plans confirm the importance of parks, greenways, and farmland for recreation, transportation and environmental protection. As the Washington area population grows from almost 4 million people to 5.6 million in 2020, preservation and development of green space is as challenging and important as ever.

National Capital Region Transportation Planning Board

The Transportation Planning Board (TPB) approved a vision in 1998 that calls for more growth in and near regional activity centers which are connected by multi-modal transportation corridors. This approach is intended to reduce development pressure on the region's green space and encourage an interconnected system of greenways. To illustrate this plan, the Metropolitan Washington Council of Governments (COG) is developing a composite regional map showing regional transportation corridors, the regional core, regional activity centers and green space under the direction of a joint transportation and land use committee made up of local officials.

Metropolitan Greenspace Workshop

In October of 1994, seventy-five people – elected officials, planners, and advocates – gathered at Metropolitan Washington Council of Governments for the Metropolitan Washington Greenspace Workshop to develop a long-term vision for open space preservation in the region and common strategies for greenway preservation, development, and implementation. Workshop participants attended a series of sessions on topics ranging from funding to safety, ecology, and transportation. Each workshop session generated a list of findings and recommendations for action and further study.



Ellicott Rendering of L'Enfant Plan 1792

"Workshop participants recognized that the Washington Metropolitan region offers an excellent opportunity to showcase an urban greenspace initiative right in the backyard of the Nation's leadership."

- Report of the Metropolitan Greenspace Workshop, October 1994



1901 McMillan Plan



1997 Extending the Legacy Plan

"In the 21st Century, the Washington metropolitan region remains a vibrant world capital, with a transportation system that provides efficient movement of people and goods. This system promotes the region's economy and environmental quality, and operates in an attractive and safe setting - it is a system that serves everyone. This system is fiscally sustainable, promotes areas of concentrated growth, and manages both demand and capacity, employs the best technology, and joins rail, roadway, bus, air, water, pedestrian and bicycle facilities into a fully interconnected network."

- Vision Statement, National Capital Region Transportation Planning Board

Transportation and Community and Systems Preservation Pilot Program Grant

To build on the efforts of the 1994 workshop and support the new transportation vision, the Federal Highway Administration awarded the TPB a grant under the Transportation and Community and Systems Preservation (TCSP) Pilot Program. The grant supports two key components of the TPB vision: improving circulation within the regional core and regional activity centers, and integrating green space into a regional greenways system. *Priorities 2000: Metropolitan Washington Greenways* represents one component; a companion document on circulation systems represents the other.

In order to provide the level of attention needed to advance regional greenways and to involve key agencies, officials and stakeholders, the TPB created a Green Space Advisory Committee to help guide the planning and implementation process. Over a nine-month period, the committee provided guidance on examining the existing greenway network, identifying priority projects within the region, and defining potential sources for funding implementation. Working with these experts and local planners, TPB has produced this report to help implement proposed greenway projects throughout metropolitan Washington.

Priorities 2000: Metropolitan Washington Greenways

Priorities 2000: Metropolitan Washington Greenways establishes a framework for green space in the Washington area, identifies regional greenway priorities, and puts forth an implementation strategy to help make these proposed greenways a reality. During the course of the planning process, over 150 proposed greenways were identified across the region and twenty projects were identified as local priorities. Out of these twenty local priority projects, eight regional priority projects were identified and described in detail. These projects range in scale and character, but they all provide interjurisdictional connections that are the foundation of the greenway network.

The regional priorities build on the work of the 1994 Metropolitan Greenspace Workshop and the Regional Bicycle and Pedestrian Subcommittee. The Subcommittee, made up of planners from each jurisdiction, reports to TPB's Technical Committee. Members meet regularly to share information and set regional bike/ped priorities, many of which are greenway projects.

The *Priorities 2000: Metropolitan Washington Greenways* will help communicate the vision of a regional greenway network. It is a guide for elected officials, planners, and advocates. It is organized into three parts:

- **Introduction**
- **Regional Greenway**
- **Framework**
- **Implementation Strategy**

The Introduction provides an overview of green space goals in the region and defines terminology used in this report. The Regional Greenway Framework establishes the vision for greenways in the Washington area and highlights specific projects that would contribute to the regional greenway network. The Implementation Strategy section provides practical information on how to implement greenway projects in the region. It details existing funding opportunities, acquisition and development alternatives, management and community outreach techniques.

A Note on Terminology

This report refers to both green space and greenways. The focus is on greenways, for two reasons. First, comprehensive identification of green space in the Washington region is beyond the scope of this project and is in fact underway as part of the composite regional map effort described above. Second, because the TPB is responsible for transportation funding, greenways, especially those with a transportation element, are most likely to be funded and implemented under TPB plans. Page 15 of this report defines green space, greenways, blueways and trails. Also, many

of the resources and techniques described in the report are relevant for green space planning.

What is the TPB?

The National Capital Region Transportation Planning Board (TPB), the federally designated Metropolitan Planning Organization for the region, guides transportation investments in the region through the development of a 25-year Long-Range Plan and a six-year Transportation Improvement Program. The TPB includes elected officials from local governments and the Maryland and Virginia General Assemblies as well as representatives of the transportation agencies of the District of Columbia,

Maryland and Virginia, the Washington Metropolitan Area Transit Authority (WMATA), and non-voting members of the Metropolitan Washington Airports Authority and federal agencies.

What is COG?

The Metropolitan Washington Council of Governments (COG) is the regional planning organization of the area's major local governments and their governing officials. COG works toward solutions to problems in such areas as growth, air and water quality, transportation, and housing. The Transportation Planning Board, while a separate entity, is located at COG.



Lakelands and Kentlands, new developments in the City of Gaithersburg, illustrate the city's Smart Growth Policy by clustering houses to create common open space and using natural features to create greenways .

Arlington County's goal for open space is "to ensure, for this and future generations, the provision of an adequate supply of beneficial open space which is safe, accessible and enjoyable, and shall take the necessary steps to protect, enhance and acquire open space to meet these needs."

- Open Space Master Plan, September 1994

Montgomery County plans to connect "new and existing open spaces to form a 100 mile "ribbon of green" from the Potomac River to the Patuxent River via the Northwest Branch."

- Legacy Open Space Plan, October 1999

Goals and Objectives

At the 1994 Metropolitan Washington Greenspace Workshop, participants found that *"There is a distinct need for more and better information on open space preservation and greenways in the Metropolitan area, their usage, standards, and economic impacts. A study of this activity should be made and data collected so that elected officials can make informed and responsible decision about greenways and open space"*. Since 1994, there have been many studies documenting the need and benefits of open space protection throughout the United States, but there has been little effort to coordinate green space and greenway initiatives.

The overarching goal of this study under the Transportation and Community and Systems Preservation (TCSP) Pilot Grant Program is to help integrate green space throughout the region into a connected regional greenways system. The objective is to create a green space strategy that identifies priority projects that are critical to the region and to locate potential funding sources that can be used to implement those projects. In order to satisfy the goals of the program, the strategy must:

- Help improve the efficiency of the transportation system.
- Reduce the impacts of transportation on the environment.
- Reduce the need for costly future

investments in public infrastructure.

- Help ensure efficient access to jobs, services and centers of trade.
- Encourage private sector development patterns to support these goals.

The implementation strategy strengthens the regional greenways system and furthers the TCSP goals by incorporating the region's green space into the transportation network. It improves non-vehicular access to activity centers and helps consolidate development by protecting open space. These goals can only be realized if the projects identified as part of this strategy are implemented. Therefore, it is important that a comprehensive implementation strategy satisfy both the regional goals that will help generate funding and the local goals that will help generate public support.

Regional Goals

Regional transportation goals are identified by the National Capital Region Transportation Planning Board in their 1998 vision, including:

- Enhancing quality of life and promote a strong and growing economy.
- Providing a better pedestrian environment.
- Promoting reasonable access to transit.
- Enhancing the use of technology.
- Developing better funding mechanisms.
- Improving support for international and interregional travel and commerce.
- Protecting the natural environmental, cultural and historic resources, and communities.

A system of integrated green space and greenways will help the Washington area's transportation system achieve these goals by strengthening the pedestrian and bicycle network, enhancing community access to the greenway network, encouraging development to locate near activity centers, and recognizing standards to maintain a green space network for environmental, recreational, and transportation purposes.

Community Goals

Metropolitan Washington encompasses many jurisdictions, including the District of Columbia and seven counties and several cities in Virginia and Maryland. Each local government has established a series of goals and objectives that describe a vision for green space, greenways, and transportation in its jurisdiction. Although many of the objectives site specific geographic locations, the general goals for open space and access are similar:

- Protect, enhance and acquire adequate open space for this and future generations.
- Provide beneficial open space that is safe, accessible and enjoyable and that serves population needs.

- Maintain a system of natural areas, open spaces and outdoor recreation facilities that enhance and perpetuate the natural resources of the area.
- Maximize open space opportunities provided by private developers through development proffers and easements.

Smart Growth principles in the City of Gaithersburg state that "Community size should encourage walking and bicycling and should be structured so that housing, schools, jobs, daily needs, and other activities can be within easy walking distance of each other."

- City of Gaithersburg Smart Growth Policy, August 1999

The City of Alexandria encourages developers to incorporate active and passive open spaces and recreational facilities within development plans to serve the development's added residential and employee population.

-City of Alexandria, 1994 Parks and Recreation Master Plan

The Capital Crescent Trail in Montgomery County and Washington, DC provides easy pedestrian and bicycle access for numerous communities northwest of the Capital to K Street in Georgetown near trails leading downtown. It attracts approximately 300 commuters every day. >>



The Washington & Old Dominion Trail, travelling through Arlington, Fairfax and Loudoun Counties in Virginia, has brought numerous recreational benefits to northern Virginia. It serves more than two million bicyclists, pedestrians, rollerbladers, and horseback riders every year on its parallel paved and crushed stone paths. The rail-trail also connects a number of community parks, including Bluemont Park in Arlington and Vienna Centennial Park in Fairfax. >>



Benefits of Greenways

Transportation

- Greenways with hiking or biking trails **reduce road congestion** by providing alternative transportation routes for commuters going to work and residents going to commercial centers.
- Green space connections can **link residents to transit nodes**.

In 1991, it was estimated that bicycling and walking trips in the U.S. replaced nearly 18 billion motor vehicle miles. These non-motorized trips saved approximately 850 million gallons of gasoline which would have added 10.4 million metric tons of exhaust emission air pollution into the atmosphere. The American public saves from 5 to 22 cents for every automobile mile displaced by walking and bicycling due to reduced pollution, oil import savings and less traffic congestion. (Source: NBPC Technical Brief , Technical Assistance Series, Number 2, September 1995)

Recreation

- A green space network **improves quality of life** by providing a variety of recreational opportunities to all residents.
- Greenways **provide recreational and fitness opportunities** to communities without direct access to parks.

According to a 1994 study by American Lives, a research firm serving the real estate industry, "walking and biking paths" ranked third among 39 features identified by homebuyers as crucial factors in their home purchasing decisions. "Community designs that deliver low traffic and quiet streets" were ranked first, and "lots of natural, open space" was second. (Source: NBPC Technical Brief, Technical Assistance Series, Number 2, September 1995)

Economic Opportunities

- Greenways help **strengthen the local economy** by stimulating community revitalization and creating jobs related to recreation and tourism.
- Greenways **increase property values** and the local tax base by enhancing quality of life and attracting businesses and residents to a community.
- Greenway planning helps **control community growth** and prevents the high cost of unplanned development.

In Pennsylvania, a study of the Oil Creek Bike Trail found that the average visitor spent \$25.85 per day, including \$9.09 for food, \$6.27 for transportation, \$2.56 for lodging (many visitors camp) and \$7.94 for equipment and other activities. In 1992, the National Park Service found that the average expenditure of approximately 170,000 individuals visiting the Tallahassee-St. Marks Trail in Florida every year is more than \$11 per day. This increase in local spending helps revitalize communities by increasing employment.

In Baltimore County, Maryland, a 1994 study conducted for the Maryland Department of Natural Resources found that the Northern Central Rail-Trail attracts 457,000 visitors every year and has led to the creation and support of 262 jobs in local businesses, such as trail construction and maintenance work, restaurants and hotels, regional sporting goods companies and supermarket chains. The same study also found that the Northern Central Rail-Trail increased the salability of property listings along the trail. (Source: NBPC Technical Brief, Technical Assistance Series, Number 2, September 1995) For more information on the economic benefits of green space, see Trust for Public Land's study called *The Economic Benefits of Parks and Open Space: How Land Conservation Helps Communities Grow Smart and Protect the Bottom Line* at www.tpl.org/tpl/tech.

Preservation and Conservation

- Green space **protects sensitive natural features** and provides an opportunity to interpret their significance.
- Green space **preserves important habitat corridors** that promote plant and animal diversity.

- Green space **preserves the character of rural communities** by protecting ridges, river corridors, and scenic resources.
- Green space **protects cultural and historical resources** by providing buffers between sensitive resources and new development.
- Green space provides opportunities to **interpret and link cultural and historic resources**.

Preservation and conservation of wooded stream valleys and riparian areas provide diverse habitat for fish and other wildlife. Riparian areas enable primary biotic production, protect stream banks from erosion by water, trap stream-born sediments which build up stream banks, promote water absorption and storage, recharge groundwater reserves and regulate stream flow.

The George Washington Memorial Parkway preserves the natural scenery along the Potomac River and helps improve the water quality of the river by protecting its shoreline and enabling surface water to infiltrate the ground before reaching the river.>>



The Chesapeake and Ohio (C&O) Canal provides a historic greenway along the Potomac River for 184.5 miles from Washington, D.C. to Cumberland, MD. The designation of the Chesapeake and Ohio (C&O) Canal as a National Historical Park under the National Park Service has protected hundreds of original structures, including locks, lock houses, and aqueducts. These historic structures help educate the public on the canal's role as a transportation system during the Canal Era.>>



Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountains is going home; that wildness is a necessity; and that mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but as fountains of life.

- John Muir

76% of Maryland residents would be willing to pay more for a home that had parks and natural areas nearby.

90% of Maryland residents would support the development of walking and bike paths in their community.

- Maryland Greenways Commission Study, 1995

Environment

- Green space **enhances water quality** in urban areas by reducing surface runoff and providing opportunities to protect riparian vegetation and filter storm water.
- Green space **enhances air quality** by providing vegetation that provides shade and filters the air.
- Green space preservation in flood plains **reduces the need for flood-control measures** in urban areas.

Greenways enhance water quality by filtering runoff, enabling surface water to shed sediment, nutrients, and pesticides before entering streams. Forest soils can absorb runoff at rates 10-15 higher than grass turf, and 40 times greater than a plowed field.

The protection of greenways for water quality not only provides habitat to fish and other wildlife, it also protects drinking water supplies. In New York City, the estimated cost to protect drinking water supplies by purchasing upstate lands is \$1.5 billion and the estimated cost to build a filtration plant if these lands are developed is \$ 6 billion to \$8 billion. (Source: *The Economic Benefits of Parks and Open Space*, NPS)

Livable Communities

The transportation, recreation, economic, preservation, conservation, and environmental benefits associated with greenways work together to improve individual quality of life and create **livable communities**. Uncontrolled, scattered development has required local governments to build new roads and infrastructure, has required local citizens to commute long distances to work, and has diminished the nation's open space. Today, many local governments and citizens are recognizing the costs of sprawl and demanding **smart growth** to improve individual lives and build sustainable communities. Greenways, and their many benefits, are integral to this vision of livable communities.

For more information on the benefits of greenways, see *Thinking Green: A Guide to the Benefits and Costs of Greenways and Trails* at www.dep.state.fl.us/gwt/publications/index.

Green Space, Greenways, and Trail Types

Green Space and Greenways

Across the country, citizen groups and public agencies are working to incorporate green space into their communities and identify greenways as part of their transportation, recreation, and open space networks. Numerous types of green space and greenways have evolved from these efforts, making it necessary to define green space and greenways in the context of this study and the Washington area.

Green space refers to all elements of a region's natural context from city parks and street tree plantings to protected stream valleys and agricultural lands. These natural features provide connectivity within the region, helping to define the region's character and make our communities livable. Green space is also referred to as open space.

Greenways refer to corridors located in urban or rural areas that often have transportation and recreational benefits. In some areas of the country, ecological greenways are designated to promote the natural migration of plant and animal species; these may not permit public access or human activity.

Although many greenways identified in this study have ecological benefits, the focus here is on greenways that permit public access and

demonstrate transportation benefits. The study also includes urban greenway connectors, which provide critical links between greenways with on-road trails or urban streetscapes.

In recent years, Federal and state funding programs have created opportunities for greenways within road right-of-ways. Using preserved lands along transportation corridors to enhance greenway connectivity within the region should be encouraged. These multi-modal open space and transportation corridors will reduce traffic congestion, enhance visual quality, and provide greenway access to many isolated communities. Although many jurisdictions think of these enhanced transportation corridors as *parkways*, this term should be reserved in the Washington area for those gateways coming into the Capital that are managed by the National Park Service, such as the George Washington Memorial Parkway.

During the development of this report, the topic of *blueways* was introduced. Blueways are rivers and streams used for recreation. Often they are designated as federal or state scenic rivers and are protected from incompatible land uses along the river corridor. Existing blueways within the Washington area are typically located within a protected greenway. The study does not identify blueways as separate from the regional greenway network.

- 1. Asphalt Path
- 2. 2% Max. Cross Slope
- 3. 3:1 Adjacent Slope
- 4. Granular Gutter
- 5. Excess Fill used to create Path Edge

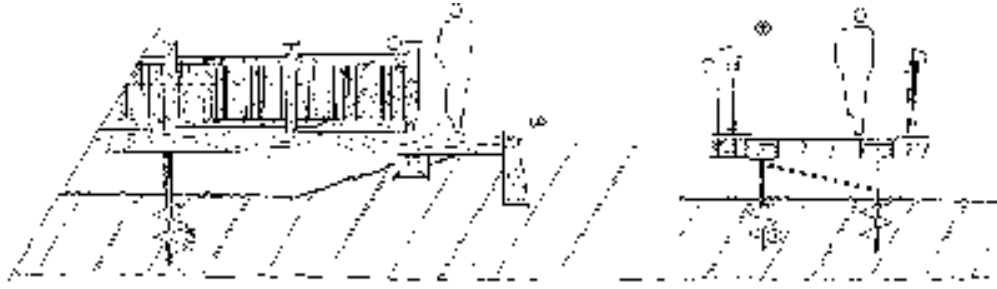


Hard-Surface Multi-Use Trails



- 1. Granular Road Bed 8'-12' wide
- 2. Shrub Planting and/or Fallen Tree
- Trunks delineating trail routes
- Soft-Surface Trail

1. Wood Boardwalk with 42" Guard Rail
2. Adjacent Trail
3. Helical Pier with Bracing
4. Clear Span 7'-6"



Wood Boardwalks

Trail Types

Greenways often contain trails that help provide connectivity within the network, enabling users to get from one location to another. The following types of trails are found within the Washington Metropolitan area:

Soft-Surface Trails for Hiking, Mountain Biking, or Horseback Riding

Soft-surface trails for hiking, walking, and running are often located in greenways with steep terrain or sensitive ecological habitat. The natural surface trail is thought to have fewer environmental impacts than a hard-surface trail.

Soft-surface trails are sometimes constructed in remote greenways that have fewer users to save money or in popular natural areas to provide a natural experience. These trails use either a natural surface of dirt and rock or are constructed with a surface of mulch or fine gravel.

Soft-surface trails for mountain biking and horseback riding are typically sited in less sensitive areas that are less susceptible to erosion.

Wood Boardwalks

Wood boardwalks are often used for trails in wet or sensitive environments. Boardwalks enable trails to connect through sensitive environmental areas without significantly disturbing the habitat or detouring outside of the area.

Hard-surface Multiuse Trails for Biking, Walking, Running, or Rollerblading

Hard-surface multiuse trails are often located in urban areas with large populations. These trails are often used for recreation and transportation by pedestrians, bicyclists, and rollerbladers. They are typically constructed with asphalt surfacing.

Rail-Trails

Rail-trails are located along abandoned railroad tracks. They follow a gentle grade and are located in both urban and rural areas. Sometimes they are paved to accommodate a multiuse trail and other times they are kept as a gravel surface.

Non-Motorized vs. Motorized Trails

Motorized trails for all terrain vehicles and dirt bikes are popular in many areas of the country; however in urban areas motorized uses are incompatible with heavy pedestrian and bicycle use. None of the trails discussed in this study accommodate motorized uses.

Regional Green Space Framework

Vision for Green Space in Metropolitan Washington

In 1790, George Washington chose the peninsula between the Anacostia and Potomac Rivers to site the nation's capital. Pierre L'Enfant laid out the city with a grand scheme of avenues, circles, and streets that responded to the complex topography of the region. The rivers, streams, ridges, terraces, and vistas within the city give it a special identity that has been preserved by the city's extensive park lands.

The vision for green space in the Washington area today builds on this legacy by providing an integrated network of greenways based on the natural features of the region. Using the Potomac and Anacostia Rivers and their tributaries as the spine of the green space network, greenways link natural areas and communities throughout the region. Other natural features, such as escarpments and ridges, add to the framework providing a diversity of habitat and experience.

Implementation of this green space vision is underway. Efforts to create the Potomac Heritage National Scenic Trail (PHNST) and the Anacostia Greenway along the Potomac and Anacostia Rivers are reinforcing the foundation of green space in metropolitan Washington. These greenways have mobilized Federal, state, and local agencies, as well as

individual citizens, to establish a new legacy for the region. The PHNST and the Anacostia Greenway will function as the backbone of regional green space, providing critical connections between stream valley greenways, rail-trails, and other greenways.

Existing Green Space Network

Across the region, both residents and local governments are recognizing the value of integrating green space into our communities. Momentum is building as jurisdictions, both small and large, are acquiring lands and opening them to the public. The Washington Metropolitan Area has over 75 existing greenways or trails throughout the region. Some of these greenways, such as the C&O Canal and the W&OD Trail, continue for miles through many jurisdictions. Others, such as the Hooffs Run Park and Greenway in Alexandria, provide local access and recreational opportunities to individual neighborhoods.

Significant existing regional greenways and trails in the Washington area include:

- C&O Canal National Historical Park
- Mount Vernon Greenway
- Washington and Old Dominion (W&OD) Trail
- Rock Creek Greenway
- Capital Crescent Trail
- Anacostia Tributary Trail System

"Whatever of natural beauty is to be preserved and whatever park spaces are still to be acquired must be provided for during the next few years or it will be forever too late."

- 1901 McMillan Plan

"Washington's founders envisioned a bustling port that spread out from the confluence of the Potomac and Anacostia Rivers to thriving neighborhoods surrounded by lush green hills. 'Nature has done much for it,' Pierre L'Enfant observed, 'and with the aid of art, it will become the wonder of the world.'"

- Extending the Legacy, National Capital Planning Commission 1997

"The entire system of local shopping and community facilities should be linked by parks and greenways so that easy access could be had throughout the community; including the real contact with the open country."

- Wedges and Corridors Plan, National

Capital Planning Commission 1961



Preservation of greenways provides opportunities to link open space with recreational facilities and transportation networks.

- Appalachian Trail Greenway
- Cactoctin-Gambrill Greenway

- Bullrun Occoquan Greenway
- Patuxent River Greenway

Together, these greenways create a broad network that integrates green space into the region and enables residents from certain areas of the region to access the District of Columbia and a few of the Regional Activity Centers. This network is far from complete. Many existing greenways are isolated by physical barriers, such as a highway, water body, or privately held land. Many communities are located far from a greenway corridor and many neighborhoods adjacent to a corridor have no designated access to it.

Green Space Opportunities and Challenges

Over 150 greenway projects have been proposed in the Washington area. These projects range in scope from simple neighborhood access links to fifty mile greenways encompassing thousands of acres of land. Many of these projects would eliminate barriers in the existing greenway network or would extend existing greenway corridors to reach isolated communities. Some of these projects would establish new greenways in areas currently underserved, while others would provide local access to the existing network. If all of these projects were implemented, the region would boast of one of the most comprehensive greenway networks in the nation.

A few of the major greenway opportunities in metropolitan Washington include:

- Creating **regional greenway spines** along both sides of the **Potomac and Anacostia Rivers**.
- **Connecting the Potomac and Patuxent Rivers** in Frederick, Montgomery and Prince George's Counties.
- Providing Regional Activity Centers **improved access** to the greenway network.
- Improving **interjurisdictional connections** and cooperation.
- Designating regional **parkways as "Scenic Highways"** to promote green space protection and compatible land uses along parkway corridors.

Implementation of proposed greenways requires funding, public support, land acquisition, design, and construction. The majority of proposed projects in the Washington area have begun the process of implementation; however, many have stalled. Constraints to the implementation process typically include:

- Lack of funding
- Public opposition
- Opposition or indifference in local leadership
- Lack of staffing in local planning departments
- Inability to acquire lands
- Lack of cooperation and coordination among local, regional, state and Federal agencies

For a complete list of proposed greenways in the region, refer to the appendix.

Regional Greenway Projects

Implementation of the proposed greenway projects will occur over many years as resources permit. The goal of this report is to develop an implementation strategy for a select group of greenway projects that will enhance the regional greenway network in the short-term. In order to identify projects that can be implemented quickly with additional resources, each jurisdiction was asked to present their priority projects. Twenty local priority greenway projects were identified (see list on following pages).

The character of the local priority projects varies widely between jurisdictions. Some are stream valley trails or rail-trails with large areas of land, while others are urban streetscapes with street trees, benches and lighting, or greenway connectors with segments on-road.

The local priority projects typically have local political support and some funding. Implementation of these projects is underway by local planning or parks and recreation

departments. Many are under study, some are in the process of land acquisition, and others are partially constructed. Despite these efforts, each of the projects requires significant funding and support to complete implementation.

In order to help focus attention and resources on greenway implementation, a select group of eight regional priority projects was chosen from the list of local priority projects. This selection was based on criteria from greenway, open space, bicycle projects, and funding agencies that were collected and analyzed. Given the large variety of project types on the local priority list and the diversity of jurisdictional needs in the region, the following five criteria were used to evaluate each local priority project:

- Potential **interjurisdictional connection**
- Crossing or filling a **critical gap**, such as highways or rivers, or providing a small, but important, link in the regional system
- **Ecological benefits**, such as providing habitat corridors, averting short-term development, or providing protection of a sensitive area
- **Links to** an existing or planned **greenway**
- **Community access** to the regional greenway network

	<i>Description</i>	<i>Location</i>	<i>Length</i>	<i>Lead Agency</i>
<i>Accotink Greenway</i>	Connects from Fort Belvoir to the City of Fairfax. Partially Complete.	Fairfax County City of Fairfax	13 miles	Fairfax County Park Authority, City of Fairfax Department of Public Works
<i>Anacostia Greenway</i>	Connects from Buzzards Point to Edlensburg Marina in Prince George's County.	Washington, DC and Prince George's County	7.2 miles	National Park Service, DC Office of Planning, Maryland-National Capital Park and Planning Commission
<i>Ballegger Creek Greenway</i>	Connects from Ballegger Creek Park to the Monocacy River.	Frederick County	4 miles	Frederick County
<i>Broad Run/Rocky Branch Greenway</i>	Continue Broad Run/Rocky Branch Greenway along the stream corridor with development proffers.	Prince William County	20 miles	Prince William County Park Authority
<i>Collington Branch Greenway</i>	Stream valley greenway is proposed to have trail that will connect Bowie with Upper Marlboro.	Prince George's County and City of Bowie	9 miles	Maryland - National Capital Park and Planning Commission
<i>Cross County Trail</i>	Connects Potomac Stream Valley with Accotink Greenway and Difficult Run.	Fairfax County	27 miles	Fairfax County Park Authority
<i>DC Trolley Trail</i>	Rail-trail project would connect Hyattsville to Beltsville and link to the Paint Branch Stream Valley Park.	Prince George's County and City of College Park	5.5 miles	Maryland - National Capital Park and Planning Commission, City of College Park
<i>Eisenhower Avenue Greenway</i>	Connects the Holmes Run Trail with an off-road segment along the south side of Eisenhower Avenue.	City of Alexandria	0.5 miles	City of Alexandria Department of Parks and Recreation
<i>Fort Circle Greenway</i>	Connects Civil War fortifications with urban greenway streetscape around the District.	Washington, DC	23 miles	National Park Service
<i>Henson Creek Greenway</i>	Trail project would connect existing greenway to the future Branch Avenue Metro Station, the Suitland Parkway Trail, and the Potomac Heritage Trail.	Prince George's County	6.5 miles	Maryland - National Capital Park and Planning Commission
<i>Metropolitan Branch Trail and Anacostia Gateway</i>	Connects Union Station to Montgomery County and Prince George's County along railroad right-of-way.	Washington DC, Prince George's & Montgomery Counties	8.4 miles	DC Department of Public Works, Maryland-National Capital Park and Planning Commission, National Park Service

Monocacy River Greenway	Proposed multi-use trail from Potomac River/C&O Canal to Tuscarora Creek. Priority portion is from Tuscarora Creek to Carroll Creek.	Frederick County, City of Frederick	25 miles	Frederick County Department of Planning and Zoning
Northwest Branch Greenway	Natural surface trail from Prince George's County to the Patuxent River.	Montgomery County	4.8	Maryland - National Capital Park and Planning Commission
Patuxent Regional Greenway	Regional greenway is planned along the Patuxent River to protect water quality. Natural surface trails are planned through segments of the corridor.	Montgomery County, Prince George's County	34 miles	Maryland - National Capital Park and Planning Commission, State of Maryland, Washington Suburban Sanitary Commission
Potomac Heritage National Scenic Trail	Links green space along both sides of the Potomac River from the Chesapeake Bay to Pennsylvania. Partially complete.	Prince William, Fairfax, Prince George's, and Loudoun Counties, Washington DC	90 miles	National Park Service, Potomac Heritage Partnership, Individual Counties
Seneca Greenway	Project links Potomac River to Patuxent River. Partially complete.	Montgomery County	7.4 miles	Maryland - National Capital Park and Planning Commission, State of Maryland, Seneca Coalition
Suitland Parkway Trail	Trail project connects DC to Prince George's County along parkway and greenway.	Prince George's County	9.0 miles	National Park Service
Washington, Baltimore, & Annapolis Trail	Rail-trail project from Patuxent River to Glenn Dale. Partially Complete.	Prince George's and Anne Arundel Counties	5.6 miles	M-NCPPC, Anne Arundel County Dept. of Recreation and Parks
Watts Branch Greenway	Existing greenway needs signage, trail improvements, and connections to make it functional.	Washington, DC	3.3 miles	DC Department of Parks and Recreation
W&OD Connection to White's Ferry	Connects W&OD Trail to the C&O Canal at White's Ferry along road.	Loudoun County	4.4 miles	Loudoun County, NVRPA, City of Leesburg

Eight regional priority greenway projects were selected that satisfy three or more of these criteria. The regional priority projects represent a range of greenway types in the Washington area from urban connections and greenway streetscapes to rail-trails and stream valley corridors. They will serve as models for the implementation of integrated green space throughout the region.

Regional Priority Projects

Accotink Greenway, Fairfax County, Virginia

Anacostia Greenway, District of Columbia

Fort Circle Greenway, District of Columbia

Metropolitan Branch Trail and Anacostia Gateway, District of Columbia and Prince George's County, Maryland

Monocacy River Greenway, Frederick County, Maryland

Northwest Branch Greenway, Montgomery County, Maryland

Potomac Heritage National Scenic Trail, Prince William, Fairfax, and Loudoun Counties, Virginia; Prince George's County, Maryland; and District of Columbia

Washington, Baltimore & Annapolis Trail, Prince George's and Anne Arundel Counties, Maryland

The selected regional greenway projects are described in detail on the following pages.

Each project description includes a brief **overview** of the project and a **generalized map** showing the approximate location of the greenway corridor. They also include brief summaries of the following:

Status: Describing how much of the greenway has been implemented and what efforts are currently underway.

Next Steps: Listing what actions should be taken to spur implementation in the short-term that are not currently underway or planned for the immediate future.

Benefits: Listing specific ways the greenway will benefit the environment and the regional greenway network.

Challenges: Listing specific issues associated with the greenway that will require special attention during implementation.

Local Stakeholders: Listing major agencies, organizations, and groups which should be involved in the planning and implementation process. This list does not include all potential stakeholders.

Costs: Describing preliminary estimates for the cost of implementation as of April 2000, if available.

Funding Sources: Describing past and current funding sources and listing potential government funding programs for which the greenway may be eligible.

Regional Priority Projects

1 Accotink Greenway

2 Anacostia Greenway

3 Fort Circle Greenway

4 Metropolitan Branch Trail and Anacostia Gateway

5 Monocacy River Greenway

6 Northwest Branch Greenway

7 Potomac Heritage National Scenic Trail

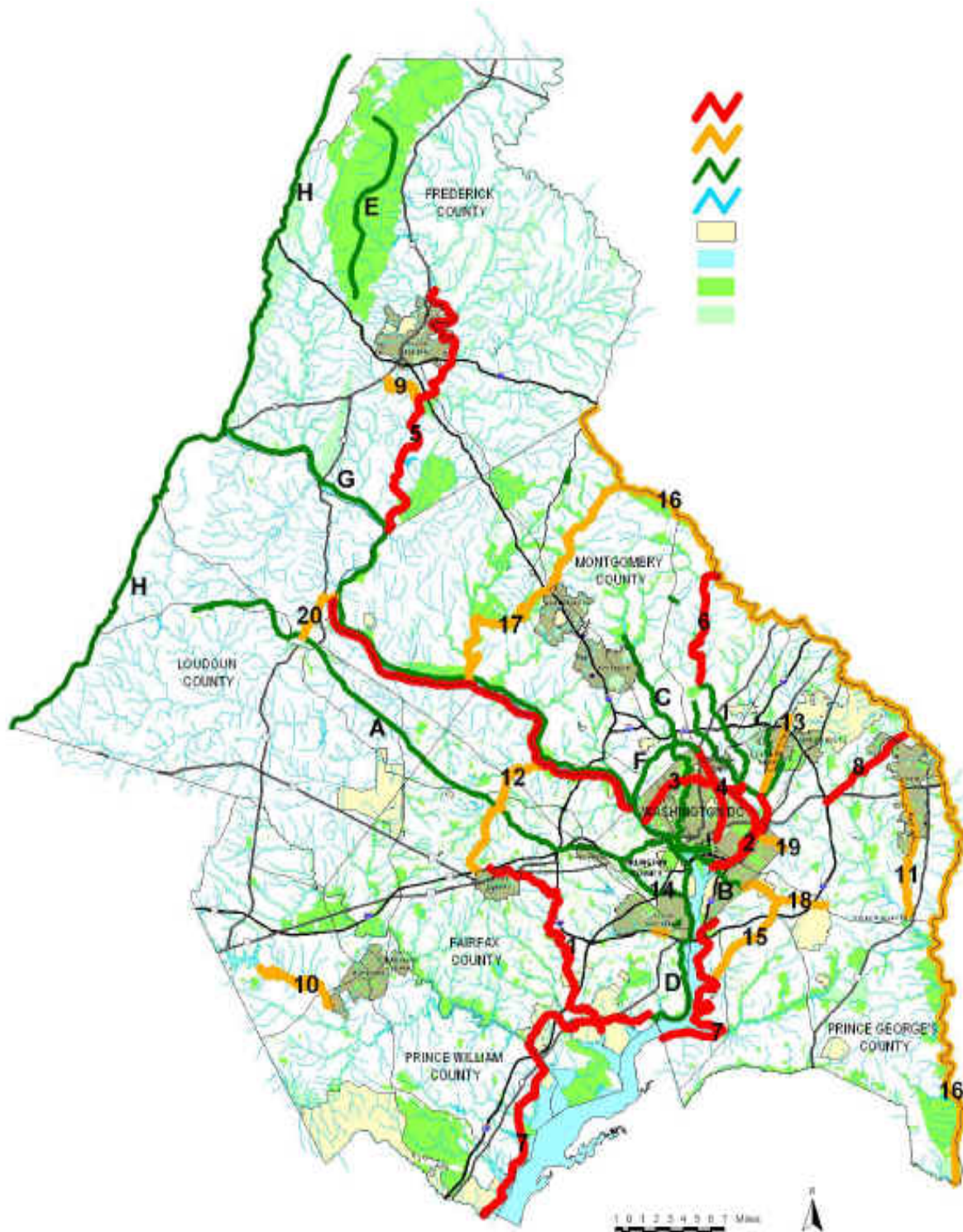
8 Washington, Baltimore & Annapolis Trail

Local Priority Projects

- 9 Ballenger Creek Greenway
- 10 Broad Run/Rocky Branch Greenway
- 11 Collington Branch Greenway
- 12 Cross County Trail
- 13 DC Trolley Trail
- 14 Eisenhower Avenue Greenway
- 15 Henson Creek Greenway
- 16 Patuxent Regional Greenway
- 17 Seneca Greenway
- 18 Suitland Parkway Trail
- 19 Watts Branch Greenway
- 20 W&OD Connection to White's Ferry

Selected Existing Greenways

- A W&OD Trail
- B Suitland Parkway
- C Rock Creek Parkway
- D Prince William Parkway
- E Oxon Run
- F Mount Vernon Trail
- G Maine to VA
- H Four Mile Run
- I Fairfax Parkway
- J Catoctin-Gambrill Greenway
- K Capitol Crescent Trail
- L C&O Canal
- M Appalachian Trail



- Regional Priority Project
- Local Priority Project
- Existing Greenway
- Surface Water
- Federal Land
- Open Water
- Public Open Space
- Private Open Space



Accotink Greenway

The Accotink Greenway begins in the City of Fairfax and travels southeast toward the Potomac River, ending in the Fort Belvoir Military Reservation. The greenway connects densely populated areas with suburban developments, enabling residents to reach local commercial areas, schools, designated bike routes, and the Vienna Metro Station. There are several major recreation facilities located within the greenway, including: Van Dyck Park, Thaiss Park, Eakin Community Park, Eakin Mantua Park, Accotink Stream Valley Park, Lake Accotink Park, and Wakefield Park. The Accotink Greenway also serves as a major segment of the proposed Cross County Trail, that links the Pohick Stream Valley to the Accotink and Difficult Run providing a connection from the southern portion of Fairfax County to Great Falls National Park.

Approximately 1,600 acres of the Accotink Greenway are preserved as public open space and approximately thirteen miles of paved and unpaved trails have been built through this land. Mill races, mills, prehistoric sites and other cultural and historic sites are also located throughout the corridor. Protected within the green space are floodplain forests, upland hardwood and softwood forests, forested wetlands, and wetland shrub swamps (Fort Belvoir's policy to preserve riparian forest buffers requires that the greenway be located outside of the Accotink Creek riparian area).

Although a large portion of the greenway is protected and accessible to the public, there are many segments that are not. In the northern portion of the

greenway, there are two small gaps north of Route 236. In the southern half of the greenway, there are critical gaps, caused by large road corridors and private ownership, that prevent users from travelling long distances. The greenway is also cut off by Shirley Memorial Highway and Fort Belvoir Military Reservation, making it impossible for users to reach the Potomac River.

The Accotink Greenway project requires land acquisition, road and creek crossings, and coordination with the US Army. The greenway would benefit from signage and publicity to raise awareness of the corridor and help trail users find their way. Interpretive signage would also increase the public's appreciation and understanding of the significance of the rich cultural and natural resources within the greenway.



Status

Implementation of the greenway is underway; half of the proposed trails are funded or built. The greenway requires land acquisition to protect segments from development. For segments within Fort Belvoir, the Fairfax County Park Authority must coordinate with the US Army to designate those lands for public access and trail use.

Next Steps

- Acquire land or easements from Fort Belvoir and private landowners to complete greenway.
- Determine trail alignment in southern portion of County. Coordinate the segment of the Fairfax County Parkway that cuts through the Fort Belvoir Engineer Proving Ground with the Accotink Greenway alignment.
- Install signage to identify historical and cultural areas and improve wayfinding.

- Plant buffers between greenway and adjacent properties.

Benefits

- Prevents degradation of water quality.
- Provides greenway access for communities in the southeastern part of the County.
- Links north, south, east, and west sections of the City of Fairfax.
- Preserves riparian and stream habitat.
- Provides significant piece of the Cross County Trail.

Challenges

- Existing mill traces and railways must be accommodated.
- The southern end of the greenway must cross Shirley Memorial Highway.
- Fort Belvoir has security requirements that affect the siting of public access facilities.
- Stream crossings need pedestrian bridges.
- Citizen opposition from local homeowner's groups.



Trails within the greenway corridor must cross a series of tributary streams.

Local Stakeholders

- Fairfax County Park Authority
- City of Fairfax Department of Public Works and Department of Parks and Recreation
- Fort Belvoir Military Reservation
- Citizen, Environmental, and User Groups, including Washington Area Bicyclist Association, Fairfax Trails and Streams, and Audubon Society
- Virginia Power

Costs

Construction costs are estimated to be between \$2,500,000 and 3,000,000. Land acquisition would require additional funding.

Funding Sources

The trail has been partially funded by Park Bonds, TEA-21 grants, and VA Congestion Mitigation & Air Quality Program grants. The Greenway may be eligible for additional funding from the following

programs:

- Chesapeake Bay Gateways and Water Trails Initiative
- Virginia Outdoors Fund

Information Contact

Fairfax County Park Authority

(703) 324-8741



The Accotink Greenway goes through this underpass at King Arthur Boulevard.

Anacostia Greenway

Planners, politicians and citizens have long envisioned a greenway along the Anacostia River. Recently the concept has gained momentum and captured the attention of several key stakeholders. These agencies and groups have begun planning the Anacostia Riverwalk. The Riverwalk is part of the larger Anacostia Waterfront Initiative, a partnership between the District of Columbia, the Federal Government, and the community that will revitalize the entire Anacostia waterfront and adjoining neighborhoods in the District of Columbia and Prince George's County.

Some sections of the corridor, such as Anacostia Park on the south side of the river, are already developed. However, much of the riverfront remains inaccessible to residents. When completed, the Riverwalk will consist of a trail on one or both sides of the river from the Potomac to the District border where it will connect with existing and planned trails in Maryland.

The Riverwalk could link several destinations including the National Arboretum, Kenilworth Park and Aquatic Gardens, RFK Stadium, Kingman Island, Anacostia Park, a redeveloped Navy Yard and the historic Bladensburg Waterfront Park in Maryland. With construction of a 1.5 mile segment in Prince George's County, it could also provide a critical connection between

Prince George's County's 26-mile Anacostia tributary trail system and downtown DC. The District and Federal Governments own more than 90 percent of the riverfront land.

In addition to the Riverwalk, new attention to the river also provides opportunities for environmental enhancements in the corridor, such as the restoration of Heritage and Kingman Islands, environmental remediation at the Southeast Federal Center, Poplar Point, and the Washington Gas property, a reduction in combined sewer overflows, and development of the Frederick Douglass Gardens as an east-of-the-river arboretum promoting community stewardship.

Recreation improvements under study include rehabilitation of the trail in the Watts Branch Tributary and development of a canoe 'trail' along the river. Job training and environmental education could be integrated into many of the initiatives.



Status

The DC Office of Planning has hired a project manager for the Riverwalk Trail with funds from the U.S. Department of Transportation. Stakeholders along the Anacostia River are beginning to work together to develop a common vision for other components of the greenway.

Next Steps

- Design the Riverwalk trail.
- Obtain funding for implementation.

Benefits

- Improves access to the Anacostia River for nearby residents and trail users throughout the regional greenway system.
- Connects Prince George's County trails and eastern DC with downtown and the Potomac River.
- Provides potential link to the Potomac Heritage National Scenic Trail.

- Provides opportunity for environmental enhancements.
- Provides opportunities to experience and interpret natural areas in the middle of a major city.
- Encourages economic development and enhances community pride.
- Improves access to Metro stations (Anacostia, Navy Yard)

Challenges

- Coordinating the many agencies, groups and plans along the greenway.
- Reaching consensus among stakeholders on trail design and alignment.



Local youth, helping to clean up the Anacostia River, are actively involved in shaping a new future for the river.

- Protecting wetlands and other sensitive habitat along the river.
- Constructing trails past US 50 (New York Avenue) and the rail tracks/bridge south of US 50 in DC.



Local communities are planting trees along the Anacostia River with help of groups, such as the Anacostia Watershed Society.

Stakeholders

- District of Columbia Office of Planning
- National Park Service
- Earth Conservation Corps
- Anacostia Watershed Society
- US Department of Transportation
- Department of the Navy
- Department of the Army
- General Services Administration
- Environmental Health Administration

Maryland-National Capital Park and Planning Commission

Costs

Costs will be determined by the DC Office of Planning.

Funding Sources

The Riverwalk and Anacostia Greenway will require significant funding from a number of sources to be implemented. The Riverwalk may be eligible for the following government funding programs:

- Transportation Enhancement Program
- Congestion Mitigation & Air Quality Program
- Recreational Trails Program
- Land and Water Conservation Fund
- Chesapeake Bay Gateways and Water Trails Initiative

Information Contact

DC Office of Planning, 202-442-7600. Patrick Gregerson, National Park Service, 202-619-7277. MNCPPC (Prince George's County), 301-952-3661.

The Anacostia River is home to many waterfowl, including these cormorants.



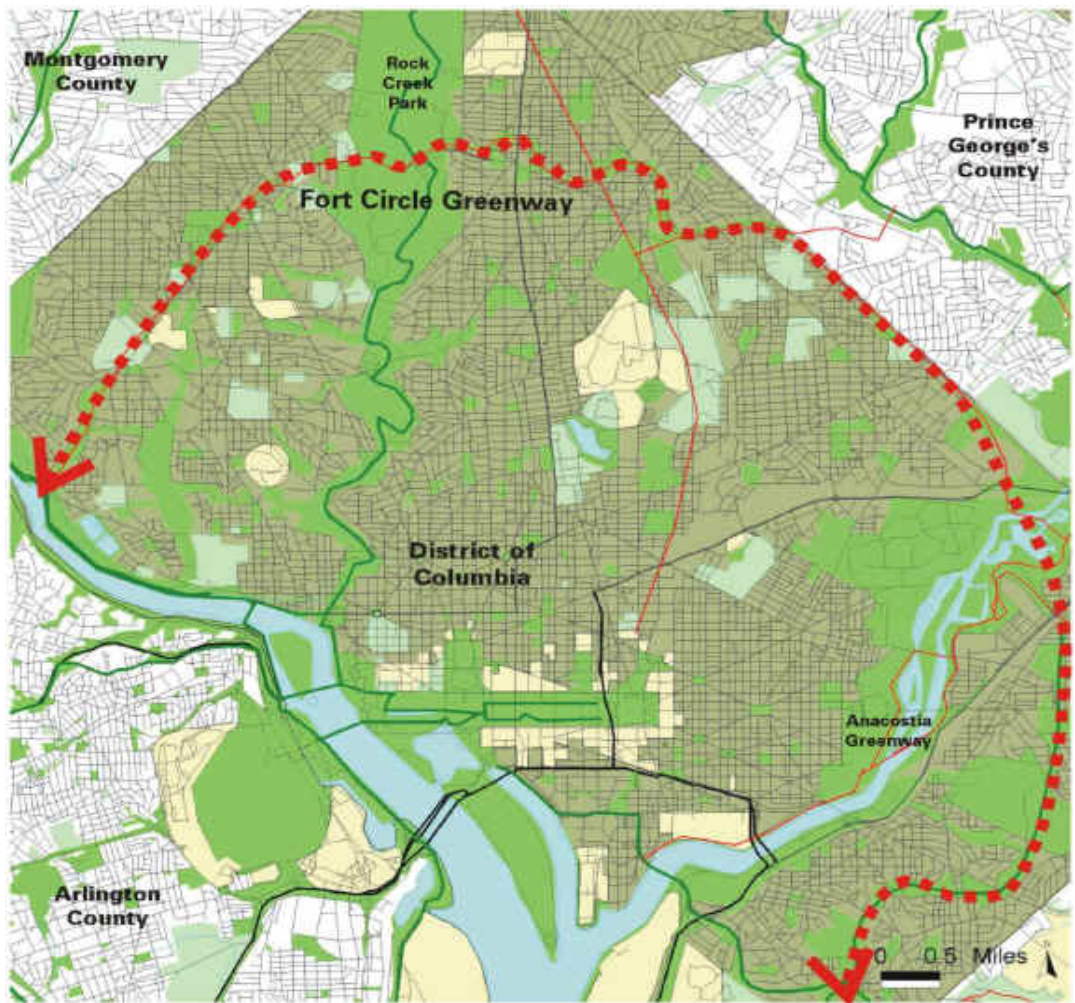
Fort Circle Greenway

During the Civil War, a system of forts, batteries, rifle trenches, and military roads was built on high points surrounding the District of Columbia. As the city grew and developed after the war, most of these fortifications disappeared. Many of the remaining fortifications today are

protected by the National Park Service (NPS) within the Fort Circle Greenway as part of the George Washington Memorial Parkway, Rock Creek Park, and National Capital Parks-East.

The main portion of the greenway connects in a half circle from Fort Marcy on the George Washington Parkway through the Palisades Park to Battery Kemble, Fort Bayard, Fort Reno, Fort DeRussy, Fort Stevens, Fort Slocum, Fort Totten, and Fort Bunker Hill. It then continues south of the Anacostia River to Fort Mahan, Fort Chaplin, Fort Dupont, Fort Davis, and Fort Ricketts and then to Fort Stanton, Battery Carroll, and Fort Grebel. These forts are linked by a series of small urban parks that form a linear greenway through the city. This greenway also connects with other regional greenways, including the Rock Creek Greenway, Metropolitan Branch Trail, Capital Crescent Trail, Anacostia Greenway, and Suitland Parkway Trail.

Although the Fort Circle Greenway provides the opportunity for a 23 mile pedestrian connection across the city and protects a



significant piece of the city's history, many residents and visitors are unaware of it. Lack of signage, lighting, pedestrian crosswalks, or a trail make it difficult for users to follow the greenway. Lack of public facilities and parking makes access difficult. By publishing maps, signs, and developing a well marked trail, the greenway could provide a significant pedestrian connection across the District of Columbia, while improving access to the region's greenways.

Status

The majority of land associated with the Fort Circle Greenway is owned by NPS. NPS is currently drafting a management plan for the Fort Circle Greenway, entitled the *Civil War Defenses of Washington*, establishing how to manage, protect, and preserve historic resources, while providing for a meaningful visitor experience, education, and enjoyment. This greenway will also be evaluated as the District of Columbia segment of the Potomac Heritage National Scenic Trail.



Confederate troops shot at, and missed, President Lincoln at Fort Stevens. The fort, located at the intersection of Piney Branch Road and 13th Street, NW, could attract more visitors and residents if more pedestrian facilities and signage were provided.

Next Steps

- Install directional and interpretive signage along greenway.
- Designate existing sidewalks or construct paths through green space parcels with special pedestrian crosswalks across roads.
- Install lighting and other features to improve pedestrian experience.
- Provide maps of greenway to visitors and local residents.

Benefits

- Preserves and interprets historic resources from the Civil War.
- Enhances the scenic character of the nation's capital by linking urban green spaces.
- Provides local communities access to the regional green space network.

Challenges

- Inappropriate activities within some areas of the greenway discourage visitation and use.
- Frequent street crossings make it difficult for bicyclists to use the greenway.

Local Stakeholders

National Park Service

DC Office of Planning

DC Department of Parks and Recreation

Costs

The National Park Service is currently studying the costs of greenway implementation.

Funding Sources

The Fort Circle Greenway may be eligible for the following government funding sources:

- Federal appropriations to the National Park Service by Congress
- Transportation Enhancement Program
- Recreational Trail Program
- Land and Water Conservation Fund



The Fort Circle Greenway would help link Emory Park to Rock Creek Park, providing local residents better access to recreational resources.

Information Contact

John Parsons, National Park Service, National Capital Region, 202-619-7025.

Metropolitan Branch Trail and Anacostia Gateway



The Metropolitan Branch Trail (MBT) will run from Union Station to Silver Spring (7.7 miles), with the Anacostia Gateway (formerly called the Prince George's Connector) connecting from Fort Totten to West Hyattsville (0.7 miles). The trail will be a hybrid trail (part off-road trail, part side-path, and part bicycle lanes with adjacent sidewalks) that could revitalize the neighborhoods of Northeast DC, and adjacent suburbs with recreational opportunities and green space.

The trail will parallel the Red and Green Lines of the Metro, at times adjacent to railroad tracks and at times leaving the rail corridor to travel along neighborhood streets and sidewalks. It will complete a bicycle beltway, linking with the Capital Crescent Trail and National Mall and complete a missing link in our region's trail network. It will also provide a bicycle commuting corridor from Silver Spring to Union Station.

The MBT will be a multi-jurisdictional trail connecting DC, Montgomery County and Prince George's County. It will traverse land owned by the National Park Service, the Washington Metropolitan Area Transit Authority, CSX Corporation, the Maryland-National Park and Planning Commission, and local governments.

The MBT will be well-lit, well-signed trail that uses existing over or underpasses, as well as new ones to minimize the number of at-grade trail /road intersections. The trail will be constructed in phases to allow users to benefit as soon as possible.



The MBT will help integrate green space, such as this one near the New York Avenue Bridge, into the city's recreation and open space system.


Status

Implementation will be completed in phases. The first segment of the trail is complete, but the entire trail is not scheduled to be finished until 2005. Additional planning, land acquisition, and funding is required to complete the trail.

Next Steps

- Identify final trail alignment in Fort Totten and Silver Spring sections.
- Negotiate land acquisition with CSX and other land owners in corridor.
- Build community support with neighborhood groups and other stakeholders.

Benefits

- Connects Northeast Washington D.C. to suburban areas in Maryland.
 - Reduces congestion by providing non-vehicular transportation linkage.
 - Provides open space and recreational opportunities to underserved areas.
- 
- The MBT offers many direct connections to the Metro system and existing open space in the city.
- Improves access to Metro stations (Union Station, New York Avenue, Fort Totten, Takoma, and Silver Spring)

Challenges

- Acquiring land from CSX, the District of Columbia, and National Park Service.
- Aligning trail portions near active train tracks.
- Coordinating multiple jurisdictions and agencies.

Local Stakeholders

Coalition for the Metropolitan Branch Trail District of Columbia

City of Takoma Park

DC Department of Public Works

Montgomery County

Prince George's County

National Park Service

Washington Metropolitan Area Transit Authority
Maryland-National Park and Planning Commission
Washington Area Bicyclist Association
Coalition for the Capital Crescent Trail

Costs

Construction costs for the Metropolitan Branch Trail are estimated to be between \$9,000,000 and 10,000,000. Acquisition costs are estimated to be around \$8,000,000.

Funding Sources

The trail has been partially funded by TEA-21 High-Priority/Demonstration Project funds, DC Congestion Mitigation & Air Quality Program and Highway Trust Fund, and corporate sponsors. While Prince George's County has programmed money for design and construction through the Capital Improvement Program, Montgomery County has yet to identify funding sources to complete their section of the trail. It may be eligible for the following government funding programs:

- Transportation Enhancement Program
- Recreational Trails Program

Information Contact:

Coalition for the Metropolitan Branch Trail (202) 628-2500;

DC Dept of Public Works (202) 939-8115;

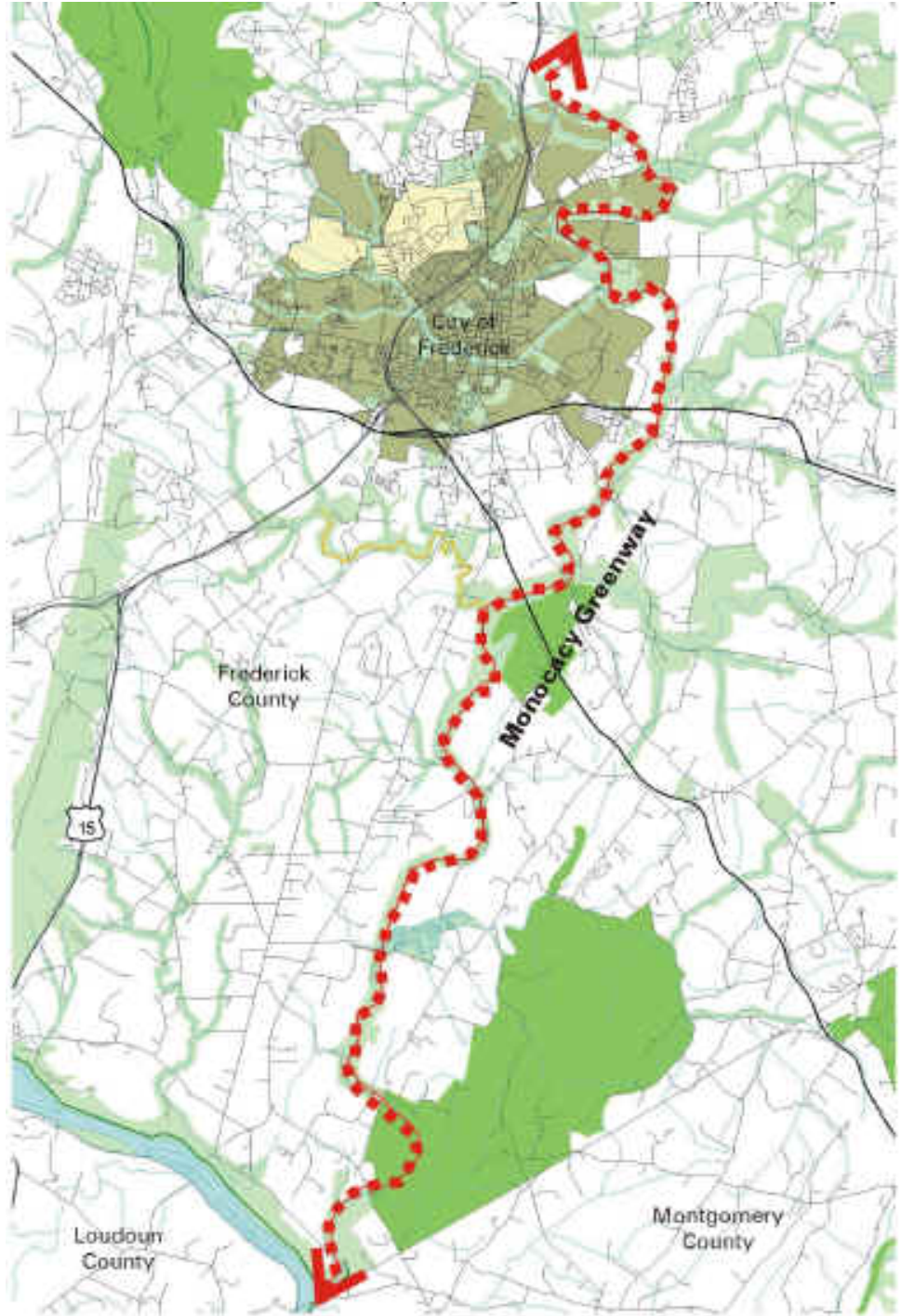
Eileen Nivera, Prince George's County Dept. of Parks and Recreation, M-NCPPC (301) 699-2522

Monocacy River Greenway

The Monocacy Scenic River is one of the most visible natural features in Frederick County. It runs for 58 miles, and stretches from the Pennsylvania border south to the Potomac River. The corridor serves as a major spine through the center of Frederick County, connecting several parks along the river, including: Pinecliff and Buckeystown parks, Monocacy National Battlefield Park and the C&O Canal, as well as several parks located near the river, such as Sugarloaf Mountain, Fountain Rock, and Baker Park. The greenway would also provide access to the Monocacy Natural Resource Management Area, though facilities would not be constructed in this area.

The corridor is primarily characterized by agricultural uses, except for the central section around Frederick City which has been developed primarily with residential uses and some industrial and commercial uses.

In 1994, the County prepared the Monocacy River Greenway Study. The study recommends that a trail system should be developed for recreational uses from Walkersville south to the Potomac River. It also recommends that north of Walkersville the greenway should be maintained as passive open space or conservation area due to the rural and agricultural nature of the area.



More recently, the Frederick County Bikeways and Trail Plan, adopted in December 1999, recommends the Monocacy River Greenway be developed with a multi-use trail. The City of Frederick and the County have prioritized the 4.2 mile segment of trail between Tuscarora Creek and Carroll Creek within the city limits.

Today, very little of the floodplain along the river is under public ownership. The City of Frederick has been acquiring land in the floodplain of the Monocacy River Greenway as it becomes identified through the development process. During this process, small segments of the trail have been constructed by residential developments, but they are not connected within a network.

Status

Implementation will be completed in phases. Phase I is a 4.2 mile section between Tuscarora and Carroll Creeks. No funding has been allocated for the study of Phase I.

Next Steps

- Conduct detailed corridor analysis.
- Develop acquisition strategy.
- Build community support with local neighborhood groups and other stakeholders.

Benefits

- Preserves the scenic landscape of the Monocacy River.
- Protects the riparian buffer along the river.
- Minimizes flood damage.
- Protects water quality and wildlife habitat.
- Provides connections to historical and natural resources throughout the County.

Challenges

- Acquiring title or easements for significant areas of land along the corridor.
- Connecting greenway through steep topography.
- Providing twelve bridge crossings over river, including over two railroad bridges.

Local Stakeholders

Frederick County

Maryland Department of Natural Resources

National Parks Service

City of Frederick

Frederick County Trails, Inc.

Monocacy Scenic River Advisory Board

Costs

Costs have not been established for either acquisition or development of the trail at this time.



The Monocacy River Greenway would help preserve the river history linked to this Mill Race within Monocacy National Battlefield Park.



The Monocacy River provides many recreational opportunities both on the land and on the water.

Funding Sources

The Monocacy Greenway has not received funding for implementation. It may be eligible for the following government funding programs:

- Transportation Enhancement Program
- Recreational Trails Program
- Program Open Space
- Maryland's Rural Legacy Program

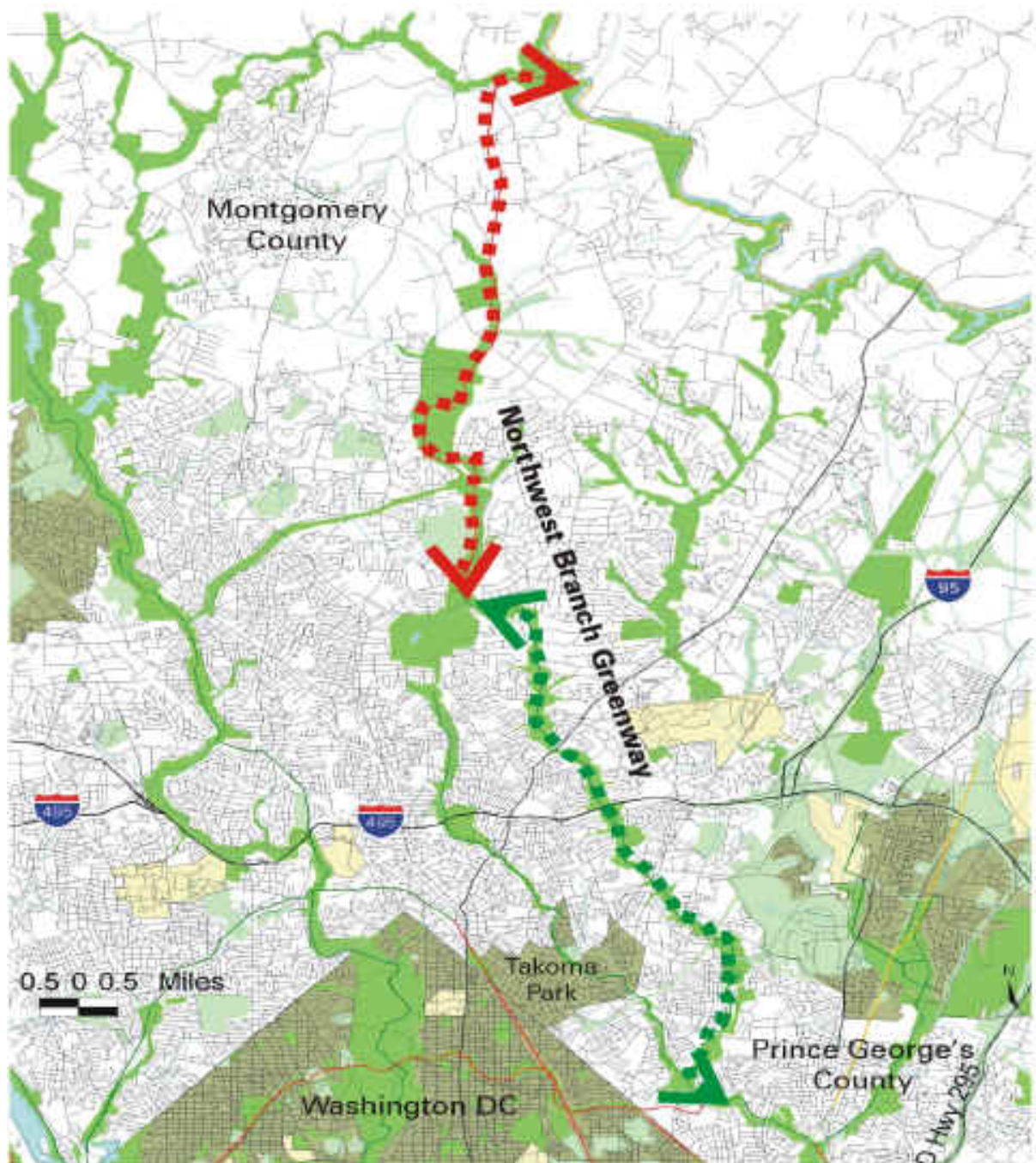
Information Contact

Jim Gugel, Frederick County Dept. of Planning and Zoning, 301-694-1144

Northwest Branch Greenway

The Northwest Branch is a stream valley greenway that originates near Route 108 in the Olney/Sandy Spring area and extends south to the Anacostia River in Prince George's County. The greenway corridor is a key component of the countywide trail system, connecting to Sligo Creek and the Anacostia River greenway systems in Prince George's County. A hard surface trail begins near the Beltway and travels south into Prince George's County, and a series of natural surface trails are located between Kemp Mill Road and the Beltway.

Most of the Northwest Branch stream valley lies in existing or proposed parkland. Proposals to extend the corridor will connect the Northwest



Branch
Greenway to the
Hawlings River
and Patuxent
Greenways with
protected lands
and natural
surface trails
north of Kemp
Mill Road.

This will enable residents and visitors to travel from Washington, DC to the Patuxent River. The greenway will also link a number of schools, including Springbrook High School, Westover Elementary School, and Northeast High School, with existing trails and bikeways on Franklin Avenue, Randolph Road, Bonifant Road, and Ednor Road.

The Northwest Branch contains a rich variety of riverscapes with scenic areas, diverse habitats, and historic resources. The Maryland Department of Natural Resources has designated the stream as Recreational Trout Waters and three Biodiversity Protection Areas have been designated in the greenway by the Maryland Natural Heritage Program. Historic resources near the Northwest Branch include Underground Railroad sites, historic homesteads, and Quaker heritage sites. A new natural surface interpretive trail will help educate users about the history of Montgomery County and its role in the Underground Railroad. More work is needed to identify where the trail should go, which historic elements should be linked, and what properties should be considered for public acquisition.

Status

Large portions of the greenway and trail system already exist. Implementation of the greenway extension and trail improvements is scheduled to be finished by 2002. However, additional planning, land acquisition and funding is required to complete implementation.

Next Steps

- Define location of rural legacy trail and historic interpretation.
- Construct bridge across river to enable access between the east and west sides.
- Provide better greenway access to adjoining communities and neighborhoods.
- Acquire easements or land acquisitions to extend greenway north to Hawlings River.

Benefits

- Links communities from the Beltway north to the Patuxent River.
- Provides opportunity to interpret the Underground Railroad and Quaker Heritage cultural resources.
- Provides opportunity to protect and interpret significant natural features and habitats along

the Greenway.

Challenges

- Segments of the corridor contain sensitive Biodiversity Protection Areas, wetlands, and steep slopes that may be incompatible with trail development.
- Trails cross dangerous road intersections at Colesville Road, Bonifant Road, Ednor Road and Norwood Road.
- Communities along corridor have inadequate access to the greenway and its trails.
- It is impossible to cross between the east and west sides of the river in most sections.
- North of MD Route 108, land or easements must be acquired to connect to the Hawlings River Greenway.

Information Contact:

Maryland - Lynn Coleman, National Capital Park and Planning Commission,
(301) 650-4391

Local Stakeholders

Maryland - National Capital Park and Planning Commission

Legacy Open Space Advisory Group

Maryland Department of Natural Resources (Natural Heritage Program and Greenways Commission)

Funding Sources

The Northwest Branch Greenway may be eligible for the following government funding programs:

- Chesapeake Bay Small Watershed Grants Program
- Transportation Enhancement Program
- Recreational Trails Program
- Program Open Space
- Maryland's Rural Legacy Program

It also may be eligible for funding through Montgomery County's Legacy Open Space Program. The program recommends that the County should issue a \$18 million bond issue in 2001 and use \$36 million of CIP funds for acquisition in 2001 and 2002.



Farm lands along the greenway may be protected under the Rural Legacy Program.

Potomac Heritage National Scenic Trail

In 1983 Congress designated a corridor for a "Potomac Heritage National Scenic Trail" (PHNST) between the Chesapeake Bay and the Allegheny Highlands. The legislation emphasizes a strong role for citizen groups and for local and state governments and limits the role of the federal government to primarily coordination and technical assistance.

As landscapes in the Washington area are transformed, many citizen groups and local governments are using the corridor designation to help address local needs for outdoor recreation and transportation alternatives, to focus investments in open space conservation

and heritage tourism, and to coordinate with adjacent jurisdictions. In practice, local jurisdictions are using the concept of the PHNST as a planning and development tool to make connections among existing trails and parks, schools, residential areas, shopping areas, public transit facilities, commercial districts, community centers, museums, historic sites and marinas. With the Mount Vernon Trail and the C & O Canal Towpath as two "official segments," the vision of a PHNST is best characterized as a network of trails, complemented by educational facilities, for non-motorized travel on land and water.



Jurisdictions throughout the Washington area are seeking to build upon the PHNST concept with local segments. Trails exist at various stages of development in Prince William County, Fairfax County, Loudoun County, Prince George's County, U.S. Army Garrison Fort Belvoir, and the City of Alexandria, as well as on the Northern Neck of Virginia and in Allegheny County, Maryland and Westmoreland County, Pennsylvania. In the District of Columbia, planners are evaluating both the Fort Circle Greenway and Anacostia Greenway as potential alignments for the PHNST (see pages 26 and 28). In addition, the following pages describe proposed segments of the PHNST within individual jurisdictions in metropolitan Washington.

Prince William County Potomac Heritage Trail

The Potomac Heritage Trail, in Prince William County, will follow a corridor between Route 1 and the Potomac River and will extend from Fairfax County to the Quantico Marine Corps Base and Stafford County. Where possible, the trail will be a hard-surfaced, multiuse trail along the Potomac River. The trail is likely to follow a route from the pedestrian bridge in the Town of Occoquan at the Fairfax County line, to the Mason Neck Wildlife Refuge (formerly the Harry Diamond Labs site), Veteran's Memorial Park, and across Neabsco Creek to Leesylvania State Park. It will then cross Powells Creek to the Cherry Hill Peninsula, the Featherstone Marsh Fish and Wildlife Management Area, across Quantico Creek to the Town of Quantico, the Marine Corps Base, and on into Stafford County. The greenway will provide pedestrian linkages between state and county parks, a federal wildlife refuge, wildlife management areas and wetlands, and will also connect harbors, marinas, schools, commercial areas, and neighborhoods along the Potomac River waterfront.

The County's Park Authority is currently working to implement the first segments of the trail between the Mason Neck Wildlife Refuge and Veteran's Memorial Park. This includes working with the Virginia Department of Transportation to construct a pedestrian bridge over the railroad tracks at Veteran's Memorial Park and seeking

funding to build a multiuse trail segment adjacent to the railroad corridor. The County also has two mixed-use residential developments, Belmont Bay (approved) and Cherry Hill (proposed), which include proffers for trails within their commercial, residential, and open space areas. Portions of these trail systems will be incorporated into the PHNST and will serve to connect the northern and southern portions of Prince William County's waterfront. It is hoped that these trail segments, in turn, will build momentum for implementing the entire trail within Prince William County and also provide connections to other county and regional trail networks.

Benefits

- Links new recreation and open space areas to the waterfront.
- Provides pedestrian access to recreation, community, and commercial facilities along the waterfront.
- Promotes tourism and economic development along the Potomac River corridor.

Challenges

- Opposition by property owners to the trail
- Trail crossings of wetlands and lagoons on the proposed route.
- Public safety concerns about security and police protection



Fairfax County Fairfax Heritage Trail and Potomac Heritage Trail

The Potomac waterfront of Fairfax County extends south of the City of Alexandria and north of Arlington County. Therefore, proposed segments will be located in two areas of the county: the portion between the Prince William County and the City of Alexandria, called the Fairfax Heritage Trail (FHT); and the portion between Arlington and Loudoun County, called for the purposes of this report, the "Potomac Heritage Trail" (PHT). The FHT will provide a link, along the Mount Vernon Memorial Highway, between the southern terminus of the Mount Vernon Trail in Grist Mill Park and the Walker Gate of the US Army Garrison Fort Belvoir. The trail will continue to Prince William County through Fort Belvoir exiting near Pohick Creek and Old Colchester Road. Two alternatives exist to link the FHT to Prince William County: the first alternative is a trail currently being developed adjacent to Gunston Road by way of Old Colchester Road; and the second would be to follow the Laurel Hills Greenway through the Lorton Site and connect to the town of Occoquan.

In northern Fairfax County, the PHT exists along the George Washington Memorial Parkway from the Arlington County line to the Capital Beltway. The gap between the Beltway and Great Falls National Park needs further analysis to determine an appropriate alignment. A feasibility study is now being performed by the National Park Service that may extend the Mt. Vernon Trail to Great Falls. From Great Falls National Park to the Loudoun County line, the proposed PHT will use a series of Northern Virginia Regional Park Authority lands and easements to connect to Algonkian Regional Park in Loudoun County. Road rights-of-way would be used where easements cannot be secured on private lands.

The two proposed trails have different characters. The southern portion of the county is relatively flat and the proposed FHT will be primarily a multiuse paved trail. Also, much of the trail already exists; implementation of the remaining segments will improve pedestrian and bicycle linkages to regional commercial and employment centers throughout southern Fairfax County.

The proposed PHT is located on difficult terrain with steep slopes and very little of it is accessible. Implementation will improve public access to existing parks and conservation areas along the upper Potomac River.

Benefits

- Reduces traffic by providing pedestrian and bicycle connections from the southern end of Fairfax County to Alexandria.
- Provides waterfront access for residents.

Challenges

- Limited access along the upper Potomac.
- Coordination with Fort Belvoir to ensure continuity of the FHT. (ongoing)
- Funding requests to construct the FHT in Fort Belvoir do not compete well with other military budget items. (identification of funding ongoing)
- Connections between upper Potomac properties require easements or use of roadways.

Next Steps

- Determine alignment of trails.
- Acquire parcels or easements to ensure continuity of the trail.



Loudoun County Potomac Heritage Trail

The Potomac Heritage Trail in Loudoun County has the potential to establish connections among local trail networks, parks, and existing easements in a corridor between Fairfax County and White's Ferry via Leesburg. The greenway corridor will parallel the Potomac River from the Fairfax County line to Algonkian Regional Park along existing trail easements. It will then travel to Goose Creek and cross the state scenic river on the Keep Loudoun Beautiful Bridge. The trail corridor will continue along the west side of the River Creek property within an existing utility corridor and potentially cross private properties to reach the Red Rock Overlook Regional Park and Ball's Bluff Regional Park, an important Civil War site. Finally, the corridor will continue east across White's Ferry.

Ownership of the PHT through Loudoun County is a critical issue. Trail easements across private property are held by the Northern Virginia Regional Park Authority and Loudoun County between the Fairfax County line and Algonkian Regional Park. Between the park and Goose Creek, existing easements are disconnected. Past Goose Creek, the trail corridor must cross private properties and detour around residential developments to reach Red Rock Overlook Regional Park and Ball's Bluff Regional Park. After Ball's Bluff, the corridor must cross a large area of private land to reach White's Ferry. The corridor could connect to the

Town of Leesburg by an extension along Edward's Ferry Road. Implementation of the trail depends on closing these significant gaps and generating public support for the trail in the short term.

Once implemented, the Potomac Heritage Trail will be a true resource for Loudoun County. It will link communities with the county's rich historical and environmental resources and provide access to the regional green space network, including the C&O Canal at White's Ferry and the Appalachian Trail. In addition, rivers, wetlands, and historic features will be protected from encroaching development and

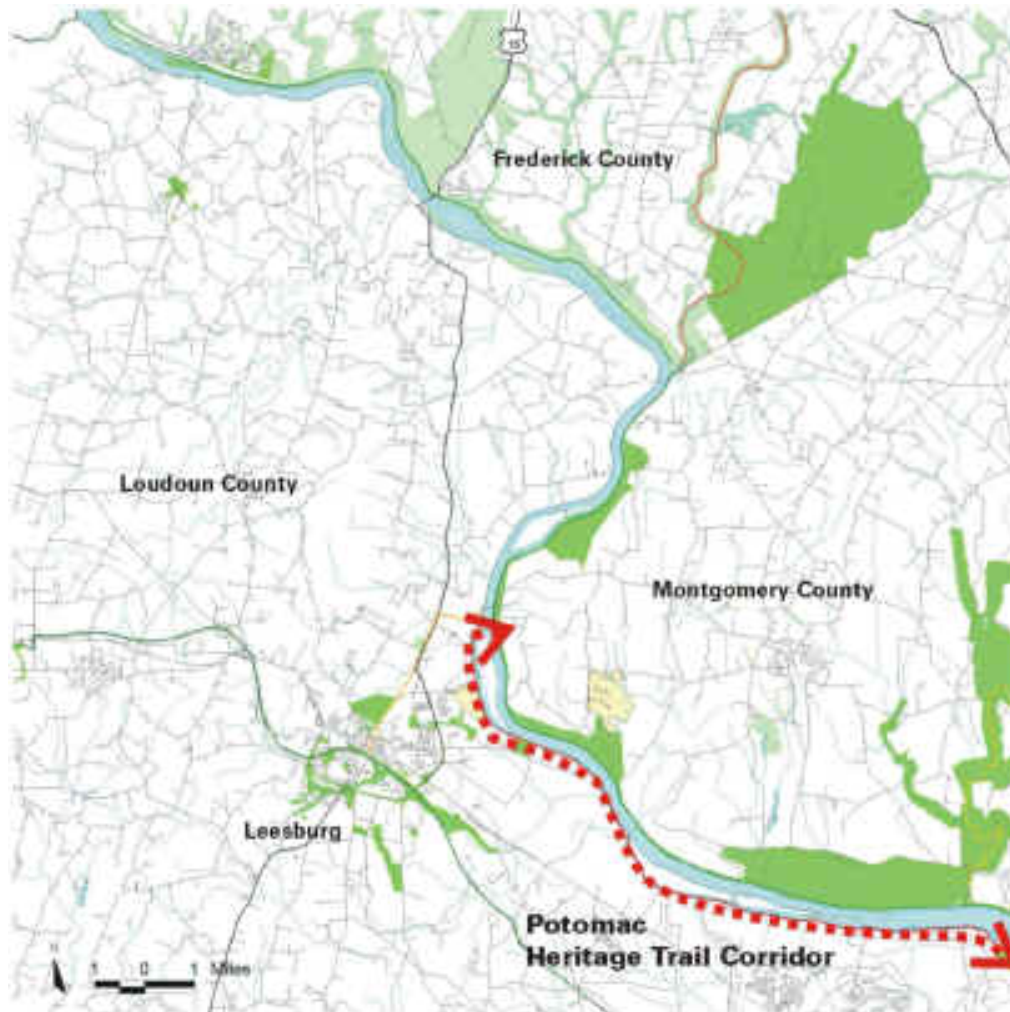
interpreted as important resources in the county.

Benefits

- Extends green space network in Loudoun County.
- Improves access to and protects historical features, such as Ball's Bluff Regional Park and the Keep Loudoun Beautiful Bridge.

Challenges

- Securing public access easements across private properties
- Crossing creeks along the greenway may be costly and politically difficult



Prince George's County Potomac River Greenway and Potomac Heritage Trail

The Potomac River Greenway and Potomac Heritage Trail links the PHNST from Piscataway Creek to the District of Columbia along the waterfront of Prince George's County. The vision is to provide a greenway with a multiuse trail for pedestrians and bicyclists that would encourage multi-modal transportation, foster tourism, and revitalize communities along the river.

The route will begin in Piscataway Park and run north along Piscataway Creek to Fort Washington Park, providing a critical link to area cultural resources, including Indian burial grounds and Civil War fortifications. The greenway will continue north connecting the communities of Tantallon and Silesia to the Potomac River Waterfront Conservation Area and Riverview Park. North of Silesia, the greenway will connect to the Henson Stream Valley Park and the Fort Foote Historic Site, as well as the Broad Creek Historic District. To the north, the greenway will connect the Potomac River Waterfront Park to the Oxon Hill National Park providing greenway access to the Oxon Hill community.

The long-term greenway vision will require significant planning studies, land acquisition, public access easements, and sensitive trail design. In order to provide a greenway connection in the short term, the county has developed an on-road bike route that will provide bicycle access on existing roads from Piscataway Creek to Oxon Hill. A study of an off-road trail route is currently underway.

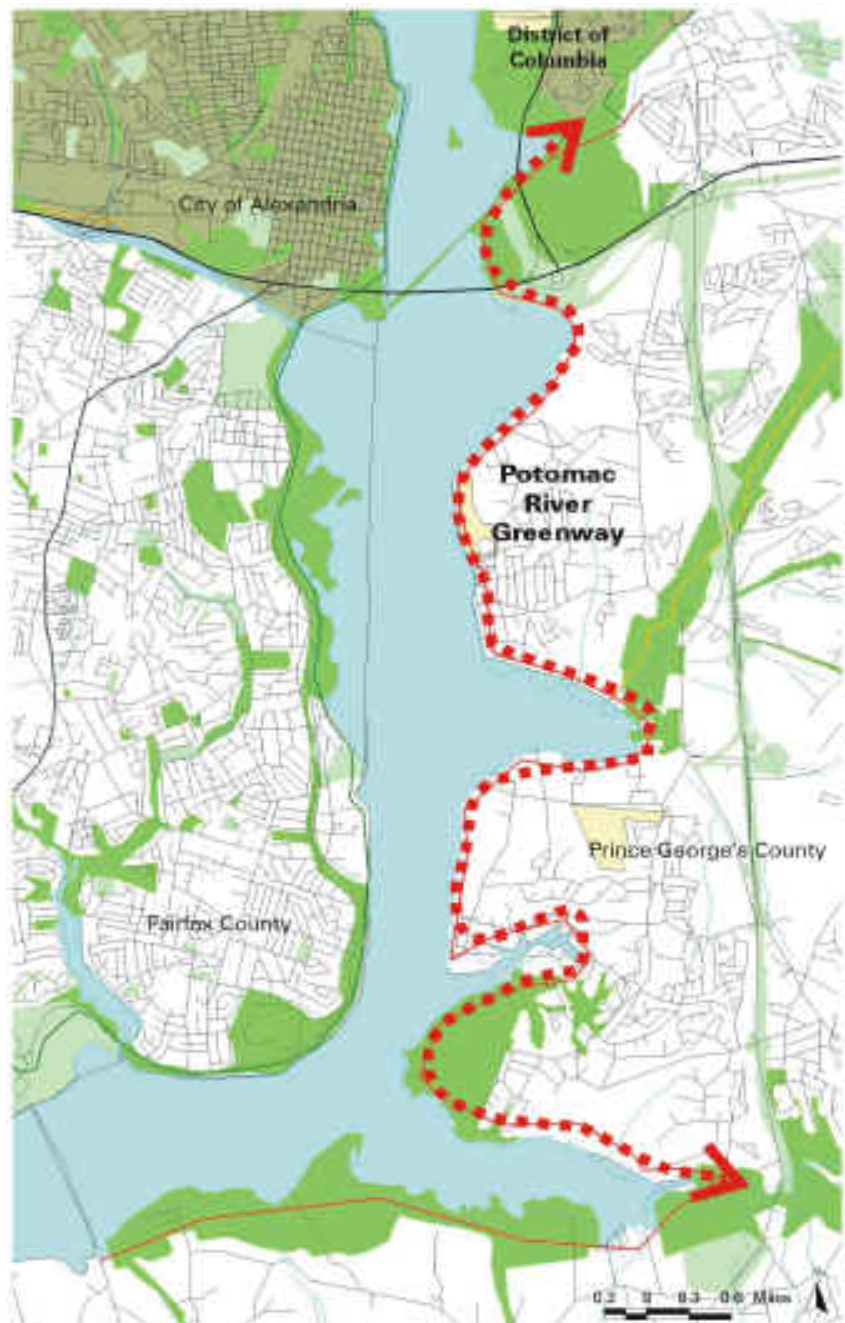
Benefits

- Encourages revitalization of communities along the greenway.
- Links communities of Tantallon, Silesia, Friendly, and Oxon Hill to Washington, D.C. with a pedestrian and bicycle route.
- Fosters tourism south of the

District of Columbia along the Potomac River.

Challenges

- Avoiding perceived negative impacts associated with trail development to natural and cultural resources along the greenway
- Acquiring land or obtaining public access easements
- No public access is allowed through the National Harbor site south of Woodrow Wilson Bridge, and the steep topography will make it difficult detour around the site.
- Greenway will involve Federal, state, and local parks, as well as trail and scenic easements.
- Links with the proposed bike lanes on the new Woodrow Wilson Bridge and north to the District of Columbia greenway alignments remain in the planning phases in both political jurisdictions.



Status

Fifty percent of the entire PHNST from Smith Point, Virginia, and Lookout Point, Maryland, to Pennsylvania is complete. However, only 62 percent of trail is complete in Maryland, 16 percent is complete in Virginia, and 36 percent is complete in the District of Columbia. In Prince William County, the Park Authority and Department of Public Works are studying the trail alignment and developing the first segments. In Fairfax County, the Northern Virginia Regional Park Authority is studying potential alignments and buying easements for both segments: the Fairfax Heritage Trail and the Potomac Heritage Trail. Construction plans and specifications have been completed for the five-mile segment of the trail through Fort Belvoir. In Loudoun County, the Department of Parks, Recreation, and Community and the Northern Virginia Regional Park Authority are working together to study potential alignments and acquire easements. In the District of Columbia, the City Council, Office of Planning, National Park Service, Departments of Parks and Recreation and of Public Works are studying potential alignments through the city and the Potomac Heritage Partnership is assisting with community outreach and participation. In Prince George's County, the Maryland - National Capital Parks and Planning Commission is studying potential short-term and long-term alignments and the Potomac Heritage Partnership has received a grant from PEPCO to publish an interpretive guide for the river corridor in the county.

Stakeholders

Many agencies, nonprofit organizations, associations, and individuals are actively involved in implementation of the PHNST. A few of the many groups include:

- NPS Rivers, Trails and Conservation Assistance Program
- Potomac Heritage Partnership
- City of Alexandria Dept. of Recreation, Parks & Cultural Activities
- Arlington County Dept. of Parks, Recreation & Community Resources
- Fairfax County Park Authority
- Loudoun County Dept. of Parks and Recreation
- Prince William County Park Authority
- Prince George's County Maryland-National Capital Park and Planning Commission
- Northern Virginia Planning District Commission
- Northern Virginia Regional Park Authority
- Virginia Dept. of Conservation and Recreation
- District of Columbia Dept. of Parks and Recreation and Dept. of Public Works
- National Park Service
- U.S. Army Garrison Fort Belvoir
- Potomac River Basin Consortium
- Potomac Conservancy

Friends of the Potomac
Interstate Commission on the Potomac River Basin
Chesapeake Bay Foundation
Northern Virginia Tourism Consortium
The Accokeek Foundation
Potomac Water Trail Association
Bicycle and Trail Advisory Groups
Local Equestrian Groups

Costs

The total construction cost for the PHNST within Northern Virginia is estimated to be approximately \$19,830,000. Specific segments described in this report are estimated to be the following:

Prince William County \$5,428,000
Fairfax County \$7,741,000
Loudoun County \$4,852,000
Prince George's County \$2,950,000
Total: **\$20,971,000**

These estimates do not include potential land acquisition costs.

Funding Sources

Funding for the PHNST has come from many sources, including TEA-21, NPS, local Capital Improvement Programs, and development proffers. Trail segments may be eligible for the following Federal government funding programs:

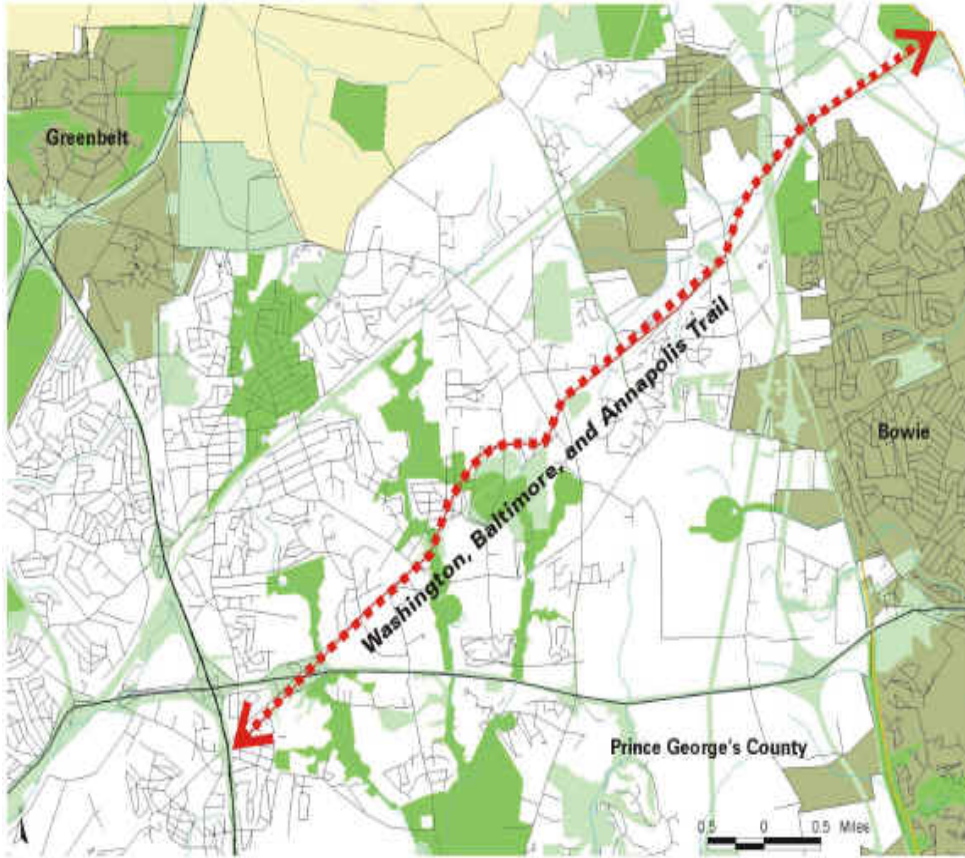
- Chesapeake Bay Gateways and Water Trails Initiative
- Transportation Enhancement Program
- Recreational Trails Fund Program

General Information

NPS Rivers, Trails & Conservation Assistance Program, 304-535-4014

Potomac Heritage Partnership, 202-333-4478

Washington, Baltimore, and Annapolis Trail



The Washington, Baltimore & Annapolis (WB & A) Trail is a proposed rail-trail that will connect the three cities and serve as the alignment for both the American Discovery Trail and the East Coast Greenway. In Prince George's County, the trail has been divided into two phases. Phase I of the trail extends southwest from Race Track Road near the Patuxent River for 5.6 miles along WB & A railroad right-of-way to Route 450 in Glenn Dale. The trail connects the Patuxent River Park to the City of Bowie, Highbridge Elementary School and Park, Camelot Community Park, Glenn Dale Community Center, and Folly Branch Stream Valley. The trail will have a 10' wide bituminous concrete surface and is intended for hikers, bikers, and equestrians.

Phase II of the trail is a proposed bridge crossing the Patuxent River to Anne Arundel County. This crossing will provide a vital connection to the Baltimore & Annapolis (B&A) Trail and to the Patapsco Regional Greenway in central Maryland.

Future phases will create a trail along an abandoned railroad right-of-way from Race Track Road to the Fran Uhler Natural Area.

Status

Implementation of the WB&A Trail will occur in phases. Phase I of the trail was completed in the fall of 2000. Planners are currently reviewing preliminary designs and cost estimates for Phase II and have submitted proposals for TEA-21 funding.

Next Steps

- Secure funding for Phase II.
- Build support with stakeholders.

Benefits

- Links to regional greenway systems, including: the Patuxent River Greenway, B&A Trail, and the Patapsco River Greenway.
- Reduces congestion by providing non-vehicular transportation to commercial, industrial and recreational centers .



The WB&A Trail would link the Patuxent Regional Park to the Anacostia Tributary System.

Challenges

- Coordinating multiple jurisdictions and agencies
- Building community and other stakeholder support
- Explore opportunities to link WB&A with the Anacostia Tributary Trail System

Stakeholders

Prince George's County Planning Board, Maryland-National Capital Park and Planning Commission

Prince George's County Department of Parks and Recreation, Maryland-National Capital Park and Planning Commission

Prince George's County Department of Public Works and Transportation

Maryland Department of Transportation

WB&A Recreation/Commuter Trail Association

Trail Riders of Today

College Park Area Bicycle Association

Bowie Bicycle Coalition

Rails to Trails Conservancy

Washington Area Bicycle Association

Oxon Hill Bicycle Club

Prince George's County Bicycle and Trails Advisory Group

Costs

Costs of Phase I of the WB&A Trail have been approximately \$250,000 for acquisition and \$4.1 million for construction. Preliminary costs for Phase II are expected to be approximately \$600,000.

Funding Sources

Phase I of the trail is funded with a combination of state and federal sources, including:

- Intermodal Surface Transportation Efficiency Act (ISTEA)
- Program Open Space
- Park Bonds.

Phase II of the trail is expected to be completed with TEA-21 funding sources matched by Prince George's and Anne Arundel Counties.

Information Contact

Fred Shaffer, Prince George's County Planning Dept., M-NCPPC, 301-952-3661.

Eileen Nivera, Prince George's County Dept. of Parks and Recreation, M-NCPPC, 301-699-2522.

"Physical access to open space is, of course, basic. The ability of persons with disabilities to enjoy open space should in no way be design-impaired. With few exceptions (natural areas typically do not contain paved trails, for example), physical accessibility must be assured. No less important is access for low income households and for those living in high density areas. These populations use open space as a necessary extension of their living space. The County must assure distribution of open space that guarantees this access."

- Arlington County Open Space Master Plan, 1994

Community Greenway Access

The broad network of existing greenways throughout metropolitan Washington enables many residents to enjoy the out-of-doors and travel in the region without using their cars. However, there are many communities and neighborhoods located adjacent to a greenway corridor that do not have access to it. Communities and neighborhoods which are cut off from the network suffer from fewer recreational opportunities and fewer choices of transportation. Connecting these communities to the greenway corridors strengthens their relationship to the region at large and builds a stronger community.

Improving greenway access:

- Provides opportunity for **alternative transportation**.
- **Improves quality of life** by creating new **recreational opportunities**.
- Encourages **economic regeneration**.
- **Links isolated communities** to the region as a whole.
- **Strengthens** citizens' understanding and appreciation of the **natural**

environment.

- **Increases property values** of local residents.

In order for a greenway network to be successful, local residents and workers must be able to reach and use it. The number of accessible trails often limit those who are physically challenged from enjoying adjacent park resources. Access is often difficult because of the natural character of the area; the corridor could be isolated by steep topography, wetlands, or a stream channel. In urban areas, access is often barred by man-made features, such as a highway, busy road, or a simple fence. Occasionally, greenway access is denied because it would require crossing private lands; and sometimes, access is made difficult by the perception of danger or confusion. The following elements are common solutions for areas with limited access:

- Construct a paved or natural surface trail.
- Acquire a trail easement across private land.
- Provide directional signage at all trail entrances and intersections.
- Provide maps of local greenway corridors and access points.
- Locate community access to ensure that potential targets of opportunity for criminal activity are minimized.
- Construct a pedestrian bridge across a creek.
- Build a boardwalk across sensitive natural areas.
- Raise public awareness and support for the community access point.

Community access to the greenway network is a challenge in all of the jurisdictions throughout the Washington area. In order to illustrate some of the opportunities and challenges commonly associated with different types of community greenway access, three case studies are described within the Washington area. The first case study, the *Rock Creek Access*, demonstrates the challenges of providing access in an area with steep topography, man-made barriers, and property boundaries. The second case study, the *Gude Drive connection to the Rock Creek Trail*, illustrates the ability to connect a large population to a major greenway by providing a short segment of trail through public and private properties. The third case study, the *Ninth Street Greenway*, demonstrates how an urban area can link a community to an urban commercial center by enhancing the streetscape.

Walter C. Pierce Community Park Access

Rock Creek Park is a major greenway corridor connecting from the Potomac River in the District of Columbia through the northwest quadrant of the city to Montgomery County. The park contains many recreational, cultural, and natural features that attract residents and visitors from around the nation.

A potential new access from the east side exists near Duke Ellington Memorial Bridge and Walter C. Pierce Community Park. This

access would descend the slope from the community park and join an existing soft surface bridle path that connects over Rock Creek Tunnel to the National Zoo. The entrance would strengthen the connection between the Adams Morgan community and the park, as well as increase the visibility and safety of Walter C. Pierce Community Park. This project also has the potential to make a pedestrian

connection between the Columbia Heights Metrostation on the green line and the Woodley Park Metrostation on the red line.

Gude Drive Connector to Rock Creek Park

The City of Rockville is the second largest city in Maryland with almost 50,000 residents, and it is county seat of Montgomery County. It occupies 13.03 square miles within metropolitan Washington and is located 12 miles northwest of the nation’s capital. The city is located adjacent to Rock Creek Regional Park, which links to Montgomery County and Washington, DC, but it does not have easy pedestrian or bicycle access to the park.

The Gude Connector is a 1.1 mile hard surface trail that will provide a vital connection from East Gude Drive in the City of Rockville to a 12 mile network of trails in Rock Creek Regional Park to the northeast. The trail connects parkland, a golf course, residential neighborhoods, and a future recreational park

Walter C. Pierce Community Park Access Benefits

- *Provides an access to the east side of Rock Creek Park for residents of the Adams-Morgan area.*
- *Discourages inappropriate uses of the park near Duke Ellington Memorial Bridge.*
- *Establishes a pedestrian connection between the Columbia Heights Metrostation on the green line and the Woodley Park Metrostation on the red line.*



The Walter C. Pierce Community Park Access would link Adams Morgan to Rock Creek Park near the community park, a popular recreation area for many community residents.

Gude Drive Connection to Rock Creek Regional Park Benefits

- *Provides major connection between Rock Creek Park and City of Rockville.*
- *Connects existing bicycle and pedestrian facilities both on and off-road.*
- *Provides access to protected open space*



Ninth Street, near Virginia Square.

Ninth Street Greenway Benefits

- *Enhances pedestrian environment in urban corridor.*
- *Provides pedestrian linkages to Metrostations.*
- *Provides access to green space network via the Bluemont Junction Trail.*

site. It will also provide access to the City's proposed 10 mile bicycle beltway encircling the City. Finally, the Gude Connector will provide a significant link for trail systems throughout the county to the I-270 Corridor bike path. The majority of the trail corridor will have to be acquired from various public and private landowners, including an adjacent business park.

Ninth Street Greenway

Since the early 1970s, planning efforts have encouraged higher density mixed-use development along the Rosslyn-Ballston Corridor in Arlington County. Office and commercial development has been focused along Wilson Boulevard and Fairfax Drive near each of the metrostations. Forecasts for the area predict that both the residential and daytime populations will continue to grow over the next twenty years.

Recently, planners and residents in Arlington County have begun to focus on how to create a pedestrian scale urban environment within the high-density commercial corridor. The Ninth Street corridor, travelling east-west between Wilson Boulevard and Fairfax Drive, presents an unique opportunity to connect urban parks and metrostations, while protecting pedestrians from the heavy traffic within the area.

The Ninth Street Greenway will be located along 9th Street from Jackson Street to North Glebe Road. The greenway will be an urban streetscape with large sidewalks, street trees, pedestrian furnishings, and public art. It will provide pedestrian connections to the Ballston and Virginia Square Metrostations from the surrounding community, as well as from the Bluemont Junction Trail to the west.

Implementation Strategy

Implementation of the Washington Metropolitan area green space and greenway network will occur over many years as interest and resources permit. The implementation process is complex; it requires committed staff, supportive citizens, funding, and a clear strategy to turn a good idea into a positive resource for the community and the region.

This implementation strategy is a resource for planners, community leaders, and interested citizens working to implement local greenways. It focuses on the final stages of implementation, including funding, acquisition and development, community outreach and management. The *Funding Opportunities* section describes potential funding sources for individual projects within the region. *Acquisition and Development Alternatives* describes potential methods for greenway acquisition and development for different types of agencies and groups. *Community Outreach Techniques* outlines methods to generate public support and to approach potential landowners and neighbors. *Management Techniques* describes the management and organizational issues that must be addressed to ensure a safe and successful green space network. These sections answer many of the initial questions that arise once planners, community leaders, or interested citizens have a greenway plan and are ready to implement it.

Overview of the Implementation Process

The greenway implementation process varies dramatically from project to project. The natural and cultural resources along a greenway, neighborhood residents, and local leadership can have a large influence on how a greenway is planned and designed, and implemented. There are many resources that describe different types of implementation processes, including: *Greenways: A Guide to Planning, Design, and Development*; *Park, Recreation, Open Space and Greenway Guidelines*; and *Connecting Our Commonwealth: The Virginia Greenways and Trails Toolbox* (see Section IV for detailed citation).

One critical component of greenway implementation is public participation. Involving local

communities, businesses, and residents in the planning process builds trust and ownership in a greenway, educates people to take pride in and be stewards of green space, and garners support for greenway implementation and management. Community involvement takes place throughout the implementation process. The following steps provide a broad framework for greenway implementation:

1. Identify Potential Greenway

Undeveloped open space, ridges, stream valleys, waterfronts, utility corridors, and transportation corridors all provide opportunities for greenways. Sometimes

these open space areas and corridors are already used informally by local communities. Formal designation of a greenway by planners, community residents, and local jurisdictions will help protect potential resources along the corridor and provide safe access for pedestrians and bicyclists.

2. Inventory and Analyze Greenway Resources

Once a greenway is identified, the natural, cultural, and community resources along the corridor should be analyzed. The following tasks are typically initiated during this phase:

- Identify sensitive natural and cultural features of the greenway, including habitat areas and historic sites.
- Identify areas of environmental degradation that may be improved by greenway implementation.
- Identify community resources, such as schools, parks, public transportation, libraries, neighborhoods, and commercial centers, that could be linked by the greenway.
- Organize a citizen group to participate in planning and implementation of the greenway and galvanize support by local leadership.
- Raise funds for planning and design studies.

3. Prepare Greenway Plan

Planning and design is critical to developing a successful greenway that protects the environment, provides community access, and contributes to the regional green space network. Critical components to a greenway plan include:

- Public involvement
- Trail alignment
- Community access points
- Pedestrian elements, such as lighting and furnishings
- Interpretive and directional signage
- Acquisition and construction costs
- Management and maintenance program

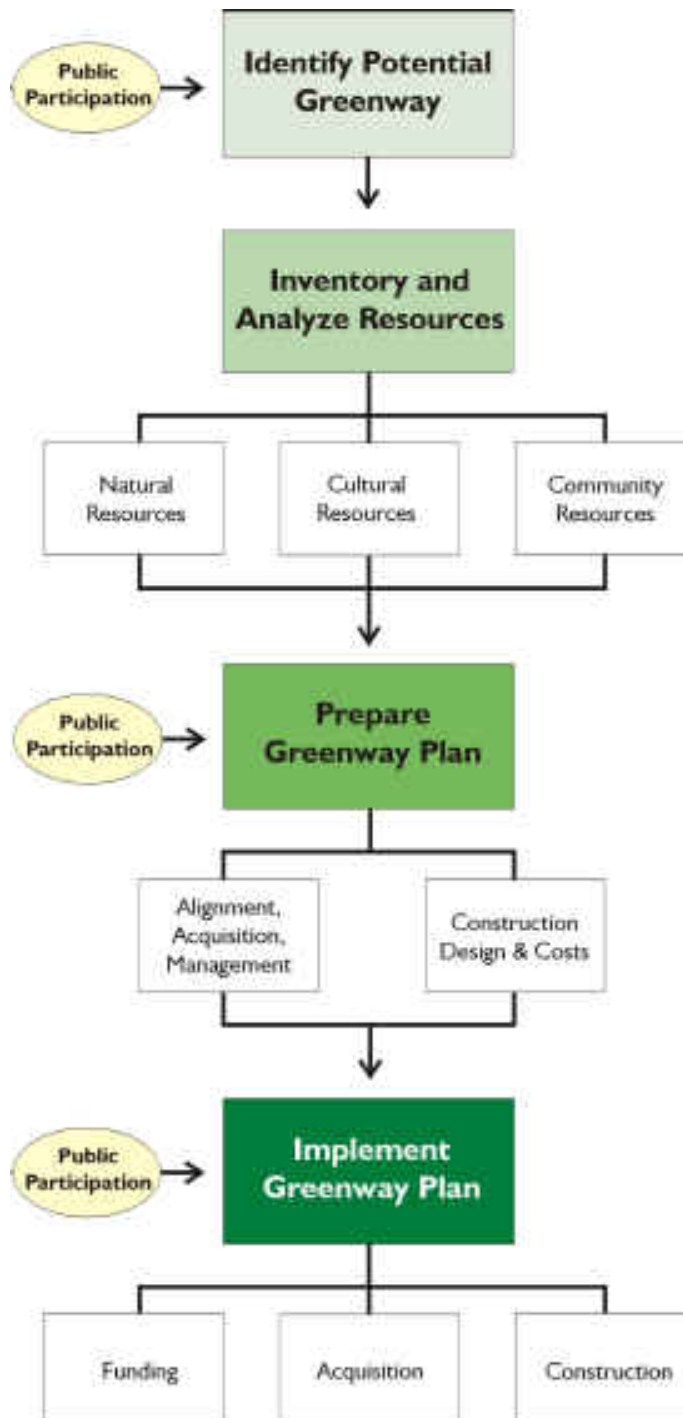


Getting public participation early in the planning process is critical to developing partnerships that will lead to successful implementation.

4. Implement Greenway Plan

Successful implementation of a greenway plan often depends on strong partnerships between public agencies, local citizens, and nonprofit groups. Working together, these groups can generate the resources and support needed to acquire lands and open a greenway to the public. Final implementation of a greenway plan includes:

- Raising funds for acquisition and construction
- Acquiring lands
- Construct greenway elements
- Opening greenway to the community



Funding Opportunities

Across the United States, communities are developing greenways and trails to protect their green space and provide critical linkages between residential, commercial, business, and recreational areas. Funding for these greenways comes from four sources: federal, state, local, private, or a combination of these.

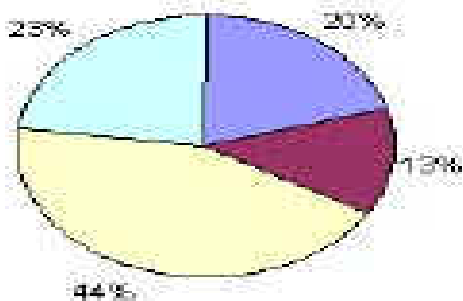
Federal funding typically goes to state programs which distribute the money to individual projects. Federal programs also require that project sponsors match a portion of the funding with their own resources. Funding by local governments varies widely between jurisdictions. The level of public support for green space often determines how a municipality funds greenway initiatives, as well as how much funding the municipality can generate. Private funding sources range from foundations and nonprofit organizations to individual businesses and interested citizens, who may donate money or volunteer labor.

Partnerships between these different agencies and groups are frequently the most successful at raising funds. Commitment to a project at the federal, state, and local levels not only ensures the implementation of a project, it helps to ensure the long-term success of a greenway within the region.

This section outlines green space funding opportunities available as of Spring 2000. It is based on information gathered from the Rails to Trails Conservancy, the Trust for Public Land, and the Virginia Resource Access System websites, and the *National Trails System Sourcebook for Federal, State, and Foundation Assistance*, published by the National Park Service in 1999. Information collected from these sources was confirmed and supplemented through telephone calls and internet searches. The funding sources are organized into four sections: Federal Funding, State Funding, Local Funding, and Private Funding. Information on project type, criteria, available funds, average grant amount, application deadlines, and contacts is provided for each funding source.

The funding environment is ever changing. As the national economy grows, foundations have more to give away and governments have more to spend; but when the economy shrinks, funding becomes scarce. Federal, state, and local green space funds rely heavily on both a positive economic and political climate. An administration that supports green space acquisition and greenway development may be followed by one that does not - stifling existing appropriations and green space initiatives. Planners or citizens implementing greenway projects in the future should use this resource as a starting point in their search for funding, understanding that these sources will evolve and change with time.

Average Annual Distribution of Federal Transportation Enhancement Funds



"The Council of Governments should work in cooperation with the Potomac River Greenways Coalition to pursue financial assistance and to serve as coordinator of a metropolitan-wide initiative."

- Report of the Metropolitan Greenspace Workshop, October 1994

Federal / State Funding

Transportation Equity Act for the 21st Century

The Intermodal Surface Transportation Efficiency Act (ISTEA), enacted by Congress in 1991, was a federal program that funded a wide range of transportation programs including trails. In six years, it provided over \$1 billion for multiuse trail development throughout the nation. In June 1998, Congress continued and expanded this program by enacting the Transportation Equity Act for the 21st Century (TEA-21). TEA-21 will provide federal funding for transportation projects, including trail development and bicycle and pedestrian systems, through 2003. Under TEA-21, trail development projects are eligible for funding from the following twelve programs:

- Transportation Enhancement Program
- Recreational Trails Program
- "Core" Surface Transportation Program
- Congestion Mitigation & Air Quality Improvement Program
- Federal Lands Program
- Scenic Byways Program
- Highway Safety Program
- Bridge Program
- National Highway System
- Transit Enhancement
- Transportation & Community System Preservation Pilot Program
- High Priority Projects

Although trails are eligible for funding through each of these programs, states control how these Federal funds are spent and trail projects must compete with other transportation projects for resources. Local governments must work through state agencies to obtain funding from these Federal programs. The Transportation Enhancement Program and Recreational Trail Program are the two programs most commonly used to fund trails and greenways.

Transportation Enhancement Program

The Transportation Enhancement Program funds projects related to surface transportation that fall within one of the following twelve categories:

- Pedestrian and bicycle facilities
- Pedestrian and bicycle safety and education activities
- Acquisition of scenic or historic easements and sites
- Scenic or historic highway programs including welcome centers
- Landscaping and beautification

- Historic preservation
- Historic transportation buildings, structures, or facilities
- Conversion of abandoned railway corridors to trails
- Removal of outdoor advertising
- Archaeological planning and research
- Mitigation of runoff pollution and provision of wildlife undercrossings
- Transportation museums

Selection criteria for project funding include: multi-modalism, environmental protection, and community livability. The program has been designated approximately \$3.6 billion to be spent nationally over six years. It is distributed through state transportation programs.

Requirement: 20 percent local match or 15 percent funding by other Federal agency and 5 percent local match

For More Information Contact: National Transportation Clearinghouse at www.enhancements.org.

District of Columbia Transportation Enhancement Program

The Transportation Enhancement Program for the District of Columbia is administered by the Department of Public Works. The Department focuses on projects that are part of the Capital Improvements Program and that respond to constituent needs. It receives more than \$2 million per year and allocates funds for projects ranging between \$300,000 and \$7.5 million, sometimes saving money from one year for large projects the next.

For More Information Contact: Ken Laden, DC Department of Public Works, 202-671-2309.

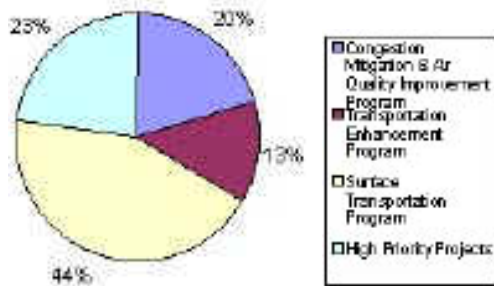
Maryland Transportation Enhancement Program

Administered by the State Highway Administration (SHA), the Transportation Enhancement Program provides approximately \$8 to 9 million annually to Maryland for enhancement projects, such as providing bicycle or pedestrian paths, restoring transportation buildings, and converting train tracks into trails. A minimum of grant of \$20,000 is allowed for construction projects.

Preference is given to projects that demonstrate: economic benefit to the project area; positive environmental and historical benefits; regional significance; and connections to schools, libraries, recreational facilities and transit services. Projects must also be located adjacent to transit facilities, or within state designated revitalization areas or priority funding areas. Design must be 30 percent complete. Proposals are accepted at anytime during the year and funds are awarded in the summer and in the fall. A State agency, county or municipal government, nonprofit organization, community group, or individual may identify potential projects. Projects proposed by non-governmental agencies must have a government agency as a cosponsor.

Since Congress introduced Transportation Enhancements in 1991, more than \$2.4 billion has been invested around the country in facilities for walking and bicycling, historic preservation, scenic beautification, land acquisition, and environmental mitigation.

Projected Distribution of Virginia TEA-21 Funds by Program through 2005



In Arlington County, Virginia, TEA-21 Transportation Enhancement Funds have been used to upgrade the Four Mile Run Trail.

Requirement: 50 percent overall local match and 20 percent cash match for construction costs

For More Information Contact: Dennis Simpson, Maryland State Highway Administration, 410-545-5675 or www.sha.state.md.us/oppe/tep6.

Virginia Transportation Enhancement Program

The Transportation Enhancement Program is administered by the Virginia Department of Transportation to fund transportation activities or improvements which increase a project's value or make it more aesthetically pleasing, such as providing bicycle or pedestrian paths, restoring transportation buildings, and converting train tracks into trails. Projects must be submitted by a nonprofit organization or the general public with formal endorsement by a local jurisdiction or public agency. Projects will be evaluated according to the following criteria: cost, need, community support, environmental benefits, aesthetic value, and compatibility with existing land uses. The program has received \$18.5 million for 2000 and typically funds grants between \$200,000 and \$300,000. The application deadline is in January of each year.

Requirement: 20 percent local match

For More Information Contact: Bob Terrell, Virginia Department of Transportation, 804-786-2872

Recreational Trails Program

The Recreational Trails Program funds new trail construction, land acquisition, trail easements, maintenance and restoration of existing trails, and purchase or lease of trail construction and maintenance equipment. The program has been guaranteed funding of almost \$45 million a year. This funding is distributed to state programs by a formula based on the sales of gasoline to off-highway motorized vehicles in each state.

Requirement: 20 percent state or local match

For more information, see www.fhwa.dot.gov/environment/rectrail.htm.

District of Columbia Recreational Trails Program

The Recreational Trails Program in Washington, DC is administered by the Department of Parks and Recreation in conjunction with the Department of Public Works. The Departments work primarily with the National Park Service, the largest owner of green space in the District, as well as other interested parties, to rehabilitate and develop trails throughout the District. The program receives approximately \$400,000 per year. In 1999, the District of Columbia received \$482,843.

Requirement: 20 percent District match

For More Information Contact: Theodore Pochter, DC Department of Parks and Recreation, 202-673-6525.

Maryland Recreational Trails Program

The Recreational Trails Program funds the development of community-based, motorized and non-motorized recreational trail projects for all kinds of trail uses, such as hiking, running, wheelchair use, bicycling, in-line skating, equestrian use, cross-country skiing, off-road motorcycling, all-terrain vehicle riding, and four-wheel driving. Administered by the State Highway Administration (SHA), this program receives approximately \$760,000 of TEA-21 funding that is matched with local funds or in-kind contributions to implement trail projects. Projects can be sponsored by a county or municipal government, nonprofit agency, community group or individual. The maximum award under this program is \$100,000 and the average grant ranges from \$15,000 to \$50,000.

Activities eligible for funding within this program include: construction, maintenance or restoration of trails, trailside facilities or trail linkages; purchase and lease of trail construction equipment; acquisition of easements or property for recreational trails and corridors; educational programs to promote safety and environmental protection relating to trails. Preference will be given to projects which have broad-based community support, provide linkages to or complete

existing trails, provide improvements to a trail in order to benefit or mitigate impacts to the natural environment, or will be constructed or maintained by youth conservation or service groups. Applications are accepted on an annual basis, usually in the fall.

Requirement: 20 percent state or local match

For More Information Contact: Sylvia Ramsey, Maryland State Highway Administration, 410-865-1100, sramsey1@mdot.state.md.us

Virginia Recreational Trails Program

The Virginia Recreational Trails Fund Program is administered by the Department of Conservation and Recreation (DCR) in order to provide and maintain both motorized and non-motorized recreational trails and trail facilities. Grant funding may be given to private organizations, city governments, county governments, or other government entities, including partnerships between the federal government and private trail groups or organizations. Funding is granted with the stipulation that recipients work under guidance from the DCR Trails Board.

Grants will be considered for proposals which provide: non-motorized recreational trails, multi-use trails, connector trails to existing trail corridors, innovative shared uses of trail corridors, and motorized trails. Planning proposals for future facilities are not eligible. Applications will be evaluated according to



The Shoreham Trail, funded by the Recreational Trails Program in Washington, DC, enables pedestrians and bicyclists to access Rock Creek Park from Connecticut Avenue.

the following criteria: project need, project innovation, design parameters, population served, support of project, and provisions for the project's continuing existence. The program receives approximately \$1 million per year; in 1999, Virginia received \$1,133,936. The average grant size is \$50,000. The application deadline is in January of each year.

Requirement: 20 percent sponsor match or 15 percent funding by other Federal agency and 5 percent local match

For More Information Contact: Jerry Cassidy, Grant Administrator; Department of Conservation and Recreation, 804-786-3218.

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) is an open space preservation program, created in 1964, that uses revenues from offshore oil and gas receipts to support the creation of national and community parks, forests, wildlife refuges, and open spaces. Over its first 30 years, LWCF provided more than \$8.8 billion to acquire new federal recreation lands and as grants to state and local governments. It has been responsible for protecting nearly 7 million acres of parkland, water resources, and open space and for developing more than 37,000 state and local park and recreation projects. To ensure an integrated approach to conservation and recreation, LWCF funds are distributed through both a federal program and a state matching-grants program. The federal program funds the purchase of land and water areas for conservation and recreation. The state program provides funding to states for planning, developing, and acquiring land and water areas for natural resource protection and recreation. Forty percent of the fund is equally divided among all states and sixty percent is allocated based on population and density. In fiscal year 2000, \$40 million was appropriated for this program. In addition, the Conservation and Reinvestment Act (CARA) of 1999 was passed by the House Committee. If passed into law, this new piece of legislation would reinvest half of the money received by federal government from offshore oil and gas leases to wildlife conservation and other environmental protection efforts.

District of Columbia Land and Water Conservation Fund

The Land and Water Conservation Fund Program in Washington, DC is administered by the Department of Parks and Recreation in conjunction with the Department of Public Works. The Departments work with the community to improve or replace outdoor recreation facilities, such as playgrounds and ball

fields, throughout the District. Most of these projects are listed on the city's Capital Improvement Program. Over the past thirty years, the program has funded over \$13 million of improvements. The program currently receives approximately \$81,000 per year. If the CARA bill is passed, it is anticipated that this amount would increase.

Requirement: 50 percent local match

For More Information Contact: Theodore Pochter, DC Department of Parks and Recreation, 202-673-6525.

Chesapeake Bay Small Watershed Grants Program

The Chesapeake Bay Small Watershed Grants program allocates grants to local organizations and communities working to protect and preserve watersheds in the Chesapeake Bay basin. The program seeks to address local land use protection and environmental education issues within small watersheds, as well as strengthening the link between communities and the Chesapeake Bay Program. A greenway must fulfill one or more of the following objectives to be eligible for the program: restore or protect riparian forest buffers along the Bay and its tributaries, promote sound land management practices to minimize the impacts of development, maintain and protect existing wetlands, encourage community based activities, provide increased public access to the Bay and its tributaries, or educate the public on how to protect and restore the Bay. The program has been allocated \$2 million by the National Fish and Wildlife Foundation. Average grant sizes range from \$10,000 to 20,000 with \$35,000 as the maximum grant size. The application deadline is in January of each year.

Requirement: All projects must be completed in one year.

For More Information Contact: Malia Somerville, National Fish and Wildlife Foundation, 202-857-0166.

Chesapeake Bay Gateways and Water Trails Initiative

The Chesapeake Bay Gateways and Water Trails Initiative provides funding for projects that strengthen the Chesapeake Bay Gateways and Water Trails Network. The Network is designed to interpret the Bay's story, help people access the Bay's resources, and foster Bay conservation and restoration. Three types of projects are eligible, including those that: enhance interpretation at Gateway hubs and regional information centers; develop or enhance interpretation, access and/or restoration efforts at Gateway sites; and develop or enhance water trails and/or land-based trails. Proposals will be evaluated for the extent to which they:

- Advance Network goals and meet characteristics of the particular Network component for which they are proposed
- Visibly demonstrate a significant initial component of the Network
- Include an effective budget and demonstrate the ability to complete project within required time period
- Demonstrate community support

Trail projects located in Washington, DC, Prince William County, Fairfax County, City of Alexandria, Arlington County, Prince George's County, and Montgomery County may be eligible for funding. Congress has allocated \$400,000 to be distributed in year 2000 as a Demonstration Project Grant Round.

The application deadline is in April of each year.

Requirements: 50 percent match

For More Information Contact: Jonathan Doherty, Program Manager, National Park Service, Chesapeake Bay Program Office, 410 Severn Avenue, Suite 109, Annapolis, MD 21403, or go to www.chesapeakebay.net/program.

North American Wetlands Conservation Fund

The North American Wetlands Conservation Fund, administered by the U.S. Fish and Wildlife Service, provides grant funds for wetlands conservation projects in the United States. These grant funds are matched 1:1 by U.S. non-federal dollars. Funds are used to acquire real property interest in lands or waters and to restore, manage, or enhance wetland ecosystems and other habitat for migratory birds and other fish and wildlife species.

Requirements: a 1:1 match of non-federal

funds; funds must be spent within two years.

For More Information Contact: Bettina Sparrowe, Grant Proposal Administer, U.S. Fish and Wildlife Service, North American Waterfowl and Wetlands Office, 4401 North Fairfax Drive, Room 110, Arlington, VA 22203 (703-358-1784).

Other State Funding

Most Federal funding is distributed through State agencies. States have also initiated their own funding programs.

Congestion Mitigation & Air Quality Program

The Congestion Mitigation & Air Quality Program in Washington, DC is administered by the Department of Public Works. The Department focuses on projects that are part of the Capital Improvements Program and that respond to constituent needs. It receives \$5 million per year and allocates funds ranging between \$100,000 and \$8 million.

For More Information Contact: Ken Laden, DC Department of Public Works, 202-671-2309.

Program Open Space

Program Open Space (POS) provides funding for acquisition of parkland, forests, wildlife habitat, greenways, and natural, scenic and cultural resources for state, county, and city

parks and natural areas. It will also fund 75 to 90 percent of development costs for county and city parks and recreation areas. Program Open Space is administered by the State Department of Natural Resources (DNR) and is funded mostly by the state's real estate transfer tax, which places one-half of one percent of the purchase price of a home or land into a special fund for POS. It also administers the Federal Land and Water Conservation Program providing grants to local governments with a 50 percent match.

The funds designated for POS are divided equally between local and state projects. Maximum grant amounts are determined by county allotments which are based on population and the amount of real estate transfer tax generated in the county. In addition, every county must create a Land Preservation and Recreation Plan that outlines acquisition and development goals in order to be considered for POS.

To date, the real estate transfer tax has resulted in the acquisition of more than 230,000 acres of open

space for state parks and natural resource areas and more than 30,000 acres of local parkland. It is estimated that the total distribution of funding for Program Open Space for fiscal year 2001 will be \$121,220,850. These funds are divided among ten programs, including several that can be used for green space and greenway acquisition and development. These programs include: Local Grants, State/Local Acquisition, State Only Acquisition, Capital

Development, Heritage Conservation Fund, Rural Legacy, and easements.

For More Information Contact: Chip Price or Grant Dehart, Department of Natural Resources, (410) 260-8425.

Maryland

Maryland Scenic Byways Program

The Maryland Scenic Byways Program funds a variety of projects along designated State Scenic Byways, National Scenic Byways, or All American Roads. These byways and roads typically have historical, cultural, natural, archaeological, or recreational qualities that promote Maryland's unique heritage and help increase tourism and stimulate local economies. The program will fund safety improvements, pedestrian and bicycle facilities, rest areas and interpretive facilities, overlooks, highway shoulder improvements, and recreational area access enhancements within scenic byway corridors, as well as easements for scenic, historic, recreational, cultural, natural, and archaeological resources adjacent to scenic byways. The program will also fund the development of community-based corridor management plans for proposed byways.

The program is administered by the State Highway Administration (SHA). Byways may be sponsored by a local government, nonprofit agency or community group that is working with an appropriate governmental agency as

a cosponsor. Preference will also be given to byway projects with the potential for broad-based community support. Proposals are accepted on an annual basis, usually in May and then reviewed in June.

Requirement: 20 percent local match

For More Information Contact: Terry Maxwell, Maryland State Highway Administration, 410-545-8637

Maryland's Rural Legacy Program

The Rural Legacy Program is administered by the Department of Natural Resources to protect "Rural Legacy Areas," regions rich in a multiple of agricultural, forestry, natural and cultural resources that, if conserved, will promote resource based economies, protect green belts and greenways, and maintain the fabric of rural life. The Rural Legacy Program provides the focus and funding necessary to protect large contiguous tracts of land and other strategic areas from sprawl development, and enhance natural resource, agricultural, forestry and environmental protection through cooperative efforts among State and local governments and land trusts. Protection is provided through the acquisition of easements and fee estates from willing landowners, and the supporting activities of Rural Legacy Sponsors and local governments.

Projects will be evaluated with the following criteria:

- Significance of the agricultural, forestry, and natural resources proposed for protection

- The degree of threat to the resources and character of the area, reflected by patterns and trends of development and landscape modifications in and surrounding the area
- Significance and extent of the cultural resources proposed for protection through fee simple purchases
- Economic value of resource-based industries or services proposed for protection through land conservation
- Quality and completeness of the Sponsor's Rural Legacy Plan
- Strength and quality of partnerships created for land conservation among Federal, State and local governments and land trusts
- Extent to which federal or other grant programs serve as a funding match
- Sponsor's ability to carry out the proposed Rural Legacy Plan

The Rural Legacy Program is currently funded through 2002 with \$87.3 million. Applications for the Rural Legacy Program are accepted annually.

For More Information Contact: Diane Evans, Department of Natural Resources, 410-260-8454.

Maryland Agricultural Land Preservation Foundation

The Maryland Agricultural Land Preservation Foundation is administered by the Maryland Department of Agriculture to preserve productive agricultural land and woodland. Preservation of agricultural land and woodland helps to curb the expansion of random urban development, protects wildlife and preserves the environmental quality of the Chesapeake and its tributaries.

The Maryland Agricultural Land Preservation foundation is funded by two sources: 14 percent of its funds come from Program Open Space and the rest comes from revenues generated by the state's agricultural land transfer tax. The amount of funding varies every year but averages approximately \$12 million annually. There will be an additional funding of \$2.5 to \$3 million through Rural Legacy Program over the next five years.

The Foundation purchases conservation easements on a competitive basis, and requires that an individual establish their property in an Agricultural Land Preservation District in order to qualify.

For More Information Contact: Paul Sheidt, Maryland Department of Agriculture, 410-841-5860



Program Open Space has worked with homeowners and landowners throughout the state to acquire more than 150,000 acres of open space for state parks and natural resource areas and more than 25,000 acres of local park land.

Canal Road, along the C&O Canal, is designated a scenic byway in both the District of Columbia and Maryland.

Virginia

The Commonwealth of Virginia has many programs that may support green space and greenways development. Information about these resources are available at www.cns.state.va.us/dhcd/VRAS.CFM.

Virginia Outdoors Fund

The Virginia Outdoors Fund is administered by the DCR with Land and Water Conservation Funds for the purpose of improving and enhancing existing public recreation facilities and public parks throughout the state. The program currently receives \$400,000 per year; however, if the CARA Bill is approved, it may receive \$15 million per year. Grants of \$25,000 to 50,000 are given to local parks and recreation agencies.

Requirement: 50 percent local match

For More Information Contact: Jerry Cassidy, Grant Administrator; Department of Conservation and Recreation, 804-786-3218, jcassidy@dcr.state.va.us.

1999 Virginia Land Conservation Fund Grant Program

The Virginia Land Conservation Foundation's grant program is administered by the DCR for the acquisition of conservation lands. Six types of conservation projects are targeted: recreation/park and open space, natural areas/rare plants and animal habitats and exemplary natural communities, cultural and historic resources, fish and wildlife habitat, agricultural lands, and forestal lands. The Virginia State Legislature is currently reviewing the program requirements; however, \$3.25 million in funding is expected for 2000. The original intent of the program was to help localities, public bodies, and nonprofit organizations raise funds for matching grants to acquire land for conservation. Grant awards have targeted applications for 50 percent or less of total project costs. The deadline for applications is in November.

For More Information Contact: Jerry Cassidy, Grant Administrator; Department of Conservation and Recreation, 804-786-3218, jcassidy@dcr.state.va.us.

Virginia Environmental Endowment

The Virginia Environmental Endowment offers two sources of grant funding: the Virginia Program and the Virginia Mini-Grant Program. The Virginia Program provides funding to community action groups who promote sustainable communities and water quality protection and management. The Virginia Mini Grant program allocates funding for community based efforts to strengthen environmental education and promote stewardship of Virginia rivers, streams, and wetlands. Selection criteria for the two programs include: cooperation with diverse organizations; utilization of existing resources and expertise from local businesses and industries, public agencies, academic institutions, and conservation organizations; emphasis on the services of volunteers; and development of a practical model using schools and local communities to promote environmental awareness and stewardship. The Virginia Program grants range from \$10,000 to 20,000 and the Virginia Mini-Grant Program range from \$1,000 to 5,000 for one year projects. Application deadlines are April 15, August 15, and December 15.

For More Information Contact: Gerald McCarthy, Virginia Environmental Endowment, 804-644-5000.

Legacy Open Space is a ten-year \$100 million initiative to conserve open space throughout Montgomery County, including historic sites, sensitive natural resources and urban green areas. The program will be implemented through a functional master plan and funded using a combination of county funds, partnership efforts and private sources.

Local Funding

Capital Improvements Program

Local governments throughout the nation have initiated yearly appropriations from local general revenue for greenway and trail development through their Capital Improvements Programs (CIP). Local communities should consider dedicating a portion of local revenues to the development of a green space network. Each dollar invested in these resources could yield revenue in the form of increased private development and tourism. Local governments can supplement their CIP for park acquisition, maintenance, and capital improvements by increasing income taxes or sales and issuing bonds.

Every jurisdiction in the Washington area uses some portion of their CIP to support public green space. In some cases, such as the City of College Park and Prince William County, these funds are used to maintain existing green space. In other jurisdictions, such as Montgomery County, a significant portion of CIP funds are dedicated to acquisition and development of green space.

Public Sector Bonds

In recent years, several communities throughout the nation have asked local residents to financially support the development of community greenway systems through bond referendums. Generally, a bond program will be successful if it is tied to specific projects that can be clearly demonstrated as an investment in economic growth.

General obligation (G.O.) bonds are primarily secured by ad valorem property taxes and are the most common type of bonds available. In order to pay the principal and interest on the bonds, cities and counties may increase property taxes beyond the normal limit to pay the principal and interest on the bonds. Since investors perceive property taxes as being less risky than the security for other types of indebtedness, G.O. bonds may be issued at relatively lower interest rates, and are therefore less expensive funding mechanisms for local governments than revenue bonds. Many jurisdictions within the Washington area have used County or park bonds to

support green space acquisition and development, including Arlington County, the City of Rockville, Fairfax County, Montgomery County, Prince George's County, and Prince William County.

Revenue bonds are secured with the taxes levied for the use of a specific public project, or with fees charged to facility users. These funds are typically used by local governments facing increased usership or demand to manage growth, improve water quality, or increase public safety by developing parks, open space, and recreation facilities.

Documentary Surtax

A documentary surtax allows a local government to create a community lands acquisition fund by applying a conveyance tax surcharge on every transfer of real estate within the local jurisdiction. This method of funding helps provide the funds to help pay the high cost of acquiring parkland in areas where real estate speculation tends to drive up the price of land. The State of Maryland uses a 0.5 percent documentary surtax on real estate transfers to support the Program Open Space. None of the individual

jurisdictions within the region use the surtax; however, it has been successfully applied in other regions of the United States and may be a good tool for some jurisdictions within metropolitan Washington to consider.

Documentary Surtax: In the town of Marion, MA, a 2 percent property surtax funds the acquisition of recreational lands. A special open space commission oversees the acquisition of lands and management of the program.

Public Sector Bonds: Since 1948, citizens have played an important and active role in bringing about the expansion of open space and recreation. In 1948, the Recreation Committee recommended a bond referendum for the acquisition of land for public parks and playgrounds. In 1951, the voters overwhelmingly passed a park bond for \$822,000. Since that first bond referendum in 1951, Arlington citizens have supported over \$65 million in park bonds.

Special Assessment Districts

Special assessment districts are widely used by local governments as a way to ensure the acquisition and protection of open space. An open space district is a defined area in which a local government levies open space charges upon property owners who have collectively voted to create the district. Typically, the property owners must be the beneficiaries of the open space and the size of individual assessment levies must be proportional to the amount of per-parcel special benefit which the property receives. An open space district's revenues may only be spent for open space purposes, encouraging a steady flow of funding for the long-term implementation of an open space plan.

An Infrastructure Financing District (IFD) and a Regional Open Space District are other forms of special assessment districts. An IFD typically occurs in substantially undeveloped areas; it allows localities to purchase open space without raising property taxes. However, in order for an IFD to be formed, each of the other taxing agencies must grant its approval before any of its portion of the increment can be collected by the IFD. A Regional Open Space District's primary function is to acquire, preserve, and maintain open space. The district is incorporated through the cooperative efforts of a region's cities, counties, and voters and is governed by an elected board of directors.

Development Impact Fees

Development impact fees may finance park land acquisition and infrastructure on a project-by-project basis. Typically, the fee is determined by evaluating the potential impact a proposed development will have on a jurisdiction. Often these fees are used to support new roads, utilities, or schools; but in some jurisdictions, such as Arlington County, the City of Rockville, Fairfax County, Prince George's County and Prince William County, these fees are used in conjunction with development proffers to support green space acquisition. If a developer cannot set aside a portion of land for green space, then the jurisdiction will ask for a development impact fee to support green space elsewhere.

Impact fees are short-term in nature because they are directly related to the rate of development within a community and are not dependable during times of slow activity. Therefore, impact fees should only be used to supplement a long-range acquisition program. Jurisdictions that use development impact fees as their sole funding for open space acquisition may encounter several problems. First, under many state laws, unused and uncommitted fees must be refunded if not obligated in five years. Second, the purpose and amount of an impact fee must be clearly justified by the proportional impact of a specific development project on the community and of the fee on the open space goals of the jurisdiction. Finally, fees often cannot provide an adequate lump sum for significant improvements to be built at one time.

Lease-purchasing

A lease-purchase option is a loan by which a city or county locates a bank, leasing company, or nonprofit organization that is willing to purchase a targeted property. Following the purchase, the land is rented to the city or county to cover principal and interest payments. At the end of the lease, the local entity has reimbursed the lessor and owns the property. In the Washington area, Frederick County and the City of Fairfax currently use lease-purchasing to fund land and equipment acquisition, respectively.

Cities and counties may sometimes use "certificate of participation" (COP) financing in conjunction with lease-purchasing to acquire expensive tracts of land. Under this technique, the lessor purchases the open space, leases it to the local government, and receives a small fee. The lessor then assigns the rights to receive lease payments to a trustee who works with an underwriter to issue certificates of participation to individual investors. The local government annually appropriates funds for lease payments which are distributed to the certificate holders by the trustee and at the end of the lease, the city or county acquires title to the property.

Under a carefully crafted COP program, investors may be entitled to tax-free investment income. Depending on the local government's credit rating, this type of financing can therefore be accomplished at a relatively low interest rate.

Private Funding

Foundation Grants

Eastman Kodak American Greenway Awards Program

The American Greenways Program is a partnership project of Kodak, The Conservation Fund, and the National Geographic Society. It promotes greenways at the national, state, and local levels, providing small grants and technical assistance to nonprofit organizations and public agencies to help them implement greenway projects. Grants may be used for mapping, ecological assessments, surveying, conferences, planning, design, promotional materials, interpretation, surveys, legal expenses or construction. Grant recipients must show the importance of the project to local greenway development efforts, demonstrate community support for the project, show the extent to which the grant will result in matching funds or other support from public or private sources, show the likelihood of tangible results, and demonstrate the capacity of the organization to complete the project. The maximum grant amount is \$2,500; however most grants range from \$500 to \$1,000. Applications are submitted between March 1 and June 1 each year.

Private Fundraising: In Menlo Park, CA, the Peninsula Open Space Trust (POST) is a private, nonprofit land conservancy which has protected more than 35,000 acres on the Peninsula for agriculture, wildlife habitat, scenic vistas and recreational opportunities. As a means of generating interest and funding for preservation, POST has introduced a challenge grant in which people who contribute to the trust will find their money amplified if POST achieves its fund-raising goals. Since launching its campaign in 1996, POST has raised \$24 million and acquired 10,000 acres of land. Any additional incoming funds will go to completing the acquisition of the Johnston Ranch, a 647-acre Half Moon Bay property. Furthermore, the Kresge Foundation of Troy, MI, has awarded POST a \$1 million challenge grant if the land trust can complete its \$28.5 million campaign.

For More Information Contact: American Greenways Coordinator, The Conservation Fund, (703) 525-6300 or visit www.conservationfund.org.

Bikes Belong Coalition

The Bikes Belong Coalition assists local organizations, agencies, and citizens in developing and funding bicycle facilities projects that will be funded by TEA-21. Project proposals are evaluated based on: the amount and type of facilities being created and connected, the expected growth of bicycling in the project area, public support, cost, statistical data and information about the area, projected timeline for completion, and the influence the project may have on future projects. Grants are given up to \$10,000 and are given on a rolling basis throughout the year.

For More Information Contact: Bikes Belong Coalition, (617)734-2800 or visit www.bikesbelong.org/grants.

American Hiking Society National Trail Endowment

American Hiking Society National Trails Endowment is a privately funded, national grants program dedicated to protecting hiking trails. It awards over \$60,000 per year to grassroots efforts to save trail lands and build and maintain foot paths. Any nonprofit working on hiking trails is eligible, as long as the project addresses the AHS mission of establishing, protecting and maintaining foot trails. Grant awards can be applied to acquire trail corridors, build and maintain trails, and develop a constituency to support specific trail projects. Applications are accepted in October each year and the average grant size is \$3000.

Requirement: One key partner in the project must be a 501c(3) charitable organization and projects must be complete within a year (except for land acquisition programs).

For More Information Contact: American Hiking Society, (301) 565-6704, mmsloan@americanhiking.org, www.americanhiking.org/alliance/endow_det

REI Grants

REI offers two grant programs that will fund greenways: Conservation Grants and Great Places Grants. Conservation Grants are intended to protect lands and waterways, while making them more accessible for recreation. They are typically given to projects that support community based initiatives to promote environmental conservation. Great Places Grants provide funding for protection and enhancement of community outdoor recreation areas. They fund projects that promote outdoor activities and outdoor campaigns, as well as encourage collaboration between grassroots organizations and local constituencies. Grants range from \$15,000 to 25,000. Conservation grant applications should be submitted between March and December. The Great Places grant deadline is in February.

For More Information Contact: www.rei.com or send a request in writing to: Grant Administrator, REI Public Affairs, P.O. Box 1938, Sumner, WA 98390-0800.

Surdna Foundation

The Surdna Foundation provides funding to address many types of environmental issues, including: human systems, and transportation and urban/suburban land use projects. Human system projects focus on helping the public to better understand environmental problems and opportunities. Transportation and urban/suburban land use projects focus on reducing vehicle miles traveled and maximizing accessibility over mobility. In 1999, the Foundation allotted approximately \$10 million for environmental causes. Average grants range from \$75,000 to \$150,000, although grants have been given up to \$500,000. There

is no deadline for the application.

For More Information Contact: Surdna Foundation (www.surdna.org), 212-557-0010, or write to: Edward Skloot, Executive Director, Surdna Foundation, Inc., 330 Madison Avenue, 30th Floor, New York, NY 10017-5001.

Marpat Foundation

The Marpat Foundation allocates a portion of its funds "to conserve natural resources or advance knowledge of the natural world" in metropolitan Washington. Grants typically range from \$5,000 to \$20,000. The deadline for application is September 15.

For More Information Contact: Marpat Foundation, www.fdncenter.org/grantmaker/marpat or contact JKoven@aol.com.

Ducks Unlimited

Ducks Unlimited's Matching Aid to Restore States Habitat (MARSH) program is a reimbursement program that provides matching funds and grants for the acquisition and enhancement of waterfowl habitat. Funds and grants to public and private agencies and organizations within each state are based on a percentage of Ducks Unlimited's net annual grassroots fundraising in that state plus any unused MARSH funds from the previous year. Projects protecting or restoring habitats within the *North American Waterfowl Management Plan* Joint Venture areas receive first consideration.

For More Information Contact: Ducks Unlimited Inc., One Waterfowl Way, Memphis, TN 38120; 1-800-45DUCKS or 901-758-3825. www.ducks.org.

In 1999, the Marpat Foundation donated \$10,000 to the Conservation Fund to assist with the implementation of Maryland's Rural Legacy Program.

Richard Reynolds Foundation

The Richard Reynolds Foundation funds a wide variety of projects, including environmental and community projects. The total funding for the program ranges from \$1.5 to \$2 million and individual projects are typically granted \$10,000.

For More Information Contact: Richard Reynolds Foundation, 803-740-7350

Community Funding

Local Businesses

Local industries and businesses may provide support for development of green space through: cash donations to a specific project; in-kind donations of equipment and labor by corporations to reduce the cost of implementation; and discounts in the cost of essential materials purchased from local businesses for implementation. This method of raising funds requires a significant organization and coordination between those planning, building, and funding a greenway project.

Greenway Sponsors

A sponsorship program for greenway amenities enables individuals and businesses to give donations to pay for smaller greenway elements, such as benches, trash receptacles or interpretive signage. The program must be well planned and organized, with design standards and associated costs established for

each amenity. Usually, plaques recognizing the individual contributors are placed on the constructed amenities.

"Buy-a-Foot" Programs

"Buy-a-Foot" programs have been successful in raising funds and awareness for trail projects across the country. The cost of implementation is calculated by foot. Local residents or businesses then donate a "foot" or more of trail. Buy-a-foot programs help potential donors envision how the donated funds will be used, establishing a sense of ownership between the donor and the trail.

Volunteer Fund Raising

Community volunteers may help with fund raising. Potential sources of volunteer fund raisers in the Washington area could include local bicyclists, historical groups, trail groups, and civic clubs.

Acquisition and Development Alternatives

Acquisition of land is often the best way to protect greenways within developing areas. Ownership ensures control; however, acquisition of land in urban and suburban areas can be extremely costly. Public agencies and nonprofit organizations rarely have the financial resources to purchase all the land required to make a contiguous greenway. Instead, they prioritize potential acquisitions and target funding for the most significant sites, trying to incorporate adjacent areas through other methods. Successful implementation of an entire greenway often requires more than one agency or group, it requires cooperation and partnership between many agencies, organizations, and individuals to generate the resources and support necessary.

Completion of the metropolitan Washington greenway network will require a concerted effort by local government agencies, private sector organizations, municipalities, business leaders, and community residents. These groups, who have the influence and authority to guide green space development, must become partners in the implementation of the greenway network through ownership, funding, or management. They also must be supported by Federal and state agencies, working in concert with their goals. Serious commitment, intense negotiation, and visionary leadership is required to give this network physical reality.

The following pages describe acquisition and development alternatives for Federal, state, and local governments, as well as for nonprofit organizations, corporations, and private individuals.

Federal and State Agencies

Federal agencies, such as the National Park Service, Forest Service, U.S. Fish and Wildlife Service, Bureau of Land Management, and Federal Highway Administration, provide funding for other agencies to acquire land for greenways; however, they rarely acquire new lands for green space or recreation. Acquisitions are limited due to agencies' specific criteria for acquisition and the need for congressional authorization.

State agencies have more flexibility in acquiring lands. Statewide bonds or appropriations can provide significant funding for green space acquisition and state departments of recreation or forestry can acquire large tracks of land. In Maryland, the Department of Natural Resources (DNR) acquires, plans, develops, and maintains the state's public natural resource lands. These include parks, forests, wildlife management areas, natural resource management areas, fish management areas, and natural heritage areas. The department also provides assistance in the development of outdoor facilities and administers

Program Open Space to help fund green space acquisition and development. DNR also supports the Maryland Greenways Commission, which was established in 1990

to help create a statewide, natural infrastructure by protecting and connecting important natural corridors. It is involved in planning and implementing greenway projects throughout the state. (www.dnr.state.md.us) Likewise, the Maryland Department of Transportation helps develop pedestrian and bicycle pathways across Maryland.

In Virginia, the Department of Conservation and Recreation (DCR) manages the state's natural resources and provides technical assistance and grants to local jurisdictions for comprehensive outdoor recreation planning. DCR has a number of programs that manage open space, natural, and recreation resources, including the Virginia Outdoors Foundation, Scenic Rivers Program, Virginia Byways Program, Natural Heritage Program, Floodplain Management Program, and Nonpoint Source Pollution Control Program. DCR may purchase lands for green space protection or recreation, or assist local jurisdictions in green space . (www.state.va.us/~dcr/dcr_home.htm)

County and Local Governments

Local government park and recreation agencies acquire, develop, and maintain recreation facilities, such as greenways and regional parks, for local citizens. Although these agencies may acquire land by fee simple acquisition or condemnation, they often rely on land use controls, such as zoning and subdivision regulations, or tax incentives to protect recreation and green space lands. The following methods may help local jurisdictions develop greenways in the Washington area:



Partnerships between agencies can enhance connectivity and safety for pedestrians and bicyclists. At Ronald Reagan National Airport, the National Park Service and the Metropolitan Washington Airports Authority worked together to build pedestrian bridges over exit and entrance ramps to the airport.

"The future sustainability of the region is predicated on building partnerships between the business and conservation communities. There is an immediate need to bring the two interests together, initiate a dialog between them and try to find common ground."

- Report of the Metropolitan Greenspace Workshop, October 1994

"Amidst the growth and vitality of every community it's crucial to save the havens for heart and mind that all of us need and enjoy. We find respite in nature, in reminders of our heritage and in tree-lined streets. And we are able to do that because Presidents, and County Councils and citizens before us acted to preserve these places. Now it's our turn to act."

Councilmember Derick Berlage , Montgomery County, Maryland

Purchase or Transfer of Development Rights

The *purchase* of development rights enables a local government to purchase the right to develop more intensive uses from a landowner. The landowner receives compensation for the rights and the property is given a lower value, reducing property taxes. This enables the government to control the type or amount of density on the property without buying the property outright.

The *transfer* of development rights enables landowners to increase potential development density on one property by lowering development density on another. This enables the local government to direct density and growth away from sensitive landscapes without paying for development rights. Typically, the transfer of development rights is regulated under a legally established program that buys and sells density credits. Under the program, development can be distributed over the whole community rather than in just a small number of large projects. Proceeds from the sale of development credits can be used to purchase additional lands for open space.

As the region faces increasing development pressure, jurisdictions are considering the purchase or transfer of development rights as a potential option to protect green space from urban sprawl. However, Fairfax County is the only jurisdiction actively purchasing and transferring development rights to guide growth.

Development Proffers

Development proffers enable developers to set aside a portion of their development for certain uses, such as park areas, trails, or open space. In some jurisdictions, these proffers are made voluntarily to help mitigate impacts resulting from the proposed use of the land. In others, development proffers are negotiated between the builder and the county during the rezoning and approval process in order to equate the potential impact of development with the potential benefit of the proffer. In counties that are experiencing severe development pressures, a developer may be required to set aside 50 percent of the developable land for open space by clustering buildings, as well as incorporating other features such as buffer plantings, screening or setbacks from critical areas.

Development proffers is the most frequently used method for acquiring green space within the Washington area. For several jurisdictions, including the City of Fairfax, Loudoun County, and Prince William County, development proffers account for the majority of green space acquisitions. In other jurisdictions, such as Prince George's County, development proffers are mandatory for approved developments.

Performance Controls

Performance controls require developments to meet certain requirements, such as buffers, setbacks, open space areas, septic tank regulations, groundwater protection, critical and steep slope restrictions, floodplain restrictions, or impervious surface restrictions. Often these controls are regulated through performance zoning to designate permitted uses and impacts within a certain area. Performance zoning enables development to be planned with a comprehensive, environmentally based strategy that evaluates the potential impacts of the proposed development on a community's facilities, the environment, and local economic conditions. In some jurisdictions across the United States, points are assigned to the development for each of the standards achieved in the plan. A potential development is then approved or disapproved based on the number of points accumulated.

Land Bank

A land bank is a permanent fund that enables local governments to acquire or preserve important lands

for open space, agriculture, recreation, parks, shoreline access, or greenways, at a lower cost before development pressure raises land prices. Local governments have the opportunity to either recover all, or a portion of acquisition costs

by leasing purchased property back to a farmer or another entity, or reselling the acquired land with deed restrictions that guarantee the property's continued open space use. Various methods are available to fund the land bank, including Documentary Surtax and Property Tax Surcharge.

In the Washington area, several jurisdictions use methods similar to land banking, including Fairfax County, the City of Rockville, Montgomery County and Prince George's County. These jurisdictions acquire lands to protect green space and guide growth, but do not typically lease the property back to the former owner or resell the land with deed restrictions.

Non-Governmental Organizations

Nonprofit 501(c)(3) organizations often have more success acquiring and implementing greenway systems due to their commitment, flexibility, in-depth knowledge of local issues, and ability to motivate volunteers. These groups can reinforce government efforts or they can lead implementation using government programs for support.

Nonprofit organizations that may be involved in green space protection include civic groups, universities, and quasi-public agencies; however land trusts are most commonly involved in protecting open space, agricultural lands, wildlife habitats, and natural resource lands. Land trusts are typically local, private nonprofit organizations with boards of directors comprised of private citizens.

The Coordinated Development District (CDD) zoning overlay "provides the City with an opportunity to work closely with developers to achieve a more balanced development program for [large sites with significant development potential]. This would include enhancement of open space and recreational opportunities as part of a development package. A recent example is the Stonegate Project which, in addition to meeting it's own recreational needs, will provide four and one-half acres of stream valley park for the enjoyment of City residents."

- City of Alexandria 1994 Parks and Recreation Master Plan



The City of Alexandria is working with landowners to develop public open space and trails within commercial developments, such as this trail along Potomac Yards.

"Many of the green places and open spaces that need protecting most today are in our own neighborhoods. In too many places, the beauty of local vistas has been degraded by decades of ill-planned and ill-coordinated development."

- Vice President Albert Gore, January 12, 1999

Land trusts rely on private funds, corporate or foundation grants, and property gifts to carry out their land acquisition and management activities. A number of trusts also use public funds to purchase open space.

Land trusts preserve open space in a variety of ways. Some use their funds to buy real estate and then manage or lease back their holdings. Others purchase conservation easements which protect sensitive land from development while allowing owners to sell their remaining property interests to whomever they please. Land trusts also purchase and resell land with deed restrictions that guarantee the property's open space character in perpetuity. Alternatively, trusts sometimes acquire land temporarily and then transfer it to public or private conservation organizations. Since they are less fettered by regulation, private land trusts are usually able to respond more quickly than governmental entities to sudden and fleeting purchasing opportunities. They also use their real estate experience to help public agencies with the mechanics of acquisition.

Several national nonprofit organizations and land trusts that actively acquire land include the following:

The Trust for Public Land (TPL) works to protect land for human enjoyment and well-being by helping "conserve land for recreation and spiritual nourishment and to improve the health and quality of life of American communities." TPL's legal and real estate specialists work with landowners, government agencies, and community groups to: create urban parks, gardens, greenways, and riverways; build livable communities by setting aside space in the path of growth; conserve land for watershed protection, scenic beauty, and close-to-home recreation; and safeguard the character of communities by preserving historic landmarks and landscapes. Since 1972, TPL has helped protect more than a million acres in 45 states—from expansive recreation areas, to historic homesteads and city parks.

The Trust for Public Land has a Chesapeake Field Office located in Washington, DC. For more information, call 202-543-7552 or visit their website at www.tpl.org.

The Nature Conservancy plays a large role in the conservation of the country's most valuable lands and waters. Their large membership has enabled them to protect more than 11 million acres of habitat in the United States and nearly 60 million acres in Canada, Latin America, the Caribbean, Asia and the Pacific. They currently manage 1,340 preserves, the largest system of private nature sanctuaries in the world. The Nature Conservancy uses a nonconfrontational approach that enables them to forge partnerships with landowners, corporations, and governments. The Conservancy works with the Maryland Heritage and Biodiversity Conservation and Virginia Natural Heritage Programs to identify critical areas of conservation. It uses leases, conservation easements, management agreements, and land acquisition to help ensure protection of sensitive lands. The Nature Conservancy headquarters is located in Arlington, Virginia. For more information, call (703) 841-5300 or visit www.tnc.org.

The Rails-to-Trails Conservancy is a 13 year-old nonprofit organization dedicated to enriching America's communities and countryside by creating a nationwide network of public trails from former rail lines and connecting corridors. Although the conservancy does not acquire lands, it will provide technical assistance to nonprofit organizations, citizen activists, agency staff and other trail advocates through their Trail Partner Program. The Rails-to-Trails Conservancy headquarters is located in Washington, DC. For more information, call 202-331-9696 or visit www.railtrails.org.

The Conservation Fund is a national conservation organization that works with private and public partners to protect land and water. The Fund is one of the first national nonprofit organizations that

integrates economic development with conservation. Since 1985, the Fund has protected more than 1.7 million acres of open space, wetlands, wildlife habitat, and historic sites.

The American Greenways Program is one of the Fund's major conservation programs. The Conservation Fund headquarters is located in Arlington, Virginia. For more information, call 703-525-6300 or visit www.conservationfund.org.

In addition to these national level land trusts, there are many land trusts in the Washington area that focus on this region. The following list includes only a few of these nonprofit organizations:

- The Potomac Conservancy (www.potomac.org)
- Accokeek Foundation (www.accokeek.org)
- Monocacy Watershed Conservancy, Inc.
- Patuxent Tidewater Land Trust (www.patuxent-tidewater.org)
- Land Trust of Virginia (www.landtrustva.org)
- Northern Virginia Conservation Trust (www.look.net/fairfaxLand/FLPThome.htm)
- Greater Sandy Spring Green Space, Inc. (sandyspringgreenspace.org)

Private Landowners

Many of the proposed greenways throughout the Washington Metropolitan area require acquisition of or access to private lands.

In many cases, landowners will voluntarily sell or donate land to be protected as part of a greenway; but in some cases, acquisition is unnecessary. Landowners may retain full title to their land and provide public access to the greenway through easements. Easements establish a legally binding contract that describes a mutual understanding of the specific use, treatment and protection that the lands will receive. Typically, a city, county, or nonprofit organization will purchase or hold the easement. Property owners who grant easements retain all rights to the property except those which have been granted by the easement. The property owner is responsible for all taxes associated with the property, less the value of

The Nature Conservancy has protected many sensitive habitats across the midatlantic. Although access to some of these landholdings is restricted, New Point Comfort, an 111-acre preserve on the western shore of the Chesapeake Bay in Mathews County, has been opened to the public. This preserve protects three major natural habitats: tidal salt marsh, maritime forest, and sandy beach, enabling visitors to observe over 200 species of birds from an handicapped-accessible boardwalk and observation deck.

"Grassroots groups in the region should develop stranger partnerships with each other and pursue funding opportunities on a united front."

- 1994 Metropolitan Greenspace Workshop Report



Companies in the Washington area are protecting historic sites and providing critical linkages in the greenway network by donating easements across private land, such as this former Mill located within an easement donated by Xerox along Goose Creek in Loudoun County.

the easement granted. Easements are generally restricted to certain portions of property, although in certain cases an easement can be applied to an entire parcel of land. Easements are transferable through title transactions, thus the easement remains in effect in perpetuity.

The following types of easements are often associated with green space development:

Conservation Easements

Conservation easements generally establish permanent limits on the use and development of land in order to protect natural resources. Dedicated conservation easements can qualify for both federal income tax deductions and state tax credits, reducing the donor's taxable income. Landowners retain all other property rights, but they may experience lower resale value on the land. Conservation easements do not always permit public access. While conservation easement donors may receive certain tax benefits, the primary motivation for granting the easement is usually to protect the cultural or natural resource values of the property.

Preservation Easements

Preservation easements are structured like conservation easements, except that they protect the historical integrity of a structure or landscape by defining sound management practices.

Public Access Easements

Public access easements provide the general public with the right to access and use a property for a specific purpose. Both conservation easements and preservation easements may contain clauses for the right of public access and still be eligible for tax incentives. Some public access easements may be written for a specific time period, making it difficult to open a greenway in perpetuity.

Joint Use Easements

Joint use easements combine multiple uses, such as public access and utilities, within a single easement. As a means of ensuring the preservation of open space and upholding environmental stewardship, utility companies around the country have been introducing programs and forming partnerships with local communities to develop greenways within existing utility corridors.

Management Agreements

Management agreements can be established between the county, local communities, nonprofits, public or private organizations and landowners who wish to participate in the development of the green space network. These agreements define areas of maintenance and management that are compatible with existing land management activities, especially where trails intersect with public or private properties and/or rights-of-way. Management agreements spell out specific duties, responsibilities and activities of local communities, nonprofits, government agencies, and public or private organizations that wish to assist with management activities. Generally, management agreements can be amended or terminated at any time by either party with 30 days written notice.

Adopt-a-Greenway Program Agreements

An Adopt-a-Greenway Program encourages community groups, greenway users, families, businesses, school groups, civic clubs and other organizations to join in managing the green space system. The lead organization

will need to work closely with the local communities to ensure that all Adopt-a-Greenway Program groups manage and maintain trails in a manner that is consistent with other land use objectives. Written agreements should be developed for each Adopt-a-Greenway group and a current record of this agreement should be kept on file. Groups will be assigned a specific section of the green space network, defined by location or milepost. The activities of each organization should be monitored by the lead organization.

Cross Access Agreements

The lead organization and local communities can use cross access agreements to permit private landowners that have property on both sides of a green space corridor access across the corridor. Adjacent landowners generally have the right of access at any time. However, they cannot block the right-of-way for trail users, other than for temporary measures such as permitting livestock to cross, or transporting equipment. Adjacent landowners are responsible for acts or omissions which would cause injury to a third party using the trail. If a landowner must move products, materials, livestock or equipment across the trail on a regular basis, appropriate signage should be installed to warn users of the trail to yield for such activities.



New River Trail State Park, located in western Virginia, was created in 1986, when Norfolk Southern Corporation donated a 57-mile tract of abandoned railroad right-of-way to the Commonwealth of Virginia.

"In 1994, Appalachian Power Company (APCo) entered into a memorandum of understanding with the Department of Conservation and Recreation and the Department of Game and Inland Fisheries to make some of their project lands available for public use through the Partners in Rivers Access Program. In addition to developments on project lands, APCo wanted to provide public recreational opportunities within their service area. They offered to provide funding to help DCR and DGIF acquire and develop public access sites on area rivers. These private dollars have been used by DCR, DGIF, and the local governments as seed money to complete a number of projects on the rivers in the APCo service area and New River Trail State Park."

- Virginia Outdoors Plan

Crossing of abandoned or active rail lines, utility corridors and/or roads and highways will require the execution of agreements with companies, local, state or federal agencies and organizations that own the rights-of-way. The crossing should be signed with appropriate regulatory, warning and information signs. In cases of large highways, these intersections may be above or below grade to reduce the risk of accidents.

Management Techniques

Good management of green space, greenways and trails is integral to their success. Safe greenways with well maintained trails and entrances will encourage residents and visitors to explore the green space network and give residents a viable choice for non-vehicular commuting within the region. This section presents four critical components of green space management: safety and security, maintenance, multiuse conflicts, and liability. It describes the main issues of each and offers several elements or steps that will lead to a better green space network. Information included in this section has been drawn from several sources, including: *Greenways: A Guide to Planning, Design, and Development, Park,*

Recreation, Open Space and Greenway Guidelines, Connecting Our Commonwealth: The Virginia Greenways and Trails Toolbox, and the National Bicycle and Pedestrian Clearinghouse Technical Assistance Series.

Safety and Security

Public Access

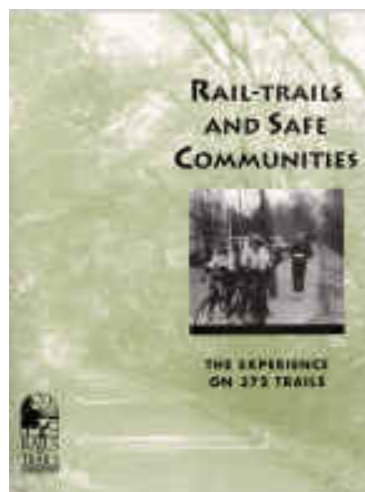
The general public should have free access to all recreational green space that is owned by the local communities, or that has been secured with a public access easement. All access and use should be governed by local community policies and trail ordinances. Permitted uses may include hiking, bicycling, running, wheelchair riding, skateboarding, rollerblading, mountain biking, horseback riding, or other uses determined compatible by local communities. These allowed uses will vary from trail to trail or by jurisdiction and should be designated at all trailheads and access points. Trails should be operated like other parks within local communities, typically open for public use from sunrise to sunset, 365 days a year, except as specifically designated.

Safety and Security Program

Safety is a duty and obligation of all public facilities. In order to provide a standard of care that offers reasonable safety measures, the greenway sponsor, grassroots greenway groups, and the local communities should work together to develop and implement a Safety and Security Program for the network. This program should consist of: well defined safety and security policies; the identification of trail management, law enforcement, emergency and fire protection agencies; the proper posting, notification and education of the trail user policies; and an emergency response system. The safety and security of the green space system should be coordinated with local law enforcement officials, local neighborhood watch associations, and other partners in the green space network.

Important components of a safety and security program include:

- Working with local community police to establish a **Green Space Safety and Security Committee** that can meet at regular intervals to discuss management of the network.
- Preparing a **Green Space Safety Manual** to distribute to management agencies and post at all major trail heads.
- Posting **User Rules and Regulations** at all public access points to trails.
- Establish a **consistent method of signage** along greenways to help user orientation and provide information on each greenway, such as size, length, and cultural and natural features.



The Rails-to-Trails Conservancy, in cooperation with the NPS Rivers, Trails, and Conservation Assistance Program, has documented the extent of crime on rail-trails and has reviewed it in a broader perspective in this document (available free online at www.trailsandgreenways.org).

- Working with the management partners to develop **Trail Emergency Procedures**.
- Inspecting facilities monthly with a **Safety Checklist**.
- Preparing a **User Response Form** for complaints and complements to be provided at all trail heads.
- Working with management partners to develop a **system to analyze reported accidents**.
- Conducting a regular **Maintenance and Inspection Program**, and sharing the results of these investigations with all management partners.
- Coordinating with other **Public Information Programs** to provide information about events and activities for local community residents.
- Continually **evaluating green space program objectives**.

Emergency Response Plan

In order to effectively patrol the green space network and respond to the potential for fire, floods and other natural or human-caused disasters, local communities and management partners should adopt an green space emergency response plan. This plan defines a cooperative law enforcement strategy for green space and trails based on services required and those that are typically provided by local police, sheriff, fire and EMS agencies. Specifically, all trails should be provided with an address system that denotes specific locations along the length of a trail corridor. A site plan that illustrates points of access to each trail corridor should be produced and kept on file in local emergency system facilities. Each trail should be designed to permit access for law enforcement, fire and EMS. A system of cellular-type emergency phones should be located in remote sections of the system, providing users with access to the area 911 Emergency System.

The emergency response plan should also define the agencies that should respond to 911 calls, and provide easy to understand routing plans and access points for emergency vehicles. Local hospitals should be notified of these routes so that they may also be familiar with points of access.

Trail Patrols

Volunteer or professional trail patrols help ensure trail safety. Establishing these patrols falls under the responsibility of the greenway or trail sponsor and can be performed by local law enforcement or other governmental agencies or volunteer groups. A Rails-to-Trails survey determined that the majority of trail systems across the country have patrolling. Patrols can be done by foot, bicycle (the most popular form of patrolling), or car for those trail systems which have vehicular access. The primary function of patrols include providing information on trail systems or use and providing assistance or calling emergency services, if needed. Just the presence of patrols can deter crime and encourage trail use and enjoyment, particularly in urban areas.

Maintenance

Trail Maintenance

Encouraging trail use to relieve traffic congestion is an important goal for the Washington area. Maintenance of trail facilities is critical to encouraging pedestrian and bicycle use. Trails that are not properly maintained can create potential liability risks for the managing agency.

Establishing a routine maintenance program is the responsibility of the trail managing organization. Tasks should be scheduled as often as appropriate to keep the trail clean, usable and safe. Tasks that promote safety should be given priority. The following activities are typically required for multiuse off road trail systems:

- Patching or repairing trail surfaces
- Inspecting, repairing, and/or replacing signs, traffic markers, bollards and gates
- Mowing shoulders and trimming vegetation
- Removing fallen trees, branches, etc.
- Repairing facilities after storm damage
- Cleaning culverts, catch basins or other drainage structures
- Repairing lighting, benches, water fountains, and other trail facilities
- Maintaining bridges and tunnels
- Inspecting all trail facilities and structures
- Removing litter and trash

Maintenance of bikeways is similar to multiuse trails. Removing road debris or leaves or snow is even more important to keep surfaces clean and safe for trail users. In addition, these routes need to be well marked with lane stripes and signage, and free of drainage structures, changes in surfaces or other obstructions.

Developing a maintenance budget is also important to ensure activities are performed at the intervals needed. For example, painting of signs or striping needs to be performed on a five year cycle and resurfacing on a ten year cycle, so funds for these activities need to be included in the park agency's or other trail management organization's budget at the appropriate funding cycles.

Volunteer Support

Community volunteers can be very important to trail maintenance and management programs. Potential sources of volunteer labor in the Washington area include local bicyclist clubs and groups, trail groups, historical groups, Boy Scouts, Girl Scouts, and civic clubs.

A manual for green space volunteers can be



In Montgomery County, Park Police Friends patrol the trails by foot, bike and horse. The Friends consist of community members and local businesses who help organize special events to acquire needed equipment and services for the officers and volunteers.

- Park Police Friends Website, www.parkfriends.org

developed to guide and regulate volunteer work. The manual should include a description of appropriate volunteer efforts, request forms, waiver and release forms, and a completion form on which volunteers are asked to summarize their accomplishments. Written guidelines would also be provided for volunteer work in floodplains.

"The design and creation of open space is the beginning. But this investment must last virtually forever. That means making a strong commitment to maintaining our open space -- not just adequate, but superb maintenance."

- Arlington County Open Space Master Plan, 1994

To better organize volunteer activity, an "Adopt-a-Trail" program can be developed. Participants who adopt a segment of trail would be responsible for periodic trash pickup, but could also install landscaping, prune trail-side vegetation, develop wildlife enhancement projects, and install site amenities. "Adopt-a-Trail" volunteers could be allowed to display their names on a sign along the adopted section of green space to recognize their contribution.

Multi-Use Conflicts

What Causes Conflicts

As trails become more crowded, conflicts arise between different users. On paved trails, bicyclists, pedestrians, and rollerbladers come into conflict. On natural surface trails, pedestrians, mountain bikers, and equestrians come into conflict. People moving at a fast pace for exercise may disturb those using the same trail for nature observation or family outings with children.

Besides crowding or mixing user groups, a number of other factors can cause trail conflict. The National Bicycle and Pedestrian Clearinghouse identifies some of these different attitudes toward the environment, varying standards of behavior, and different levels of tolerance for other people. Also, some trail users may stereotype other user groups (for example, hikers versus bicyclists' attitudes) and complain of conflicts whether these user groups are causing them or not. Understanding the nature of conflicts is important to developing appropriate actions to resolve them. For more information on multi-use conflicts, see the American Trails resource library at <http://www.outdoorlink.com/amtrails/resources/ManageMaintain/index.html>.

Conflict Resolution

Techniques to resolve conflicts fall into the following four categories:

Design solutions: A trail can be designed or redesigned to reduce user conflicts. Design techniques may include:

- Painting a center line on multiuse trails
- Building trails with adequate widths depending on expected level and type of use
- Designing adequate sight distances
- Designing to control speeds, including varying trail surfaces
- Providing separate trailheads for different users
- Designing parallel trails for separate users, such as equestrians and bicyclists

Education: Posting guidelines for trails and distributing trail brochures help educate trail users and prevent potential conflicts. Education programs should:

- Communicate why the trail is shared and the benefits of cooperation
- Communicate the consequences of problem behavior
- Provide brief information on trail etiquette
- Communicate types of conditions to be expected along the trail length and suitable areas for suitable uses
- Provide information about safety and security, including points of contact for emergency response

User Involvement: Public involvement in all aspects of trail planning and management is important to conflict resolution. Having user groups participate in the design process can help establish cooperation among the users and identify design solutions prior to construction. Once conflicts emerge, bringing user groups and the general public together to work out potential solutions is often required as part of the management process. Possibilities for public involvement include public meetings, trail councils, joint construction or maintenance projects, "Adopt-a-Trail" programs, and programmed events such as trail rides, etc.

Regulation and Enforcement: Regulations and enforcement can be required where conflicts repeatedly occur and public safety becomes an issue. Regulations typically address speed limits (for bicyclists), establishing rights-of-way for certain uses and users, or establishing certain times for certain uses.

One of the most effective ways to reduce conflict is to develop a Trail Ordinance that provides individual users with a code of conduct. Several communities across the United States have adopted progressive trail ordinances to govern public use and keep trails safe for all users. These ordinances can include rules and regulations for trail use that can be displayed both on brochures and information signs throughout the green space system to control potential conflicts. A typical ordinance might include the following rules and regulations:

- **Be Courteous:** All trail users, including bicyclist, joggers, walkers, wheelchairs, skateboarders and skaters, should be respectful of other users and adjacent



The International Mountain Bicycling Association triangle is commonly used for regulating rights-of-way. This symbol shows bicyclists yield to pedestrians, and pedestrians and bicyclists yield to horseback riders. Signs can be ordered by calling IMBA at 888-442-4622 or visiting their website at www.imba.com.

landowners.

- **Keep Right:** Always stay to the right as you use the trail, or stay in the lane that has been designated for your user group.

- **Pass on the Left:** Pass others going in your direction on their left. Look ahead and behind to make sure that your lane is clear before you pull out and around the other user.



Volunteer groups like the Friends of the W&OD Trail are critical to the success of many area greenways.

- **Give Audible Signal When Passing:** All users should give a clear warning signal before passing with a voice, bell or soft horn.

- **Control Your Bicycle:** Lack of attention, even for a second, can cause disaster - always stay alert! Maintain a safe and legal speed at all times.

- **Do Not Block the Trail:** When in a group, use no more than half the trail, so as not to block the flow of other users.

- **Yield when Entering or Crossing Trails.**

- **Use Lights at Night:** (where permitted) When using the Trail before dawn or after dusk be equipped with proper light.

- **Do Not Use this Trail Under the Influence of Alcohol or Drugs.**

- **Clean-up Your Litter:** Pack out what you bring in and clean up after your pets.

- **Keep Pets on Leashes:** All pets must be kept on secure and tethered leashes.

- **Prohibition on Camp Fires:** Fires, for any purpose, are prohibited within the Trails System. Any person caught lighting a fire for any purpose will be prosecuted to the fullest extent of the law.

Liability

Liability issues with greenways and trails are more perceived than real. Liability is an issue that is often discussed during the planning and public input process for new greenways programs; and it should always be addressed up-front with direct information and advice.

The majority of liability risks related to operating a greenway or trail system are associated with segments that are heavily-used. Examples of liability risks include: personal injury from accidents, trespassing and damage to private property, contract or trust violations to the managing organization or adjacent property owner, or violations of other laws, such as environmental damage. Recreational use

statutes and insurance programs can offer protection from these risks.

State Recreational Use Statutes cover liability issues for private landowners and nonprofit groups that own or manage trails. These statutes are in place for 48 states, including Maryland and Virginia, and protect private landowners from personal injury suits when their property is open to public use without fees. These statutes also can provide immunity for public agencies, such as state or county agencies; although typically these public agencies have their own liability and risk management programs.

Liability insurance is also recommended for nonprofit groups and public agencies to cover possible litigation suits related to accidents or damages on greenways or trails. Insurance programs need to be tailored to the type of use associated with each greenway, as well as employee or volunteer programs for maintenance. Commercial general liability insurance is available to cover property damage, including buildings, structures and personal property, as well as medical and business expenses associated with operation and management of a greenway or trail. Umbrella policies offer even broader coverage; in fact, a "Green Umbrella" policy is available from the Land Trust Alliance that has been specifically prepared for nonprofit groups involved in land conservation for public use. Information on these and other policies are available from the more common, larger insurance companies.

There are several other common ways to potentially reduce exposure from legal actions associated with trail/greenway operations and management:

- Trails should be properly designed using standard and acceptable design guidelines, such as the American Association of State Highway and Transportation Officials (AASHTO) *Guide for Development of Bicycle Facilities*.

- Standard maintenance programs should be in place to reduce potential hazards to users, particularly after storm events and flooding.

Technical Assistance

There are many Federal, state, local, and nonprofit programs offering technical assistance to help citizens and community leaders plan and advance locally-led greenway projects. These programs may help develop management and funding strategies, as well as guide community outreach. They typically offer a range of services, such as: assessing resources and mapping, developing promotional brochures and events, planning, facilitating public meetings, helping manage and coordinate projects, and serving as a liaison between organizations and agencies.



Trail managers say that following accepted trail design and management practices can go a long way toward limiting a trail manager's liability.

A list of major organizations and agencies that provide technical assistance are listed on the following page. The focus, available services, and selection criteria of each organization varies widely. For more information, call the telephone numbers provided or go to their websites. In addition to these organizations, many local governments offer technical assistance to projects within their jurisdiction. Government contacts are listed at the end of this document.

Federal Programs

- Rivers, Trails and Conservation Assistance Program, National Park Service, (202) 343-3780, www.ncrc.nps.gov/rtca
- National Scenic Byways Resource Center, FHWA, (800)4BYWAYS, www.byways.org
- Chesapeake Bay Local Assistance Department, (804) 225-3440
- Chesapeake Bay Foundation, (410) 268-8816, www.cbf.org

State Programs

- Maryland Greenways Commission, (410) 260-8780, www.dnr.state.md.us/greenways/commission/index
- Virginia Department of Conservation and Recreation, Division of Planning & Recreation Resources, (804) 786-6140, www.state.va.us/~dcr/dcr_home.htm
- Virginia Outdoors Foundation, (703) 327-6118

Regional and Local Programs

- Northern Virginia Planning District Commission, (703) 642-0700

Nonprofit Programs

- The American Greenways Program, (703) 525-6300, www.conservationfund.org
- Conservation Fund Land Advisory Services, (703) 525-6300, www.conservationfund.org
- Trails and Greenways Clearinghouse, (877) GRN-WAYS, www.trailsandgreenways.org

- Northern Virginia Conservation Trust, (703) 354-5093

Community Outreach Techniques

Trails and greenways are at first glance a "mom and apple pie" issue – everybody likes them. However, when proposed as a potential project in or near people's residences, they often become unpopular, resulting in a "Not-In-My-Backyard" (NIMBY) attitude. This can happen despite all the good intentions of trail proponents or park agencies to provide alternate transportation systems or additional community recreational resources. This section provides information on community outreach techniques that may help generate public support for greenways, as well as data sources for further investigation.

Confronting Opposition to Greenways

Local residents and greenway neighbors who oppose greenways typically object for three reasons:

- Economic impacts
- Safety and security concerns
- Public and private property liability risks

Understanding these concerns enables greenway planners to confront opposition and helps turn opponents into supporters. There are many publications and websites that provide information on public opposition to greenways, including:

- National Transportation Enhancements Clearinghouse, www.enhancements.org
- Rails-to-Trails Conservancy, www.railtrails.org
- Trails and Greenways Clearinghouse, www.trailsandgreenways.org
- Bicycle Federation of America, www.bikefed.org

Economic Impacts

Economic objections to greenways often relate to the financial burden of acquiring lands and constructing greenways on local governments and to the devaluation of properties adjacent to greenways. As described in the benefits of greenways, studies have found that bike and pedestrian facilities can be positive economic development projects for communities. Revenues from additional tourism or indirect spending associated with trail use will often exceed the public costs of construction and operation. Many communities across the country are trying to expand their trail systems either for commuting or recreational purposes to promote this asset to new residents or visiting tourists.

In addition, the acquisition and implementation of greenways is rarely achieved by a single municipality. Typically, greenways are funded through multiple sources, such as Federal, state, and private grants combined with local Capital Improvement

Program funds. A nationwide poll (as cited by the *National Bicycle and Pedestrian Clearinghouse*) has found that a majority of adults surveyed prefer that their local governments spend more funding for safe, secure bicycle paths and pedestrian walks. Likewise, property values along greenways have typically been found to rise once implementation is complete.

Safety and Security Issues

Opposition to greenways is often tied to perceived threats to safety and security within the greenway and to areas adjacent to the greenway. Physical safety of users within a greenway can be enhanced by:

- Good trail design that incorporates signage, lighting, access to phones, location of entrances, and clear sight lines; eliminates dead-ends and isolated areas; and improves tunnels and underpasses.
- Establishing regular maintenance programs to monitor condition and activity along the greenway.

- Patrolling the greenway regularly to discourage inappropriate activities and establish a security presence within the greenway.
- Involving local neighborhoods in maintenance and patrol of the greenway to provide more eyes and ears for local police.

Studies have found that active greenways and trail systems do not contribute to an increase in crime and vandalism and often reduce crime along underutilized corridors, such as abandoned rail lines. Finally, greenways with trails provide safer conditions for walking and bicycling than on-road bicycle routes or sidewalks.

Liability

Liability issues are an important consideration when working with the public on new trail systems. Survey results by the Rails-to-Trails Conservancy have shown that actual risks are minimal; fewer than 7 percent of trail managers responding to a survey on this subject have had any claims and the majority



The Rails-to-Trails Conservancy have put together this valuable resource documenting the extent of opposition to rail-trail projects and generating strategies for successful partnerships and outreach (available free online at www.trailsandgreenways.org).

A 1992 National Park Service study of the Burke-Gilman Trail in Colorado found that property values along the corridor either increased or remained constant.

"Four separate studies conducted between 1979 and 1997 concluded that rail-trails do not increase crime."

- Rail-trails and Safe Communities, The Experience on 372 Trails.

Rails to Trails Conservancy.

of these have been minor and easily resolved. State recreational use statutes cover liability issues for private landowners and nonprofit groups that own or manage trails; and liability insurance will cover nonprofit groups and public agencies from possible litigation suits related to accidents or damages on greenways or trails. See the Liability section in Management Techniques for more information.

Public Outreach Strategies

Without community support, local governments or planning organizations have little opportunity to implement greenways. Planners rely on the public to help:

- Identify important natural, cultural, and community resources that should be protected and connected along the greenway.
- Determine appropriate greenway and trail alignments.
- Generate funding for acquisition and implementation.
- Manage and maintain the greenway after implementation.
- Promote the greenway within the community and to visitors.

In order to build successful partnerships between the community and the local government or planning organization, it is important to develop a public outreach strategy that involves the community in greenway planning and implementation. The following techniques may be used to build strong community participation programs:

Invite the public to participate

Successful greenways are designed to serve the communities they link. In order to serve those communities best, it is important to identify who would use the greenway and involve those users in the planning and design process. Organizing an inclusive planning effort will build ownership of the greenway within the community and generate public support. The easiest way to invite the public is to contact local organizations, such as civic associations, recreation groups, neighborhood associations, schools, churches, garden clubs, and local environmental groups. Individuals may be contacted by posting notices in newspapers or newsletters, libraries, coffee shops, and local websites.

Hold interactive planning and design workshops

Interactive planning and design workshops enable community residents to participate in the planning process. Workshops are organized around a series of exercises that enable individuals to express their ideas and concerns, as well as listen to others. The process helps build a vision for the greenway within the community and builds consensus between potentially disparate groups.

Present plans to the public for review and comment

Greenway plans and designs should be presented to the public to get comments and gauge community support. In order to maximize the number of citizens who see and comment on the plan, it should be presented in several forums. Many jurisdictions use a formal public presentation followed by oral and written comments. This presentation may be supplemented by a printed hand-out distributed at local government offices, libraries, schools, coffee shops, and other community facilities, as well as by a greenway website on the internet. Presentations to school groups at the middle, junior high, and high schools is also a good way to get reactions and comments from

children and teenagers who would use the greenway, but who typically do not attend public meetings.

Generate publicity

Publicity about trails is an important tool to build support and encourage public use. Several different techniques are listed below.

News media: Using the local newspaper to print a story about a new greenway or public event related to a greenway, such as public meetings during the design and planning stages of trail development, is an excellent, inexpensive way to keep the public informed of greenways projects. Contact the media about an event before it occurs and prepare a news release or press kit to provide accurate information. Also, upcoming meetings can be printed in the community calendar or upcoming local events section of newspapers.



Public involvement - early and often - is critical to successful greenway implementation.

"Initiate a promotional campaign to educate the public about existing access to existing green spaces. Signage and advertising could go a long way. We should produce a single user-friendly map of greenways (modeled after Metro's map) to show access to green spaces throughout the region."

- 1994 Metropolitan Greenspace Workshop Report

Brochures and Newsletters: Printed material is particularly helpful in providing information, such as maps, membership information, donation requests and advertisements, about a greenway. Brochures can be designed simply as a folded, single page piece or more elaborately for the larger regional trail systems, such as the Potomac Heritage National Scenic Trail brochure published by the Potomac Heritage Partnership.

Newsletters are also helpful in providing information on volunteer opportunities and to keep supporters of nonprofit organizations involved in greenways informed. Mailings for nonprofit organizations with Section 501(c)(3) status can obtain bulk rate-mailing permits from the U.S. Postal Service.

Events: Holding events to raise public awareness of a greenway, raise money and encourage volunteer assistance for management and operations is an effective marketing tool. Popular events include river festivals, trail clean-up days, races, or fund-raising events, such as luncheons or receptions. If possible, event opportunities should coincide with other environmental awareness days, such as Earth Day, Virginia Rivers Month (June) for Virginia trails, or National Trails Day (the first Saturday of each June). These events need significant advance planning, community cooperation and good advertisement to be successful. Typically, the more cooperating partners involved in an event, the more successful it will be.

Products: Another marketing technique is to produce give-away items for advertisement, such as bumper stickers, commuter mugs, hats, or water bottles. Involving local businesses to contribute in the cost or distribution of these items can help offset costs.

Additional information on this subject can be found in the *Guide to Public Relations for Nonprofit Organizations and Public Agencies* available from the Grantsmanship Center (www.tgci.com).

Appendix

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Informational Websites

Accokeek Foundation www.accokeek.org

American Hiking Society www.americanhiking.org

American Trails www.AmericanTrails.org

Anacostia Watershed Society www.anacostiaws.org

Chesapeake Bay Gateways and Water Trails

Initiative www.chesapeakebay.net/program.

Coalition for the Capital Crescent Trail www.waba.org/paths.

Coalition for the Metropolitan Branch Trail www.waba.org

East Coast Greenway www.greenway.org

Northern Virginia Conservation Trust www.look.net/fairfaxLand/FLPThome

Federal Highway Administration Recreational Trails Program www.fhwa.dot.gov/environment/rectrail.

Friends of the W&OD Trail www.wodfriends.org

Grantsmanship Center www.tgic.com

Greater Sandy Spring Green Space, Inc. www.sandyspringgreenspace.org

Land Trust of Virginia

www.landtrustva.org

Maryland Department of Natural Resources www.dnr.state.md.us

Maryland Greenways Commission www.dnr.state.md.us/greenways/commission/index

Maryland Transportation Enhancement Program www.sha.state.md.us/oppe/tep6.

Metropolitan Washington Council of Governments www.mwcog.org

National Scenic Byways Online www.byways.org

National Transportation Enhancements Clearinghouse www.enhancements.org

Nature Conservancy www.tnc.org

Oxon Hill Bicycle and Trail Club www.ohbike.org

Patuxent Tidewater Land Trust

www.patuxent-tidewater.org

Pedestrian and Bicycle Information Center www.walkinginfo.org

www.bicyclinginfo.org

Potomac Conservancy www.potomac.org

Prince George's County Department of Parks and Recreation www.pgparcs.com

Rails-to-Trails Conservancy www.railtrails.org.

Rivers, Trails and Conservation Assistance Program www.ncrc.nps.gov/rtca

Surdna Foundation www.surdna.org

The Conservation Fund www.conservationfund.org

The Foundation Center www.fdncenter.org

Trails and Greenways Clearinghouse www.trailsandgreenways.org

Trust for Public Land www.tpl.org

University of Maryland Environmental Finance Center www.mdsg.umd.edu/EFC

Virginia Department of Conservation and Recreation www.state.va.us/~dcr/dcr_home.

Virginia Resource Access System www.cns.state.va.us/dhcd/VRAS.CFM

Washington Area Bicyclist Association www.waba.org

Local Government Contacts

District of Columbia

Department of Public Works Callistus Nwadike (202) 671-2308

Department of Parks and Recreation Ted Pochter (202) 673-6525

Maryland

Maryland Department of Natural Resources Teresa Moore (410) 260-8780

Maryland Greenways Commission

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City of Bowie Lori Shirley, Planner (301) 609-3051

City of College Park Terry Shum (301) 277-3445

City of Rockville

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Montgomery County Mary Dolan (301) 495-4552

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City of Falls Church Shirley Street, Parks & Recreation Department (703) 248-5077

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Loudoun County

Jim Compher, Department of Parks, Recreation, and Community (703) 777-0343

Prince William County Patti Pakkala, Prince William County Park Authority (703)
792-4212

List of Proposed Greenways

There are many proposed greenways within the Washington area. Some are in the process of implementation, while others are just concepts under consideration. The following list represents proposed greenway projects that have been recognized by individual jurisdictions. The projects are listed in alphabetical order by jurisdiction and are listed with the agency that would lead implementation. Proposed greenways that cross jurisdictional boundaries are listed in multiple jurisdictions.

District of Columbia

Anacostia Greenway, National Park Service (NPS) and DC Office of Planning

Fort Circle Greenway, NPS

Metropolitan Branch Trail and Anacostia Gateway (Prince George's Connector), DC
Department of Public Works (DC DPW), NPS

Watts Branch Greenway, DC DPW

Potomac Heritage National Scenic Trail, NPS, DC DPW

Maryland

City of Bowie

Collington Branch, Maryland - National Capital Park & Planning Commission (M-NCPPC)

Horsepen Branch, M-NCPPC

Washington, Baltimore, and Annapolis Trail, M-NCPPC

Patuxent Regional Greenway, M-NCPPC, State of Maryland (MD), Washington Suburban
Sanitary Commission

City of College Park

Trolley Trail, City of College Park

City of Frederick

Carroll Creek Greenway, City

H&F Trolley Trail, County, City

Rock Creek Greenway, City

City of Gaithersburg

B&O Railroad Trail, City
Great Seneca Greenway Trail, City
Long Draught Greenway Trail, City
Muddy Branch Greenway, City
Whetstone Greenway Trail, City

City of Rockville

Bicycle Beltway , City
Connections to Bethesda Trolley Trail, City
Connections to C&O Canal National Historical Park, Montgomery County
Gude Drive to Rock Creek Bike Path, City
Maryland 355 (Rockville Pike North and South), City
Thomas Farm, Developer, City

Frederick County

B&O Trail, Town of Mt. Airy
Ballenger Creek Greenway, County
Bush Creek Greenway, County
Catoctin Creek Greenway, County
Catoctin Trail Extensions, County, Maryland Department of Natural Resources (MD DNR),
NPS
Emmitsburg Greenway and Trail, Emmitsburg
Emmitsburg Railroad Trail, County, Emmitsburg
H&F Trolley Trail, County and City of Frederick (City)
I-270 Transitway, County
Linganore Creek Greenway, County
Middletown Greenway, Middletown, County
Middletown-Myersville Trolley Trail , County
Monocacy River Greenway, County, City, NPS
Sugarloaf - Little Bennett Greenway , County, MD DNR
Tuscarora Creek Greenway, County/City

Walkersville-Woodsboro Corridor, County

Montgomery County

Bethesda Trolley Trail, M-NCPPC

Black Hill Regional Park, M-NCPPC

Bucklodge Branch Stream Valley Park, M-NCPPC

C&O Canal National Historical Park Access Improvements, M-NCPPC, NPS

Clarksburg Greenway, M-NCPPC

Clarksburg Master Plan Bikeway

Corridor Cities Transitway

Dry Seneca Creek , M-NCPPC

Eastern County Corridor, M-NCPPC

Great Seneca Creek , M-NCPPC

Gude Drive/Key West Ave./Great Seneca Highway Bike Paths

Hawlings River, M-NCPPC

I-270 Corridor Bikepath, M-NCPPC

Inter-County Connector ROW

Little Bennett Creek, M-NCPPC

Little Paint Branch, M-NCPPC

Little Seneca Creek, M-NCPPC

Magruder Branch, M-NCPPC

Mathew Henson Greenway , M-NCPPC

Mathew Henson State Park, MD DNR

Metropolitan Branch Trail, M-NCPPC

Montrose Parkway Greenway

Muddy Branch , M-NCPPC

North Branch of Rock Creek, M-NCPPC

North Germantown Greenway, M-NCPPC

Northwest Branch Greenway, M-NCPPC

Ovid Hazen Wells Park, M-NCPPC

Paint Branch , M-NCPPC

Patuxent Regional Greenway, M-NCPPC, MD, Washington Suburban Sanitary Commission

Reddy Branch, M-NCPPC

Ridge Road/ MD 27 I-270 Interchange Bike Path

River Road

Rock Creek, M-NCPPC

Seneca Greenway , M-NCPPC, MD, Seneca Coalition

Ten Mile Creek, M-NCPPC

Upcountry Corridor, M-NCPPC

Upper Paint Branch Stream Valley Park, M-NCPPC

Wildcat Branch Stream Valley Park, M-NCPPC

Prince George's County

Anacostia River Greenway, M-NCPPC

Cabin Branch Greenway, M-NCPPC

Charles Branch

Cherry Hill Road Trail, County Department of Public Works and Transportation (DPWT)

Chesapeake Beach Rail-Trail/Trolley Trail, M-NCPPC

Collington Branch SVP Greenway, M-NCPPC

DC Trolley Trail, M-NCPPC

Folly Branch, M-NCPPC

Good Luck Road Trail, County DPWT

Henson Creek Greenway, M-NCPPC

Horsepen Branch, NCPPC

Indian Creek Extension, M-NCPPC

Lottsford Branch Greenway, M-NCPPC

Mattawoman Branch SVP Greenway, M-NCPPC

MD 193, Maryland State Highway Administration (MDSHA)

Oxon Hill Road Trail, MDSHA

Patuxent Regional Greenway, M-NCPPC, MD, Washington Suburban

Sanitary Commission

Piscataway Creek Greenway, M-NCPPC

Potomac River Greenway, M-NCPPC

Prince George's Connector, M-NCPPC

Rhode Island Avenue, Hiker/Biker Trail, City of College Park,

Southwest Branch , M-NCPPC

Suitland Parkway Greenway, NPS

Tinker's Creek SVP Greenway, M-NCPPC

Washington, Baltimore, Annapolis Trail, M-NCPPC

Western Branch SVP Greenway, M-NCPPC

Takoma Park

Metropolitan Branch Trail, M-NCPPC

Virginia

Arlington County

Boundary Channel Bridge Underpass, NPS

Columbia Pike-Pentagon-Boundary Drive Connector, County

East Cemetery Wall Trail, County, VA

Four Mile Run-Shirley Highway Crossing, County, Northern Virginia Regional Planning Authority (NVRPA), Virginia Department of Transportation (VDOT)

George Washington Memorial Parkway Crossing, County, NPS

Mount Vernon Trail Extension, NPS

Ninth Street Greenway, County, DoD, NPS

Potomac Yard, Developer

Roosevelt Bridge to Mount Vernon Trail, NPS

Rosslyn Circle Area Improvements, County, NPS, VDOT

W&OD Bluemont Trail Realignment, NRVPA

Washington Boulevard Trail, County, VDOT

City of Alexandria

Cameron Station, Developer

Carlyle Project between Duke St. and Eisenhower Ave., Developer

Chamblis Street Connector, City

Eisenhower Greenway/Bikeway Improvement, City

Eisenhower/Wilson Bridge Approach Connector, City

Forest Park Trail

Holmes Run/Raleigh Connector, City

Jones Point Park Trail

Millrace Connector, City

Mt. Vernon Trail/Abingdon Spur, City

Payne Street Connector, Developer

Potomac Yards , Developer

Taney Avenue Connector, City

Tarleton Park Trail/Bikeway, City

W&OD Railroad Alexandria Branch, City

Fairfax County

Accotink Greenway, Fairfax County Park Authority (FCPA)

Cross County Trail, FCPA

Cub Run/Rocky Run, FCPA

Difficult Run, FCPA

Dulles Suburban Center Greenways, County

Holmes Run/Turkey Cock, FCPA

Laurel Hills Greenway, NVRPA

Fairfax Heritage Trail, NVRPA

Pimmit Run, FCPA

Pohick/South Run, FCPA

Potomac Heritage Trail, NPS, NVRPA

Sugarland Run, FCPA

City of Fairfax

Accotink Creek Middle Fork Extension, City

Accotink Creek North Fork, City

Church Street Trail, City

Ranger Road Park Trail, City

City of Falls Church

Crossman Park Boardwalk, City

Falls Park Rees Trail, City

Prince William County

Broad Run Greenway, PWC Park Authority

Bull Run/Occoquan River Connection, Prince William County, VA

Neabsco Creek Greenway, PWC Park Authority

Old Bridge Road Trail,

Potomac Heritage National Scenic Trail, NVRPA, PWC Park Authority, private developers

Powells Creek Greenway, PWC Park Authority

Loudoun County

Ida Lee Park Trail, City of Leesburg (City)

Loose Goose Creek, County, NVRPA

Potomac Heritage National Scenic Trail, NPS, County

W&OD Connection to White's Ferry, County, NVRPA, City

W&OD Trail Extension to Bluemont, County