

# Chapter 4

## **Greenways, Trails & Open Space**

# Chapter 4 – Greenways, Trails & Open Space

Greenways and trails are important components of a community's comprehensive parks and recreation plan. Trails provide passive recreation opportunities and green corridors protect natural resources and important habitat areas. Easy access to trails facilitates exercise and fitness. Connecting parks and community destinations with trails and greenways adds to the livability and quality of life of a community. This chapter will explore the opportunities for greenways and trails in the South Schuylkill County region.

## Greenways & Trails

### Greenways

A greenway is corridor of open space. Greenways may vary greatly in scale from narrow ribbons of green that run through urban, suburban, and rural areas to wider corridors that incorporate diverse natural, cultural, and scenic features. They can incorporate both public and private property and can be land- or water-based. They may follow old railways, canals, or ridge tops, or they may follow stream corridors, shorelines, or wetlands, and include water trails for on-motorized craft. Some greenways are recreational corridors or scenic byways that may accommodate motorized and non-motorized vehicles. Others function almost exclusively for environmental protection and are not designated for human passage.

Greenways differ in their location and function, but overall, a greenway will protect natural, cultural, and scenic resources, provide recreational benefits, enhance natural beauty and quality of life in neighborhoods and communities, and stimulate economic development opportunities.

### Benefits of Greenways and Trails

#### Social Benefits –

- Provide access to historically and culturally significant features.
- Provide opportunities to reconnect with the natural environment.
- Increase quality of life.



- Help to preserve the character and aesthetic appeal of a place or landscape.
- Provide significant new public places which can help to connect people and communities.
- Improve health and wellness of greenway and trail users.
- Heighten sensitivity to the natural environment by providing for interaction between people and nature.



#### Transportation Benefits –

- Promote non-motorized transportation.
- Provide safe alternative transportation routes for pedestrians and bicyclists which will lessen dependency on automobiles.
- Provide emergency access via trails to undeveloped areas.
- Reduce roadway congestion through redistribution of users to alternative transportation routes.



#### Ecological Benefits –

- Connect fragmented landscapes.
- Promote plant and animal species diversity.
- Provide corridors for wildlife migration and movement.
- Preserve and protect vital wildlife, plant, and aquatic habitats.



- Improve air quality and reduce noise.
- Protect natural areas.
- Reduce stormwater damage and promote flood mitigation within protected floodplains.
- Protect watersheds and groundwater retention areas.
- Store and convey floodwaters.
- Clean up abandoned corridors.



- Serve as a filtering zone; wetlands absorb pollutants and nutrients and slow surface run-off.

#### Recreation Benefits –

- Provide areas to jog, walk, bike, ride horses, cross-country ski, and canoe.
- Serve as sites for passive pursuits such as picnicking, fishing, and enjoying nature.
- Connect existing and planned trails.
- Encourage ecotourism.
- Provide landscapes for environmental education.
- Provide connections between parks and other protected lands.



#### Economic Benefits –

- Increase nearby property values.
- Precipitate new and expanded businesses related to greenway and trail use. New businesses will provide employment opportunities and revenues.
- Create tourist destinations which generate expenditures on food, services, and lodging.
- Reduce damage and financial loss from flooding by providing buffer areas along stream and river corridors.

## State and Local Greenway and Trail Initiatives

### Pennsylvania

In 1991, Pennsylvania Governor Tom Ridge enacted Executive Order 1998-3, charging DCNR, DEP, and PENNDOT, assisted by the Pennsylvania Greenways Partnership Commission, to develop an action plan for advancing a Pennsylvania Greenways Partnership Program. In June 2001, *Pennsylvania Greenways: An Action Plan for Creating Connections* was completed. The plan sets forth a series of goals and action items in a coordinated and strategic approach aimed at developing a statewide system of connected greenways.

#### Pennsylvania Greenways Vision

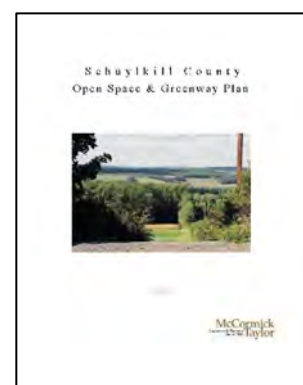
Pennsylvania and its many partners will develop an outstanding network of greenways across the Commonwealth, creating an asset highly valued by Pennsylvanians and enhancing the quality of life for all. This network of greenways will connect Pennsylvanian's open space, natural landscape features, scenic, cultural, historic and recreational sites, and urban and rural communities. Greenways will become one of the Commonwealth's most powerful tool to achieve sustainable growth and livable communities.

It is envisioned that Pennsylvania's greenways network will consist of individual greenways and regional networks of greenways of all kinds. While every greenway is important and adds value to Pennsylvania's landscapes and communities, a statewide greenways network achieves broad connections that are fundamental to sustainable environments in rural, suburban, and urban settings. The landscape connections that will result throughout Pennsylvania will create a "green infrastructure" of open space vital to the health of Pennsylvania's ecological systems and manmade communities. The statewide greenways network also can provide a new connectivity within and among Pennsylvania's communities, and promote healthier lifestyles with more abundant recreational opportunities and transportation alternatives, and stronger connections to cultural and historic places. This connectivity can be represented by the metaphor of the "hubs" and "spokes" of a wheel.

### Schuylkill County Open Space & Greenway Plan

The Schuylkill County Open Space & Greenway Plan recommended an interconnected network of area and corridors of preserved areas and environmentally sensitive lands and resources. The network includes five general conservation categories: Natural Areas, Greenways, County Lands, Watersheds, and Trails. The following elements of the network are within or partially within the South Schuylkill area:

- Natural Area – Lower Little Swatara Wetland
- Greenways – Blue Ridge Mountain





- Greenways – Panther Valley Tract
- County Land – Koenigs Creek Flood Control Dam
- Watersheds – Tumbling Run Reservoir
- Watersheds – Rattling Run Reservoir
- Trails – Bartram Trail
- Trails – Appalachian Trail
- Trails – West Branch Schuylkill-Blackwood-Indian Run Trail
- Trails – Little Schuylkill River Water Trail



## Greenway and Trail Initiatives of Adjacent Municipalities

The Southern Schuylkill region is contiguous to numerous municipalities in Schuylkill County and Berks County. Currently, only the Schuylkill River Trail and the Appalachian Trail extend between municipalities. The Schuylkill River Trail enters Schuylkill County from the south at Port Clinton Borough and extends northwest through South Manheim Township, Auburn Borough, West Brunswick Township, Landingville Borough, North Manheim Township, and Schuylkill Haven Borough. The Appalachian Trail follows the Blue Mountain ridgeline and crosses through portions of Port Clinton Borough, South Manheim Township, and Wayne Township.

## Organizing Elements of the Greenways and Trail Network

The 2001 Pennsylvania Greenways – An Action Plan for Creating Connections proposes that “... the Commonwealth should have a distinguishable greenway network, similar to the Interstate Highway System ...”. This greenway network will ultimately take the form of “hubs and spokes.” The “hubs” of this network are the destination and the “spokes” are the greenways and trail corridors connecting these destinations with the places where we live, work, and play. The following hubs and spokes have been identified in the South Schuylkill region:

### Hubs

#### Transportation –

- Schuylkill Transportation System – Bus Route #30 to Schuylkill Haven with stops in Schuylkill Haven, Cressona, and Penn State Schuylkill Campus.
- Reading and Northern Railroad – A regional railroad operating in eastern Pennsylvania, with headquarters located in Port Clinton and provides freight service in the region.

### Schools –

- Blue Mountain School District High School
- Blue Mountain School District Middle School
- Blue Mountain School District Elementary East
- Blue Mountain School District Elementary West
- Blue Mountain School District Elementary Cressona
- Penn State University – Schuylkill Campus



### Recreation –

- Municipal Parks
- Hawk Mountain Sanctuary
- Schuylkill Country Club
- Hidden Valley Golf Course
- Second Mt. Rod and Gun Club
- Appalachian Trail
- Bartram Trail
- Little Schuylkill Branch Water Trail
- Schuylkill River West and Main Branch Water Trail
- Port Clinton Grove



### Commercial – Employment –

- Route 61 Corridor – Orwigsburg-Schuylkill Haven
- Cressona Mall
- Orwigsburg Borough Downtown

- Schuylkill Haven Downtown

#### Other Destinations –

- Restaurants
- Churches
- Municipal Buildings
- Fire Halls



### Spokes

- |                            |                         |
|----------------------------|-------------------------|
| ■ Trails                   | ■ Utility Rights-of-Way |
| ■ Stream Corridors         | ■ Road Rights-of-Ways   |
| ■ Wooded Ridge Lines       | ■ Sidewalks             |
| ■ Sanitary Sewer Easements |                         |

### Barriers

There are several barriers to greenway corridor and trail development in the study area. The very resources that promote greenway potential, also influence land use and development patterns, resulting in barriers to connectivity. The major transportation corridors present significant barriers to connectivity. Route 61, Route 443, Route 183, and the active railroad line of the Reading and Northern Railroad are barriers to development of trails. Additionally, existing industrial, commercial, and residential development creates barriers to continuous trail corridors.

Alternative routes or engineering solutions such as bridges, underpasses, and controlled crossings must be incorporated to provide a connected network across these barriers. To create a comprehensive greenway and trail system, linkages that connect greenways and trails across barriers is critical to maximizing recreation benefits. In the Southern Schuylkill region it is important to work with PennDOT and municipal Public Works Departments to incorporate pedestrian and bicycle friendly linkage solutions when roadways, bridges, and underpasses are upgraded. It will be necessary to evaluate existing sidewalks and road rights-of-ways as part of a comprehensive system of greenways, trails, and trail links.

## Greenways in the South Schuylkill Region

The Schuylkill River, streams, and the Blue Mountain Ridge provide the spokes for the South Schuylkill region greenway system. Two major greenway corridors have been identified with 10 minor greenways that connect to the major greenway. The greenways are illustrated on the Greenway and Trail Map on page 4-22.



## Major Greenways

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**Schuylkill River Greenway** – The Schuylkill River Greenway follows the Schuylkill River corridor traversing seven municipalities of the region. From the southern boundary of Schuylkill County with Berks County, north to the Pottsville Borough boundary, the Schuylkill River meanders approximately 21-miles. The Schuylkill River Greenway is a major regional greenway extending from Philadelphia to northern Schuylkill County.



**Blue Mountain Ridge Greenway** – The Blue Mountain Ridge Greenway, also known as the Kittatinny Ridge Greenway, follows the Blue Mountain ridgeline, which generally aligns with the southern boundary of Schuylkill County. The greenway corridor in the South Schuylkill region includes portions of Weiser State Forest; State Game Lands No. 110, 80, and No. 106; and Hawk Mountain Sanctuary. The Appalachian National Scenic Trail is located within this greenway corridor. The greenway extends approximately 25 miles along the southern boundary of the South Schuylkill region municipalities' boundary with Berks County. The 200-mile regional greenway extends south into Maryland, crossing Fulton, Franklin, Dauphin, and Lebanon Counties; and northeast to New Jersey, crossing Berks, Carbon, Lehigh, Northampton, and Monroe Counties. The Kittatinny Ridge Greenway has been designated as an Important Bird Area, due to its significance as a major flyway for migrating raptors, vultures, and songbirds. Hawk Mountain Sanctuary is located along the Kittatinny Ridge and is known as a destination to view and learn about raptors and other birds.

## Minor Greenways

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**Little Schuylkill River Greenway** – The Little Schuylkill River Greenway follows the Little Schuylkill River which flows into the Schuylkill River in Port Clinton Borough. The river extends northeast through West Brunswick Township, East Brunswick Township, and beyond the study region to Tamaqua and Still Creek Reservoir.

There are no parks or open space parcels located along this river and it is classified as a Cold Water Fisheries stream by PA Department of Environmental Protection, water quality standards within the study area.



**Pine Creek Greenway** – The Pine Creek Greenway follows Pine Creek in West Brunswick Township, Deer Lake Borough, and East Brunswick Township. The creek is dammed to form Deer Lake and is along the southern boundary of West Brunswick Recreation Park. Pine Creek is classified as a Cold Water Fisheries stream.

**Mahannon Creek Greenway** – Mahannon Creek Greenway follows Mahannon Creek, from its confluence with the Schuylkill River just north of Landingville Borough, through North Manheim Township, Orwigsburg Borough, to West Brunswick Township to its origins at the toe of Sharp Mountain. Mahannon Creek is classified as a Cold Water Fisheries stream.

**Bear Creek Greenway** – Bear Creek Greenway somewhat follows Route 895 through South Manheim Township. It is tributary to the Schuylkill River just south of Auburn Borough. Bear Creek originates in State Game Land 110 in Blue Mountain, south of Summit Station. Bear Creek is classified as a Cold Water Fisheries stream.

**Plum Creek Greenway** – Plum Creek Greenway extends along Plum Creek from the confluence with the Schuylkill River, south of Landingville Borough to Lake Wynonah. Plum Creek is classified as a Cold Water Fisheries stream.

**Red Creek Greenway** – Red Creek Greenway follows Red Creek in the valley area south of Schuylkill Haven Borough, through South Manheim Township. Red Creek is classified as a Cold Water Fisheries stream.

**West Branch Schuylkill River Greenway** – West Branch Schuylkill River Greenway follows the West Branch Schuylkill River through the central portion of the South Schuylkill Region. The West Branch joins with the Little Schuylkill in Port Clinton Borough to form the Schuylkill River. The West Branch Schuylkill River is classified as a Cold Water Fisheries stream.

**Tumbling Run Greenway** – Tumbling Run Greenway follows Tumbling Run in North Manheim Township. Tumbling Run is a High Quality-Cold Water Fisheries stream, from the source to Tumbling Run dam and Cold Water Fisheries stream from the Dam to the confluence with the Schuylkill River, south of Pottsville.

**Upper Little Swatara Creek Greenway** – Upper Little Swatara Creek extends into northern Wayne Township from the west and is part of the Susquehanna River Basin.

**Lower Little Swatara Creek Greenway** – Lower Little Swatara Creek extends into southern Wayne Township from the west and is part of the Susquehanna River Basin.

## Greenways and Open Space Protection

The greenways in the South Schuylkill Region function primarily to protect open space, natural area, and natural resources. The Blue Mountain Ridge Greenway primarily traverses public lands while other greenways are primarily on private lands, following stream corridors. While public ownership is one way to protect the greenways and their underlying resources, few municipalities have the financial resources or the opportunity to acquire all the land along a natural corridor. Working with willing landowners to protect land through stream stabilization, riparian buffer plantings, and natural flood mitigation strategies, as well as, conservation easements are popular approaches to conservation and



open space protection while the land remains in private ownership. Table 4-1, Open Space Protection Strategies identifies various strategies to protect open space and greenway corridors.

Table 4-1 Open Space Protection Strategies		
Open Space Protection Strategy	Strategy Explanation	Advantage/Disadvantage
Acquisition or Donation		
Acquisition	Acquisition of land for the sole purpose of greenway/trail development	One of the most effective methods of permanently protecting open space. It is also the most costly and contingent upon an agency or organization to manage and maintain the land.
Donations/Gifts	Donation of land to an agency or non-profit organization	Provides permanent protection without public expenditure. May provide tax benefits to the donor if the donation is for preservation or conservation.
Bargain Sale	Land is purchased at less than its appraised market value.	Difference in purchase and fair market value is considered a charitable gift for tax purposes.
Option to Buy	An agreement with a property owner to purchase or have the right of first refusal to purchase land.	Secures the rights for future purchase but does not set price or determine when or if property would be sold.
Purchase of Development Rights	To provide a landowner the monetary difference between the value of land when fully developed with uses allowed by rights verses the value of the same parcel remaining undeveloped as open space.	For landowner lowers taxes on land. Cost to purchase development rights may be high.
Purchase of Resource Protection Rights	To purchase the rights from a landowner to protect and manage specific resources.	Cost to purchase resource protection rights may be high.
Purchase & Resale	Purchase land by party desiring to restrict its future use and resold only under conditions or restrictive deed conditions.	Party that originally purchased the land for the sole purpose of restricting its use is relieved of continuing ownership and maintenance responsibilities. Land remains on tax rolls.
Condemnation	Condemnation is the act of eminent domain or taking of private property for public purposes.	Tool for acquisition. May be costly and reflect negatively on the greenway initiative. Use as last resort for protection.
Easements		
Conservation Easements	A legally enforceable agreement between a landowner and an agency or non-profit organization which places restriction on the use of or activities on a specific property which aligns with conservation objectives.	Less expensive than acquisition of land. The landowner retains rights not surrendered in the easement agreement and the easement provisions are valid and enforceable in perpetuity. Public access may be restricted. Method for enforcement needed.
Public Access Easement	An easement that provides the public the right to access to or through a privately-owned land for a defined purpose such as hiking, walking, and biking. Specific activities such as hunting and motorized vehicle use may be prohibited.	Less expensive than acquisition of land. The landowner retains rights not surrendered in the easement agreement and the easement provisions are valid and enforceable in perpetuity.

Table 4-1, Cont.

**Open Space Protection Strategies**

Open Space Protection Strategy	Strategy Explanation	Advantage/Disadvantage
<b>Land Use Regulations</b>		
Overlay Zone	A zone that is overlaid on an existing zone which adds regulation governing the use of a property. This technique is typically used to protect floodplains, woodlands, and steep slopes. Overlay zones can be designated for specific resources or areas to provide additional environmental protection. Riparian buffers, wetlands, and unique natural areas are resources that could be protected with an overlay zone.	Enforced by local government. Allows targeted protection of natural resources.
Cluster Zoning	Cluster zoning promotes the clustering of development and maximizing open space on a tract of land. Ordinance provisions should promote the preservation of sensitive natural resources such as stream corridors, wetlands and hedgerows, contiguous open space, and buffering.	Can reduce construction and infrastructure costs. Must work with developer to ensure that open space is useful as a greenway and linked to other protected open space.
Transfer of Development Rights	Property owners can sell development rights to developers for use in targeted areas. Open space is preserved by deed restrictions on properties that no longer carry development rights.	Allows development to be directed to specific areas.
Mandatory Dedication	Dedication of land from developers for park and recreational purposes. Municipalities must adopt a recreation plan that supports the dedication standards contained in the subdivision and land development ordinance.	Dedicates open space where development is occurring. Fee in lieu of provisions allows fee for land based on fair market value to be used for purchase of land in targeted areas.
Open Space Subdivisions	Open space subdivisions promote preservation of open space through the identification of natural resources and development designs that preserve these resources and significant open space.	Retain the density of the tract being developed. Must work with developer to ensure that open space is useful as a greenway and linked to other protected open space.
<b>Other Methods</b>		
Official Map	A municipality may map existing and proposed features such as parks, greenways, trails, and easements, and through this designation reserve public land. If a plan for subdivision or development of mapped land is presented, the municipality may withhold approval for a period of one year, giving the municipality the option to purchase or condemn the property.	The official map does not protect land for greenways but merely reserves land for purchase by the municipality.
Deed Restriction	Restrictions as part of the deed that limit in some way the use of a piece of land. Examples include removing vegetation, requiring a portion of a tract to remain undeveloped, buffer, etc.	Features protected in perpetuity.



It will take the cooperative efforts and long-term commitment of landowners, municipalities, the county, and land conservation organizations to fully protect the greenways identified. The existing protected open space parcels and park site are the building blocks of a continuous network of protected green corridors. Protecting contiguous lands along the major greenway corridors is recommended as the highest priority for conservation. The rationale for starting with contiguous lands is based on the conservation principles stated by the *International Union for Conservation of Nature – 1980 World Conservation Strategy* which suggests that connected natural systems are ecologically more sustainable and important than unconnected systems. “If all else is equal, large reserves are better than small reserves; a single large reserve is better than several small ones of equivalent total area; reserves close together are better than reserves that are far apart; rounded reserves are better than long, thin ones; reserves clustered compactly are better than reserves in a line; and reserves that are connected by corridors are better than unconnected reserves.”<sup>1</sup>

## Existing and Potential Trails in the South Schuylkill Region

The South Schuylkill region is fortunate to have two trails of national significance as well as other trails and trail opportunities. The trails are illustrated on the Greenway & Trail Map on page 4-22.

### Existing and Planned Trails Routes

**Appalachian National Scenic Trail** – The Appalachian National Scenic Trail is a continuous, marked footpath extending along the Appalachian Mountain system for more than 2,100 miles between Katahdin in Maine and Springer Mountain in Georgia. The Appalachian National Scenic Trail traverses the southern boundary of East Brunswick, West Brunswick, South Manheim, and Wayne Townships, generally following the ridge line of Blue Mountain, meandering between Schuylkill County and Berks County.



The National Trails System Act authorized new, broader agreements among federal agencies, states, and non-federal entities to manage the trails. The Appalachian Trail Conservancy and Appalachian Trail Park Office, in partnership with the United States Department of Agriculture Forest Service, and numerous volunteer organizations, share responsibility for general trail management and operations; resource management; facilities and use management; information, interpretation, education, and outreach; and technical program support.

On June 11, 2008, then Governor Rendell signed House Bill 1281 amending the Appalachian Trail Act of 1978. HB 1281 is now known as Act 24 of 2008 and became effective on August 10th, 2008.



<sup>1</sup> Mark A. Benedict and Edward T. McMahon, *Green Infrastructure, Linking Landscapes and Communities* (Washington: Island Press, 2006), p.110.

The amended act now requires municipalities where the Appalachian Trail passes to adopt and enforce zoning ordinances that preserve the “natural, scenic, historic and aesthetic values of the trail and to conserve and maintain it as public resource”. The four municipalities with portions of the trail should consider adopting zoning ordinance provisions to be in compliance with Act 24.

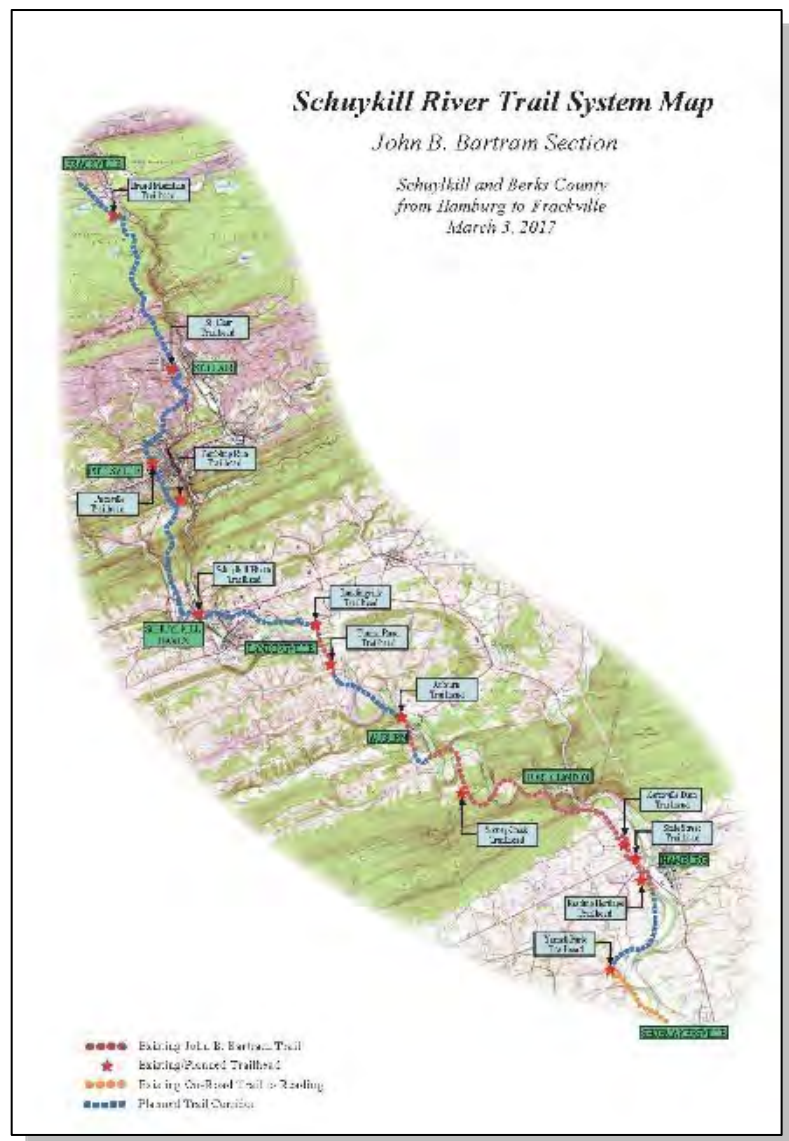
**Schuylkill River Trail** – The Schuylkill River Trail is a multi-use trail in southeastern Pennsylvania, that when fully developed, will extend 130-miles, from Pottsville in Schuylkill County to Philadelphia. The trail is primarily built on abandoned railroad corridors. Approximately 63-miles of the Schuylkill River Trail is open, including seven-miles from Hamburg, Berks County to Auburn, Schuylkill County.



The Schuylkill River is a National and State Heritage Area. A National Heritage Area is a place designated by the United States Congress where natural, cultural, and historic resources combine to form a nationally distinctive landscape. The Schuylkill River received this designation in 2000 and had previously been named a Pennsylvania Heritage Area by the Department of Conservation and Natural Resources in 1995.

**John B. Bartram Trail** – The John B. Bartram Trail section of the Schuylkill River Trail is located between Frackville, Schuylkill County and Hamburg, Berks County. The trail, when complete, will be the northern section of the Schuylkill River Trail. Four segments of the John B. Bartram Trail currently exist, while other portions are in the planning stage. In the South Schuylkill Region, the Bartram Trail is developed in the following areas:

- From Tumbling Run Reservoir, along a sewer easement on the east side of Route 61 into Schuylkill





Haven to the area of the Schuylkill Haven Senior & Recreation Center on Haven Street. The approximate length of this section is 3-miles. The northern portion of this trail section, north of Route 61 has been developed.

- From terminus at Meadow Drive, north of Landingville to approximately 0.5-miles south of the Tunnel Road Trailhead. The approximate length of this section is 1-mile.
- There is a missing 1.7-mile section between the section that ends 0.5-miles south of the Tunnel Road Trailhead to Auburn Borough. A planning study is currently exploring this section.
- From the Auburn Trailhead, which is on Route 895, just east of Auburn Borough the trail extends south on the east side of the River for approximately one-half-mile to the Auburn Borough Boundary.
- There is a small missing link in Auburn Borough where the trail bends to cross the Schuylkill River south of the active railroad line.
- The trail is developed from the south side of the Schuylkill River bridge, south of Auburn, to the Kernsville Dam Trailhead in Berks County. This section of the trail crosses the Appalachian Trail in Port Clinton. The approximate length of this section is 6 miles.



The Bartram Trail, as part of the Schuylkill River Trail, is a significant linear resource. When complete, the trail will link the Southern Schuylkill Region with the City of Philadelphia and other trails that connect to the Schuylkill River Trail. The Bartram Trail should serve as the main trail spine for the Southern Schuylkill Region and local trails should link to the Bartram Trail as possible.

**Schuylkill River Water Trail** – The Pennsylvania Fish and Boat Commission (PFBC) define water trails as boat routes suitable for canoes, kayaks, and small motorized watercraft. Like conventional trails, water trails are recreational corridors between specific locations. Water trails are comprised of access points, boat launches, day use sites and potential overnight camping areas, enabling the water trail to be used for single day and multiple day trips. Water trails also provide connections to history, ecology, geology, heritage, and wildlife. PFBC is the sole agency to designate official water trails; however, individual trails and trail corridors are conceived and maintained by a network of volunteers, property owners, civic groups, and associations. Water trails are a special type of greenway and offer various benefits to local communities including enhancing opportunities for tourism and economic development, providing recreational amenities, and encouraging restoration and conservation through proper stewardship of the resource. All designated water trails abide by “leave no trace” principles. The Schuylkill River Water Trail includes the 147-mile river corridor which passes through five counties: Berks, Chester, Montgomery, Philadelphia, and Schuylkill. The river traverses the study region, flowing from North Manheim, near the Borough of Pottsville, south to the Borough of Port Clinton at the Berks County line. The water trail also includes the Little Schuylkill River.



Five access points are located within the project area along the Schuylkill River:

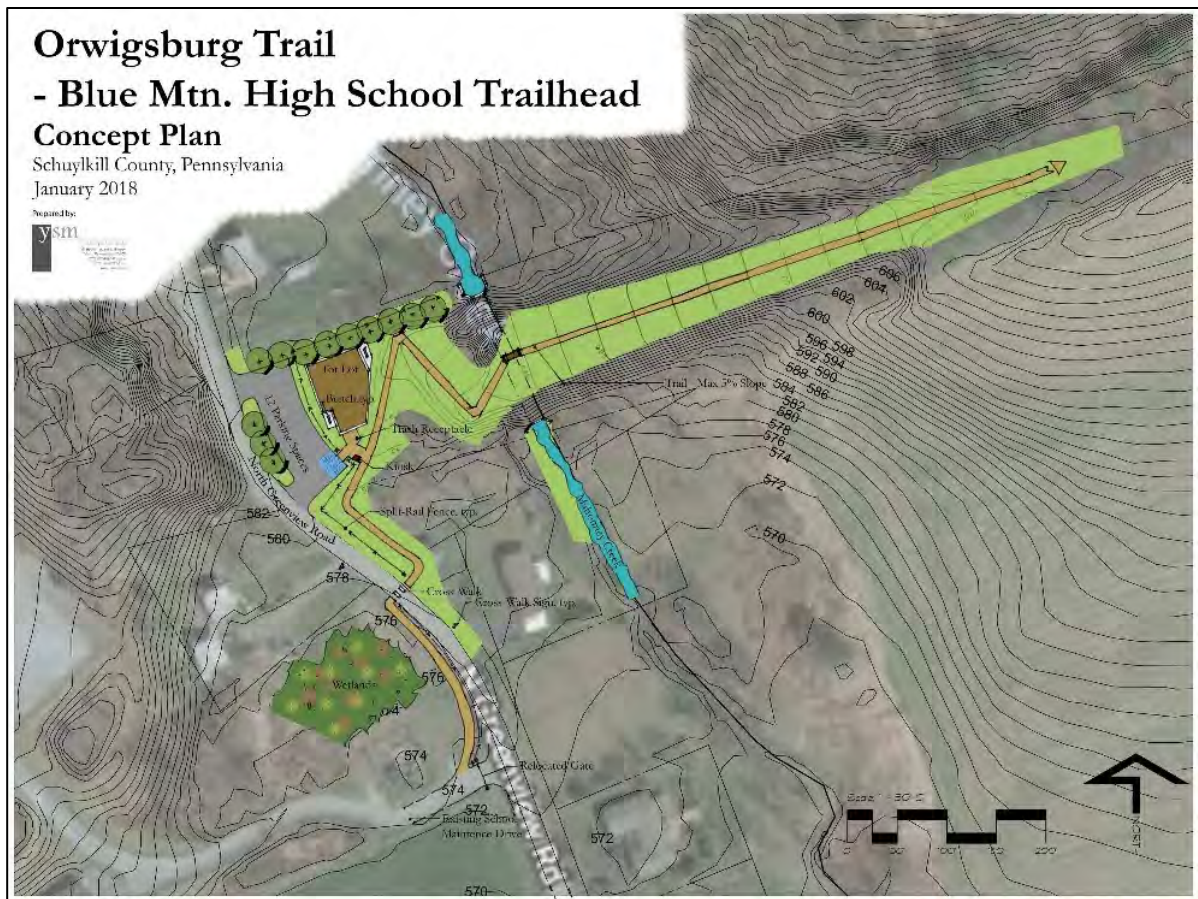
- Schuylkill Haven Island Park – Parking is available in this Schuylkill Haven Borough park.
- Auburn Dam Access – PA Fish & Boat Commission access area with parking and ramp.
- Auburn Route 895 Trailhead – Parking is available. Trail to river and trail connection to the Schuylkill River Trail – John Bartram Trail.
- Port Clinton Park – Parking and ramp to river provided. Camping is permitted by permission in the Borough owned park.
- Landingville Community Fire Company – An informal earthen access area is located on lands of the Landingville Community Fire Company, just west of the Main Street bridge. There is a gravel parking area on the Fire Company land.



The distance between these five access points is approximately 8 miles. An additional access point is located along the Little Schuylkill River in New Ringgold Borough along Route 895. There is no formal parking or ramp to the river provided.

**Port Clinton Towpath Trail** – The Port Clinton Towpath Trail is located along the river on the area of the former towpath. The trail extends from Port Clinton Park, west to the Borough boundary.





**Blackwood Trail** – The southern portion of the proposed Blackwood Trail is in North Manheim Township, on the south side of Gordon Nagle Trail (PA Route 901). The trail extends north through Norwegian, Branch, and Reilly Townships to the village of Blackwood. The trail is approximately five-miles long and is located on an abandoned railroad corridor. The trail will be on land owned by the Schuylkill County Municipal Authority. The trail will have three trailheads with the eastern trailhead located at the Seider’s Hill Baseball/Pottsville Youth Soccer fields, along PA Route 901.

## Potential Trails, Bicycle Routes, and Trail Accommodations

**Lizard Creek Junction to Blackwood** – This abandoned railroad was built under the Schuylkill & Lehigh Valley Railroad and was abandoned in 1953. The railroad corridor can still be seen in places to include in the area of the Blue Mountain High School west of Orwigsburg, north of Industrial Drive, along Lehigh Avenue, and parallel and south of Lehigh Street in Orwigsburg. This abandoned corridor has potential as a trail link between Orwigsburg Borough and Blue Mountain High School. The corridor continues through the Borough to the east, crossing North Washington Street. A connector link along North Washington Street would connect this trail to Memorial Park and the Blue Mountain Middle School athletic fields.

The Orwigsburg Trail – Blue Mountain High School Trailhead Concept Plan explores how the trail could extend from the abandoned corridor to the High School campus. A small tot lot is suggested at the trail head to complement the athletic fields of the school campus. The corridor extends to Orwigsburg and if developed would provide a safe trail route to the High School for students.



**Port Clinton to Cabela's/Walmart Trail Accommodation** – The Bartram Trail extends south from Port Clinton to the Kernsville Dam Road Trailhead. The trail is near Industrial Drive, which extends through the commercial development on the east side of Route 61 and crosses Route 61 at a signalized intersection to access the Cabela's and Walmart commercial area. The Appalachian Trail and Bartram Trail meet in Port Clinton Borough and long-distance hikers on the Appalachian Trail could be directed to the Bartram Trail to access this commercial area for supplies. Possible accommodations for long-distance hikers include lockers for packs, bikes provided on a share system, and signage with maps and information about the nearby commercial destinations. The large commercial destinations may be interested in a partnership to provide the accommodations.

## Complete Streets & Walkable Communities

Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.<sup>2</sup>

Benefits of Complete Streets include:

- Provide travel choices
- Encourage walking and bicycling
- Encourage healthy and active lifestyles
- Enhance safety
- Improve air quality
- Help reduce carbon emissions
- Help create livable communities where walking and bicycling are a viable choice of transportation
- Provide children with opportunities to reach nearby destinations in a safe environment
- Have positive environmental impacts due to reduced pavement widths, use of pervious pavement, and introduction of landscaping

In 2015 the US Department of Health and Human Services released “*Step It Up! The Surgeon General’s Call to Action to Promote Walking and Walkable Communities*”. The Call to Action addresses several key principles for improving the nation’s health and defines five goals to support walking and walkability in the United States.



**Goal 1** – Make Walking a National Priority.

**Goal 2** – Design Communities that Make It Safe and Easy to Walk for People of All Ages and Abilities.

**Goal 3** – Promote Programs and Policies to Support Walking Where People Live, Learn, Work, and Play.

**Goal 4** – Provide Information to Encourage Walking and Improve Walkability.

<sup>2</sup> National Complete Streets Coalition, 10/28/15. <http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/complete-streets-faq>

## Goal 5 – Fill Surveillance, Research, and Evaluation Gaps Related to Walking and Walkability.

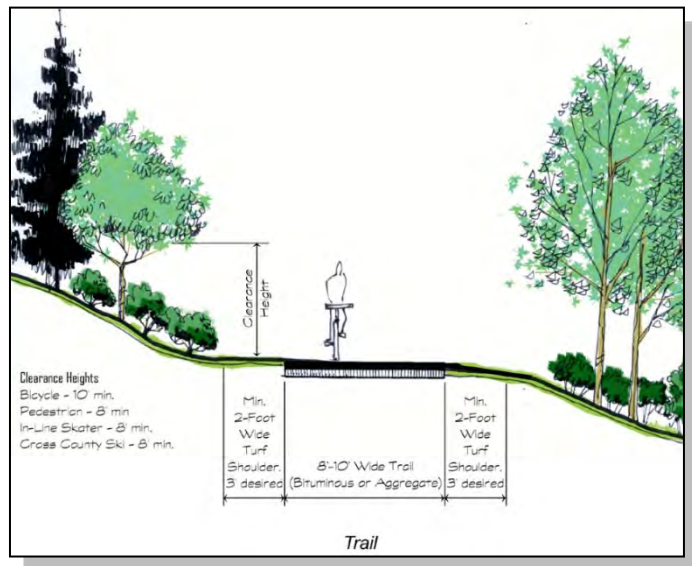
Walking is an easy way to start and maintain a physically active lifestyle that will provide substantial health benefits. Among adults who reported any physical activity in 2011, 52% of men and 74% of women reported walking as one of the top two activities in which they participate.<sup>3</sup> Walking can be multipurpose and, where pedestrian and bicycle accommodations are provided, can be transportation to get to school, go shopping, walk the dog, or gather with friends at a nearby park to socialize. Walking benefits communities by making them safer, reducing air pollution, and benefiting local economies.

## Expanding the Trail System

The diverse setting of the South Schuylkill Region with its small boroughs and villages, rural townships with agriculture and woodlands, suburban residential area, and commercial land use will require a varied approach to create a comprehensive network of trails throughout the municipalities. The John B. Bartram Trail section of the Schuylkill River Trail, when complete, will function as the main spine of the regional trail system providing the north-south corridor. Other regional and local trails should connect to the Bartram Trail to maximize connectivity. There are not always physical features such as an abandoned railroad or trolley line to create a regional-wide system of trails. Pedestrian and bicycle friendly communities includes sidewalks, bike lanes, and shared roadways to round out trail systems and extend trail systems into the developed areas of communities. Following are facilities that should be considered to enhance connectivity and expand the trail system.

**Sidewalks** – Sidewalks present one level of solution for enhancing mobility, but only accommodate pedestrians. To truly enhance mobility in a community, trails of sufficient width to accommodate both pedestrians and cyclists are needed. Parts of Orwigsburg, Cressona, Auburn and other Boroughs are developed with sidewalks, but most of the suburban residential development does not have sidewalks.

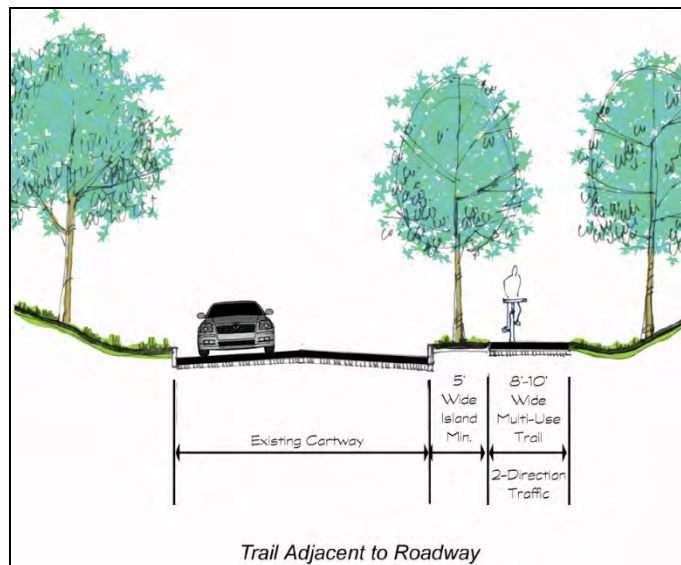
**Trails** – Typically, the preferred configuration for a trail is a separate corridor that extends from point A to point B. Safety is enhanced when trails are separated from roadways and road crossings are minimized. Community trails should be multipurpose for both pedestrians and bicycles. Recommended width for a shared use trail with two-directional traffic is 8-12-feet. Trails may follow a stream corridor or a utility right-of-way or run cross-country following no physical feature at



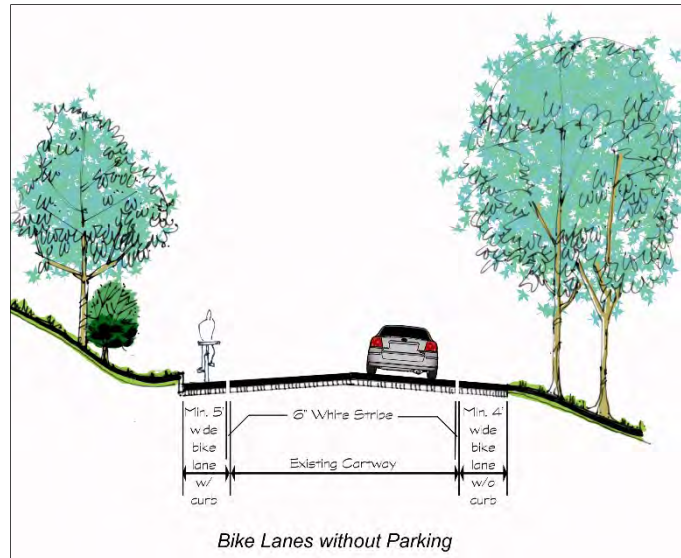
<sup>3</sup> Watson KB, Frederick GM, Harris CD, Carlson SA, Fulton JE. U.S. adults' participation in specific activities, Behavioral Risk Factor Surveillance System – 2001. *J Phys Act Health*, 2015;12(suppl 1):S3-S10.

all. Because trails are typically outside of public rights-of-ways, access easement will be required where trails are not on public land.

**Trails Adjacent to Roadways** – Trails adjacent to roadways are typically located within the road right-of-way. A grass strip of at least 5-feet wide should separate the trail from the roadway where possible. Trails adjacent to roadways are suggested along roads that do not have adjoining sidewalks and the physical area to develop a separate trail is available.



**Bike Lanes without Parking** – Where physical space is limited; trail development may not be possible. An alternative may be development of bike lanes on wide roadways with adequate right-of-way width. Bike lanes should be developed on both sides of a two-way street, separated from the vehicular cartway by a 6" white stripe. Bike lanes carry bike traffic, on the road cartway, in the same direction as the adjacent vehicular traffic. The recommended minimum width of a bike lane is 4' on streets without curb or gutter and 5' from the face of a curb. The *American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities*

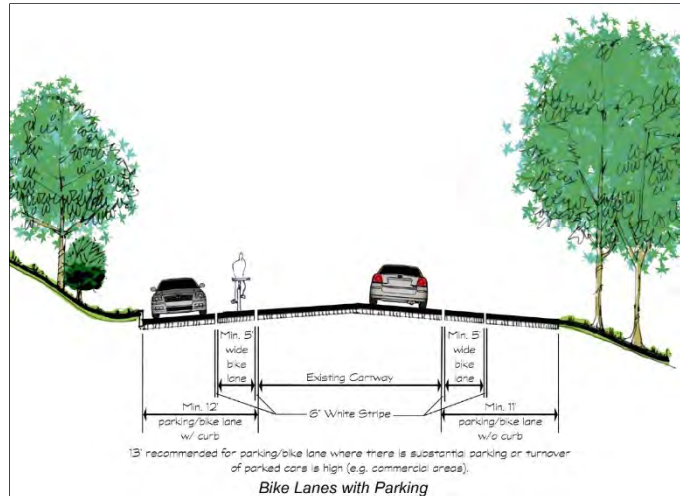


should be referenced when designing on-road bicycle facilities. Bike lanes provide a travel route for bicycles but do not provide accommodations for pedestrians. In areas where sidewalks exist, bike lanes can expand the network by providing a dedicated location for bicyclists. Where sidewalks are not provided, a separate multi-use trail is preferred to accommodate both pedestrians and bicyclists. Bike lanes effectively narrow a street and provide a traffic calming effect as motorists typically drive slower on narrower cartways.

**Bike Lanes with Parking** – Additional consideration must be made where on-street parking is permitted. To expand the connectivity of the trail network for cyclists, bike lanes are often developed between the parking aisle and the vehicle cartway on streets with parking where certain spatial parameters exist. The sketch below shows the dimensions provided in the AASHTO guidelines for bike lanes on streets with on-street parking.



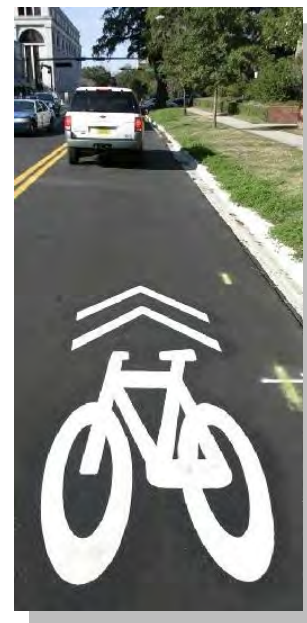
There is an inherent danger associated with bike travel in the “door zone” of parked cars and the topic of bike lanes on streets that allow on-street parking is controversial, with diverse views that relate to safety. Car doors opening into bike lanes present a significant safety concern for cyclists. When cyclists encounter a door opening in their path of travel they must either stop short or swerve into the vehicle travel lane to avoid the open door. Cyclists have been injured and killed trying to avoid an open car door or hitting an open door. The possibility of a door zone related crash is highest in locations with high parking turnover, such as a main street or in commercial districts.



Various techniques have been experimented within communities to reduce door zone accidents such as wider bike lanes, pavement markings and warning signs, and in some communities shared lane pavement markings, are used.

**Signed Shared Roadways** – The roadways throughout the Southern Schuylkill Region have not been designed with bicyclists in mind. In Pennsylvania, a bicycle is considered a vehicle and must conform to the rules and regulations that apply to all vehicles as well as specific requirements for bicycles. There are accommodations that can make a roadway more compatible with bicycle travel. Signing or marking a road for shared use is a common design feature that enhances bicycle use. The AASHTO guidelines note the following reasons for developing a signed bike route:

- The route provides continuity to other bicycle facilities such as bike lanes and shared use paths.
- The road is a common route for bicyclists through a high demand corridor.
- In rural areas, the route is preferred for bicycling due to low motor vehicle traffic volume or paved shoulder availability.
- The route extends along local neighborhood streets and collectors that lead to an internal neighborhood destination such as a park, school, or commercial district.



The two signs at the right are used in Pennsylvania to designate a shared road roadway. In April of 2012 Pennsylvania enacted a new law to enhance bicycle safety, requiring drivers to provide a 4-foot comfort zone when passing on the left of bicyclists.



Another method of signing a roadway that emerged in recent years and is becoming more popular is the installation of “sharrow” markings on roadway pavement. A sharrow is a shared lane marking that is often installed on roadways that are popular with bicyclists but too narrow or inappropriate for bike lanes. The sharrow indicates where bicyclists should ride to avoid traveling in the door zone of parked cars and alerts motorists of bicycle traffic. Sharrows are typically installed 11-feet from the curb, which provides approximately 4-feet clearance from parked cars. Sharrow markings are intended to improve the position of the bicyclists and motorists on roads without bike lanes, alert motorists, deter aggressive motorist behavior, encourage correct bicycle travel, and encourage bicycle use.

Other roadway improvements that enhance shared road bicycle travel include bicycle-safe drainage grates, paved shoulders, flush bridge expansion joints, improved railroad crossings, controlled intersections with lights, and wide curb lanes.

## Greenways, Trails & Open Space Analysis

### Strengths

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The developed portions of the John Bartram Trail provide a close-to-home example of the many benefits of a recreation trail. Residents have voiced significant support for the trail and trails in general. Fitness and wellness activities, experiencing nature, and trail activities ranked high as responses to the opinion survey as to why residents visit parks. The Bartram Trail is part of the Schuylkill River Trail system, which has the support of the Schuylkill River National & State Heritage Area. The Bartram Trail is the main trail spine through the region and connects the South Schuylkill Region to other areas along the trail corridor.

The region is fortunate to have avoided the rampant development that has consumed open space in areas of southeastern Pennsylvania. Stream corridors, wooded ridge lines, and large tracts of agricultural and open space lands remain undeveloped, which can facilitate their protection and function as greenways and open space.

### Challenges

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The challenges to greenway protection and trail development involved working with private landowners to protect green resources and permit the development of trails. Transportation barriers and developed areas also present a challenge. Access and ownership are significant challenges to trail development and greenway conservation along the small streams in the region.

### Opportunities

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The public input process found that there is broad public support for trails in the Region. The abandoned rail corridor used by the John Bartram Trail presents a major trail spine that traverses the Region which local trails can connect to. The green resources of the Region present ample opportunity to conserve open space and greenways corridors.

## GREENWAY AND TRAIL MAP

Prepared By:

**ysm**

Landscape Architects

12 South Newberry Street  
Yonkers, New York 10501  
Tel: 914-968-8888  
Fax: 914-968-8888  
www.ysmllc.com

