

# Final Statewide Greenway Trails Plan & Final Generic Environmental Impact Statement

April 7, 2021



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OPRHP acknowledges the many representatives from local governments, regional transportation planning organizations, non-profit groups, and other stakeholders for their contributions to this plan.

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**SEQR  
NOTICE OF COMPLETION OF A FINAL GEIS**

**Date of Notice:** April 7, 2021  
**Lead Agency:** New York State Office of Parks, Recreation and Historic Preservation (OPRHP)  
**Title of Action:** **Adoption and Implementation of the Statewide Greenway Trails Plan**  
**SEQR Status:** Type I  
**Location of Action:** Statewide

This Notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review) of the Environmental Conservation Law.

OPRHP, as lead agency, has prepared a Final Generic Environmental Impact Statement (FGEIS) regarding the proposed action described below (Statewide Greenway Trails Plan).

**Brief Project Description:** The New York State Office of Parks, Recreation & Historic Preservation (OPRHP) has prepared a plan for a comprehensive statewide system of non-motorized multi-use trails (Greenway Trails) as directed by legislation signed by Governor Cuomo in November 2019 (<https://legislation.nysenate.gov/pdf/bills/2019/A5035B>). The Statewide Greenway Trails Plan identifies trail user types, addresses trail trends and issues, and discusses the benefits of trails. Input from a variety of state and local stakeholders as well as from the general public was solicited in the creation of the Plan. The Plan compiles a GIS inventory of existing and proposed non-motorized, shared-use trails across the state. The Plan provides a vision, goals and recommendations that will guide future planning and development of Greenway Trails in the State. The final Plan will guide decision-making, influence greenway trail development policy in state and local governments, and inform communities, organizations and individuals engaged in trail development and management. Potential environmental impacts associated with adoption and implementation of the plan, as well as mitigation measures that could be taken to reduce potential impacts, are included as a part of the Plan which, in its entirety, constitutes a Final Generic Environmental Impact Statement. The FGEIS contains a comments and responses chapter.

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**AVAILABILITY OF FGEIS:** Agencies and the public are afforded the opportunity to consider the FGEIS; this consideration period ends April 18, 2021. Copies of the Final Plan/FGEIS are available for review at the office of the agency contact and the document can also be reviewed on OPRHP's website at: <https://parks.ny.gov/inside-our-agency/master-plans.aspx>.

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# Executive Summary

Spending time in green open space is vital to human health and quality of life. Public open space offers the opportunity for all people to enjoy the benefits that come from time spent in nature. New York State is known for its unparalleled parks and open spaces, from New York City’s iconic Central Park, to the awe-inspiring Niagara Falls. The state’s robust and varied network of trails are a critical component of these spaces. Trails pass through all regions; they border rivers, cross countryside, traverse cities, and lead users to unique natural wonders.

The trail types discussed in this plan, hereby called greenway trails, encompass shared-use paths that can be used by persons of all ages for healthy, fun recreation. As long, linear corridors, they also provide unique transportation opportunities that may not be available in more traditional park settings. Often born from old rail corridors and canal towpaths, greenway trails have always been popular local resources. Today, they have grown into tourism generators, transportation connections, and destinations for recreation. All three characteristics are exemplified in the new Empire State Trail which connects users through many scenic landscapes, historic regions, and urban and rural communities across New York.

This plan seeks to first identify and inventory the state’s greenway trail facilities while discussing the many benefits that come with greenway trail development and usage. Additionally, the plan highlights the current trends associated with greenway trail use and identifies associated needs captured from stakeholders across the state. Most notably, the content of this plan will provide a framework to expand and cohere New York’s network of greenway trails by identifying and prioritizing new connections while providing information and resources for effective future development.

## Plan Vision

A vision for a greenway trails network across New York State was developed for this plan that consolidates broad goals to address priority topics identified during the planning process and in the plan’s legislation. These goals will help develop a more cohesive and comprehensive greenway trails system that serves all New Yorkers, offering new trail corridors, closing gaps between existing trails, identifying appropriate funding resources, and promoting greenway trails for their valuable tourism, transportation, and health benefits.

**Statewide Greenway Trails System Vision:**  
**The Statewide Greenway Trails Plan envisions a network of shared use paths that provide all New Yorkers and visitors, opportunities for healthy and active recreation, routes for alternative transportation, and the ability to connect to and enrich our communities and natural landscapes in urban, suburban, and rural settings.**

## Goals of the Statewide Greenway Trails Plan

New York State is fortunate to have an existing greenway trails network that offers a wide range of experiences within its urban and suburban communities and natural areas across the state. This plan builds on the work of many trail stakeholders which has resulted in the outstanding greenway trails found across the state. Implementation of the Empire State Trail (EST) has called attention to these routes as part of a larger system, with important linkages and destinations across New York's distinct regions.

To help sustain and build upon the momentum of previous efforts, the Statewide Greenway Trails Plan offers a series of goals designed to create a more cohesive and inclusive network with greater connectivity, ensuring that these resources are available to all.



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### Goal 1

*Prioritize the development and expansion of greenway trails in underserved communities.*

Not all communities are located within easy access to parks, trails, or nature. Residents living in these areas may miss out on the benefits of recreational open space — improved public health, safe routes to walk or bike to school, or options for non-vehicular transportation. This plan seeks to expand opportunities for equitable access to greenway trails and other destinations in New York State's areas of highest need.



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### Goal 2

*Collect and publish information to aid in the planning, development, and management of greenway trails.*

Greenway trails are developed as a public amenity by a range of agencies, organizations, municipalities, and private entities. Stakeholders often undertake efforts to capture data or conduct research on existing and potential trails, users, trends, and more. This goal emphasizes the importance of sharing data with partners statewide to accomplish the greater vision for this plan.



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### **Goal 3**

***Expand the greenway trails system to reach more New Yorkers in more areas.***

Public input received for this plan made it clear that greenway trails are a valued resource; a majority of those surveyed considered it important to extend existing trails or create new ones across the state. This goal and its recommendations aim to expand the state's greenway trail system by developing new trail corridors, closing trail gaps, and making connections to primary trail corridors such as the Empire State Trail.



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### **Goal 4**

***Identify funding opportunities for the acquisition, planning, development, and maintenance of greenway trails.***

As this plan calls for increasing the reach of greenway trails across the state, securing the resources for these efforts will be critical. To this end, existing funding streams must be maintained, and new opportunities should be explored.



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### **Goal 5**

***Foster greater collaboration among agencies and stakeholders to advance greenway trails in New York.***

Realizing the vision of this plan will require the combined efforts of greenway trail partners across the state. Stakeholders will need to share resources to build on current achievements and work together to prioritize and act on the goals and recommendations laid out in this plan.



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## **Goal 6**

***Promote the greenway trails system as a destination for tourism, healthy recreation, and active lifestyles.***

A robust greenway trail system can make positive impacts on a broad scale. Goal 6 seeks to publicize the many benefits of greenway trails, such as public health and tourism and economic impacts, to current and potential trail users at the local, regional, and state level.



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## **Goal 7**

***Enhance bicycle and pedestrian transportation options by connecting greenway trails and communities.***

Regional and local trails can be a viable transportation option for local communities. Whether for short trips or commuting to work, greenway trails need to provide convenient and equitable access points. They need to take people where they need to go and make connections with key destinations.

### **Planning a Greenway Trails System**

In the course of developing a statewide plan for greenway trails, the creators explored current trends in greenway trail use, planning, design, and management. It was also critical to identify the recreation, health, and transportation needs of New Yorkers as they relate to these facilities.

To support this process, representatives from state agencies, not-for-profits, municipalities and other organizations involved in greenway trail development and management were engaged in the process to utilize their knowledge and experience of the pressing issues, trends, and challenges of their work. This collective effort helped inspire this plan's vision and informed creation of the goals and recommendations that can help address these issues. Commonalities that emerged in the planning for this document coalesced to form the vision and goals for greenway trails over the next decade.

### **Public Survey**

For this plan, OPRHP partnered with Parks & Trails New York (PTNY) to produce a public survey on greenway trail use and preferences that reached every county in the state. The results make it clear that greenway trails are a highly valued and well-used resource for residents in all parts of the state.

More than 85 percent of survey respondents reported using a greenway trail on at least a monthly basis, with walking and bicycling reported as the most common activities. Greenway trails are primarily used for exercise, health and wellness, being in nature, and for just having fun. Scenery and natural beauty were also a common reason given for why trails were popular destinations.

### Comments submitted about greenway trails included:

“It offers a variety of experiences and access to three unique towns. You pass through orchards, rock outcrops, forest, so many interesting things.”

“We live close to it. Use it for bicycle commuting to work, for bike outings and for multiday tours... for walks, dinners at canalside restaurants and more.”

“Many different areas, some busy, some more secluded. You can just go for miles...”,  
“pretty, peaceful, interesting terrain with good biking pavement and bridges.”

The survey also sought to understand which factors should drive the future growth of the state’s greenway trails network. When asked what would increase their use of greenway trails, the majority answered that having more trails available in their area would increase their use.

A majority of those surveyed (85%) considered it very important or important to create new, or expand existing, greenway trails, to increase funding for greenway trails, and to close gaps to create a more interconnected greenway trail system. Results showed that most people travel 30 minutes or less to visit a greenway trail.

Responses were received from all regions of the state, with a larger number coming from upstate regions -- particularly the greater Rochester area -- and fewer responses from New York City and Long Island than would reflect the state’s population distribution. The median age responding was 58, and more than 90 percent of respondents were white, non-Hispanic, despite that demographic only comprising 56 percent of the state’s population.



*Ashokan Rail Trail (Photo: Hank Osborn, NY-NJ Trail Conference)*

### Trail Inventory

A primary component of this plan was the creation of a spatial inventory of existing, planned, and proposed trails across the state, as well as the identification of potential trail corridors. This effort was accomplished with the assistance of many local partners and trail representatives who supplied their trail data to a larger geographic information system (GIS) database provided by OPRHP. Upon receipt, the data was reviewed for accuracy and compiled into the larger statewide data layer for mapping and analysis purposes. These maps provide a snapshot of greenway trails which will continue to change as more trails are developed. In addition to traditional map figures, the trail data is also available via a web-based map at <https://greenway-trails-plan-nysparks.hub.arcgis.com/>.



## Implementation

The goals and recommendations, as well as data and inventory developed for the Statewide Greenway Trails Plan provide a framework for trail stakeholders across the state. It will take a collective effort from these partners to ensure continued success. Some of the plan's priority actions include:

- OPRHP and other federal, state, and local partners will need to collaborate to identify plan priorities, ensure adequate funding sources, and promote trail standards.
- Data collected for this plan should be leveraged to ensure that trail connections, gaps, and opportunities are identified for prioritization and implementation.
- Rating criteria for trails-related grants should reflect the goals of this plan.
- Future versions of this plan may focus directly on specific topics, goals, and recommendations identified in this plan.

## Environmental Impacts

The Statewide Greenway Trails Plan constitutes a Generic Environmental Impact Statement (GEIS) pursuant to the State Environmental Quality Review (SEQR) Act. The effects of this plan would result primarily from the advancement of the Statewide Greenway Trails System, and the implementation of the goals and recommendations identified herein. The Plan calls for increasing the reach of greenway trails across the state, greater collaboration between stakeholders, safeguarding funding opportunities, collecting and sharing data, and promoting and expanding opportunities for trail-based tourism, recreation, and transportation.



*Restored Rosendale Trestle on the Wallkill Valley Rail Trail*





***Amsterdam Gateway Bridge***

The cumulative effects of implementing the goals and strategies in this plan will be overwhelmingly positive. The state's network of greenway trails will be maintained and expanded and some associated environmental benefits such as reduced carbon emissions, increased green space, and the potential for sustainable design practices will also be achieved.

Since the Statewide Greenway Trails Plan generally addresses all greenway trails, identification of site-specific adverse impacts, including those which are unavoidable, will be required by way of future planning and environmental review on a per-project basis. Although specific adverse impacts associated with the application of the Plan's goals and strategies cannot be identified, adverse impacts may arise when one or a group of goals and/or strategies are given more emphasis over other goals and strategies. Minimization of these impacts can be addressed through appropriate planning and environmental review.

## **Summary**

Greenway trails are an invaluable resource in New York. They offer miles of fun and healthy recreation, provide green transportation connections, and are a valued community amenity. It is hoped that this plan will inspire and facilitate the expansion of this outstanding recreation and transportation system across the state.



*Equestrians, Minnewaska State Park Preserve (Photo: OPRHP)*

# Chapter 1 — Introduction

New York State's extensive greenway trail system offers residents and visitors hundreds of miles of routes that bring people into areas of natural beauty, helps them connect to the state's history, and provides safe, accessible places for people to exercise and play. The Statewide Greenway Trails Plan/Generic Environmental Impact Statement (GEIS) establishes goals and recommendations for further developing this system of non-motorized, multi-use trails, or greenway trails.

This plan documents the existing greenway trails network in the state and considers the benefits of developing a cohesive non-motorized, multi-use trail network. It identifies new trail opportunities and describes planned and proposed trail corridors. The plan was developed based on public input, stakeholder experience, and with the involvement of other state agency partners. It considers recent studies, articles, and research to demonstrate how greenway trails can improve public health, increase quality of life and happiness, improve walkability, and contribute to community revitalization.

This plan will guide decision-making, assist state and local governments with greenway trail policy development, and provide valuable information to communities, organizations, and individuals engaged in trail development and management. It articulates a vision for how the state can advance its greenway trail network. Ultimately, it will become part of the more comprehensive *New York Statewide Trails Plan* update.

## Purpose

Legislation enacted in November 2019 requires that the New York State Office of Parks, Recreation & Historic Preservation (OPRHP) prepare a plan to help shape future development of the State's comprehensive statewide system of non-motorized multi-use trails (greenway trails) (see **Bill No. A05035B**). Once finalized and adopted, the Statewide Greenway Trails Plan will act as a guide for the development of trails of this type across the State.

As defined in the legislation, the Statewide Greenway Trails Plan provides the overall concept and policy framework to assess and develop non-motorized greenway trails in NYS. It includes a spatial inventory of existing and planned greenway trails and identifies goals and implementation strategies. OPRHP is also required to develop a comprehensive plan periodically for the establishment of a statewide trails system of all types. The last Statewide Trails Plan was published in 2010. In future years, this Greenway Trails Plan will be incorporated as a component to an updated Statewide Trails Plan.

This document also serves as a Final Generic Environmental Impact Statement (FGEIS), prepared in accordance with Article 8 of the New York State Environmental Conservation Law (ECL § 8-0101 et seq.) and its implementing regulations found in Part 617 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR Part 617).

## Authorization

Authority for the development of a Statewide Trails Plan, as well as for the establishment of the State Trails Council, and for administration of the Recreational Trails Program, resides with OPRHP (Chapter 660 of the Consolidated Laws, L. 1972, Article 3, as well as federal law). The 2010 NY Statewide Trails Plan cites relevant sections of the state and federal authorizations of OPRHP to act as the state trails coordinator (see Appendix A). The NYS Assembly Bill A5035B requires that OPRHP create a plan regarding non-motorized multi-use trails (<https://legislation.nysenate.gov/pdf/bills/2019/A5035B>).



## Planning Process

Content for this plan was partially based on surveys of trail users and collaboration with other federal and state agencies and regional stakeholders, including representatives from the NYS Department of Health (DOH), NYS Department of Environmental Conservation (DEC), NYS Canal Corporation (Canals), NYS Department of Transportation (DOT), U.S. National Park Service (NPS), Empire State Development (ESD), Parks & Trails New York (PTNY), municipal and transportation planning organizations, the Hudson River Valley Greenway, Niagara River Greenway, and others.

This plan's content is also based on research and analysis of the development, management and maintenance of existing trail systems, and a review of other states' trails planning efforts. It identifies current issues, needs, and trends in the development and use of greenway trails into the 21st century.

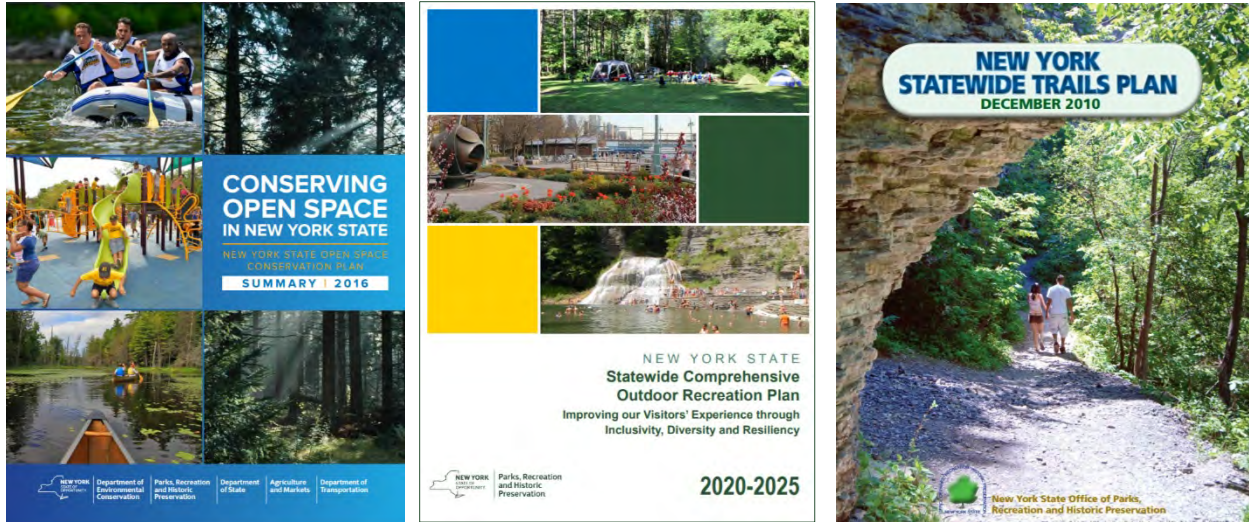
## Vision

To help guide greenway trails development in the future, members of the planning team, together with stakeholders, agency staff and through public input, developed the vision statement. This process serves to inspire and lead design and development towards an ideal condition – in this case, a comprehensive system of greenway trails in New York State. The vision developed for this plan is:

The Statewide Greenway Trails Plan envisions a network of shared use paths that provide all New Yorkers and visitors, opportunities for healthy and active recreation, routes for alternative transportation, and the ability to connect to and enrich our communities and natural landscapes in urban, suburban, and rural settings.



*Old Erie Canal State Park (Photo: OPRHP)*



Statewide Planning Documents

## Other Statewide Plans

### New York Statewide Trails Plan<sup>1</sup>

Last prepared in 2010, the *New York Statewide Trails Plan* identified a proposed framework for greenway trails, long-distance hiking trails and water trails, with strategies to address various issues encountered by trail users, and those managing and maintaining trail systems. When the *NY Statewide Trails Plan* is next updated, the *New York's Statewide Greenway Trails Plan*, will become part of that document.

### NYS Statewide Comprehensive Outdoor Recreation Plan (SCORP)<sup>2</sup>

The SCORP is prepared by OPRHP every five years. The 2020-2025 SCORP provides statewide policy direction and fulfills the agency's recreation and preservation mandate. The SCORP serves as a status report and as an overall guidance document for recreation resource preservation, planning and development. The document is also used to guide the allocation of state and federal funds for recreation and open space projects.

### NYS Open Space Conservation Plan (OSP)<sup>3</sup>

The OSP provides an integrated statewide strategy for land conservation that is guided by a set of underlying goals and principles. The 2016 Open Space Plan represents current open space conservation actions, tools and programs administered by DEC, OPRHP, the Department of State (DOS), the Adirondack Park Agency (APA), the Department of Agriculture and Markets (DAM) and the Department of Transportation (DOT). The plan has been revised every three years since 1992 to adapt to shifting conservation priorities.

### Empire State Trail Plan (EST)<sup>4</sup>

Completed on December 20, 2020, the Empire State Trail is the nation's longest multi-use trail, a continuous, 750-mile route, spanning the State from New York City to Canada and Buffalo to Albany. The majority of the EST is a shared-use path designed to accommodate pedestrians and bicyclists. Other EST sections are on-road bicycle routes appropriate for experienced bicyclists. This initiative closes gaps between existing greenway trails, including the Erie Canalway Trail, the South and North County Trails in Westchester County, Champlain Valley Trail, and the Dutchess, Hudson River Valley Greenway Trail and Wallkill Valley Rail Trails in the mid-Hudson Valley.

## Regional and Local Trail Planning

Much of the regional and local planning for greenway trails across the state is done by municipal planning organizations, otherwise known as MPOs. Required by law for the use of federal transportation funds, these organizations represent urban areas with a population of 50,000 or more and coordinate regional land use and transportation planning for their respective regions. There are 14 MPOs in New York, most of whom have their own detailed regional transportation plans which include greenway trails.

OPRHP conducted outreach to these groups during the development of this plan and their input and trail data was invaluable. A list of New York's MPOs and links to their respective websites can be found in the Resources section at the end of this plan.

## Definitions

Greenways are linear corridors of open space that are often vegetated, undeveloped, or preserved for protection. These corridors offer opportunities to create long-distance recreation and transportation facilities, or greenway trails. For the purposes of this plan, greenway trails will be defined as shared-use paths that are separated from roadways and vehicle traffic. General characteristics of greenway trails include:

- A minimum tread width of six feet
- A relatively flat, graded surface and/or improved tread
- Can be used for non-motorized transportation and recreation<sup>5</sup>

Greenway trails often use pre-existing corridors, such as former railroad rights-of-way or canal towpaths. Examples of greenway trails in New York include the Erie Canalway Trail, Dutchess County Rail Trail, Bethpage Bikeway, Genesee Valley Greenway, Hudson River Greenway, Black River Trail, and Catharine Valley Trail.

Of course, New York's vast trail network extends well beyond greenway trails and includes trails for hiking, paddling, equestrian use, snowmobiles, and more. In fact, many of these trail users also utilize greenway trails for recreation and transportation. This plan, however, will focus solely on those trails defined above as greenway trails and the uses that occur on them. The **2010 Statewide Trails Plan** addresses all trail types across New York. Up to date information and planning for these other trail types will be included in OPRHP's next Statewide Trails Plan, which will be developed in the coming years.

While most of the use on greenway trails in New York are non-motorized recreation activities, some trails do allow motorized use by snowmobiles and, occasionally, off-highway vehicles. While the legislation directing this plan specifies that the trails included be non-motorized trails, there may be some instances where a land manager or trail organization allows motorized trail use. The spirit of the plan, however, and the uses described here, will focus solely on non-motorized use.

It is also worth noting that in addition to its many greenway trails, New York State has two legislatively defined greenway regions: the Hudson River Valley Greenway (HRVG) and the Niagara River Greenway (NRG). These designations define geographic regions which are home to unique and significant natural, cultural, and historical features, including greenway trails.



## Accomplishments

Over the past decade, New York State has made notable progress expanding and improving its greenway trails. This plan includes examples of new trails and describes success stories from across the state's greenway trail system.

One of the most significant trail accomplishments in recent years was the completion of the Empire State Trail (EST). Announced in 2017 and funded with \$200 million, this ambitious project links trails from New York City north to Canada and from Albany west to Buffalo, creating the longest single-state greenway trail in the nation. The EST is comprised of three distinct legs: the Erie Canalway Trail, the Champlain Valley Trail, and the Hudson River Valley Greenway Trail. The completed Empire State Trail links regions, cities, and towns across New York to form the backbone of the state's Greenway Trails System.<sup>6</sup>

As with all infrastructure projects, greenway trails require funding to advance from concept to reality. Over the past ten years, greenway trails in New York have been awarded more than \$40 million through Federal and State grant programs administered by the NYS DOT and OPRHP. By covering much of the planning, design, engineering, and construction costs, these grants, combined with other state funding, have played a critical role in making shared-use greenway trails a reality in communities across the state.

In the last decade, Parks & Trails New York (PTNY), a statewide nonprofit advocate for parks and trails, has spearheaded innovative programs, funded community-based projects, and advocated to expand greenway trails across the state. PTNY has:

- assisted 38 communities in 34 counties to develop, enhance, and promote 260 miles of multi-use trails, with its Healthy Trails, Healthy People program;
- developed the Park and Trail Partnership Grants program, in coordination with OPRHP, to provide organizations, including trail-based groups, with the resources they need to be effective stewards and advocates; and
- initiated the "Close the Gaps" campaign for the Erie Canalway Trail, laying the groundwork for the completion of the 360-mile trail between Buffalo and Albany, a significant part of the Empire State Trail.

Across the state, many exciting greenway trail corridors continue to advance from vision to reality. In 2018 the Erie Cattaraugus Rail Trail, Inc. (ECRT) signed a 49-year railbanking lease agreement with the Buffalo and Pittsburgh Railroad, clearing a major hurdle to develop the 27-mile corridor southeast of Buffalo. Since that time, the ECRT has executed a three-year Strategic Plan and partnered with GoBike Buffalo to secure \$750,000 from the Ralph C. Wilson Jr. Foundation. Funding will be used to study the greater Southern Tier Trail, and 80-mile corridor linking the City of Buffalo south to the ECRT, the City of Olean and on to the Genesee Valley Greenway.

At the opposite end of the state, the long-awaited Adirondack Rail Trail is expected to begin construction in 2021. The 34-mile shared-use trail will link the communities of Lake Placid, Saranac Lake, and Tupper Lake, taking trail users through the heart of the Adirondack Mountains. Acquired by the State from the bankrupt Penn Central Railroad in the 1970s, the rail corridor traverses some of the most beautiful areas in the Adirondack Park. The Department of Environmental Conservation's (DEC) amended Remsen-Lake Placid Travel Corridor Unit Management Plan, which calls for the removal of rail infrastructure, was approved by the Adirondack Park Agency in May 2020. A portion of the rail line will continue to be maintained for scenic train service.



***Adirondack Rail Trail (Photo: Adirondack Recreational Trails Advocates (ARTA))***



## Chapter 2 — Trail Types and Uses

Greenway trails can be found throughout New York State, from the tip of Manhattan to the shores of Lake Erie. As defined in the previous chapter, these greenway trails are shared-use paths that provide recreation and transportation, accommodate multiple uses, and have a wide tread, often with an improved surface. In the United States, the development and popularity of these corridors have been on the rise since the 1970's and have been inspired by or adapted within a wide range of landscapes.<sup>7</sup>

### Trail Types

#### Rail Trails

Greenway trails are often created from lands that formerly served a transportation purpose; the most common of these are rail trails. Railroad routes offer long, straight corridors, relatively gentle grades, and inherent connectivity making them excellent for greenway trails. Rail trails gained major traction in the early 1980's with the passage of the National Trails System Act, as Amended March 12, 2019,<sup>8</sup> which included a provision allowing otherwise unused rail corridors to be converted to trails — a process known as railbanking.<sup>9</sup> Under railbanking, a railroad company can work with an interested party to develop an unused rail corridor for trail use while still maintaining ownership rights for potential future rail use.

Examples of existing rail trails in New York include the new and highly popular Ashokan Rail Trail, which opened in 2019 in the Catskill Mountain Town of Hurley, and the Harlem Valley Rail Trail, a paved route running north from of the Town of Wassaic, passing through Taconic State Park in Copake Falls, and north to Hillsdale.

Proposed rail trails include the Upper Hudson Rail Trail, which could travel nearly 90 miles from Saratoga Springs north to Tahawus — the heart of the Adirondack High Peaks and source of the great Hudson River.<sup>10</sup> The North Shore Rail Trail, formerly known as the Rails to Trails Recreational Path, will be a new approximately 10 mile-long recreational route under construction on the former Long Island Rail Road (LIRR) right-of-way, owned by the Long Island Power Authority (LIPA). The trail runs from Crystal Brook Hollow Road in Mt. Sinai to Wading River Manor Road in Wading River, and parallels NYS Rt. 25A. The trail is estimated to be completed in late 2021.



***Mohawk Valley cyclists pedal in the Erie Canalway National Heritage Corridor (Photo: OPRHP)***



**The Maybrook Trail, Putnam County, NY, (part of the EST under construction in 2020), with approximately 23 miles of shared-use pedestrian and bicycle rail trail alongside tracks owned by Metro-North Railroad (Photo: <https://maybrooktrailerway.org/>)**

Opportunities also exist to develop greenway trails alongside active rail lines, a newer practice known as rail-with-trail. For these, an unused track or other area of the rail corridor is developed as a shared-use trail. With publicly accessible open land increasingly scarce, providing a trail along an active rail corridor offers a public amenity where there may be few alternatives. The national non-profit trail advocacy group Rails-to-Trails Conservancy (RTC) notes there are over 375 rails-with-trails totaling over 930 miles in the U.S.

The Maybrook Trailway is a shared-use bicycling and pedestrian path under construction and planned for completion in 2021. The 23-mile trail spanning two counties, will run along the Metro-North Railroad Beacon Line Corridor from Brewster, NY to Hopewell Junction, NY. Formerly known as the Beacon Line Trail, the name was changed to “Maybrook Trailway” to better align with the important historical role the Maybrook Line railroad played in the community for nearly a century. The Maybrook Trailway runs adjacent to a portion of the Metro-North Railroad Beacon Line Corridor, which is still in operation but does not have active train traffic. This project is also an important part of the Empire State Trail, connecting the Putnam Trailway to the Dutchess Rail Trail and Walkway Over the Hudson State Historic Park.

### **Waterfront Trails**

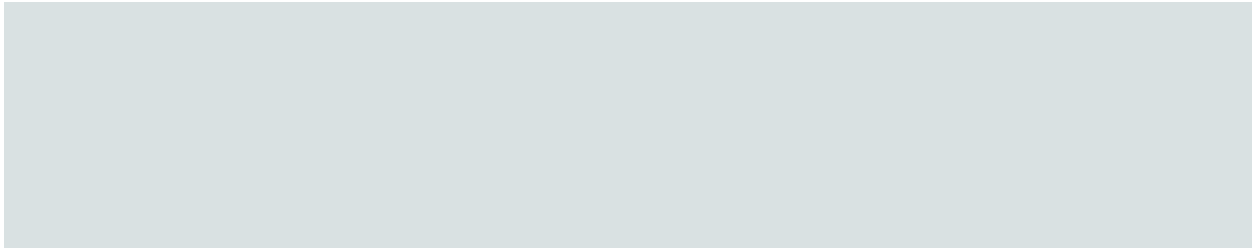
While railroads are often the genesis of greenway trails, other landscape features, including shorelines, riverbanks, and other natural corridors provide an ideal setting to site greenway trails. While these linear routes were created by natural forces, many now traverse a variety of developed landscapes, from historic sites to post-industrial settings. Greenway trails that have been developed in New York State along waterways include:

- The Buffalo Outer Harbor Trail, on the southern end of the Niagara River where it meets Lake Erie, runs more than four miles from Lighthouse Point Park to the Union Canal at the Erie Canal terminus at Lackawanna, NY. Along the route are six parks, preserves, and other green spaces to visit in this historic area.
- The Bronx River Pathway runs through the 807-acre Bronx River Reservation north of Manhattan following the natural river corridor. The paved trail spans central Westchester in three sections, totaling nine miles from Valhalla to Yonkers. Construction of the Bronx River Parkway in the 1920s altered the river’s historic path, and the County has implemented natural restoration projects along the route, restoring wetlands and riparian areas and removing invasive species.<sup>11</sup>

### Canal Trails

Prior to the expansion of the railroads, barge canals provided a means of transportation for goods and materials across the landscape. A level, graded area adjacent to the canal, called the towpath, was used by the livestock that pulled the canal boats. While canals may still be used for travel and commerce, the boats and barges no longer need their animal workers.

Like rail lines, remaining and intact towpaths can be retrofitted as public trails that provide inviting routes alongside the canal. Arguably the most well-known greenway trail in New York, the Erie Canalway Trail, stretches from Albany to Buffalo and comprises one of the three legs of the Empire State Trail. Other canal trails in New York include the Black River Feeder Canal Trail and Cayuga-Seneca Canal Trail.



***One of NY's best-known greenway trails, the Erie Canalway Trail, was created along the historic canal corridor. The trailway can be seen, above right, as it passes through the City of Lockport in Niagara County, New York (Photo: OPRHP).***





***Ellen Farrant Memorial Bikeway (Morton Fox via Flickr)***

### **Other Trail Types**

Greenway trails and shared-use paths have been developed in the adjacent rights-of-way along highways, such as the Cross-Island Parkway Trail in Queens. This paved trail follows its namesake through northeastern Queens, and Little Bay Park, on its northern end, offers views of the Throgs Neck Bridge and the bay. The Ellen Farrant Memorial Bikeway at Jones Beach on Long Island is another example of a trail that developed within a highway right-of-way.

While not as common, opportunities also exist for greenway trail development in other corridors, such as utility rights-of-way. A recent example of this is a new section of the Empire State Trail which runs along a former trolley corridor, now owned by the utility company National Grid, between the Cities of Rensselaer and Hudson. The Albany-Hudson Electric Trail is under construction and will be a 36-mile shared-use bicycling and pedestrian trail. The majority of the route will be off-road and, like many greenway trails, accessible for persons with disabilities. The trail is planned to be completed and open to the public by the end of 2020.

The North Shore Rail Trail, which connects from Port Jefferson to Wading River, will utilize the long-abandoned Long Island Rail Road's Wading River extension line, which went out of service in 1938 and is now owned by Long Island Power Authority. The trail will connect with the DEC's popular Rocky Point State Pine Barrens Preserve and its existing network of hiking and mountain bike trails, as well as other natural areas. The idea was first suggested over 50 years ago by local civic members, and re-introduced in 2001 by advocates of bicycle organizations, the Setauket-Port Jefferson Greenway Trail, and area residents. The trail will connect local parks, schools, businesses, residential communities, and athletic fields while providing a safer alternative for residents in this densely developed area to walk, run, and bike.

## **Trail Uses**

### **Walking, Cycling, and More**

Greenway trails accommodate a wide range of user activities. As seen in the public survey for this plan, and other greenway trail surveys across the country, walking and cycling are the two activities that most often occur on greenway trails.<sup>12</sup> Greenway trails are also popular destinations for running and jogging and, less frequently, activities like in-line skating. Some greenway trails may also allow for other uses such as horseback riding. In areas where snow cover is sufficient, greenway trails can also be utilized for winter activities such as cross-country skiing, snowshoeing, and even snowmobiling (where permitted).

It's not surprising that greenway trails appeal to many different user groups. In most cases they have long, linear corridors, gentle grades, and wide, firm tread surfaces. These attributes provide a comfortable, predictable, and safe route for users of all types and all ages; from families out for a casual walk, distance runners training for a race, or cyclists taking in the fresh air.

Greenway trails provide users with a connection to open space and the natural environment in rural, suburban, and especially urban areas. As noted in the survey results for this plan, 40% of participants noted that "observing nature/birding" was a top motivation for using greenway trails and 69% of participants identified "scenery/access to nature" as a factor when planning a trip to a greenway trail.

Programmed and group events are often very popular, sometimes drawing large crowds to greenway trails. Fundraiser walks and bicycle rides, various types of races, and themed outdoor educational programs on topics ranging from geology, wildlife, foraging for native plants, or regional history may draw people to greenway trails. Specialized groups may gather to remove invasive species, to photograph nature, walk their pets, paint watercolors, or tour historic sites along the route. There may be regional differences in the types of programs found at greenway trail facilities, and offerings in urban areas may differ substantially from trails in rural or suburban communities. Chapter 5 of this plan discusses new and anticipated trends in greenway trail usage.

It is important to note that although greenway trails are designed for multiple uses, trail managers allow differing sets of uses along different trails. Not all greenway trails allow all uses noted above, and some trails allow other uses. It is up to the managing agency, organization, or landowner to decide which are allowed and which are prohibited, and these regulations can vary, even along the same trail as it crosses jurisdictional lines.

### Transportation

In addition to recreational use, greenway trails increasingly serve a dual purpose as transportation routes. The linear nature, length, and inherent connectivity of these corridors provide cyclists, pedestrians, and other users a safe, and often scenic, off-road alternative to reach destinations for commerce, education, and employment. In fact, 10% of responders to the 2020 Greenway Trails Survey completed for this plan identified transportation or commuting as one of their top three motivations for using a greenway trail. As people seek to lower their carbon footprint to combat climate change, greener alternative modes of transportation will become even more important.



***Segment of the High Line, an accessible elevated greenway in New York City, looking south, 20th Street (Dansnguyen, via Wikipedia)***



**Terrapin Point at Niagara Falls State Park (Photo: OPRHP)**

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## Accessibility

When designed and constructed to established standards, greenway trails are often accessible for people with disabilities and mobility issues. Universal design standards call for developed trails and facilities with a firm, stable surface, gentle grades and slopes, and ADA accessible parking at trailheads. New York's *2020-2025 Statewide Comprehensive Outdoor Recreation Plan* notes that, as the state's population ages, providing more public open space and recreation opportunities that are accessible to all will be increasingly important.<sup>13</sup>

While they vary, principles of universal design, as defined by The Center for Universal Design at North Carolina State University, offers the following elements:

- Equitable use
- Flexibility in use
- Simple and intuitive
- Perceptible information
- Tolerance for error
- Low physical effort
- Cultural appropriateness
- Size and space for approach and use

These principles are broader than those of accessible design and barrier-free design.<sup>14</sup>

**In a 2016 survey conducted by the Rails-to-Trails Conservancy, 32% of respondents identified accessibility as a factor they considered when visiting a trail.**

(<https://www.railstotrails.org/trailblog/2016/september/16/what-tops-the-charts-in-trail-use-here-are-our-2016-survey-results/>)



## Chapter 3 — Greenway Trail Benefits

New York’s multi-use trail network has seen substantial growth in recent years, most notably through the development of the Empire State Trail (EST), but also through the completion of regional and local trails and key connection projects. Many of these, including the Maybrook Trailway, from Putnam County, NY to Danbury, CT, and the Albany-Hudson Electric Trail, recently completed as part of the Empire State Trail (EST), were identified in the **2010 NY Statewide Trails Plan**.

Having a public trail close to home means having a safe and easily accessible link to the outdoors and nature, with all the accompanying benefits. A nearby greenway trail makes it easier to take a walk or run, to meet up with friends and family, and to connect with others in your community. The physical and psychological benefits of spending time in public, green, open space are well-documented, as is the value to the local economy, the environment, wildlife, and nearby real estate. This chapter looks at some of the recent information on how greenway trails can improve quality of life.

### Health & Happiness

The first guideline from the U.S. Office of Disease Prevention & Health Promotion (ODPHP) for adults is to “move more and sit less.”<sup>15</sup> The ODPHP notes a strong relationship between our increasingly sedentary lives and risk of heart disease, high blood pressure, and other causes of mortality. Physical activity can help offset these risks.

Establishing a network of well-designed public trails that provide safe, off-road environments for walking and bicycling makes it easier for residents of cities, suburbs, and rural areas to choose to do outdoor activities. The Centers for Disease Control and Prevention (CDC) has determined that simply providing places in our communities that enable physical activity can increase the number of people who exercise at least three times a week by 25 percent. They found that for people who are inactive, even small increases in physical activity can bring measurable health benefits.<sup>16</sup>

### Public Health and Greenway Trails

The design of greenway trails has generally focused on their recreational and transportation functions. However, the focus of greenway trail planning is shifting to include community health, both physical and emotional. Reshaping the built environment to support healthy physical activity has the potential to offer a range of long-term public health benefits for the population.<sup>17</sup> Increasingly, lack of access to open space is considered a contributing factor to the rise in obesity (a significant contributing factor of heart disease) in the U.S.<sup>18</sup> Obesity can lead to other health issues, including stroke, diabetes and some cancers, which may be reduced by regular exercise and access to the natural environment. The National Park Service’s “Healthy Parks, Healthy People” initiative is part of a larger movement toward health-related collaborations. Some health facilities are offering “health prescriptions,” while some insurers and health plans will sponsor trails and parks and encourage their members to use them.<sup>19</sup>

The many benefits to public health and well-being that result from spending time in natural areas have been widely studied and are well-documented. In 2017, the National Park Service collaborated with the CDC to publish a report: *Improving Public Health through Public Parks & Trails*, where these benefits are neatly summarized:

*“The public health benefits of parks and trails are broad and crosscutting. For individuals, benefits include providing places for physical activity, improving mental health, reducing stress, providing connections to nature, and increasing social interactions. Parks and trails can simultaneously provide venues for community*

*events, activities, and public health programs and improve the environment. Parks and trails that contain tree canopy can protect and improve public health by mitigating urban heat islands. Parks can reduce flooding risks by capturing and detaining floodwaters in wetlands or other park facilities such as playing fields. Parks can also protect human health and property loss by deterring development in areas prone to events like mudslides, wildfires, and flooding.”<sup>20</sup>*

Looking at public open space as a public health resource offers an opportunity to think about recreation resources in a new way. A CDC report on parks and health suggests that public open space might be used for introducing wellness programs and disseminating health information. The report notes that, “creating linkages between health services and parks and building green opportunities into every state and local health prevention strategy is a win-win strategy to promote environmental sustainability and community health.”<sup>21</sup> Other “out-of-the-box” ideas from the CDC report include:

- Entering financial partnerships with health insurers to help bolster revenue for green space development or maintenance costs.
- Engaging employers to support parks and trails as an employee wellness program.
- Stationing volunteers, such as local university students, in public green spaces as “physical activity ambassadors” to provide guidance and support to people using parks for exercise.

As more health departments want to engage people in routine regular physical activity, the infrastructure needs to respond by connecting and integrating trails and open spaces and tying sidewalk networks into more integrated systems.

### **Emotional Health**

In general, people living in cities have fewer opportunities to connect with nature and therefore miss out on the accompanying benefits. By providing facilities and easily accessed outdoor green space, physical activity levels increase, and people tend to make social connections that benefit their own health as well as that of their community. A 2019 study concluded that just two hours a week in the outdoors is the threshold for a measurable impact on mental health. Of over 20,000 participants, the majority took part in outdoor activities within two miles of their home, reinforcing how important it is to have outdoor recreation facilities, including nearby access to trails.<sup>22</sup>

Greenway trails generally offer trees, water, and access to open space in areas that may be dominated by pavement, buildings, and traffic. For people living in dense cities or car-centric suburbs with environments characterized by strip malls, urban sprawl, and industrial zones, these green corridors offer an important respite. Remote rural areas can also lack public facilities for outdoor recreation and the important physical and social benefits that public trails can offer.

In 2020, science writer Florence Williams wrote, “There’s a growing body of science on how even small, unimpressive elements of nature can change our moods and even our nervous systems.”<sup>23</sup> A CDC study on parks and health also found that exercising in natural settings may be more beneficial than equivalent activity in a built environment (e.g., gyms).<sup>24</sup> The authors noted that study participants reported a greater reduction in stress and depression with improved attention span, stronger social ties, and better quality of life. A nonprofit organization dedicated to the idea that physical activity promotes optimal health, Exercise is Medicine (EIM), promotes exercise as integral in the prevention and treatment of many medical conditions. With an overall goal of connecting health care with physical activity, EIM encourages physicians and other health care providers to include physical activity in patient treatment plans and provide referrals to available exercise programs.<sup>25</sup>



### Public Health Issues in 2020

As the OPRHP's Statewide Greenway Trails Plan was being developed, the state was facing an unprecedented challenge with a global pandemic caused by the novel coronavirus (COVID-19). Beyond the wide-ranging and devastating impacts of the pandemic, public behavior, lifestyles, and work cycles were profoundly changed. During this time, public open space and recreation became an essential public health resource, and recreation providers were hugely impacted in ways that will likely have long-lasting effects.

Public outdoor recreation played a central role in the public health response to the pandemic. Parks, trails, beaches, waterways and other natural areas quickly became an indispensable resource for a populace confined to their homes for months. With the likelihood of catching COVID-19 higher indoors, many people looked to get outside, and park and trail usage skyrocketed. During this time, for instance, the Hop River Trail in Bolton, Connecticut, saw a 216% increase in use in March 2020 — over 6,000 more users in one month — compared to March 2019.<sup>26</sup>

Other more unexpected impacts emerged during the pandemic. The U.S. experienced an explosion in bicycle sales, as people discovered that cycling provided a means to stay active while maintaining social distance guidelines, or maybe found they now had the time to try biking for the first time. Some also opted to bicycle as they scrambled to find alternative options to public transportation.

With stay-at-home orders in effect, pedestrians increasingly outnumbered cars. In order to give residents room to maintain safe social distances, some municipalities began to close roadways to cars. In downtown Corning, NY, Market Street was closed off to allow pedestrians to move about safely. New York City opened as much as 40 miles of streets to pedestrians throughout the five boroughs. Residents were allowed to use the streets from 8 a.m. until 8 p.m., unless otherwise posted, as long as they maintained at least 6 feet distance from others.<sup>27</sup> In D.C., closures of three major parkways to traffic allowed people to spread out and walk, jog or ride bicycles.<sup>28</sup> Some cities expanded their bike lanes, and others began to suggest restricting some city roads to foot traffic permanently.



**Some streets were closed to cars across the state to allow people to maintain social distancing for pedestrians. (Photo courtesy the Corning Leader)**

Another notable consequence of the pandemic was cleaner air quality. As a result of the drastic reduction in private automobile use, industrial soot, tailpipe emissions, greenhouse gases dropped to levels not seen in decades.<sup>29</sup> Poor air quality is a contributing cause of health problems especially for children, the elderly, and people with existing conditions.

Minority and low-income communities are particularly vulnerable to adverse health outcomes and economic impacts.<sup>30</sup> Providing a complete network of greenway trails as an alternative to car travel is a way to keep people out of their cars, get more exercise, and continue the trend towards cleaner air.

### An Investment in Community

The Pennsylvania Land Trust Association’s online guide, *The Economic Benefits of Trails*, identifies areas that trails can have a positive economic impact. They can:

- Increase the value of nearby properties
- Boost spending at local businesses such as restaurants, lodging, and shops.
- Encourage homebuyers to move nearby (walking and biking paths are ranked as one of the most important features in a new community).
- Reduce medical costs by promoting regular exercise and other healthy outdoor activities.
- Revitalize depressed neighborhoods, creating a demand for space in what were once vacant buildings.
- Encourage businesses to expand or relocate
- Provide transportation options and cut fuel expenses
- Provide low or no-cost recreation.

### Access and Equity

In general, the benefits gained from use of public parks and trails is greatest for those who live closest to these resources. Conversely, a lack of public open space can have significant health, social, and economic implications.<sup>31</sup> Providing access to green space in underserved areas, communities whose residents are primarily individuals or households of color, elderly, single female heads of households with minor children, limited English proficiency, and persons with disabilities<sup>32</sup>, may help to reduce some inequities in health and quality of life found across the state.

Low-income communities often lack opportunities for contact with nature, which deprives people living in these neighborhoods disproportionately of the accompanying health benefits. The National Recreation and Parks Association (NRPA) has developed a toolkit to help guide policy creation and implementation, which is available online (see Resources in this plan). Its “Parks for Inclusion” initiative supports built environment enhancements, models for policy development, and best practices for program implementation to increase access to health opportunities for those with physical and cognitive disabilities, the LGBTQ community, racial and ethnic minorities and new Americans.

A report about an East Coast Greenway segment in North Carolina found that having a greenway trail within your community makes walking and bicycling safer and more accessible and can reduce pedestrian and bicyclist injuries and deaths. Pedestrian fatality rates in low-income portions of metro areas are approximately twice that of more affluent neighborhoods, making it imperative to develop greenway trails in these communities.



**The start of the 2016 Atlanta, GA Tour De Cure,**  
 (Photo: Monica Garrison, used with permission  
<https://www.blackgirlsdebike.com/media-images>)

A health impact study focused on the Genesee Valley Greenway describes greenway trails as “inherently a low-cost recreation opportunity and can extend active transportation opportunities to all populations and demographics.”<sup>33</sup> In urban areas with little space available for new parks, greenway trails can add green space to multiple neighborhoods while taking up less room. Additionally, their linear shape means that these corridors generally pass through neighborhoods of all types, and thereby can increase access to green space and its benefits for more residents than other types of parks. However, while cities throughout NYS have public trails and/or greenways, some are designed with limited entry points, which can restrict access for residents in some neighborhoods (ibid., endnote 3).

Viewing trail networks as part of a more inclusive health protection strategy can help encourage recreation providers become more innovative in developing options, creating more opportunities, links, and a more connected network.<sup>34</sup> In many urban areas, older industrial infrastructure, highways, rail lines, underutilized roadways and bridges are being converted into public greenway trails, and many have quickly become popular destinations.



***A conceptual rendering of a section of the Empire State Trail recently completed in Watervliet, NY (Photo: Albany Bicycle Coalition)***



## Economic Benefits

Greenway trails can be powerful economic drivers. The value they bring to a community and region represent a substantial economic return, as the costs of land acquisition for trails, trail construction, and maintenance are generally far outweighed by their economic benefits.<sup>35</sup> Overall visitor spending related to New York’s Erie Canalway Trail, for instance—factoring both direct and secondary effects—generates approximately \$253 million in sales, 3,440 jobs, \$78 million in labor income, and \$28.5 million in taxes in the upstate economy each year.<sup>36</sup>

When abandoned infrastructure is repurposed for public recreation and green space residents can see an improved quality of life, higher real estate values, and more services in their neighborhoods. The benefits from transforming older infrastructure into activated public spaces are evidenced in the OPRHP’s Walkway Over the Hudson State Historic Park (Walkway). Since opening in October 2009, this long abandoned 19th century railroad bridge has become a popular destination and a Hudson Valley icon.

The Walkway has roughly half a million visitors a year, including not only NYS residents but visitors from all 50 states and abroad. With parking available at both ends of the bridge, and vendors selling food and beverages, people from both sides of the Hudson can enter the Walkway for exercise, to walk their dogs, bike, meet friends, and people watch. Programs include Sunrise Strolls and the Walkway at Night, and the facility frequently hosts fundraising events, “cause”-related marches, marathons and other races that attract larger crowds. A 2018 quality-of-life-impact study examined ways in which the Walkway has impacted the region. The report found that it has had a “measurable and meaningful impact on the quality of life of local residents, especially in the City of Poughkeepsie and the Hamlet of Highland... and that it has contributed to both a renewed sense of pride and actual investment in the city’s downtown.”<sup>37</sup>

Greenway trail users are potential customers who can bring revenue into communities when they stop along the way to buy food and drinks or browse an attractive shopping district. When the context is sufficiently appealing, people will travel from some distance away. The Erie Canalway Trail, spanning approximately 300 miles across upstate NY, is a large-scale draw for people from near and far, with many stops and points of interest in communities along the route, bringing the potential for benefit from trail tourism.<sup>38</sup>



*Amenities along the Erie Canalway Trail (Photo: OPRHP)*

A 2017 report looked at the economic impact of a North Carolina segment of the East Coast Greenway, which runs from Key West in Florida to northern Maine. Researchers found that in general when trail users spend money, the benefit tends to circulate beyond the immediate vicinity, expanding throughout regional businesses and services as well. They noted that this phenomenon can also apply to smaller trails or spurs. The nonprofit group, Trust for Public Land, found that proximity to outdoor amenities such as public parks and greenway trails can also positively affect the regional real estate market. They found that properties up to 2,000 feet distance from open space may have values raised by 20 percent or more.

## A Regional Draw

Stretching from Lake Ontario to Lake Champlain, New York’s Thousand Islands region offers outdoor lovers a happy mix of woodlands, islands, and water. A 2018 Trust for Public Land report noted that visitors to the region spend an estimated \$37.9 million annually in the region, generating \$2.58 million and \$2.10 million in local and state tax revenues, respectively.

Greenway trails in the region include the Sissy Danforth Rivergate Trail, a multi-use route built on the bed of the old New York Central Railroad. Running 25 miles from Philadelphia, NY to Clayton, NY, the trail links popular resort destinations, with galleries, boutiques and eateries catering to summer visitors. Eventually, the trail will link to the Riverwalk in the Town of Clayton.



**View of the Town of Clayton, NY Riverwalk on the St. Lawrence River (Photo: Town of Clayton)**

## Trail Tourism

Tourism and recreation-related revenues from greenway trails occur in several forms. A facility may attract businesses offering recreation rentals (e.g., bicycles, kayaks, canoes), increase demand for restaurants, lodging, and other services (shuttle buses, guided tours), and support historic preservation. Examples of economic development benefit across the U.S. include:

- The Outer Banks, NC: Bicycling is estimated to have an annual economic impact of \$60 million and 1,407 jobs, supported by the 40,800 visitors for whom bicycling was indicated as an important reason for choosing to vacation in the area.
- Damascus, VA: The Virginia Creeper Trail, a 34-mile trail in southwestern Virginia, where locals and non-locals spend approximately \$2.5 million annually related to their recreation visits.
- Morgantown, WV: The 45-mile Mon River trail system is credited by the Convention and Visitors Bureau for revitalizing an entire district of the city, with a reported \$200 million in private investment as a direct result of the trail.
- Great Allegheny Passage Trail: The direct economic impact of this 150-mile rail-trail that runs through Maryland and Pennsylvania has exceeded \$14 million a year, encouraging new businesses and a rise in property values in the first trailhead town.
- Dallas, TX: The 20-mile Mineral Wells to Weatherford Trail attracts 300,000 people annually and generates local revenues of \$2 million.<sup>39</sup>

The same amenities that draw tourists to the area appeal to those looking to buy new homes or open businesses. Property value studies of similar trail systems show that nearby property owners have a minimum increase of four percent in the value of their properties when located near a greenway trail.<sup>40</sup>

In their report on tourism strategies for “rust belt” regions, the Industrial Heartland Trails Coalition encourages the development of “destination trails”... that “people will travel to – a trail that has lure, a “wow” factor, and leaves lasting impressions.”<sup>41</sup> Destination trails may offer scenic vistas, historic buildings, industrial relics, public art, eateries, and more, so that, beyond the trail, visitors can bicycle, drive, or use local transport to visit a wide variety of attractions.

Other ways that trails may benefit the local community include:

- Slowing the rate of travel, resulting in extended visits that bring people off the interstate to patronize local businesses
- Introducing trail users to attractions “beyond the trail” via spurs and routes that deliberately intersect with places of local interest.
- Creatively and intentionally connecting visitor attractions along linear trails using cell phone apps, signage, or road markings.

As a way to help revitalize small towns in mostly rural areas, “Trail Town” programs capitalize on proximity to greenway trails. The Rails-to-Trails Conservancy describes a Trail Town as “a community through which a trail passes that supports trail users with services, promotes the trail to its citizens and embraces the trail as a resource to be protected and celebrated.”<sup>42</sup> Proximity to a trail alone is generally not enough to encourage people off the trail and into adjacent communities to spend money and stimulate local economies.

The historic Adirondack Railway corridor discussed earlier is on its way to becoming a year-round tourist destination for bicyclists, runners, walkers, wheelchair users, birders, and cross-country skiers. The 34-mile greenway from Lake Placid to Tupper Lake will pass through several scenic villages and have multiple access points, providing trail users connections to local amenities.

### Historic Preservation & Community Identity

Greenway trails can become important sources of community identity. In New York State, many serve to protect and provide access to historically significant sites, such as historically important transportation corridors. Some routes connect people to places with compelling stories to tell, where important events occurred or significant buildings still stand. They may feature historic feats of engineering, like the old Croton Aqueduct or the Erie Canal, and convey a powerful sense of place that can help evoke a more powerful understanding of the lives of the people who once lived and worked in the region.



**(Top) ALCO Heritage Trail on the Mohawk River (PTNY) (Above) Historical marker on the Catherine Valley Trail, Finger Lakes (OPRHP)**

Greenway trails that pass through historic rail corridors provide a glimpse of the former significance of this mode of transport. Canalways, preserved for their impressive infrastructure and importance as a historic transportation route before the advent of railroads, are now used by thousands of people each year for bicycling, running, hiking, and strolling. These routes also bring people into direct contact with historic structures like the preserved taverns, dams, and locks that can evoke the past more effectively than guidebooks or signs.

Relics from New York State’s industrial past continue to be repurposed for public recreation. In the City of Schenectady, NY a new rail trail is part of a larger revitalization effort at the long-neglected waterfront along the Mohawk River. The ALCO Heritage Trail is named after an industrial plant owned by the American Locomotive Company (ALCO), which once dominated the waterfront here. The ALCO trail is now part of the Erie Canalway Trail system, running through Mohawk



Harbor and connecting with the Mohawk-Hudson Bike-Hike Trail. Interpretive signs along the waterfront mark milestones in Schenectady's industrial past.

Developers recognize that recreational facilities and a sense of history can be important elements that people want to have in their neighborhoods. When planning new projects, these greenway trails are seen as amenities that can be a significant selling point.

## Environmental Benefits

Vegetated open space provides wildlife habitat, offers carbon sequestration, protects the built environment from flood damage, and a multitude of other valuable functions. As linear open space corridors, greenway trails offer unique environmental benefits while providing a recreational resource for adjacent communities.

## Habitat Connections

Greenway trails offer access to nature without causing substantial environmental impact.<sup>43</sup> As protected open space, these routes can link habitat fragmented by urbanization, providing plants and animals with sunlight, food, and shelter. As tools for ecology and conservation, they help to preserve or restore natural landscapes that provide important physical connections between natural areas and begin the process of restoring historical wildlife corridors.

Uninterrupted habitat can support a higher diversity of species, especially those that favor the margins of woods or fields. Properly maintained, native habitat along these trails can also reduce the establishment of invasive plant species and increase pollinator habitat. Larger undeveloped areas can support larger and shyer animals like foxes and opossums who are important to controlling tick populations either by eating tick-carrying rodents or by eating ticks directly.

Public agencies with significant land holdings have the opportunity to make a large-scale environmental impact. Efforts to enhance green corridors include those by the NYS Power Authority (NYPA) and NYS Thruway Authority (NYTA), both of which are working to develop pollinator habitat along their Right of Way (ROW) corridors and identifying where biodiversity can be improved by managing invasive plants and promoting native plant species.<sup>44</sup>

Many greenway trails follow the course of ancient waterways. Over time, human development has altered these waterbodies -filling in the floodplains and riparian areas that once buffered runoff and pollution.



**Genesee Valley Greenway (Photo: Allen Kerkeslager)**

When designed with protecting and restoring these natural features in mind, greenway trails can help bring back healthy riparian areas along rivers and streams and provide vegetated areas to slow and infiltrate flood water.

Incorporating a planted strip or depressed bioswale alongside the trail with appropriate native species can protect pavements from sediment runoff and while also reducing soil erosion. Plant buffers filter the sediment and pollutants carried by runoff into adjacent waterbodies.



**Brooklyn Waterfront Greenway (Photos: John Wachunas)**

When designed to incorporate green stormwater elements such as permeable pavements or rain gardens, trail corridors can become green stormwater management systems that further protect water quality. Greenway trails can also improve water quality by keeping development away from waterways. Planned greenway trails can incorporate riparian or floodplain enhancement or wetland restoration as part of their development.

### Green Transportation

By providing a safe, enjoyable alternative to driving, well-designed greenway trails can reduce the use of fossil fuels and air pollution. Large areas of vegetation, such as those found in many trail corridors, produce oxygen and filter pollutants such as ozone, sulfur dioxide, carbon monoxide, and airborne particles of heavy metal.

Designing greenway trails with materials and features that ensure the longevity of the facility in the face of extreme weather is important to all trail systems but especially those in low-lying areas or flood-prone communities. Some examples of these efforts in NYS include:

- The Brooklyn Waterfront Greenway, which ultimately will offer a 26-mile route that links Brooklyn's waterfront including environmental justice (EJ) communities and low-lying areas that were heavily impacted by Superstorm Sandy. Plans will look at developing the greenway on an elevated berm in low-lying areas.
- The proposed Hudson Highlands Fjord Trail, a new linear park along a scenic stretch of the Hudson River, is planning for sea level rise based on state projections and will require some sections of elevated structures.

The NYC Department of Transportation promotes biking as a form of resilience transportation. These efforts build upon the city's **Green Wave plan**, which seeks to address cycling safety and infrastructure and calls for an increase in protected bike lanes and a master plan update. The plan promotes a transition from other forms of transport to cycling.

### Open Space Preservation & Climate Change

Much of our country's open space has been lost to development and the expansion of urban, suburban, industrial, and commercial areas. While parklands, natural area preserves, and trail corridors offer places for recreation and green respite, they are also increasingly seen as a first line of defense against the effects of climate change.



The Greenbelt Alliance notes that “forests, parks, and open space lands serve as ‘carbon sinks’ that store greenhouse gas emissions that would otherwise contribute to climate change.”<sup>45</sup> Greenway trail development also offers the opportunity to actively protect and restore floodways along river and stream corridors, expanding green space and protecting developed areas. Restoring highly impervious areas such as industrial lands to green space increases the percentage of porous, vegetated area, which are often rare in developed landscapes. When an industrial landscape, a railroad right-of-way or utility corridor is used to create a park or incorporate a greenway trail, private and largely impervious land can become public green space, with trees, flowers, and grass.

Developed along the old transportation routes of the Genesee Valley Canal and Pennsylvania Railroad, the Genesee Valley Greenway (GVG) offers a 90-mile route that has become a substantial recreational resource for the region, activating and greening formerly abandoned industrial lands. Along the trail, portions of the old canal bed have become wetland habitat, and wildlife abounds in some segments, attracting birdwatchers and nature photographers.<sup>46</sup>

Another impact of climate change is an increase in seasonal shifts, which can affect wildlife habitat. As average seasonal temperatures increase, species adapted to particular plants for food, shelter, or a changing water source are in some cases moving upwards in both elevation and latitude.<sup>47</sup> The U.S. Forest Service notes that “temperature increases and changes in precipitation can directly affect species depending on their physiology and tolerance of environmental changes.”<sup>48</sup> Greenway trail corridors offer linear habitat linkages that may become more important in accommodating these movements.

### Protecting People and Property from Flood Damage

In New York State, existing greenway trails help protect open space along waterways. As greenway trails often follow natural land or water features, they can be designed to function as natural overflow areas during the more frequent and intensive storm events seen in recent years. Restoring or protecting floodplains and improving riparian buffers as part of greenway trail development are a strategy that can be built into the design to help mitigate potential flood damage and related costs.

In lower Westchester County, the Bronx River Pathway (BRP) meanders along and across the Bronx River as it wends its way south from the Kensico Dam in the Hamlet of Valhalla. Over the decades, the river’s course and floodplain have been highly modified and restricted as it passes through a densely developed area. Bounded on one side by a busy roadway, during heavy rainstorms the Bronx River has been known to jump its banks, flooding the Bronx River Parkway.<sup>49</sup> The trail corridor on the opposite bank provides a level, mostly planted area that acts to slow and absorb the water, protecting nearby structures.



**Bronx River Pathway (Photo: Torsha Bhattacharya)**

A guide created by NYC Parks, *Design and Planning for Flood Resiliency*, offers recommendations for resiliency to flooding and extreme weather events.<sup>50</sup> Calling upon NYC Parks’ many decades of experience with waterfront park planning and design, as well as difficult lessons the City learned from Hurricane Sandy, the document offers design guidance for resilience and provides checklists for special considerations for waterfront park planning and design.

## Cultural Benefits

Every community and region has its own specific history, geography, destinations, and natural landscapes. Cultural and historic sites create nodes across the landscape where visitors can absorb the local flavor of a region's way of life and history. New York State's cultural and historic treasures are notable for their architecture, landscapes, artifacts, or context. They provide a sense of place and an understanding of past events by drawing greater public attention to the physical locations of historic events.

### A Route Through History

Running along the City of Buffalo's Outer Harbor Parkway, the Industrial Heritage Trail (IHT) is a recreational, cultural, and historic spine that links parks and interpretative sites. Developed for the NYSDOT Transportation Enhancement Program, the IHT is a 3.5-mile multi-use trail that connects with two nature preserves and the Buffalo Outer Harbor State Park.

To integrate the IHT into its context and reflect the site's industrial legacy, the trail incorporates reclaimed materials, including cobbles from the adjacent parkway and cypress logs recovered from the lake bottom. At the southern end of trail is the Union Ship Canal, originally built to support heavy industry on the waterfront, including Lackawanna and Bethlehem Steel.

Greenway trail networks can help to confer the real-life experience of local heritage by connecting the public to these sites, interpreting and providing access to them. Trails can lead people to historic battlegrounds and across covered bridges, along through canal locks, and to other monuments of our past that might otherwise be bypassed or difficult to access. Recognizing, honoring, and connecting to these features fosters community identity while attracting visitors from other places. The historic names of some parks and trails add to the recognition of the events and cultural context that enriches the community and enhances the user experience.

As corridors of public land recognized for the ability to connect people and places together, greenway trails are an important component of our state's infrastructure. More importantly, it is evident that they add significantly to the well-being of those who have access and use them. Results of the statewide survey completed for this plan made it clear that New Yorkers value these as important amenities.



**Manhattan Waterfront Greenway**  
(Photo: Jim Henderson via Wikipedia)

## Chapter 4 — Public & Stakeholder Input

In preparing the 2020 Statewide Greenway Trails Plan, OPRHP conducted outreach to gather information and content for the plan from the general public as well as relevant New York State agencies and trail-related organizations and stakeholders across the state. Input and comments were collected through online presentations and information sessions, in person meetings (prior to COVID-19), traditional and electronic mail, as well as a public survey. The information collected was used to identify topics highlighted in Chapter 5 – Trends and Issues in Greenway Trail Development and to identify priorities for its goals and recommendations.

### Public Input

On May 6, 2020, OPRHP distributed a press release announcing an online public information session, which was held later that month to discuss the Draft Scoping Document for the plan. A requirement for environmental review, the document outlined topics and components proposed in the plan.

The information session provided the public the opportunity to submit questions and comments, and the Draft Scoping Document included a 30-day public comment period. In addition to comments on the Draft Scoping Document, the agency continued to accept general comments via traditional and electronic mail throughout the plan's creation.

Comments from the public identified priority topics for inclusion in the plan such as:

- Increasing public access to green space
- The role of greenway trails in non-motorized transportation
- Ensuring environmental justice in planning
- Expansion of the state's greenway trail system
- Statewide collaboration for trail development

In addition to the methods described above, OPRHP partnered with Parks & Trails New York (PTNY) to conduct a public survey during the months of May and June 2020. The survey collected statistical data to better identify the motivations, use patterns, preferences, and desires of current and potential greenway trail users across the state. The survey was advertised widely via electronic mail and social media platforms and received over 2400 responses. A summary of that survey effort is included below.

### Greenway Trails Plan Survey

In spring 2020, PTNY and OPRHP partnered to survey the general public regarding current use of and preferences for greenway trails (see survey sample Appendix B). The survey was administered over the internet during a three-month period in late spring and early summer 2020. Due to COVID-19 restrictions, paper copies were not distributed, and in-person surveys were not conducted. Survey participation, therefore, was limited to those with computer access. Outreach for the survey consisted of email communications and social media posts across Facebook, Twitter, and Instagram accounts, and cross-promotion with partner organizations and elected officials.

The survey received a significant number of responses from all regions of the state, with a disproportionate number from upstate regions, particularly the greater Rochester area, with far fewer responses from New York City and Long Island than would reflect the state's population distribution. The median age of survey respondents was 58, and more than 90 percent of respondents were white, non-Hispanic, despite only

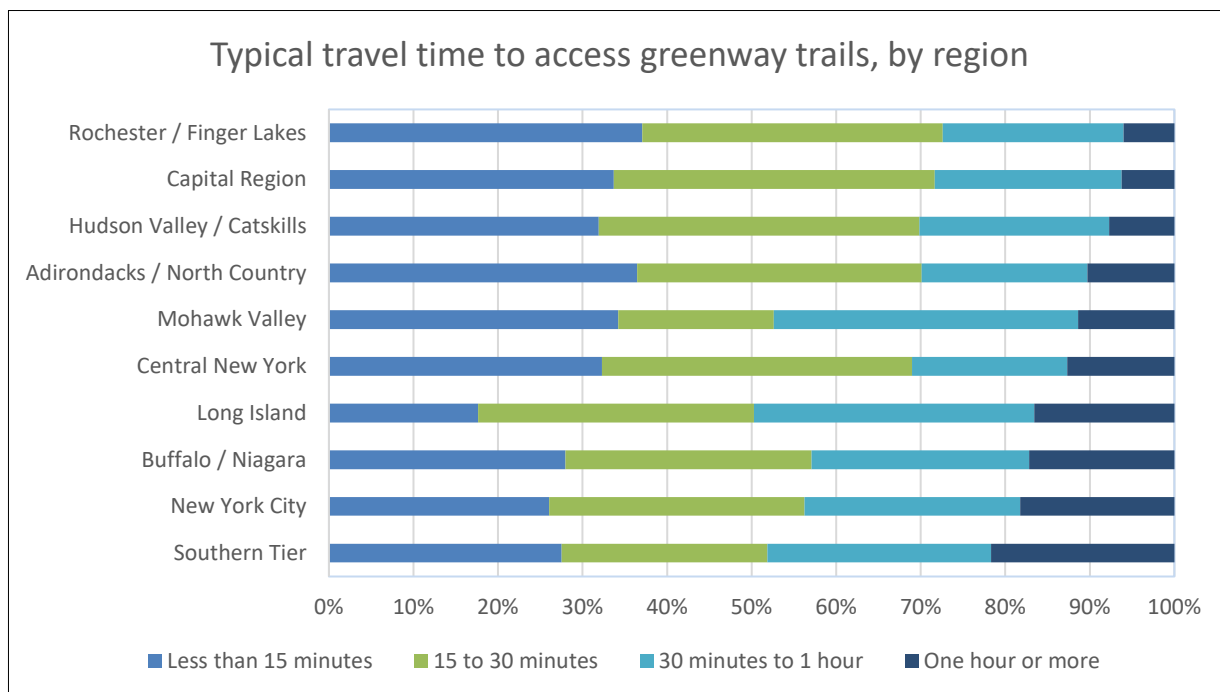
*...It's vital that the planners/landscape architects/ engineers/ policy makers/ administrators/ consultants/etc. at the involved and interested State/Federal agencies consider the different needs and desires expressed by different racial communities as a matter of racial and environmental justice.*

— Public comment received on the Draft Scoping Document for the Statewide Greenway Trails Plan

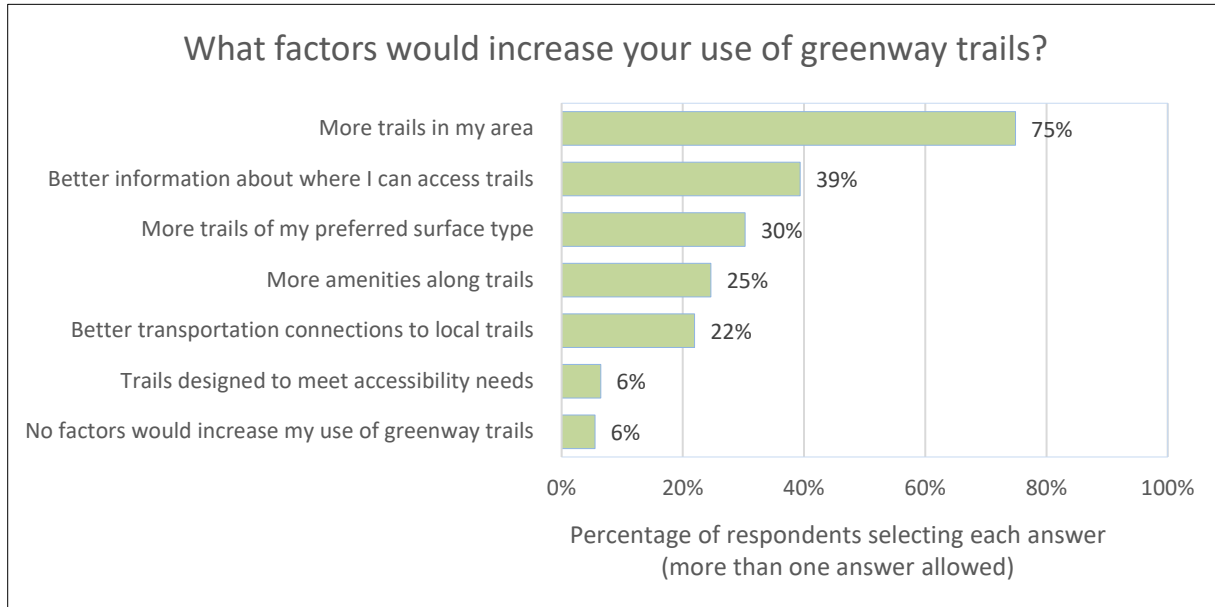
representing 56 percent of the state's general population. The homogeneity of the respondents shows the survey's results likely better reflect the greenway use patterns of a white, older, upstate demographic rather than reflecting greenway use for the state as a whole.

Respondents reported typical travel time to a greenway trail as under 30 minutes, spending between one and two hours on the trail, and covering between five and 15 miles. However, the average travel time to access a trail varied greatly by region of the state, with almost half of respondents reporting travel times of 30 minutes or more to access a greenway trail in regions such as Long Island, the Southern Tier, and New York City. More than 70 percent reported having taken a day trip with the primary purpose of visiting a greenway trail, and 43 percent have taken out-of-state visitors to visit one of New York's greenway trails. More than half of survey respondents visit greenway trails at least a few times a month.

When planning trips to greenway trails, 80% of respondents reported considering the length of the trail, 78% the proximity of the trail, and 69% the scenery or accessibility of nature along the trail. Surface type was only a consideration for 55%, suggesting that many greenway trail users will use a trail regardless of whether the surface is of their preferred type.



**Typical Travel Time to Greenway Trails, by Region**



**Factors That Would Increase Use of Trails**

The primary source of information for greenway trail users is the internet, with 70% selecting that option and an additional 30% using social media. Many of those who selected the “other” option indicated either email, apps, or other web-based platforms as their primary source of information. The second most common answer was word of mouth (42%).

For the preferred surface type for a greenway trail, the survey showed 40 percent of respondents indicating a preference for hard surface, paved trails, with 27% preferring stone dust, and 26% who prefer natural, dirt, or other unfinished surfaces.

The survey asked respondents to identify their favorite greenway trail and explain characteristics that made the trail their favorite. Over 100 different greenway trails were noted, with long-distance trails such as the Erie Canalway Trail and the Genesee Valley Greenway the most commonly listed responses. The most common reason given for why a trail was a favorite was the proximity of the trail to where the user lived or worked, and ease of access to the trail (48 percent of responses).

The survey asked what would increase the respondent’s use of greenway trails. For this, the most common response was the development of more trails in the respondent’s area (75%), followed by more information about where to access trails. More trails of the preferred surface type and more amenities along trails were cited by more than 25 percent of respondents.

The survey also asked which priorities trail managers should focus on. More than 85% considered it very important or important to create new, or expand existing, greenway trails, to increase funding for greenway trails, and to close gaps to create a more interconnected greenway trail system.

Lowest priority for those surveyed was to connect greenway trails with restaurants and retail destinations, suggesting that greenways are viewed primarily as recreational or commuting options. Similarly, on-site trail



maps, signage, and parking were indicated as the most important amenities (with 70% indicating these amenities as important or very important), followed by the presence of restrooms (61%).

(Note that some questions on the survey allowed for only one response and others allowed for multiple responses, so some questions have response percentages that add up to more than 100%.)

More details on PTNY's greenway trails public survey and its findings are included in the full report, titled *Greenway Trail User Survey: Results and Analysis*, located in Appendix B.

## Agency & Stakeholder Participation

Collaboration with partners across the state was critical to the development of this plan. Early in 2020 OPRHP met with Federal and State agency representatives from the National Park Service, NYS Department of Environmental Conservation (DEC), NYS Department of Transportation (DOT), NYS Department of Health (DOH), NYS Canal Corporation (Canals), Empire State Development (ESD), Niagara River Greenway and Hudson River Valley Greenway to discuss this plan's scope and collect their input and feedback.

OPRHP also collaborated with Parks & Trails NY (PTNY) to host three web-based stakeholder meetings aimed at collecting priority topics for the plan as well as soliciting trail data. Greenway trail stakeholders included metropolitan and transportation planning organizations, trail and open space non-profits, county government and planning representatives, and many others.

The many local, regional, and state organizations that participated in these meetings contributed greatly to the background, ideas, and goals contained in this plan. Topics of importance put forward by the group included:

- Identification of new and proposed greenway corridors
- Statewide trail connectivity and expanding the trail network
- Prioritization of trail projects
- Environmental justice considerations
- Health benefits of trail use
- Environmental concerns such as climate resiliency
- Trail advocacy and partnerships
- Funding for trails, including long-term maintenance
- Trail tourism



**Whitehall Bike Station, Empire State Trail**  
(Photo: Chuck Tomaselli)

Stakeholder groups were also a key resource for developing the Plan's inventory of greenway trail data. Trail contacts were asked to share spatial data for existing, planned, and proposed trails under their jurisdiction. The data was collected using a GIS database and compiled by OPRHP staff who reviewed it for accuracy and inclusion in the inventory. The resulting inventory is shown in Figure 1: Statewide Greenway Trail System, Figure 2: NYC Greenway Trail System (see Appendix), and online at <https://greenway-trails-plan-nysparks.hub.arcgis.com/>.

# Chapter 5 —Trends and Issues in Greenway Trail Development

The country and state have seen considerable change over the past decade, some of which has impacted trail development and use. While outdoor recreation facilities continue to be recognized as making a significant contribution to public health, community revitalization, and an overall better quality of life, significant changes in lifestyle in recent years, including those related to leisure and work patterns, have resulted in shifts in greenway trail use.

The statewide survey of non-motorized trail users discussed in the previous chapter asked New Yorkers how they use greenway trails, asked about their trail experiences, and about their priorities for current and future trail management (see Appendix B: *Greenway Trail User Survey: Results and Analysis*). The survey results provided important data that reflects current trends in public greenway trail use and helped to identify which issues are important to users.

Stakeholders active in trail development, management, and programming also contributed their issues and concerns most pressing to them and the groups they serve. Many emphasized the need to make trails more inclusive and relevant to non-users, and to find ways to better serve our communities. The importance of expanding facilities with universal design was also stressed to ensure that trails are welcoming and more accessible for use by the elderly, children, and those with different mobility needs.

Additional trends affecting greenway trail recreation have emerged from societal changes. These include the exponential development and impacts of technology, demand for new types of programming and marketing strategies; innovative approaches to trail management and maintenance, and issues such as equity and inclusion and climate change. The following chapter presents some of the trends and issues that emerged from the public outreach done for this plan and research undertaken in the course of its development.

## Technology

Mobile phone use is nearly ubiquitous today and recreation-seekers use this technology to find information on new destinations and for navigating to them as well. Rather than using brochures, paper maps, or word of mouth, most users now access websites, social media, and trail-specific apps for directions, trail amenities, and maps. Greenway trail managers can post up-to-date information about their facility — location, mileage, accessibility, seasonal conditions, trailhead locations, amenities and special events. Interactive mapping, photos, and video are all tools used to give users a better idea of what to expect and how to find things once they arrive.<sup>51</sup> More trails are also now mobile-friendly, and, once on site, a cell phone can also be used for on-site wayfinding and act as a compass, a flashlight, a star chart, and to call for help in emergencies.

Technology has long been associated with a sedentary lifestyle, but the rapidly evolving world of personal technology means the opposite for many who now use it during their outdoor experiences. People on trails can often be seen using technology specifically designed to be used during outdoor activity, which ranges from basic fitness trackers to high-tech smartwatches. Growth in this area can be partly attributed to a growing desire for health and wellness.<sup>52</sup> Some new devices have features that can drop location pins using built-in GPS or record a hiking, running, or biking route. New technological tools include wearable cameras and smartglasses which are outfitted with GPS or voice navigation, and, in addition to performance tracking,



## Demographic Shifts

With NYS trending toward an older population, greenways and trails have been evolving to accommodate the needs of an older user group. Trail managers are increasingly being called upon to create more inclusive programming that responds to this trend.

Creative ideas are emerging. The not-for-profit, *Cycling Without Age*, allows seniors with limited mobility the opportunity to get outdoors onto trails using tri-shaw bikes. Staff from its 2,200 chapter locations work with nursing homes, volunteer organizations, and cyclist federations to help seniors with few other opportunities outdoors and interacting with their communities.



*Tri-Shaw Bike (Cycling Without Age <https://cyclingwithoutage.org>)*

may offer music playlists, hands-free communication with other cyclists, including the ability to make and accept phone calls. Some can take action photos and videos to share on social media and allow users to easily track time and distance and share their workouts with a community.

A 2014 study on the impacts of technology on recreation notes that "...younger generations are so inundated with technology that they are apprehensive about the idea of going to a place where their technology no longer works."<sup>53</sup> A recent online article on how tech is affecting parks and recreation noted that "by engaging young people in games that are a hybrid of technology and outdoor exploration, local government parks and recreation leaders can help engage the next generation of citizen leaders and demonstrate the importance that park facilities have in the community."<sup>54</sup> Augmented reality technology and park exploration gamification, for instance, offer mobile-based and geocache applications that often appeal to a younger demographic.

While apps, smart watches, and GPS tracking devices can be used to navigate, people tend to use them primarily to track personal fitness. These devices may also help develop repeat trail users because they help people envision the benefits of trail use and easily share their experiences with others. Additionally, some of the data generated is publicly available, and may provide trail managers with good tools for trail usage analyses.

Social media can also play a significant role in popularizing parks by allowing users to post action photos and share favorite locations. Design innovations that use virtual resources and apps; fitness trackers and outdoor games that use GPS or drones; tools, gadgets and gear made from newly-developed materials all have the potential to influence how we recreate. New forms of data collection technology are increasingly helpful in managing, developing, or promoting trails. These include trail cameras, drones, bikeshare data, and trail counters, many of which have seen significant development and become more affordable in recent years.<sup>55</sup>

Apps now offer virtual hikes on trails throughout the world, which allows users to, for instance, virtually walk the entire Appalachian Trail, run in the New York City Marathon, or hike through Yosemite, all while running on a treadmill or sitting in an armchair. Virtual trail experiences can allow those who are unable to visit these sites physically the opportunity to experience them, as well as allowing users to experience sections of these facilities that are more difficult to access. Offering both single-day experiences or multi-day treks, these

apps clock the journey in real time. Many are professionally photographed with panoramic views of landmarks along the way; when users arrive at a stop, they see on their phone that exact spot in Yosemite, for instance. Adding to the realism, as they move their phone, the image on the screen will adjust to display what would be seen on the actual trail.

## Equipment

Advancements in technology have improved the user experience in many of the environments in which people are using bicycles – for exercise, commuting, or enjoying nature. Newly popular gravel bikes are more versatile on rough terrain and have a smoother ride on asphalt, creating more options for use. Bikes with tubeless tires that make punctures less frequent and easier to repair are now part of the mainstream market.<sup>56</sup> Lighter, more versatile bicycles include foldable bikes with vastly improved designs that allow for easier storage for commuters and those with smaller cars.<sup>57</sup> Some of today’s foldable bicycles weigh as little as 15 pounds and can easily fit under an office desk. Technology for runners includes “smart” insoles that analyze your gait and sends your smartphone suggestions, like to shorten your stride to help prevent injuries.<sup>58</sup>

### Dockless Bikeshares

Over the last decade, bikeshares have become a standard feature in cities around the world, with over 1,000 cities offering at least one bikesharing program. Some city governments have incorporated bikeshares into their transportation and sustainability plans as a low-cost and innovative mobility option for residents. More and more cities are realizing the benefits of integrating this reliable, convenient, safe, and affordable mode into their existing portfolio of transport options.<sup>59</sup>

Compared to traditional bikeshare systems with fixed stations and parking docks, the dockless model allows a rider to leave a rented bike wherever they end their trip. With no fixed stations or parking docks, bicycles are equipped with a self-lock and can be left on a street corner, in front of the rider’s house or other public places. To use, riders download the company’s app, which will direct them to the nearest bicycle that can then be unlocked, in most cases, by scanning a QR code with their phone.

### E-Bikes & Other Electric-assisted Devices

Electric-assist bicycles, or e-bikes, are another trend that has become more commonplace and is affecting trail management. E-bikes use a small electric motor for propulsion, either in conjunction with the rider’s pedaling (pedal-assist) or solely using a throttle (throttle-assist). E-bikes are generally classified into categories based on their ability to be propelled independent of pedaling (throttle vs pedal-assist), and the maximum speed with which the motor propels the bike (up to 28 miles per hour).<sup>60</sup> While more expensive than traditional bicycles, e-bikes are being embraced across a spectrum of users for similar reasons: riders can travel farther distances, tackle terrain they may have otherwise avoided or arrive at their destinations more quickly and with less effort. These are all benefits for people looking to keep pedaling into older age, commuters headed to and from work, or others just looking to reduce or avoid vehicle use.

More common in urban areas, electric scooters (e-scooters) operate similarly to some e-bikes with an electric motor providing the power. These scooters have become very popular via micro-mobility networks, such as bike and scooter shares, in urban centers across the U.S. and in Europe.<sup>61</sup>

In April 2020, New York passed legislation regulating e-bikes and e-scooters as unregistered vehicles under the Department of Motor Vehicles.<sup>62</sup> The laws outlining e-bikes and e-scooters in the state generally match those across the country, with slight variations in class type and maximum speed. In New York State, e-bikes are classified into three types and e-scooters are categorized separately:

- Class 1: A pedal-assist bicycle with an electric motor that provides assistance up to twenty miles per hour.
- Class 2: A bicycle with an electric motor, that may be used exclusively, that provides assistance up to twenty miles per hour.
- Class 3: Solely within a city having a population of one million or more, a bicycle with an electric motor, that may be used exclusively, that provides assistance up to twenty-five miles per hour.
- Electric scooter: A device weighing less than one hundred pounds that
  - (a) has handlebars, a floorboard or a seat that can be stood or sat upon by the operator, and an electric motor,
  - (b) can be powered by the electric motor and/or human power, and
  - (c) has a maximum speed of no more than twenty miles per hour on a paved level surface when powered solely by the electric motor.

State law permits e-bikes and e-scooters to be operated on streets and highways with a posted speed limit of 30 mph or less and restricts them from operating on sidewalks (unless authorized by local law or ordinance). Local governments, as well as state agencies, may apply additional restrictions to regulate the use of e-bikes and/or e-scooters on roads, trails, and shared-use paths under their jurisdiction. This means that e-bikes and e-scooters can be used on all local and state roads (with a posted speed limit of 30 mph or less) as well as in bike lanes, and on bike paths, and shared-use trails where local laws or agency regulations do not exclude them.

## Funding

New York has seen stable funding for greenways trails over the past decade. During that time greenway trail projects received more than \$40 million through state and federal grant programs including the Transportation Alternatives Program (TAP), Congestion Mitigation and Air Quality Improvement Program (CMAQ), Recreational Trails Program (RTP), Environmental Protection Fund (EPF) Parks grants and others. These programs make up the bulk of greenway trail funding available to state agencies, counties, municipalities, and non-profits in the state.

In addition to these funding streams, New York's trail systems have benefitted from a number of new public-private partnerships as well as philanthropic gifts. The planned Hudson Highlands Fjord Trail, which brings together both private and state funds, will create a shared-use path connecting Cold Spring and Beacon, NY along one of the most scenic sections of the Hudson River<sup>63</sup>. At the other end of the state, the Ralph Wilson Jr. Foundation announced in 2018, a \$100 million investment to develop parks and advance regional trail systems in western New York<sup>64</sup>. This funding is currently being used to study trail connections in the cities of Buffalo and Rochester as well as longer trail corridors spanning New York's Southern Tier region.

These funding streams, combined with state capital funding such as for the groundbreaking Empire State Trail initiative and Parks 2020 program have provided the state's greenway trail system with resources needed to achieve steady growth. Despite this growth, research indicates that demand will likely continue to outweigh available dollars.

- Data collection for this plan identified over 225 miles of planned trails and more than 850 miles of proposed trails across the state; nearly all of which will compete for the same funding sources.

- During the development of this plan partners frequently identified the need for increased funding and/or new funding opportunities as one of the most critical for growing and maintaining the state's greenway trail system.
- Results from the survey conducted by PTNY found more than 85% of respondents considered it *important or very important* to increase funding for greenway trails.

At the federal level, steps have been taken to protect and increase trail-related recreation and transportation funding. In 2020, the U.S. House of Representatives passed the Great American Outdoors Act, permanently dedicating \$900 million per year in funding for the Land & Water Conservation Fund (LWCF)<sup>65</sup>. Additionally, the RTP Full Funding Act of 2020 (HR 5797), introduced in February 2020, seeks to increase annual funding of the Recreational Trail Program raising available funds for states from \$84 million to at least \$250 million<sup>66</sup>.

Going forward, the status of funding for public recreation facilities such as greenway trails is far from certain. While larger economic impacts from the Covid-19 pandemic are not yet known, funding for recreation may be affected. A broad pool of funds will be required to expand the greenway trails network.

## Programming

Programs and activities created for specific greenway trails are becoming more popular. Group events attract more visitors and encourage people to engage in a healthier lifestyle. Marathons, half-marathons, 5Ks, and themed races, are common on some trails and can bring in large numbers of people. For bicyclists, events such as a 26-mile greenway ride in New York City invites participants to cycle the Brooklyn Waterfront Greenway, passing through the borough's diverse residential, industrial and waterfront neighborhoods. Starting in Greenpoint and ending at Shirley Chisholm State Park, riders complete the route by celebrating with music and food at a "Finisher Festival."

Other programs offer group events for fun that help promote healthy lifestyles. Some include fundraising for good causes or bringing people with shared interests together for themed walks, rides, and events. The Genesee Valley Greenway offers interpretive walks that take participants through towns to learn about local history, highlight historic canal and railroad features, and view interesting natural features along the way.

In 2020, with evolving circumstances surrounding the novel coronavirus COVID-19, some trails programming was shifted to a virtual event platform. Group races, which can attract thousands, became solo events with participants registering for a set time during which to independently run the route and track their time.

## Trail-based Tourism

Nationwide, interest in spending time in public green space has flourished over the past decade. People see parks as healthy, inexpensive destinations with well-documented and predictable infrastructure in natural settings. In NYS, the growing greenway trails network is a part of a larger system that connects people seeking new venues for outdoor recreation to parts of the state that they might not otherwise visit.

Accurate and appealing information on greenway trail access points and amenities is key to encouraging visitation and its component benefits, and the internet is a major player in making people more aware of trail networks. The National Parks Service notes that "mobile technology is making do-it-yourself travel easier than ever, with thousands of mobile phone apps bringing travel, accommodation, and activity services to our fingertips. With social media, photo-sharing apps, and other digital resources publicizing





**Local products displayed at a trailhead for the Empire State Trail (Photo: OPRHP)**

every corner of the state, interest in obscure or off-the-beaten path sites can suddenly go viral, and destination marketers can more easily reach and influence potential visitors to their area.”<sup>67</sup>

Another trend that bike manufacturers have noticed is “Bikepacking,” or multi-day trips, some with camping, that allow riders to explore larger areas and new territory. Ready-to-download itineraries are available for trips in nearly 50 countries, which include detailed information on food, weather, campsites and specific trail conditions, on one website.<sup>68</sup>

### **Ecotourism**

With more widespread concern about climate change and the impacts of travel, ecotourism and options for low-impact trips or sustainable tourism continue to expand in popularity. The International Ecotourism Society defines ecotourism as “responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education.”<sup>69</sup>

Greenways and trails offer travelers the opportunity to access the state’s historical sites, natural settings, small towns and big cities, largely without adding CO2 emissions. The Town of Mamakating, NY, for instance, promotes the region as an ecotourism destination, centered on its trail network, including the Sullivan O&W Rail Trail and the D and H Canal.<sup>70</sup>

Resources on ecotourism are widely available online; in New York State, *The Responsible Travel Guide to New York State* provides information on the culture, history and ecology of the state’s regions as well as public transportation options and finding eco-friendly activities and accommodations.<sup>71</sup> Ideas for “eco-itineraries” within NYS can also be found online, with suggested ecotourist activities that include destinations with trail networks.<sup>72</sup>



## Trails as Transportation

Greenway trail networks are evolving into critical components of multimodal transportation systems. In addition to providing a safe and enjoyable place for people to recreate, greenway trails can function as viable transportation corridors. As linear public space, trails are an important component of urban or regional multi-modal transportation systems, whether for connecting to public transit or as a direct route to the office.

Some municipalities incorporate trails and similar facilities into their transit plans, relying upon trail facilities to "feed" people in and out of transit hubs in a safe and efficient manner. The ability to avoid congested streets and highways and travel through natural areas on foot or by non-motorized means is a large factor in a community's quality of life.

The U.S. Department of Transportation notes that when effectively integrated, "bicycling and walking to public transportation help advance various environmental, health, and congestion-mitigating benefits for communities."<sup>73</sup> Changes in lifestyle, consumer culture, and work patterns, as well as greater environmental awareness about fossil fuel use and climate change, all support a growing need for safe, accessible routes for non-vehicular transport. With the recognition of public health issues related to our sedentary lifestyles, bicycles, scooters, skateboards, and walking are moving more into the mainstream as transportation options.<sup>74</sup>

Public bus and train systems may lack the infrastructure to take everyone exactly where they want or need to go. Getting people to walk the final mile from transit to their destination is one of the challenges transportation planners face when trying to keep people out of their cars. Better bicycle infrastructure, including greenway trails, can be part of the solution to the "last mile" problem.<sup>75</sup>

Providing the infrastructure for multiple modes of transportation is important for increasing the use of public transportation. Safe off-road routes or protected lanes along relatively slow speed roadways can encourage people to use public transit more often. As with all transportation options, pedestrians and cyclists need good wayfinding to locate access points. In Washington, D.C., for instance, road signs along the way to transit hubs advise people of the direction and distance of the nearest Metro station. Effective bicycle commuting infrastructure also means providing secure bike parking at rail entry points and stations, as well as providing covered bicycle racks (or – even better – a secured caged area), as well as dockless bicycles for rent at stations and terminals.

Reducing vehicle trips saves energy and resources, lowers toxic emissions and greenhouse gases. Improved public access and well-designed and maintained greenway trails with multiple entry points allows these facilities to serve as viable transportation routes for short trips that might otherwise have been taken by car. With easy access, people can jump onto a trail to shop, get to work, or socialize.

To determine whether living near a greenway trail reduced car use for community residents, the University of British Columbia in Vancouver, B.C. surveyed people living near a new greenway, the year before and after the completion of the first section in 2013. About half of the 585 participants lived under .2 miles from the greenway, and the rest were within a .3-mile radius. Results showed that the closer group (.2 miles) reduced their daily car or bus travel distance by 18 percent after greenway construction. The greenway, which provides an important east-west connection from the downtown to Stanley Park, features cycling paths, parklets, and public seating.<sup>76</sup>



***One of the many cities that experienced a surge in trail use in 2020, the East Coast Greenway in Philadelphia.  
(Photo: <https://www.greenway.org/>)***

Large-scale trail systems like the 3,000-mile-long East Coast Greenway may help facilitate the shift from fossil fuel-dependent transportation to healthier, active modes of transportation such as bicycling and walking. While many active living-related benefits of a trail network are difficult to quantify, such as improved mental health, educational growth, connection to nature, and sense of place, a growing body of literature links proximity to parks and trails to increased physical activity, decreased healthcare costs, and improved air quality.

Studies indicate that having a greenway in your neighborhood can also help reduce the overall number of pedestrian and bicyclist injuries and deaths from automobiles.<sup>77</sup>



*The Orphan Farm Road section of the Harlem Valley Rail Trail on the day of its ribbon cutting in 2015. (Photo: OPRHP)*

### **Transit-Oriented Development**

An approach to urban design that facilitates use of non-motorized transport by clustering housing, services, and amenities around public transit, Transit-Oriented Development (TOD) allows people to live, work, and recreate in the same neighborhood.<sup>78</sup> Creating districts with mixed commercial, residential, office, and entertainment uses as dense, walkable developments near transit can attract new residents and help energize neighborhoods. Studies have shown that this type of community can reduce dependence on driving by as much as 57%.<sup>79</sup>

Planning greenway trail networks that reduce distances between important destinations and provide and improve bicycle and pedestrian facilities, will increasingly allow people to bicycle or walk to work, shops, and services. The U.S. DOT emphasizes that this resource is particularly important in low-income and minority communities where people are less likely to own vehicles or may not have safe infrastructure for riding bikes or walking. When coordinated with other trail planning, these networks can become viable transportation infrastructure since they help get people safely where they need and want to go.

The U.S. DOT's "Active Transportation" initiative looks to integrate health with transportation planning. The goal is for transportation agencies, including NYSDOT, to create opportunities for people to exercise for recreation and to build physical activity into their daily routine.<sup>80</sup> Although public transportation is not typically defined as active transportation, studies have shown that because every public transportation trip is a multi-modal trip, public transportation riders have a higher level of physical activity.

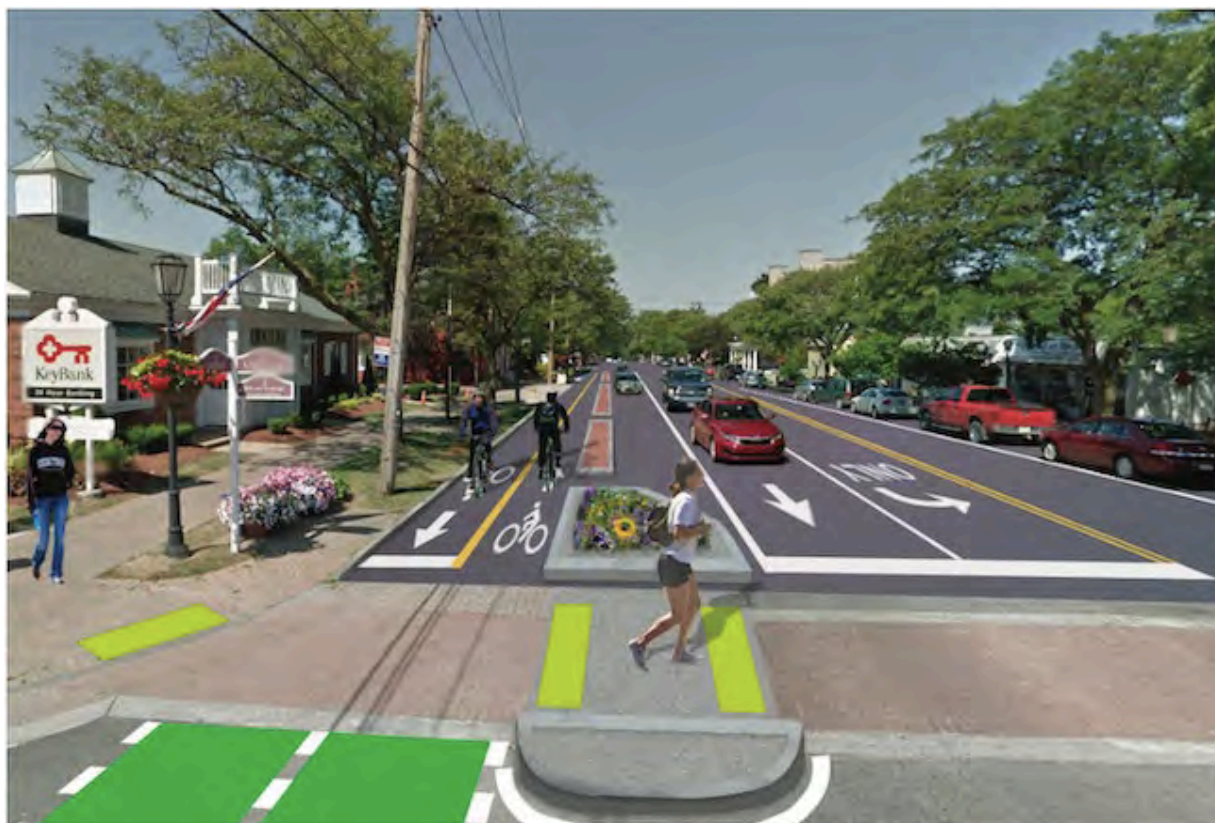


### Complete Streets

As greenway trails become a more integral part of the transportation network, planning and implementing agencies can look to making connections to other types of urban infrastructure. This idea is captured in part with the idea of “Complete Streets,” defined by the NYSDOT as “a roadway planned and designed to consider the safe, convenient access and mobility for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.”<sup>81</sup>

The idea behind a Complete Street is that redesigning roadways and accompanying infrastructure can reduce dependence on car use and make bicycling and walking safer, easier, and faster. Shifting the focus away from automobiles and providing safe places to walk or bike makes people more likely to leave their cars behind on trips to shops, entertainment, parks, and trails. Roadways for a Complete Street have generously wide sidewalks, dedicated bike lanes, comfortable and accessible public transportation stops, road crossings with clear markings, median islands, narrower vehicular travel lanes, and pedestrian infrastructure. They may also incorporate signage, pedestrian control signals, bus pull-outs, accessible curb ramps, raised crosswalks, and traffic calming measures.

Overall, the aim of a Complete Street is to integrate sidewalks, roadways, trails, bike lanes and other transportation infrastructure into a single system. Adapting existing infrastructure to make connections, providing sidewalks with curb ramps wide enough to accommodate wheelchairs and for people to comfortably walk side-by-side will make people on bike or foot safer. The system is designed to work to accommodate everyone, including children, the elderly, and persons with disabilities.<sup>82</sup>More municipalities



**Lewiston, NY bike path conceptual image. (Graphic by Alta Planning, courtesy of the Niagara River Greenway Commission)**

are adopting Complete Streets policies. In 2020, Smart Growth America reported that “90 percent of the nation’s 40 most populous cities have medal-worthy Complete Streets policies in place.”<sup>83</sup> In NYS, the Complete Streets Act (Chapter 398, Laws of New York)<sup>84</sup> was enacted August 15, 2011, requiring state, county and local agencies to consider the convenience and mobility of all users when developing transportation projects that receive state and federal funding. Many local agencies in NYS have passed Complete Streets resolutions and/or adopted their own Complete Streets policies. The National Complete Streets Coalition Policy Atlas inventories complete streets policies across the U.S. and has an interactive mapping tool showing the location of jurisdictions with these policies.<sup>85</sup>

In 2016, Governor Cuomo announced the first-ever New York State Pedestrian Safety Action.<sup>86</sup> This five-year, multi-agency, \$110 million initiative looks to make streets safer for pedestrians. It is being implemented cooperatively by the NYSDOT, focusing on engineering improvements, the State Department of Health, conducting public education and awareness campaigns, and the Governor’s Traffic Safety Committee, coordinating increased law enforcement.

### **Green Infrastructure**

Growing factors such as flooding, increases in summer temperatures, and water quality issues have brought green stormwater infrastructure closer to mainstream use. Green elements such as bioretention systems and permeable pavements for trails and parking areas are now frequently considered in both new and retrofit projects to improve local infiltration, offer shade, provide separation from traffic, and help mitigate localized flooding.

## **Management, Maintenance, and Best Management Practices**

Greenway trails can be complex to manage, often spanning counties and regions. Because there are usually many volunteer and staff roles that support a facility, it is often combined efforts that contribute to keeping the trails open to the public. The New York-New Jersey Trail Conference’s *Trail Management Guide* provides lists of responsibilities for trail managers, volunteers, and other staff involved in keeping a greenway trail operational (see Resources).

### **Trail Management**

Of the many challenges trail managers cite, those of managing or preventing behaviors that can lead to injury (ill-prepared or under-skilled users) and damage to trails (graffiti, garbage, trail spreading, going off-trail), are among those that can increase management and maintenance burdens. Conflicts between bicycles, runners, and walkers are especially common with increased use.

User education tools with protocols for safe trail use are needed, especially for new users. The New York Bicycling Coalition (NYBC) offers two videos on state vehicle and traffic laws and how they pertain to drivers and bicyclists when operating their bicycles on public roadways.<sup>87</sup> Providing on-site stewards who are available to speak to trail users can be useful; however, staff funding for this type of service remains a challenge. Volunteer stewards can be a great option.

For greenway trails along utility corridors there are safety and operational concerns, including clearances (from utility poles, guy wires, and overhead lines) and, in some cases, national security issues. Design guidelines developed for the Albany-Hudson Electric Trail provide technical information on utilizing utility corridors.<sup>88</sup> Some segments of the proposed Long Island extension to the Empire State Trail utilize utility corridors, and in the Mohawk region, trail developers are forming partnerships or license agreements with National Grid, which has a “see something, say something” program to help make these areas safer with eyes on the ground.



## Maintenance

While there is increasing demand for public greenway trails, trail developers and managers consistently report that once a trail is constructed and open to the public, finding the funds and staffing for maintenance can be a considerable challenge. Partnership agreements in which municipalities, nonprofits, or volunteer groups supplement staff responsibilities are an increasingly viable option. Nonprofits can be strong partners because they can involve a community of regional park users directly in park construction and maintenance projects, and often can mobilize volunteers and monitor their work more easily than parks agencies can.<sup>89</sup>

Maintenance agreements range from formal agreements to informal assistance from friends groups, such as the Green Lakes Friends Group, and individual volunteer efforts. An Adopt-A-Trail program provides a formal means of establishing partnerships between state agencies and local governmental entities and trail organizations for maintenance of specific trails.

A 2015 study by the Rails-to-Trails Conservancy found that 60 percent of responding trail managers indicated they do not have a written trail maintenance plan. While publicly owned trails are generally included under larger park or civil works maintenance schedules, because of liability issues, the report recommends that “trail managers should have proof that they exercise a reasonable amount of due diligence to ensure that the trails are safe.”<sup>90</sup>

Maintenance task lists and schedules available online can be customized for individual facilities. American Trails offers a maintenance checklist for greenway trails and urban trails on its website (<https://www.americantrails.org/resources/maintenance-checklist-for-greenways-and-urban-trails>), and the National Park Service has maintenance guidelines and recommendations which include recommendations for frequency of maintenance by season. Generally recommended maintenance tasks for greenway trails include:

Mowing – Annual hours spent mowing varies widely. Suburban greenway trails may have significant amounts of lawn and/or strips along trail edges that require regular mowing. Rural systems that feature more natural vegetation along the trail edges may not require as much maintenance.

Vegetation Management – Managing trailside vegetation is important ongoing work that impacts public safety. Trimming trailside brush, removing fallen trees and branches, pruning trees, and managing invasive species are typical tasks. These maintenance tasks can be labor-intensive and costly, and some trail organizations contract this type of work out.

Pavement Maintenance/Repair – Controlling damage to trail surfaces requires a program of regular, scheduled inspection and preventative maintenance. The two most common greenway trail surface materials are crushed stone and asphalt. Crushed stone is subject to damage from water erosion and vegetation (e.g., plants growing through the surface and breaking down trail edges). For asphalt surfaces, the frost/freeze cycle and stormwater are the most common sources of damage. Tree roots can also lift and crack pavements. Maintenance for hard surfaces includes regularly clearing leaves/twigs, stones, and litter. Some trails may also require maintaining pavement markings.

Other typical maintenance tasks include drainage system clearing or replacement, and ongoing maintenance of signage, parking areas, benches, kiosks, fencing, walls, bridges, picnic tables and other supporting infrastructure. Trailheads may have landscaping, toilet facilities, gates, or other infrastructure that need regular maintenance. Vandalism or illegal dumping may also cause unexpected expenses.

Increasingly, shared services for maintenance are taking some pressure away from trail managers. Volunteer groups can be an invaluable resource for trail maintenance, although they generally need some degree of training and supervision. The National Park Service (NPS) recommends mobilizing volunteers as "trail sponsors", or using an "adopt-a-trail" system.<sup>91</sup> The maintenance guidance from the NPS recommends assigning a person or group a particular segment of trail which they will be responsible for maintaining on a permanent basis, either working by themselves or by recruiting helpers. The group then becomes well-acquainted with the segment, can deal efficiently with problem areas, and determine how often work is needed to keep it well-maintained.

In Stockport, NY, the Columbia Land Conservancy has a management agreement for Harrier Hill Park, with the site's owner, Scenic Hudson, to perform routine repairs and maintenance. Mowing and snow removal is contracted out, and Scenic Hudson's park management staff manages invasive species control and larger repairs. Organizations such as AmeriCorps may be enlisted to post volunteer positions for duties such as park cleanup, flyer distribution, and trail maintenance.<sup>92</sup> The Harlem Valley Rail Trail (HVRT) is a joint effort between OPRHP, the NYSDOT, Dutchess County, the towns of North East and Amenia, and the village of Millerton. In Dutchess County, the trail is leased from NYS by the county and in Columbia County, the trail is part of Taconic State Park and is maintained by OPRHP. The Harlem Valley Rail Trail Association is very active with a large group of volunteers who assist with promotion, maintenance, and other activities along the entire trail.

### **Marketing**

Every greenway trail has a sense of place that comes in part from its physical setting (a ravine, a river, or rail cuts), and its cultural context (a city, historic landscape, archaeological elements). Historic buildings along the trail, rural routes, or former industrial sites offer a different experience than an urban greenway with sophisticated design elements, artwork, and high-end materials. Each will have its proponents. History buffs, outdoor lovers, and competitive athletes may all gravitate toward different trail types. Where and how people learn about greenway trails, and how the trails are characterized, may determine who will be most inclined to use them.

While marketing efforts for greenway trails may fall below maintenance in terms of time and energy, it can be valuable to create goals and strategies for a stronger identity for the facility, along with a framework for clearly conveying its resources to users. The value of trails is only realized if people use them. Websites, local media, events postings, newsletters, surveys, and the like are all standard methods of publicizing recreational amenities and their offerings. Friends' groups and local nonprofits may also provide outreach. In NYS, Empire State Development and the I Love NY campaign work to promote state recreational offerings.<sup>93</sup>

Greenway trails are generally profitable for area businesses, and as amenities that add to a community's unique character, local establishments, chambers of commerce, and visitors' bureaus may include local trails and greenways in their marketing efforts. Since 2006, Parks & Trails New York has conducted fourteen roundtable discussions, entitled *Bicyclists Bring Business*, with communities across the state, resulting in reports that provide each community with recommendations and strategies to help capitalize on the bicycle tourism market. Five major recommendations emerged from these discussions, with strategies to help capitalize on the bicycle tourism market.<sup>94</sup>



*Left: A “branded” walking route, Littleton Colorado (Photo: Mary O’Rourke <https://www.littletoncrabappleroute.org/>)*

*Below: A simple hand-painted arrow marks the route along the Jeju Olle Trail in Korea*



Developing a strategic action plan that includes goals and implementation strategies to increase public awareness of a facility can help focus efforts for promoting a greenway trail. The Susquehanna Greenway which runs from the New York-Pennsylvania border down to Maryland, has developed a strategic action plan that capitalizes on its location in the historic Susquehanna River region.<sup>95</sup> Recommendations in the plan include clearly defining the “greenway experience” using signage, print, websites, social media, apparel, and branding to disperse accurate information and awareness about the trail beyond its immediate region.

Marketing greenway trails as part of a larger non-vehicular system and highlighting unique features can both bring new visitors and enhance regional connectivity. Ideas include:

- Painting inexpensive road markings as “walking lanes” along roadways without sidewalks is an inexpensive way to connect greenway trails to local destinations, amenities, or public transport.
- On a larger scale, creating the armature for greenbelts around cities by protecting open space from development, and linking with existing greenways, trails, parks and other infrastructure will ensure green space is available for public recreation. The City of Toronto’s Greenbelt was established in 2005 when urban sprawl began to overcome open space. The greenbelt serves to protect farmland, forest and wetlands around the city’s edges.
- Connecting urban and rural areas by creating “spokes,” or routes leading outward from cities and suburban areas that link to existing or planned greenway trails, public parks, or destinations.
- Formalizing walks or bike routes in unique locations. A long-distance walking route on an island off South Korea, the Jeju Olle consists of more than 20 connected trails and pathways, some with audio guides.<sup>96</sup> In Japan, the Kumano Kodo offers a network of routes along an ancient pilgrimage walk where people can experience an important cultural landscape on foot.<sup>97</sup>

“Branded” or themed routes can raise visibility and help link greenway trails with regional destinations. These mapped routes generally use or adapt existing infrastructure, often with amenities such as cafes, bike rentals, or seating along the way.<sup>98</sup> A branded route may stay local, as in the City of Littleton, Colorado’s “Crabapple Route,” or map out a multi-state trek, such as “Walking with Harriet,” a route from Maryland to Canada which traces Harriet Tubman’s route of travel on the Underground Railroad.<sup>99</sup> Websites and apps with ideas, formats and maps are available to help develop a branded route (see Resources). Opportunities for themed and branded routes that can connect to and feature greenway trails are wide-ranging in New York State, which has abundant cultural, historical, geographical, and other resources. When people walk or bicycle along these facilities, they also stop to eat at restaurants, stay in local inns, visit museums, and shop in local stores along the route, contributing to the local economy.

## Sustainable Development

Decisions made when planning and developing greenway trail corridors can have a significant impact – positive or negative — on the environment. These may include location, design, materials, and construction practices. Siting projects on marginal lands or on “greyfields” (previously developed but uncontaminated areas) or “brownfields” (properties with hazardous substances or contaminants) is preferable over development that uses open space or agricultural land. With diminishing public lands and a landscape increasingly fragmented by electric lines, pipelines, other energy infrastructure, and utility corridors, more previously developed areas, including post-industrial landscapes, are being remediated and re-used to create public open space.

Opportunities to remove and revegetate existing impervious surfaces on previously developed sites can have substantial environmental benefits. Using locally sourced materials and re-using on-site material (e.g., incorporating stone or old concrete pavements found on the site) are methods of keeping the construction footprint small. The NYS DOT has implemented **Greenlites** (Green Leadership in Transportation Environmental Sustainability), a rating program aimed at improving the quality of transportation infrastructure in ways that minimize impacts to the environment, including the depletion of irreplaceable resources.<sup>100</sup>

### Green Infrastructure

State agencies with large land holdings have an opportunity to have a significant impact on the adoption and acceptance of green technologies. Some materials, such as porous pavements, may be seen by managers or developers as more expensive, difficult to maintain, or only appropriate as “demonstration” projects for educational purposes. A more widespread use of these materials, however, together with other practices that reduce impervious surface on a larger scale, can have a significant impact on issues such as water quality and flooding.

The term green infrastructure (GI) refers to both natural and developed areas characterized by vegetation, waterbodies, and pervious surfaces that filter and absorb stormwater. On a large scale, green infrastructure refers to natural, green open space that provides wildlife habitat, accommodates flooding, and protects water quality. At the smaller, site scale, GI refers to constructing stormwater management systems with materials and structures that slow, filter, and soak up stormwater. Both types of GI help to create a healthier, cleaner, and more resilient environment. As open space corridors with both natural vegetation and built infrastructure, greenway trails fall into both GI categories.

Structural GI can be incorporated during the planning phase or some existing trail systems can be retrofitted with these elements. Installing bioswales with native plants alongside trails, incorporating permeable pavements for parking areas, trailheads, and paths, planting trees and shrubs, all help protect adjacent natural areas and waterways from erosion and pollutants. Restoring degraded wetlands or riparian areas as a project element can provide wildlife habitat as well as viewing areas and opportunities for education. Streams and springs buried in pipes can be unearthed and restored to offer new habitat and appealing natural elements along the route.

With more widespread use, the cost of porous pavement materials has been coming down in recent years, and technical knowledge about installation in the construction industry has improved. Porous pavements can be produced using discarded tires or rubble from old concrete sidewalks. Asphalt made with a rubber mixture is generally softer than “standard” asphalt, which may reduce stress on runners’ joints. Trails using this material provides an accessible surface for strollers and wheelchairs, meeting the “firm and stable” criteria, and provide good traction for bike riding. Due to its flexibility, porous asphalt is also less subject to



cracking. Production costs for a porous recycled rubber asphalt product used for a trail in Wisconsin was around \$10-\$15 more per ton than “standard” asphalt.<sup>101</sup> Because of its larger air voids, however, the porous material spread 10-12% farther, and the study concluded that the cost difference was minimal.

Opportunities for using these green approaches are wide-ranging. Incorporating green materials and green stormwater infrastructure can help strengthen facilities and make them less susceptible to storm impacts. When possible, re-using materials such as concrete or road millings supports energy reduction and ‘green’ construction materials. Building new facilities outside of floodplains when possible, giving waterways room to flow, and planting buffer zones near waterbodies will help protect buildings, pavements, and site furnishings.

Trailways that do not receive runoff carrying sediments or blowing sand or soil are generally the best candidates for porous pavements. Successful implementation of GI is dependent upon site conditions; for instance, porous asphalt and bioswales work best at sites with well-drained soils and without interference from high water tables or bedrock.

## Equity and Inclusion

Lack of access to resources, amenities, and services is a major contributing factor to poverty. Access to transportation helps people gain access to the goods, services, jobs, and other facilities needed to prosper. In general, low-to-middle-income (LMI) and environmental justice (EJ) communities may not have access to the same resources and opportunities as others for improving their public health; for safe routes to school, and for non-vehicular transportation options. These communities may have disparate access to comfortable places for outdoor recreation and have historically been underserved in terms of transportation investment (e.g. infrequent transit, poor pavement conditions).

These issues can be found in both urban and rural communities, and non-vehicular options are valuable to both. A single mom living in a rural town who does not own a car may have challenges getting to work; a family living in a city apartment without a car may have limited outdoor recreation options. Transportation planning, including trails development, should therefore reflect the needs and desires of the community.<sup>102</sup>

### **Low-to-middle-income (LMI) Communities**

*LMI percentages are calculated from data provided by the U.S. Census Bureau., an individual’s income is considered to be LMI based on how it measures up to the area median family income. Overall, to be classified as LMI, an individual or family’s household income must be no greater than 80% of the area median income for the county or area where they reside.*

### **Environmental Justice (EJ) Communities**

*The U.S. Environmental Protection Agency defines environmental justice (EJ) as follows: EJ is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies... no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies.*

Planning for equitable transport requires the consideration of non-road options including paths, tracks, trails, and footbridges, to improve mobility within and between neighborhoods and therefore, accessibility. As states invest in expanding their greenway trails infrastructure, it is critical to do so in ways that support communities equitably. Adding greenway trail infrastructure has been demonstrated to lead to higher rents and home prices, which may result in displacement of long-time tenants or homeowners. States and agencies may choose to partner with municipalities or local nonprofits to ensure that housing near new greenways have sufficient tenant and homeowner protections or look at other mechanisms that enable residents to keep their homes and benefit from the increased neighborhood prosperity.

Also impacting LMI and EJ communities is the current national epidemic of obesity and related cardiovascular disease. A lack of access to places to engage in physical activity, especially walking and bicycling, is increasingly seen as a risk factor in obesity. In addition, high-speed traffic or interstate systems pass through some LMI neighborhoods, creating traffic safety concerns and higher pedestrian mortality from accidents – especially for children, seniors, the homeless and others who do not have private automobiles.

Both cultural and economic differences can affect the relevance of greenway trail developments. To ensure trails are accessible and welcoming to non-traditional users:

- Provide links. Well-marked access points and connections should be available in all kinds of neighborhoods. In Buffalo, e.g., the western portion of the Empire State Trail terminates on the western side of the city. Residents in east side communities that do not have cars or access to public transport are unable to easily reach the EST access points.
- Modify design. Gaps some communities may be caused by physical conditions such as flood zones. Trail developers may need to modify the design for some segments with elevated berms or boardwalks above flood levels. In Red Hook, Brooklyn, for example, trail segments pass through several low-lying EJ communities. Gaps in the system mean that no through route exists, and during flooding from Hurricane Sandy the neighborhood was physically isolated.
- Include immigrant populations in the discussion. Communities in some areas have large numbers of residents without cars. In the city of Utica in central NY, for instance, some LMI residents



**A group event with Black Girls Do Bike, before taking off at NYC's Five-Borough Bike Tour, May 2017 (Photo: courtesy Monica Garrison <https://www.blackgirlsdobike.com/media-images>).**

depend on bicycles for transportation year-round. Without dedicated off-road routes, people must ride on roadways in snow and other unsafe conditions, creating a need for dedicated off-road facilities.

- Engage the whole community. People living in a neighborhood or city bring ideas and considerations to the table that planners and even community leaders may not know about. Schedule meetings so those with multiple jobs can attend and ensure that meetings are accessible to all.

In the past, the construction of highways and overpasses in cities have fragmented neighborhoods, sometimes leading to deterioration and abandonment. Overpasses divide a functional, active neighborhoods, cutting residents off from commerce, transportation, amenities, and services in other parts of the city. In recent years, some cities are tearing down or transforming parts of their highway systems to create linear green space, opening up waterfronts, and reviving long-neglected neighborhoods. In the City of Niagara, lanes on the Robert Moses Parkway have been removed from car use to create a bikeway along the scenic bluffs of the Niagara River.

Opportunities to remove highway infrastructure from active use and repurpose them to create green space can be found in municipalities across the state. In Albany, NY, for instance, a planned project will create an elevated park, the Albany Skyway, using an underutilized I-787 off-ramp. Since its construction during the 1960s and early 1970s, the elevated I-787 has impeded Albany's access to the Hudson River waterfront. A Capital Region state legislator has suggested that the city also remove an additional I-787 segment, noting that other upstate cities are redesigning roads to reconnect with waterfronts.<sup>103</sup> Its removal and replacement with public green space would be a start toward addressing a range of EJ issues in nearby communities.

Planning is also underway in Buffalo to remove a highway overpass near the waterfront. This Brownfield Opportunity Area, an industrial site along the Buffalo River, has long been envisioned as a potential hub for redevelopment, including pedestrian-accessible recreation.<sup>104</sup> In February 2019, NYS launched a competition to re-imagine the Buffalo Skyway Corridor and provide public open space on the Lake Erie waterfront. The winning idea proposed removing part of the overpass and realigning existing transportation networks to support planned recreational, mixed-use, and waterfront development in Buffalo Harbor. The



**Albany Skyway -- Conceptual rendering**  
(Image: courtesy Stantec)



proposed work would remove a piece of the 110-foot-high Skyway Bridge and develop a park in that location, which includes trail connections.<sup>105</sup>

Equity in transportation means providing equitable levels of access to affordable and reliable transportation options based on the needs of the populations being served, particularly those that are traditionally underserved.<sup>106</sup> The National Recreation and Park Association (NRPA) defines inclusion as the elimination of “barriers that can deprive some people of the opportunity to enjoy the benefits of parks and recreation.”<sup>107</sup>



**A portion of the Buffalo Skyway (left), an existing highway overpass, in Buffalo, NY, may be removed as part of a project to revitalize the waterfront.**



**Image of the winning design proposal for the Buffalo Skyway project**



In terms of pedestrian and bicycle issues, traditionally underserved groups include people in at least one of the following categories: low income, minority, elderly, limited English proficiency, or persons with disabilities.<sup>108</sup>

In addition to inequities in physical access, outdoor recreation can present daunting barriers to entry in the form of lack of familiarity, skills, equipment and role models. Carolyn Finney, author of "Black Faces, White Spaces," studied issues of *Outside Magazine* from 1991 to 2001, and found that of 4,600 faces published in the issues, only 103 were non-white.<sup>109</sup> Unfamiliarity with outdoor recreation may be partly addressed by cultivating a diverse group of educators and providing relevant activities. Also important is promoting a sense of belonging and ownership with images used in outreach and marketing, on websites and other informational materials.<sup>110</sup>

Recent studies have shown that people of color do not always feel safe in public outdoor spaces, and groups have been formed to support inclusion in activities in these spaces.<sup>111</sup> A Rutgers University survey collected data on biking experiences of Black or Latino Americans in New Jersey. The survey found that the single biggest obstacle to biking among Black and Latino participants was fear of a traffic collision. Infrastructure such as bike lanes, off-street paths, and bike parking were overwhelmingly popular among those surveyed.<sup>112</sup> According to studies published by the New Jersey Bike and Pedestrian Resource Center, from the perspective of Black or Latino Americans, impediments to bike riding may also include policing practices that disproportionately target people of color, a lack of bike repair shops in the community, and few relevant programs available.<sup>113</sup>

Another organization whose mission is to encourage marginalized people of color to join the bike community, Brown Bike Girl Cycling offers "cultural competency training" which includes an anti-bias and anti-privilege seminar for cycling advocates and decision-makers who seek to establish or maintain healthy partnerships with organizations and community members of color.<sup>114</sup> Similarly, another group with an interest in more inclusive access to biking, Black Girls Do Bike, supports women of color in creating a community of like-minded cyclists (or aspiring cyclists) through meet-ups, group rides, and skills sharing. The goal is to help riders get past barriers and into the larger cycling community.<sup>115</sup>

## Climate Change

Parks and urban green space can be significant players in mitigating climate change. Trees in urban areas of the United States alone provide an estimated \$18.3 billion in environmental services value every year, including \$4.8 billion worth of carbon sequestration.<sup>116</sup> Many cities, states, and regions of the country are taking steps to reduce carbon emissions while recognizing that public open space can play an important role in helping communities build resiliency.



**A system of wetlands, swales and a rain garden help to clean runoff along the Bronx River Pathway in Westchester County**

The EPA notes that in 2018 the U.S. transportation sector produced the largest share of greenhouse gas emissions, at 28.2 percent of total emissions.<sup>117</sup> Greenway trail corridors can serve as an important part of the state’s green infrastructure. In 2019, New York State passed the ambitious climate target to be generating all carbon-free electricity by 2040 and a net-zero carbon economy by 2050, making non-motorized modes of transportation timelier than ever.<sup>118</sup>

The Federal Emergency Management Agency (FEMA) has highlighted the important role parks and open spaces can play in enhancing communities’ resilience to natural disasters, with landscape designs that enhance resiliency and sustainability.<sup>119</sup> Sea level-rise and increasingly severe and frequent storms will continue to affect many of New York’s public green space, increasing the need to design trails able to withstand these events. Resources for planning and design include NYC Park’s *Design and Planning for Flood Resiliency: Guidelines for NYC Parks*, which draws upon its experience in the aftermath of Hurricane Sandy, to look at different types of waterfront parks and recommends best practices for planning and design strategies.

## Greenway Trails 2020 and Beyond

The COVID-19 pandemic, which began early in 2020 in New York State, rapidly impacted people’s work and leisure time behaviors. A statewide lockdown to control the spread of the virus had immediate and substantial impacts on people’s lifestyles, including their use of outdoor recreation facilities. As homebound families looked for safe opportunities to exercise, sales of bicycles related equipment, and repairs doubled in March 2020 from 2019 levels, with individual bike shops reporting sales of anywhere from two to six

### Patroon Creek Greenway Project

The Patroon Creek Greenway is a proposed multi-use trail that will pass through several low income and minority neighborhoods in Albany, NY. Currently undergoing a feasibility study, the proposed 9-mile off-road route will connect the Mohawk-Hudson Bike-Hike Trail and Hudson River waterfront to inland destinations along the I-90 corridor. The proposed greenway trail would utilize DOT and utility rights-of-way, incorporating slivers of existing trails. Air quality and noise pollution affect nearby residents and businesses in these communities, with possible correlations between increased levels of asthma and respiratory illness. Traffic also use local streets to access the interstate here, creating pedestrian safety concerns, especially for children, seniors, and people walking to use public transit. If completed as planned, the Patroon Creek Greenway will connect multiple neighborhoods to Albany’s commercial areas, colleges, and new high-tech facilities (Ibid, endnote 63).

times their ordinary pace.<sup>120</sup> (The greatest rise, 121 percent, came from sales of recreational bicycles, but sales of commuter and fitness bikes rose 66 percent and children's bike sales went up 59 percent.) In New York City, use of the local bikeshare programs also surged in 2020.<sup>121</sup>

Amid the many hardships and disruption brought on by the pandemic, lifestyle shifts including new ideas for leisure and entertainment and a range of workplace innovations emerged. Workers with stay-at-home mandates were freed from their commutes and found themselves with more free time. Cooped up city dwellers flocked to any available public open space. For some months in 2020, even the state's busiest roadways were nearly devoid of cars, and some cities closed roads to automobile traffic to allow pedestrians and bicyclists the ability to move about more safely. To encourage people to walk or cycle to work, in addition to closing roads, some major cities reassigned road space to include additional bike lanes and wider walkways for social distancing.

With so many staying at home either for work to quarantine or because of job loss, an unexpected consequence of travel reductions and restrictions during the pandemic was a precipitous decline in air and auto travel. With that drop, for a time, the skies became significantly clearer over cities worldwide.<sup>122</sup> A renewed interest in bicycling or walking on trails, and other public open space during this time created a momentum with potential to spur development of more inclusive, accessible, and resilient trail systems in the state.

While the long-term impact of the pandemic is uncertain, these unprecedented conditions may result in permanent changes as policymakers reevaluate existing outdoor recreation and transportation systems.

Some municipalities and bicycling advocates are looking for ways to permanently keep cars off some of the roads. Some may elect to keep certain streets closed to vehicles or add elements that significantly improve pedestrian safety and access. Some businesses may continue to allow employees to work from home, keeping more cars off the roads for the longer term. People may continue to spend more time in parks, community gardens, and on neighborhood exercise trails.<sup>123</sup> Work programs that emerged during the pandemic in order to keep people employed, such as one that employed staff to rehabilitate and expand trails in Juneau, Alaska, may result in long-term jobs.<sup>124</sup>



*The Waddington Trail, located near the US-Canadian Border (Photo: PTNY)*



# Chapter 6 — The Statewide Greenway Trails System

New York State has a network of nearly 2,000 miles of existing greenway trails that allow the public to access nature —across rural landscapes in the Hudson and Mohawk River Valleys, in the Catskill and Adirondack Mountains, and through the hearts of urban centers. The *Statewide Greenway Trails Plan* provides a framework to assess and develop the network of existing, planned, and proposed shared-use paths and trails across NYS which collectively makes up New York’s Statewide Greenway Trails System.

## Trail System Inventory

A requirement of this plan was to compile an up-to-date inventory of existing, planned, and proposed trails that form New York State’s Greenway Trails System. For this effort, OPRHP built upon existing greenway trails data and updated its inventory through outreach to trail stakeholders across the state. This included state agencies, county governments, and other landowners and trail managers, as well as regional groups such as municipal planning organizations, transportation councils, and trail-specific organizations. The data on existing greenway trails was assembled using Geographic Information Systems (GIS) which offers a tremendous capability to analyze data across the state. The final greenway trail inventory assembled for this plan will be available to the public through the NYS GIS Clearinghouse once the final plan is published. Figures 1 and 2 in the Appendix shows the collective Statewide Greenway Trails System.

Greenway trails at a glance:

- Data collected for this plan identified 2,068 miles of existing greenway trails in New York.
- The completed 750-mile Empire State Trail comprises over 496 miles of greenway trail.
- 60 of 62 counties in New York have at least one segment of existing greenway trail.
- Erie County has the most miles of open greenway trail at 147 miles with Monroe County a close second at 143 miles.

## Existing Trails

For the inventory, existing greenway trails are defined as trail corridors currently in operation and open to the public. These create the framework of the statewide greenway trails system, and a network across the state. Each year, new sections of trail are constructed that add to the system, providing recreational and transportation opportunities to more and more people.



**Waterfront trail, City of Newburgh, NY (Photo: Live Work Learn Play)**



### Planned Trails

Planned greenway trails are defined as corridors where tangible progress has been made to extend an existing greenway trail or create a new one. The data collection has determined that there are over 228 miles of planned trails in New York. Progress might include:

- the purchase of a property for greenway trail development,
- a signed lease or railbanking agreement,
- a completed planning document or feasibility study, or
- a Memorandum of Understanding (MOU) with a landowner to develop a trail corridor.

### Proposed Trails

For the purposes of this plan, proposed trails include viable corridors such as unused rail routes, canal paths, or other rights-of-way are considered potential new greenway trails but still require acquisition, abandonment, planning, or other major steps to determine feasibility. Identifying these trail opportunities is an important step in the development of the Greenway Trails System. The plan inventory identified 1120 miles of proposed trails in New York.



*New York State Bicycle Route 14 in Watkins Glen, NY (photo by Doug Kerr - originally posted to Flickr as NYS Route 14, CC BY-SA 2.0)*

### NYS Bicycle Routes

New York State Bicycle Routes are a series of numbered, long-distance, state highway routes that provide on-road, cross-state connectivity for bicyclists. Begun in 1994, with the designation of State Bike Route 5, there are fourteen (14) routes in total covering most of New York. While they do not meet the definition of greenway trails, these routes do provide a great deal of connectivity between existing or proposed

greenway trails. In order to better visualize network connectivity, NYS Bicycle Routes have been included in the inventory and figures of this plan as a reference layer.

## Trail Gaps

A significant number of stakeholder participants identified trail gaps as a critical item to address in this plan. Gaps in a trail system prevent users from connecting to desired destinations, from accessing alternative transportation options, and do not attain the full potential of a truly connected network. While every trail gap may require a unique strategy to address, the identification of these gaps is one of the first steps toward a solution. The inventory and mapping work completed for the Statewide Greenway Trails Plan seeks to identify these gaps in a way that can determine their potential connectivity. Steps to prioritize closing gaps are addressed in Chapter 8 of this plan.

## Statewide Greenway Trails System

Collectively, the inventory of existing, planned, and proposed trails compiled for this plan and described above create the statewide greenway trails system. This system can be described as a “spine” of primary trail corridors connected and enhanced by secondary trails at the regional and local level. Primary corridors are made up of one trail or multiple individual trails that connect to each other. These trails travel long distances, connecting across regions and populations. They promote connectivity for longer recreation jaunts, alternative transportation options, and tourism opportunities. Examples of primary corridors across the state include the Erie Canalway Trail, Champlain Valley Trail, Genesee Valley Greenway, Catharine Valley Trail, Lehigh Valley Trail, Sullivan O&W Rail Trail, Dutchess County Rail Trail, and Harlem Valley Rail Trail.

Less apparent at a statewide scale, but equally important, secondary trails connect users locally to parks, neighborhoods, businesses, and even other communities. Examples of these include the Tonawanda Rails to Trails, Albany County Rail Trail, and the Black Diamond Trail. Both primary and secondary trails are critical to a successful greenway trails system, as it is the interconnectivity of the two which create a successful network across the state.

Because of its prominence, reach, and connection opportunities, it’s fitting that the Empire State Trail (EST) serves as the main primary corridor for the state’s greenway trails system. Comprised of three distinct segments, or legs, the EST includes the Erie Canalway Trail, and Hudson River Valley Greenway Trail, and Champlain Valley Trail. Each of the EST’s legs are comprised of individual primary or secondary trails with their own identity, for example: the Mohawk-Hudson Bike-Hike Trail, Saranac River Trail, Dutchess County Rail Trail, and Champlain Canalway Trail. The EST is a prime example of how an interconnected trail system creates more opportunities, mileage, and resources for users.

## Mapping the Statewide Greenway Trail System

The technology available to visualize trails at a statewide scale has grown tremendously since the 2010 Statewide Trails Plan was completed. In addition to traditional map figures included in the appendix of this plan, the 2020 Statewide Greenway Trails Plan includes an online “web-map” of the trail inventory available at: <https://greenway-trails-plan-nysparks.hub.arcgis.com/>.

Online mapping tools like these allow for the promotion of trail data at a state, regional, and local level simultaneously providing greater usability when compared to traditional map figures. The Statewide Greenway Trails Plan inventory map serves dual purposes: it provides trail users and the general public

information on existing or new trail opportunities across the state, and trail managers, planners, and advocates a valuable tool to identify trail opportunities, gaps, and needs.



***The 3.9-mile Tonawanda Rails-to-Trails, shown here under construction, is comprised of two segments on a former railroad bed (Photo: Buffalo Rising)***



## Chapter 7 — Goals & Recommendations

In order to accomplish the vision of creating a statewide, interconnected system of Greenway Trails, establishing specific goals and recommending actions is necessary. The goals listed below were developed based on public and stakeholder input and reflect current and anticipated future trends and needs of New York's varied communities and regions. Together they serve to direct the actions of OPRHP and other state and local partners as they move forward to implement the plan.

### Goals of the Statewide Greenway Trails Plan

1. Prioritize the development and expansion of greenway trails in underserved communities.
2. Collect and publish information to aid in the planning, development, and management of greenway trails.
3. Expand the state's greenway trails system to reach more New Yorkers in more areas.
4. Identify funding opportunities for the acquisition, planning, development, and maintenance of greenway trails.
5. Foster greater collaboration among agencies and stakeholders to advance greenway trails in New York.
6. Promote the greenway trails system as a destination for tourism, healthy recreation, and active lifestyles.
7. Enhance bicycle and pedestrian transportation options by connecting greenway trails and communities.



*Erie Canalway Trail (photo: Lori Van Buren)*



## Recommendations for Implementation

Each goal below includes a background statement that reflects the context in which it was conceived, followed by clear recommendations or strategies, developed for each. While not exhaustive, these recommendations identify clear logical steps toward achieving the larger goal and ultimately the vision.

### 1. Prioritize the development and expansion of greenway trails in underserved communities.

*Background: An issue raised by many stakeholders during the planning process was that underserved populations and locations should have the same opportunities to access greenway trails. These areas should be identified, and prioritized for planning and development, and future research should be conducted to better serve these communities.*

Recommendations for implementation:

- Work with partners to identify underserved and high-need areas where greenway trail development can be prioritized, including low or moderate-income neighborhoods, environmental justice communities, and/or locations with high public health concerns.
- Review and revise the rating criteria for all federal and state greenway trail funding opportunities (e.g. TAP, CMAQ, RTP grants) to appropriately prioritize underserved communities.
- Conduct a demographic analysis to better understand what populations are, or are not, served by the existing greenway trails system.
- Undertake a robust community engagement process to capture the ideas, opinions, and needs of individuals in underrepresented areas as they relate to trails, recreation, and transportation.
- Make additional public outreach materials, including planning documents, available in languages other than English.

### 2. Collect and publish information to aid in planning, developing, and managing greenway trails.

*Background: Many organizations undertake individual efforts to capture data or conduct research on existing and potential trails, users, trends, and more. Sharing this information with partners statewide can lead to better information for the collective group of greenway stakeholders.*

Recommendations for implementation:

- Work with partners to identify new priority greenway trail corridors, as well as gaps and connections between existing trails, such as the Empire State Trail, and other primary trail corridors
- Advocate for priority trail corridors and gaps to be included in future updates of *the NYS Open Space Plan* and other state, regional, and local planning documents.
- Support local trail planning efforts by publishing the current and future trail inventory on the NYS GIS Clearinghouse.
- Develop and share methodologies, data, and best practices for trail user counts and surveys.
- Collect data and create a repository of abandoned rail corridors across the state to identify railbanking opportunities for developing new rail trails.
- Work with the Public Service Commission and utility companies to identify corridors with potential for greenway trail development.

- Promote and facilitate trainings for assessment programs to evaluate trail accessibility for persons with disabilities.

**3. Expand the state’s greenway trails system to reach more New Yorkers in more areas.**

*Background: There are disparities in the distribution of greenway trails across New York. This goal seeks to expand the network to reach new areas of the state with planned and potential trails many of which will be accessible for persons with disabilities.*

Recommendations for implementation:

- Expand the Empire State Trail to include new primary corridors in key areas of the state such as:
  - Long Island extension
  - Adirondack corridor
  - Lake Erie corridor
  - St. Lawrence corridor
  - Southern Tier corridor
  - I-81 corridor (Binghamton-Syracuse-Watertown)
- Enhance the state’s greenway trails system by creating new regional trails and corridors such as:
  - Lake Ontario Parkway Trail
  - EST and Harlem Valley Rail Trail east-west connector.
  - North-south Finger Lakes corridors
  - Upper Hudson Rail Trail
  - Catskills to Empire State Trail connection.
- Provide resources and technical assistance to local governments and trail organizations in priority regions with little or no developed greenway trails.
- Encourage and promote universal design standards that ensure barrier-free trail access for users of all abilities.
- Connect New York’s statewide greenway trails system to interstate and international trails such as the East Coast Greenway, and Canadian greenway trail network.

**4. Identify funding opportunities for the acquisition, planning, development, and maintenance of greenway trails.**

*Background: Adequate funding is imperative to the success of the state’s Greenway Trail System, and demand for funding far exceeds available funds. Partners that provide funding must ensure the continued availability of these funds, and new funding sources should also be investigated.*

Recommendations for implementation:

- Work with agencies and partners continue to meet all necessary requirements to receive and distribute federal recreation and transportation funding.
- Promote trail funding opportunities to priority areas and regions through existing channels such as the Regional Economic Development Councils.
- Explore new funding opportunities by partnering with like-minded organizations such as land conservancy and trail advocacy groups.

- Identify existing and new funding opportunities that specifically fund trail maintenance activities such as:
  - A designated percent set aside in federal and state grant funding for trail maintenance.
  - Expanding existing highway maintenance funding, such as the Consolidated Local Street and Highway Improvement Program (CHIPS), to include maintenance of greenway trails.

**5. Foster collaboration between agency and stakeholder partners to advance greenway trails in New York State.**

*Background: The state's greenway trails would benefit greatly from better and more frequent collaboration between state agencies, stakeholders, and partners who aim to advance and implement this plan.*

Recommendations for implementation:

- Cultivate connections between federal, state and local partners across the state through working groups or other initiatives.
- Work with stakeholders and partners to review, prioritize, and advance the goals and recommendations in this and other relevant planning documents.
- Work to promote existing greenway trails funding and explore new funding mechanisms.
- Utilize a working group to establish and promulgate greenway trail standards for New York such as:
  - Universal design and ADA accessibility
  - Trail design standards including wayfinding and signage
  - Requirements that consider extreme weather events and climate change.
- Develop and promote procedures and best practices for trail organizations such as:
  - Sample memorandums for trail management and maintenance
  - Adopt-a-trail programs
- Organize a Statewide Greenway Trails conference for New York.

**6. Promote the Greenway Trails System as a destination for tourism, healthy recreation, and active lifestyles.**

*Background: It is important to publicize the many benefits of greenways trails to current and potential trail users at the local, regional, and state level. Furthermore, with outdoor recreation opportunities in high demand, it's valuable to identify new recreation opportunities across the state.*

Recommendations for implementation:

- Develop a promotional campaign for the newly completed Empire State Trail focused on both local use and destination tourism.
- Promote greenway trails as barrier-free recreation destinations and transportation options for persons with disabilities.
- Partner with state and local organizations to identify and promote historic, cultural, and commercial destinations along greenway trails through signage and branding.
- Work with partners to promote greenway trails throughout New York using websites, social media, and other e-communications.

- Foster partnerships with trail organizations, schools and universities, gyms, and communities to create recreation, fitness, or volunteer programs along greenway trails.
- Utilize trail corridors for community activities and events such as farmers markets, 5K runs, and food truck festivals.

**7. Enhance bicycle and pedestrian transportation options by connecting greenway trails and communities.**

*Background: Trails create valuable opportunities for non-vehicular transportation. Their success also relies on well-designed infrastructure when users reach their destinations.*

Recommendations for implementation:

- Encourage local partners to develop or expand on-road bicycle facilities to connect greenway trails with schools, parks, urban centers and residential areas.
- Advocate for local municipalities incorporate Complete Streets policies into their transportation projects to complement greenway trails.
- Develop and promote guidance for trail managers and local organizations to incorporate trail improvements such as:
  - Bike share programs
  - Wayfinding and signage
  - Transit connections
- Work with partners to streamline permitting and approval process for temporary roadway infrastructure demonstration projects such as pop-up bike lanes and other forms of tactical urbanism.



**Slate Valley Rail-Trail, Granville NY (Photo: PTNY)**





## Chapter 8 — Implementation

At its core, this plan seeks to bring the benefits of New York’s robust greenway trails system to more people and more places. The goals outlined in the previous chapter prescribe actions and recommendations that should act as a catalyst to further this mission. Accomplishing these steps will require partners to collaborate in a variety of roles, utilizing strengths and resources, and leveraging existing and new funding opportunities.

### Partners & Roles

As identified in the legislation, OPRHP will have the primary responsibility for the implementation of this plan. To fully achieve the goals and recommendations of this plan, however, greenway trail partners and stakeholders involved in trail planning, management, and advocacy across the state will need to take actionable steps, dedicate resources, and work collectively. Organizations expected to work with OPRHP to support and advance the recommendations of this plan include:

- Federal Agencies including the US Federal Highway Administration (FHWA) and National Park Service (NPS).
- State agencies including NYS DOT, DEC, DOH, Canal Corp., and Hudson River Valley Greenway
- County and municipal governments.
- Regional metropolitan and transportation planning organizations.
- Land conservancies, trail organizations, advocate groups, and other non-profits.
- Public health & environmental justice organizations.
- The Niagara River Greenway
- Public & private colleges & universities.
- NYS Trails Council
- State legislators

Stakeholders will continue to fulfill their primary roles and responsibilities as they relate to greenway trails. These roles, which often overlap between state, regional, and local partners, include land managers, policy makers, funders, trail developers, planners, maintainers, and advocates. Beyond these established roles, however, it will be crucial for partners to take additional steps to work collaboratively, develop new relationships, and share resources to further goals and resources within their purview. Examples of these actions might include:

- Memorandums between land managers and non-profits to manage and maintain a trail;
- Trail groups collaborating with local governments to develop and support an application for grant funding;
- State agencies working with college and university programs to develop methodologies and perform research on trail demographics;
- Formation of working groups or committees amongst state and local advocates to advance priorities;
- Advocates and legislators developing laws to advance greenway trail priorities.

## Funding

Identifying and securing necessary funding to sustain and grow New York's greenway trails system is critical to the implementation of this plan. Federal and state grant programs make up a majority of the large-dollar funding sources available for greenway trails in New York. The list below contains a summary of each program and the trail-related activities eligible for funding.

### Federal & State Funding

Transportation Alternatives Program (**TAP**) and Congestion Mitigation and Air Quality Improvement Program (**CMAQ**)<sup>125</sup> These funds are made available through the Federal Highway Administration under the Fixing America's Surface Transportation (FAST) Act and administered by the NYS DOT. Funding is available for transportation-based pedestrian and bicycle projects including:

#### TAP

- Safe Routes to School.
- Planning, design and construction of on-road and off-road facilities for pedestrians, bicyclists and non-motorized transportation users.
- Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, and non-motorized transportation users; shared-used trails.

#### CMAQ

- Pedestrian and bicycle facilities such as new, improved, or gap connecting bicycle commuter paths, and new, substantially improved or gap connecting sidewalks
- Travel demand management and ride sharing including bike shares

### Recreational Trails Program (RTP)<sup>126</sup>

The RTP provides funds to the States to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. These funds are distributed through the Federal Highway Administration under Fixing America's Surface Transportation (FAST) Act and the program is administered by OPRHP. Funding is available for recreation and transportation-based projects including:

- Maintenance and restoration of existing trails
- Development and rehabilitation of trailside and trailhead facilities and trail linkages
- Purchase and lease of recreational trail construction and maintenance
- Construction of new recreational trails
- Acquisition of easements and/or fee simple title to property
- Assessment of trail conditions for universal accessibility and maintenance needs

### Land and Water Conservation Fund (LWCF)<sup>127</sup>

The Great American Outdoors Act, signed into law in August 2020, provides full and permanent funding for the Land and Water Conservation Fund. This federal grant program is targeted at projects that will create or reinvigorate parks and other outdoor recreation spaces to encourage people to connect or re-connect with the outdoors and is administered by the NYS OPRHP. Broad project categories include:

- Parkland acquisition (including trail corridors).
- Development of new parks, and rehabilitation of existing recreational facilities (including trail facilities).

### Environmental Protection Fund Grant Program for Parks, Preservation and Heritage (EPF)<sup>128</sup>

The EPF is a matching grant program for the acquisition, planning, development, and improvement of parks, historic properties, and heritage areas located within the physical boundaries of the State of New York. Under the Parks section of the grant program, funding is available for:

- Acquisition, development and planning of parks and recreational facilities.
- Preservation, rehabilitation or restoration of lands, waters or structures for park, recreation or conservation purposes and for structural assessments and/or planning for such projects.

**Canalway Grants Program<sup>129</sup>**

The program includes up to \$1.0 million in competitive grants available to eligible municipalities, and 501(c)(3) non-profit organizations along the New York State Canal System for canal related capital projects. Trail related project categories include:

- Constructing new trail sections.
- Additions or improvements that enlarge, expand, or enhance trail sections.
- Substantial renovations or preservation of existing trail segments.

**Hudson River Valley Greenway Community Grants<sup>130</sup>**

The Hudson River Valley Greenway Grant Program provides communities within the Greenway area matching grants up to \$10,000 to develop plans or projects consistent with the five Greenway criteria: natural and cultural resource protection, economic development, public access, regional planning, and heritage and environmental education.

**Hudson River Valley Greenway Conservancy Trail Grants<sup>131</sup>**

The program provides funding for recreational trail projects to communities and non-profits in the HRVG counties. Special consideration is given to projects that seek to implement the goals of the Greenway Trail Program and emphasizes connections to the Empire State Trail. Eligible project categories include:

- Trail Construction, Planning and Design.
- Trail Rehabilitation or Improvement.
- Trail Education or Interpretation.

**PTNY Park and Trail Partnership Grant Program<sup>132</sup>**

This program is open to Friends organizations that support New York State parks, trails and state historic sites and is administered by PTNY, in partnership with OPRHP. The program provides \$1,000,000 in capacity-building matching grants through the NYS Environmental Protection Fund and is designed to:

- Enhance the preservation, stewardship, interpretation, maintenance and promotion of New York State parks, trails and state historic sites.
- Increase the sustainability, effectiveness, productivity, and volunteer and fundraising capabilities of not-for-profit organizations that promote, maintain, and support New York State parks, trails and state historic sites.
- Promote the tourism and economic development benefits of outdoor recreation through the growth and expansion of a connected statewide network of parks, trails and greenways.

**Dept. of State Local Waterfront Revitalization Program (LWRP)<sup>133</sup>**

Funded under Title 11 of the Environmental Protection Fund, the LWRP provides matching grants to eligible villages, towns, cities, and counties located along New York’s coasts or designated inland waterways for planning, design, and construction projects to revitalize communities and waterfronts. Eligible activities include multi-use trails.

**Hudson River Estuary Grants Program**

NYS DEC provides funding through the Hudson River Estuary Program to implement Hudson River Estuary Action Agenda priorities which include both recreation and improved river access.



### **Office of Community Renewal Community Development Block Grant (CDBG)<sup>134</sup>**

The NYS CDBG program provides financial assistance to eligible cities, towns, and villages in order to develop viable communities by providing decent, affordable housing, and suitable living environments, as well as expanding economic opportunities, principally for persons of low and moderate income. Eligible activity types include public facilities such as bicycle and pedestrian infrastructure.

### **Federal Lands Access Program<sup>135</sup>**

The Federal Lands Access Program was established to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The Access Program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.

### **Additional Funding and Technical Resources**

Beyond the opportunities listed above, there are other grants and technical support opportunities available to local governments and organizations to promote, maintain, and expand greenway trails in New York. A small sampling of these includes:

- National Park Service Rivers, Trails, and Conservation Assistance Program:  
<https://www.nps.gov/orgs/rtca/index.htm>
- Rails-to-Trails Conservancy (RTC) Grant Program:  
<https://www.railstotrails.org/our-work/grants/>
- REI Stewardship Grants:  
<https://www.rei.com/stewardship>
- Walmart Foundation Grants:  
<https://walmart.org/>
- The Conservation Fund Grants:  
<https://www.conservationfund.org/our-work/conservation-finance/conservation-grants>

### **Funding During COVID-19**

While this plan sets ambitious goals and identifies many existing and potential funding opportunities, it is important to note the financial distress and uncertainty that the COVID-19 global pandemic has caused for state and local budgets. With that in mind it is difficult to predict what opportunities will be available for future infrastructure projects. As the state and country move beyond these challenges, it will be important to recognize the crucial role trails and other outdoor recreation facilities served during this time and ensure that funding is a renewed priority.

### **Greenway Trail Design**

Design guidelines set the standards for basic greenway trail elements. They create continuity across a trails network and promote a level of quality that greenway trail users can expect. Guidelines are not necessarily static; they can be updated as needs change and new lessons are learned. Design guidelines are intended to standardize a range of typical facilities, while allowing for different settings, uses, and designer creativity.

In New York State, design guidelines for developing greenway trails are available in the document, *Design Guide, The Empire State Trail*.<sup>136</sup> This guide contains both general and technical information and provides links to federal and state resources on accessible design, materials, bridge types, plantings, and more. While using this standardized information is not a requirement, it offers a baseline for greenway trail developers, trail managers, state agencies, municipalities, and design consultants to start from. This and other guides help trail developers select the appropriate type of facility or upgrade given the project type and context.

## Standards

The U.S Federal Highway Administration (FHWA) writes that “Shared use paths should be thought of as a complementary system of off-road transportation routes for bicyclists and others that serves as a necessary extension to the roadway network.”<sup>137</sup> As trails are developed and improved, some general resources are available to help create a more integrated and inclusive system. These include:

- ADA — American Disabilities Act (federal) prohibits discrimination and guarantees that people with disabilities have the same opportunities as everyone else to participate in the mainstream of American life.<sup>138</sup> In NYS, some — but not all — greenway trails comply with ADA standards. (see Resources at the end of this document)
- NYSDOT – The NYS Department of Transportation (state) provides design guidance for bicycle facilities from a variety of sources, including the NYSDOT Highway Design Manual, Chapter 17 — Design of Bicycle Facilities and information on signage from the Federal Manual of Uniform Traffic Control Devices (MUTCD). These and links to other resources on the proper design and operation of bicycle facilities are found on their website (see Resources).
- AASHTO – The American Association of State Highway and Transportation Officials (nonprofit) is a nonpartisan association representing all transportation modes including air, highways, public transportation, active transportation, rail, and water. Its primary goal is to foster the development, operation, and maintenance of an integrated national transportation system. Resources provided include information on design, safety, maintenance, utilities/ROWs, and other technical information (see Resources).

## Signage

Interpretive signs can be an integral part of creating a greater sense of connection to a greenway trail. Information on trail signage found in the **Empire State Trail Design Guide** ensures that segments that are part of the EST system have a cohesive and identifiable appearance with consistency in materials, style, and messaging. The guide is also useful for those developing signage outside of the EST network, although the context and setting of their signs will determine the appropriate type and design. The OPRHP is in the process of developing a manual for developing interpretive and wayfinding signage to help guide the implementation of consistent wayside exhibits throughout the State’s numerous parks and historic sites.

In New York State, standards do apply to traffic control signs on all streets, highways, bikeways, and private roads open to public travel. These signs are regulated by two documents: the federal *National Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD), and NY State’s 17 NYCRR Chapter V (New York Supplement), as well as design standards established by the Americans with Disabilities Association. Information and links to these documents are available in the EST guide and see also Resources in this document.

## Priorities

### Collaborative Partnerships

While the goals and recommendations identified in this plan are equally ranked, a logical first step would be to maintain and grow the relationships developed during the creation of this plan. The opportunities and potential partnerships evidenced over the past year will be a valuable first step toward advancing the other recommendations in this plan.

### Grant Rating Criteria

As state and federal funding for trail projects becomes available through competitive grant programs, it will be important to ensure the rating criteria for each reflect the priority goals of this plan including the expansion of greenway trails in underserved communities, closing trail gaps, and expanding the trail network to priority regions in the state. Working groups for greenway trails and other partners should prioritize the development of these criteria and ensure they are incorporated into grant review processes in a timely manner.

### Future Planning Efforts

The legislation establishing this plan requires the document to be updated on a five-year basis - a brief cycle for most statewide planning efforts. One approach to these updates could be to advance specific recommendations identified in this plan. Examples of this could include:

- Progress reports providing updates on funding initiatives, trail case studies, or accomplishments of the greenway trail working group.
- Creation of whitepapers on relevant topics such as operation and management agreements, environmental sustainability, or signage & wayfinding.
- Research efforts and findings on trail user demographics & trends or trail count methodologies.

In addition to these cyclical updates, OPRHP intends to revise the agency's comprehensive Statewide Trails Plan in the coming years. The Statewide Greenway Trails Plan and its inventory will be included as a component of that future document as well as a valuable framework for advancing that larger plan.



**Updated signage and wayfinding on the Old Erie Canal Trail (Photo: OPRHP)**

# Chapter 9 — Environmental Impacts

## Introduction

New York’s State Environmental Quality Review Act (SEQR) requires all state and local government agencies to consider environmental factors in agency decision-making processes along with social and economic factors. Agencies must assess the environmental impacts of actions which they propose, evaluate alternatives, develop methods for minimizing potential adverse impacts, and provide an opportunity for the public to participate in the planning process when proposals may have significant impacts. This means these agencies must assess the environmental significance of actions they have discretion to approve, fund or directly undertake.

SEQR requires the agencies to balance the environmental impacts with social and economic factors when deciding to approve or undertake an “action.” The action in this case is the adoption and implementation of the Statewide Greenway Trails Plan. This plan provides a statewide vision and goals and recommendations for greenway trails. It describes the benefits to the State of developing non-motorized trails and of providing a cohesive trails network. The plan describes needs and trends associated with greenway trails identified through public outreach and research. It includes a GIS inventory of existing, planned and proposed greenway trails across the state and identifies trail gaps as well as potential funding sources and implementation strategies. The plan is intended to help shape the scope, character, purpose and function of the State’s greenway trail system, with planned and proposed greenway trail alignments and corridors across the state.

When the action is determined to have potentially significant adverse environmental impacts, an Environmental Impact Statement (EIS) is required. The SEQR process uses an EIS to examine ways to avoid or reduce adverse environmental impacts related to a proposed action. The SEQR decision-making process encourages communication among government agencies, project sponsors and the general public.

The Plan will guide decision-making, influence greenway trail development policy in state and local governments, and inform communities, organizations and individuals engaged in trail development and management. Its adoption and implementation have the potential for significant effects on the environment, thus it was determined that an EIS should be prepared. Since the plan is a statewide broad-based plan, an EIS which evaluates site-specific impacts of projects is not possible; thus, a Generic EIS (GEIS) is being prepared. Whereas the Statewide Greenway Trails Plan will have “wide application” and influence “the range of future alternative policies or projects,” and lead agencies are permitted to prepare a generic EIS for “the adoption of a comprehensive plan,” the preparation of a GEIS was determined to be appropriate to assess the environmental impacts of the proposed action (6 NYCRR 617.10(a)). A GEIS is an assessment of potential impacts of broad based or related groups of actions. It is more conceptual in nature than a site-specific EIS which addresses a particular proposed project. It may provide a general discussion of the rationale and impacts of the proposed action.

## Generic EIS

On March 4, 2020, OPRHP commenced a coordinated review and requested Lead Agency status by circulating Part 1 of the Full Environmental Assessment Form to interested and involved agencies. OPRHP declared itself Lead Agency and issued a Positive Declaration on April 22, 2020, requiring the preparation of a GEIS for the proposed action. A revised Positive Declaration was issued on May 6, 2020, due to a change in the public scoping webinar date. The Draft Scoping Document was published on April 22, 2020



which made it available for public review. The comment period on the Draft Scoping Document ended on May 31, 2020, with a Final Scoping Document published on June 24, 2020.

After its publication on November 18, 2020, the Draft GEIS (DGEIS) was made available for the public and involved or interested agencies to review and comment for a minimum 60-day period. A public hearing was held on January 6, 2021 to receive comments. A Final GEIS (this document) was then produced considering and incorporating substantive comments received.

This chapter, together with the other chapters of the Plan, constitutes a GEIS for the Plan. Chapters 1 through 8 describe the proposed action as well as numerous ways in which the impacts of the plan are mitigated. These chapters provide the reviewer with detailed information on: trail types and uses; benefits of trails; public input into the Plan; needs and trends associated with greenway trails; trail inventory and statewide framework; and a statewide vision and goals and recommendations along with implementation strategies. They are thus integral components of the GEIS and should be referred to while reviewing this chapter.

## Environmental Setting

The environmental setting for the Plan consists of the people and the natural, recreational, scenic, historic and cultural resources of New York State, as well as social and economic characteristics. The setting also includes the general public (residents and non-residents) and park and recreation service providers. The resources potentially affected by the Plan include:

- recreational areas,
- lakes, rivers, streams, wetlands, coastal and estuarine waters,
- significant natural habitats,
- fish and wildlife,
- rare species of plants and animals as well as common species,
- forests,
- agricultural areas,
- parklands,
- historic sites,
- archeological areas,
- scenic areas, and communities.



***Sullivan O&W Rail Trail in winter (Photo: PTNY)***

## Alternatives

There are two basic alternatives for this planning process:

- No-Action Alternative – Status Quo – no changes or updates to the overall concept and policy framework of assessing and developing non-motorized greenway trails in NYS
- Alternative 1 — Adoption and Implementation of the Statewide Greenway Trails Plan

The No-Action alternative is included for comparison of existing conditions, actions, and efforts currently underway or in place. Choosing the No-Action alternative for the Statewide Greenway Trails Plan is not a viable option since OPRHP is required to prepare a statewide non-motorized trails plan per recent state legislation. Not preparing the Statewide Greenway Trails Plan would mean that there would be no statewide guidance based on current data regarding greenway trail resources. Future implementation of greenway trails within the State would not be responding to changing needs or based on updated goals and recommendations. Further, without proper identification of stakeholder needs, failure to implement the Plan may result in the loss of opportunities to strengthen and develop greenway trails across the State.

Alternative 1 -- to Adopt and Implement the Plan -- allows the state to utilize the extensive public and stakeholder input collected during the planning process to guide future greenway trail development and management. The plan's vision, goals and recommendations respond not only to stakeholder input, but to the needs and trends identified as relevant to current times. Adoption and implementation of a statewide greenway trails plan further allows the use of GIS data and information to identify gaps in the greenway trail system across the state, to document planned and potential trail alignments and identify new opportunities.

## Environmental Impacts and Mitigation

In this section, relevant portions of the plan are discussed in terms of potential environmental impacts. Where possible, general approaches that mitigate potential adverse impacts are identified.

### Public Input and Needs and Trends:

The plan utilizes significant public input, through surveys and public meetings, and research in needs and trends to assure the relevance of the direction and content of the plan. The development of the vision, goals and recommendations for greenway trails is based on public input and the analysis and experience of stakeholders and agency planners. Survey results and other input have been received from federal and state agencies and regional stakeholders (e.g. representatives from the NYS Department of Health, Department of Environmental Conservation, NYS Canal Corporation, NYS Department of Transportation, U.S. National Park Service, NYS Empire State Development, and others), trail users, the general public, trail organizations, and municipalities.

Public feedback gained during the trail survey and public comment period was clear that people want more trails and access to green space closer to where they live. Participants of the survey indicated that trail length and proximity to trails were the top two most important factors when planning a trip to visit a trail. The plan includes goals to expand the state greenway trail system in underserved communities and to reach more New Yorkers in more areas. Input gained on the plan, both content-wise and GIS input, has served to flesh out planned and proposed greenway trail alignments and corridors across the state and identified trail gaps to help form a more cohesive and networked trail system.

Survey participants ranked trail maps, signage, and parking as the most important trail amenities on greenway trails. Additionally, stakeholders noted that universal design and resiliency in light of climate change are important in greenway trail development. The plan includes a recommendation to establish greenway trail standards that would address wayfinding and signage, accessibility issues and resiliency.

## Statewide Greenway Trails System

New York's statewide greenway trails system consists of the network of existing, planned, and proposed greenway trails and identified trail gaps across the state. Any new trail segment would be assessed and reviewed on a case by case basis at the local level. However, the plan provides the context of how it would fit within the overall greenway trail system. This is important since progressing trail development can be determined by avenues of opportunity such as when a railroad right-of-way is being abandoned.

## Vision

This plan is intended to help realize the vision for greenway trails in New York State that was developed through a collaboration with stakeholders, the public and the planning team. This is as follows:

*The Statewide Greenway Trails Plan envisions a network of shared use paths that provide all New Yorkers and visitors opportunities for healthy and active recreation, routes for alternative transportation, and the ability to connect to and enrich our communities and natural landscapes in urban, suburban, and rural settings.*

This vision provides many benefits to the recreating public and to the environment. It expands trail opportunities to more areas of the state and its people, offers non-motorized trail connections that will allow for a reduction in vehicle emissions, and will provide further protection and connectivity of the state's natural landscapes.



**The Sing Sing Kill Greenway in the Village of Ossining, NY**  
(Photo: <https://scenesfromthetrail.com/2016/05/07/sing-sing-kill-greenway/>)

## Goals

### 1. Prioritize the development and expansion of greenway trails in underserved communities.

Environmental justice (EJ) is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Efforts are focused on improving the environment in communities, specifically minority and low-income communities, and addressing disproportionate adverse environmental impacts that may exist in those communities. This goal and its recommendations aim to better serve EJ communities through enhancing engagement of, and providing more access to, greenway trails for people in underserved communities. To do this requires further data collection, analysis, public outreach, and prioritization at the state, regional and local levels. Partnerships are key to the successful implementation of this goal and recommendations.

Implementation of this goal will provide a multitude of benefits for people in underserved communities, such as: increasing access to recreational opportunities and green space; providing safer routes to local goods and services and connecting neighborhoods via non-road options; reducing the need for vehicular use; encouraging physical activity; increasing health benefits including a potential reduction in obesity; and creating more areas of green space and better connectivity of natural areas.

Greenway trail construction itself may generally have impacts on natural resources regarding clearing and development of treadways and trail corridors. Oftentimes existing corridors, such as, railroads and utility ROWs, can be repurposed or additionally used for trail development, reducing the need to impact undisturbed natural areas. As many EJ communities are in urban and suburban areas, development of greenway trails may mean the potential reduction of hardscape paving and concrete to be replaced with landscaping features along the trail (e.g. vegetated swales to manage stormwater runoff, native tree plantings) and potential for habitat enhancement projects (e.g. wetland restoration, daylighting streams).

Proper planning with input from local communities and governments is critical to this goal's success. Identifying the needs and desires of local populations, available resources and opportunities, and appropriate connections between neighborhoods and to critical infrastructure, such as, public transportation, job sites, local businesses, will be key. Following the environmental review process helps to identify and avoid, minimize, or mitigate potential adverse impacts. For example, in identifying new greenway trail opportunities for underserved communities, agencies and municipalities will follow review processes that ensure open space is conserved and that ecological communities are protected while providing appropriate access and development.

This goal may advance the state's Coastal Management Program (CMP) coastal policies regarding development and public access, when greenway trails are developed within coastal areas. Many EJ communities across the state are located within or near the state's coastal boundary. Development of greenway trails to serve EJ communities may include restoring, revitalizing and redeveloping deteriorated or underutilized waterfront areas. Greenway trails developed along waterfronts will enhance recreational access to water resources and facilities. Site-specific review of projects should be conducted as applicable to assure that the manner in which a greenway trail is planned and constructed will be consistent with coastal policies.



## **2. Collect and publish information to aid in the planning, development, and management of greenway trails.**

This effort will allow for a more comprehensive and collective group look at greenway trail gaps, and potential links and connections. This will aid in not only statewide but regional and local planning efforts and reaching short- and long-term goals. Standardizing data collection methods and practices will enable more consistent analysis and use of data for planning, development, management, and education and outreach across the state.

Coordinating with railroad and utility companies regarding ROWs for potential greenway trail development will help streamline planning efforts. Including priority projects in the NYS Open Space Plan and other state, regional, and local planning documents will assist in the acquisition of parcels and the funding available to help bring those projects to fruition.

This goal and recommendations are unlikely to have adverse impacts on the environment. In fact, the collaboration and partnership of the various entities to bring this goal to fruition will likely enhance protection of natural and cultural resources by allowing agencies, municipalities and others to analyze data more comprehensively.

## **3. Expand the Greenway Trail System to reach more New Yorkers in more areas.**

Developing new greenway trail opportunities closer to where people live will encourage more people to use the trails. The health, economic, social, educational and environmental benefits of trails are well documented. More trails closer to more New Yorkers will encourage physical activity, increase health benefits, and reduce the need for motor vehicles as a means to get to nearby locations and services. Secondly, these can result in reduced health care expenses, improved local air quality, local economic benefits and much more. Improvements to trails and new construction should be designed for maximum accessibility. This will allow for more opportunities for people with disabilities and respond to the needs of an aging population. The use of intermodal transportation to access and connect trails, especially in and near urban areas, would reduce dependency on motor vehicles and result in energy and resource savings and lower the amount of toxic emissions and greenhouse gases.

Expanding the primary trail corridors to connect to many more communities across the state will enhance the quality of lives locally as well as regionally. Trail-based tourism is on the rise with people seeking public green spaces, including greenway trails, as healthy, inexpensive facilities and destinations. Local businesses may see increased profits from trail-based tourism; this would surely expand into new communities as more primary and regional trail corridors are developed.

It is recognized that in the short term there may be adverse environmental impacts associated with trail construction and that these can be addressed in most instances through proper siting, design and construction of trails and trail corridors relative to natural and cultural resources. As noted above, utilization of existing linear corridors, such as railroad rights-of-way and utility corridors, in the development of the trail system will greatly reduce potential adverse impacts to these resources. In addition, use of up-to-date natural resource information and GIS data, a coordinated planning approach, and use of trail development standards and guidelines will help to minimize impacts.

Resource agencies provide recommendations or requirements for specific resource protection measures. Some of these include erosion control measures during construction activities, avoidance and protection of wetlands, protection of rare, threatened and endangered species, use of native plantings, and best

management practices for invasive species management. Consultation with the New York State Division for Historic Preservation (DHP) is required for projects that may impact cultural resources. Ultimately, projects should provide for the long-term protection of the trail corridors and their natural, cultural and scenic resources. This is accomplished through site specific review and coordination with the appropriate resource and permitting agencies.

This goal may advance coastal policies regarding development, fish and wildlife, public access, historic and scenic resources, and wetlands, when greenway trails are planned within coastal areas. Development of greenway trails may include restoring, revitalizing and redeveloping deteriorated or underutilized waterfront areas. Proper siting and development of trails in coastal areas can protect coastal fish and wildlife habitats and wetlands by avoiding direct impacts to water resources, addressing erosion control during construction and proper stormwater management for the project. Educational signage can be installed along a trail for the public to learn about the significance of the habitat. Greenway trails developed along waterfronts can enhance recreational access to water resources and facilities. Proper siting, design, and reviews of projects by DHP will result in the protection of historic, archeological and scenic resources. Site-specific review of projects should be conducted as applicable to assure that the manner in which a greenway trail is planned and constructed will be consistent with coastal policies.

#### **4. Identify funding opportunities for the acquisition, planning, development, and maintenance of greenway trails.**

This goal in and of itself will have no adverse impacts on the environment. Sustained federal and state funding and programs for greenway trail projects ensures continued development of greenway trails as recreation and alternative transportation routes that provide a multitude of benefits. Funding will enhance trails planning, acquisition of land for trails, trail development and maintenance, which can preserve and protect natural and cultural resources. Alternative sources of funding and donations for trail projects will provide similar benefits.

Preparation of National Register of Historic Places nominations for historic corridors to make structures eligible for EPF Historic Preservation Grants will help promote protection of cultural and historic resources along trails. Register-listed properties are eligible for additional funding and/or tax incentives that can assist in promoting these resources and trail access to them.

#### **5. Foster greater collaboration among agencies and stakeholders to advance greenway trails in New York.**

Like Goal #2 above, coordinating efforts among partners to implement this plan will reduce overall staff and volunteer time and energy, and likely funding for administration purposes, to accomplish the same amount of work. Through the planning and development of this plan, state agencies, regional, and local entities have provided critical information, GIS data, and feedback to guide the direction for a statewide greenway trail system. This goal looks for similar coordination efforts leveraging existing resources to streamline statewide efforts.

Providing greenway trail standards and guidelines will also aid in providing a more uniform and consistent trail system across the state, in terms of wayfinding and signage, design, construction, and maintenance methods. Application of approved standards in these areas can help trail planning entities to avoid, minimize and mitigate adverse environmental impacts of trail development and use.

**6. Promote the state’s greenway trails system as a destination for tourism, healthy recreation, and active lifestyles.**

The actions of promoting the greenway trail system will likely have no adverse impact on the environment. The effect of increased promotion, however, will be increased use of trails and open spaces by the public. This requires that facilities be developed and maintained to support the increased use. In light of the impacts of climate change, facilities need to be designed and adapted to be more resilient.



***ITE NY Upstate Section (Photo: James Jones)***

Increasing public awareness of the health, economic, social, educational and environmental benefits of trails will strengthen support for trail development, maintenance and use. Partnerships are essential to improving and expanding the greenway trail system. Partnering with other agencies and entities, such as friends and advocacy groups, can enhance and expand recreational and interpretive programs. With the State’s decreased resources and financial hardships setting in due to COVID-19, partnerships for greenway trail promotion are essential to expanding the public’s exposure to information about the trails. The public will be the major benefactor of these efforts. With increased access to and use of trails, the public will be encouraged to increase physical activity, connect with nature, and benefit from interpretive and educational opportunities and destinations along greenway trails.

**7. Enhance bicycle and pedestrian transportation options by connecting greenway trails and communities.**

The benefit of greenway trails to the public is significantly increased when greenway trails are connected to other public infrastructure and services. Providing safer bicycle and pedestrian connections between greenway trailheads and schools, local parks, urban centers and residential areas further increases the percentage of the population who have easy access to greenway trails; encourages more use of non-motorized transportation corridors; and further reduces the need for vehicular use in communities. Implementation of this goal will have positive impacts on the environment in terms of utilizing existing infrastructure (e.g. dedicated bike lanes on existing roads) and reducing the number of vehicle trips to trail access points, thereby improving air quality.

## Implementation

To fully implement the vision, goals, and recommendations identified in the plan, involvement by the public and private sector will be required. These entities operate at the national, state, and local levels including agencies, municipalities, land trusts, non-profits, and trail organizations and are expected to support and advance the recommendations of the plan. The plan identifies federal and state funding sources that support the development and maintenance of trails.

Identifying and coordinating with partners across the state will be crucial to prioritizing, advancing, and implementing the goals and recommendations laid out in the plan. Future partnerships or working groups may also establish greenway trail standards and promote procedures and best practices for management and maintenance of trails. Climate change will be considered during development of trail standards to assure facility resiliency in a changing environment.

As noted earlier, a GEIS is more conceptual in nature than a site-specific EIS which addresses a proposed project. In terms of impacts on resources, the GEIS can provide general discussion of potential impacts and related mitigation measures. When specific trail-related projects are undertaken, funded or approved by state or local agencies pursuant to the Plan, they are subject to SEQR if the projects meet certain thresholds as defined by SEQR regulations. Evaluation of some of these specific proposals will result in determinations that they will not have significant adverse effects on the environment as a result of undertaking the actions. Those proposals that may have significant adverse effects on the environment will require the preparation of an EIS. Under SEQR, the EIS process assures that an action to be undertaken will avoid or minimize adverse environmental impacts to the maximum extent practicable. Through SEQR and other existing review mechanisms, such as environmental permit processes, consideration of environmental factors is a part of all plans or specific actions undertaken to implement the Statewide Greenway Trails Plan.



***Cyclists on a restored stone and wood aqueduct of the Erie Canal over Nine Mile Creek in Camillus, New York. (Photo: PTNY)***



In terms of implementation of projects on a regional and local level, the *Statewide Greenway Trails Plan* may impact resources. The following categories have been identified as likely to be impacted. General mitigation measures have been identified for each category that may be adversely impacted. This is not a full and exhaustive list and analysis of trail projects and does not take the place of individual projects being subject to SEQR.

For all categories, using up-to-date GIS information and on-site field investigations provides a good basis for planning and minimizes potential adverse environmental impacts. Consideration should be given to trail location, design, materials, and construction practices to reduce potential impacts. Local trail development projects have the potential to significantly impact (positive and/or negative):

**Land:** Development of new trails generally requires construction on or physical alteration of land. New disturbance can be decreased by utilizing existing railroad or utility rights-of-way or developing trails adjacent to existing infrastructure. Developing trails on gentler slopes reduces the amount of required grading and stormwater management infrastructure. Using trail standards and guidelines to accommodate projected trail use and incorporating green infrastructure (see Chapter 5 for more details) and natural areas and open space into trail design may help reduce the area of disturbance.

**Water Resources (Surface, Wild, Scenic and Recreational Rivers):** Trail development may directly or indirectly adversely impact water resources. Trail alignments can avoid direct impacts while still providing visual and physical access (e.g. fishing) to water resources. Water resources, such as, wetlands, often provide a great interpretive opportunity to educate the public on the ecological importance of these resources. Including vegetated buffer zones between trails and water resources, incorporating green infrastructure (e.g. vegetated swales, pervious surfaces), using best management practices for stormwater management/sediment and erosion control, and following regulatory permitting procedures all aid in mitigating potential impacts to water resources.

**Flooding:** New trail construction may result in development on lands subject to flooding. Minimizing the amount of infrastructure located within areas subject to flooding is best for protection of the public, investment, and facilities. Trails can be designed to withstand, or be resilient to, floodwaters. This may include incorporating green infrastructure and/or restoring and enhancing wetlands, riparian areas, or floodplains as part of trail development, when possible. Designing trails to maintain or expand the site's capacity to manage and absorb water and water flow can also improve resiliency. Allowing for proper drainage capacity and maintaining or improving flow patterns along the trail corridor are key.

**Air Quality:** The development of a more extensive greenway trail system throughout the state is expected to positively impact air quality. With more off-road connections between neighborhoods, businesses, green spaces, public transit, and tourist destinations, a decrease in vehicular use and emissions is expected.

**Biological Resources (Plants and Animals):** Construction of new trails may result in a loss of flora or fauna. Focusing new trail development in existing corridors or rights-of way or adjacent to existing infrastructure reduces the potential for adverse impacts on plants and animals. This generally reduces the amount of vegetation required for removal and the potential disturbance to animals and their habitats. Use of up-to-date information from the New York Natural Heritage Program and other regional or local survey efforts and consultation with regulatory agencies during the planning and design process, can reduce potential adverse effects on rare, threatened or endangered species, their habitats, and significant natural communities.

Acquisition of parcels of green space and natural areas for trail development with subsequent careful trail design can provide for the long-term protection and conservation of plant and animal species and the areas they inhabit. Greenway trail corridors are often also wildlife corridors offering protected connectivity between open spaces, a variety of natural communities, and across the landscape. Best management practices for controlling the introduction and spread of invasive species and utilizing native plantings are essential to preserving and enhancing native biodiversity along greenway trail corridors.

**Aesthetic Resources:** Greenway trails often benefit the aesthetics of communities by providing dedicated green space and areas for recreation and relaxation. New greenway trails in urban areas may reclaim impervious surfaces for newly planted gardens and other vegetated areas. Former industrial areas can be remediated with new green space, helping to beautify and revitalize communities. Trees planted along the trail will further green the corridor, provide habitat and shade, stabilize soils, and help maintain cooler temperatures.

**Historic and Archeological Resources:** Development of greenway trails may occur in or adjacent to historic or archaeological resources. Consultation with the OPRHP Division for Historic Preservation is required where cultural resources may be impacted. This assures minimizing impacts to these resources, whether protecting historic structures, conducting surveys for/in archeologically sensitive areas, or designing trail amenities that complement historic districts or landscapes.

**Open Space and Recreation:** Greenway trail development will result in benefits to recreation and open space. New trails will afford more of the population access to linear corridors for exercise, relaxation, and connections to open space. Often greenway trails are more than just a linear trail surface; they are wider, larger green corridors that allow for preservation of natural communities and their ecosystem services, protection of cultural resources, and provide areas for the public to engage with the natural environment.

**Transportation:** Bicycle and pedestrian accommodations will be enhanced by expansion of the greenway trail system. Development of more trails will allow for more people to utilize the system as alternative transportation routes instead of driving vehicles. Adding bike lanes on existing roads augments the trail system to connect in to even more areas of communities.

**Energy:** As noted with transportation, expansion of the greenway trail system is expected to reduce use of gasoline in vehicles due to a reduction in use of vehicles.

**Noise, Odor and Light:** Development of new greenway trails is expected to have a temporary increase in noise and odor from construction vehicles and equipment during construction periods. Mitigation measures may include standard construction practices, such as construction equipment not being left to idle, water trucks utilized when needed to control dust, and limiting daily/weekly construction activity hours. Some greenway trails will install lighting for public safety. Use of dark-sky compliant lighting can reduce potential impacts to bats and migrating birds.

**Human Health:** Expansion of the greenway trail system is expected to benefit human health by encouraging active lifestyles with more people getting outdoors and getting exercise. Physical, mental and emotional health can all be improved with use of greenway trails. These trails are versatile for a variety of modes of movement (e.g. walking, jogging, biking, hiking, inline skating, snowshoeing, cross-country skiing, horseback riding) and most greenway trails are accessible to accommodate a higher percentage of the population.

**Community Plans/Land Use and Community Character:** Including potential greenway trails in Community Plans through the planning process will aid in increasing the likelihood of construction of trails. Trail opportunities can be explored on a community or regional level and this will allow for more comprehensive planning in light of existing infrastructure and other proposed development. Local planning is also critical for expanding the trail system into underserved communities. Community engagement is often part of the planning process and is critical for determining appropriate trail surface type, amenities, local resources, and connections to local infrastructure. Community engagement is part of the process of assuring the greenway trail will be consistent with community character.

**Climate Change:** It is imperative today that entities consider climate change during planning and design of trails and that new infrastructure is resilient to the effects of climate change.

Mitigation measures for planning and design may include: locating trails outside of floodways; installing elevated structures above future projected elevations of sea level rise; maintaining existing vegetation along shorelines to the greatest extent possible; designing for increased levels of stormwater management due to increasingly severe and frequent storms; utilizing green infrastructure; enhancing trail corridors with native plantings; including habitat restoration projects; and increasing overall protection of green space. Mitigation measures for resiliency of the trail infrastructure may include types of materials chosen (i.e. able to withstand local weather conditions, such as ice scour, waves along shorelines) and sourcing of materials (i.e. re-use of materials such as concrete or road millings to support energy reduction; 'green' construction materials, such as sustainably sourced lumber).

In light of the 2019 **New York State Climate Leadership and Community Protection Act**<sup>139</sup> (Climate Act) goal of 85% reduction in GHG Emissions by 2050, greenway trails are already playing a part by reducing the number of vehicles trips and emissions generated. Expansion of the statewide greenway trail system into more areas of the state and its communities will further advance this state climate target.

## Cumulative Impacts

The primary effect of the Statewide Greenway Trails Plan flows from the promotion of the goals and recommendations. The cumulative effects of applying the goals and recommendations will be substantially beneficial. Existing trail opportunities to the public will be maintained and expanded while at the same time protection of the natural and cultural resources will be ensured.

One of the most important cumulative effects of the plan is also the least tangible. The expansion of the trail system and the commitment of resource protection guidance provided within the plan will substantially enhance the physical, mental and emotional well-being – the quality of life – of the residents of the State.

The furthering of the quality and extent of trails has substantial beneficial effects on economic activity, as well as open space preservation and recreation opportunities, within affected communities. Development of trails often contributes to the attractiveness of a municipality for investment by businesses and as primary means of non-motorized transportation that provide connections between and within recreation areas, residential areas, businesses, schools, and places of work. Thus, greenway trails are an important adjunct to factors leading to economic recovery and development.

Application of the goals and recommendations for the development and expansion of the greenway trail system requires a commitment of resources. Resources for planning, development, and maintenance are committed through federal, state and municipal programs or projects. The plan helps determine the priority use of these committed resources. Implementation of actions which are guided by the plan will result in irreversible and irretrievable commitments of time, funding, and energy resources, but overall the benefits of

recreational opportunity, better health, open space protection, and stewardship outweigh these commitments.

The guidance provided within the plan will result in a significant reduction in energy consumption. This will especially be the situation in urban areas where trails function as a non-motorized means of transportation. Therefore, the plan will foster actions that will help mitigate climate change.

### Supplemental Environmental Review

Since the Statewide Greenway Trails Plan is a general plan, identification of program specific or site-specific adverse impacts, including those which are unavoidable, will be accomplished during future planning and environmental review of programs and projects. Although specific adverse impacts associated with the application of the plan's goals and recommendations cannot be identified, adverse impacts may arise when one or a group of goals and/or recommendations are given more emphasis over others. Minimization of conflicts and adverse impacts is accomplished through planning, environmental review, public participation and priority rating systems



*Harlem Valley Rail Trail (Photo: PTNY)*





# Chapter 10 — Comments and Responses

The Draft Statewide Greenway Trails Plan and associated trail inventory was published on November 18, 2020 on the OPRHP webpage and announced broadly with a press release. The release of the plan initiated a 60-day public comment period mandated by the plan’s legislation. Public comments on the Draft Plan were collected through traditional and electronic mail and during a public hearing for the Draft Plan, which was held virtually on January 6, 2021. Comments and feedback on the trail inventory were collected using a “crowd-sourced” reporting map hosted alongside the plan’s main trail inventory map.

The Draft Plan/Draft GEIS received 55 comments from members of the public as well as individuals representing state agencies, regional planning organizations, land trusts, and trail advocacy groups. Comments received included general support for the plan and its contents as well as editorial suggestions, trail inventory submissions, and comments related to the associated legislation or specific plan content. All comments were reviewed by OPRHP and substantive comments have been summarized below. Responses to each comment are included and revisions made as a result of the comment have been noted.

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## Category: Trail Additions

### *Comment:*

The plan received many comments suggesting specific trails and bicycle-pedestrian facilities to be added to the plan and associated trail inventory.

### *Response:*

We appreciate the public providing additional resources for the plan’s data inventory. Trails that meet the legislative requirements and the plan’s definition of Greenway Trail in Chapter 1 have been added to the inventory. While the plan recognizes their importance in creating a connected network, trail submissions such as on-road routes, bike lanes, or other bicycle or pedestrian infrastructure that did not meet the plan’s scope and definition have not been included.

### *Comment:*

Multiple commenters requested specific or regional long-distance hiking or foot trails be added to the Plan’s inventory and map.

### *Response:*

Long distance hiking trails are not within the scope and legislative requirements of the plan. For that reason, they have not been included in the inventory and web map for the Statewide Greenway Trails Plan. The planning team does appreciate the value of having multiple trail types in one map. Future statewide trails plan inventories and maps will seek to include the three major trail types: greenway trails, long-distance hiking trails, and water trails.

---

## Category: Equestrian Use of Greenway Trails

### *Comment:*

The public comment period garnered a large number of submissions from equestrian trail users in the Western part of the state. Collectively the comments discussed the economic, health, and recreational benefits of horseback riding and also communicated their preferred trail conditions/surfacing. Advocates also encouraged trail managers to consider horse use when designing greenway trails.

### *Response:*

Thank you for your comments. As noted in Chapter 2 of the plan, equestrian use is an allowed activity on some greenway trails across the state. The planning team recognizes the important role that greenway trails offer to a wide variety of user groups, including equestrians. Ultimately, the uses permitted on individual greenway trails across the state are determined by the managing entity.

### **Category: Snowmobiles and Motorized Trail Use**

*Comment:*

Commenter urged planners to consider including motorized recreation such as snowmobiling and ATV use in this and future trail plans.

*Response:*

Some greenway trails across the state do allow for motorized use, including snowmobiles and occasionally off-highway vehicles. The legislation directing this plan specifies only non-motorized use of multi-use or greenway trails be included. Motorized trail uses are identified in the 2010 OPRHP Statewide Trails Plan and will be included in future updates of that plan.

---

### **Category: Greenway Trails on Long Island**

*Comment:*

Multiple commenters identified or expressed support for greenway trails in Nassau and Suffolk Counties including the expansion of the Empire State Trail across Long Island.

*Response:*

The planning team has added additional data to more accurately represent the existing, planned, and proposed greenway trails on Long Island including those that make up the Long Island Greenway. Expanding the Empire State Trail to include Long Island is identified as a recommendation of Goal 3 in Chapter 7 of the plan.

---

### **Category: Long Distance Cycling**

*Comment:*

Commenter highlighted the needs of long-distance cyclists including the use of on-road trail connections, adequate mapping and wayfinding needs, improvements and maintenance on roadways, and trail surfacing preferences.

*Response:*

Comment noted. The legislation directed this plan to focus solely on only off-street facilities. The planning team recognizes that on-road connections often provide connectivity between greenway trails.

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### **Category: Vision & Goal Requirements**

*Comment:*

Multiple commenters stated that the plan fails to meet certain requirements of the legislation including the vision, as well as accessibility, geographic distribution, and acquisition/development goals.

*Response:*

The planning team used the Legislation as well as input from stakeholders and partners to develop a broad vision statement which is expanded on and supported by the goals and recommendations. Goal 3 includes recommendations that lay out geographies for future trail distribution, and Goals 1 through 4 all contain recommendations for trail acquisition and development. These goals and recommendations appropriately reflect the role of OPRHP in the expansion of the state's trail network. In response to the comments, additional primary corridors have been added to Chapter 6 and Chapter 7 and accessibility recommendations have been added under Goal 2, 3, and 6.

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## **Category: Prioritization and Implementation**

*Comment:*

Multiple commenters stated that the plan should go farther to prioritize the goals, identify roles and timelines for recommendations, and outline specific implementation steps.

*Response:*

The goals and recommendations in the plan are ranked equally. The legislation states that OPRHP will have a primary role in implementation, and Chapter 8 identifies and discusses the role of partners and stakeholders to the extent practicable. Recommendations will ultimately be prioritized and implemented based on the resources available to OPRHP and other partners. Additional details on implementation have been added to Chapter 8.

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## **Category: Trails & Current Issues**

*Comment:*

Additional aspects of climate change should be included in the Goals, Benefits, and Environmental Impact Sections of the Plan. The Statewide Greenway Trails Plan should also be recognized in New York State's climate planning efforts.

*Response:*

Comment noted. Climate change as it relates to greenway trails is discussed in Chapter 3: Benefits, Chapter 5: Trends and Issues in Greenway Trail Development, as well as in Chapter 9: Environmental Impacts.

*Comment:*

The plan should speak to the increased use of greenway trails as a result of the COVID-19 pandemic.

*Response:*

Chapter 3: Greenway Trail Benefits discusses the increased use and valuable role of greenway trails during the COVID-19 pandemic of 2020.

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## **Category: Laws and Land Use**

*Comment:*

The plan should address the activities listed under the General Obligations Law Recreational Use Statute which should be modified to include swimming.

*Response:*

Comment noted. Modifications to the State's General Obligation Law/ Recreational Use Statute are beyond the scope of this plan.

*Comment:*

The Plan should provide details on the rules, regulations, and rights regarding land-use for trails in New York.

*Response:*

A detailed summary of this subject is beyond the scope of this plan. It could be considered as a topic for future planning documents, as suggested in Chapter 8: Implementation. Additional trail resources are available on the OPRHP Trails Technical Assistance webpage at:

<https://parks.ny.gov/recreation/trails/technical-assistance.aspx>



### **Category: Local Trail Planning**

*Comment:*

The Plan should include the many regional trail plans completed by municipal planning organizations across the state.

*Response:*

Comment noted. Information on local transportation plans and municipal planning organizations (MPO) have been added to Chapter 1 and a list of MPOs in New York has been added to the Resources section of this Plan.

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### **Category: NYC Metro Area**

*Comment:*

The plan, map figures, and trail inventory should do more to emphasize the large population and trail density in the New York metropolitan area.

*Response:*

Comment noted. The plan is focused on greenway trails in all areas of the state, including rural, urban, and suburban settings. The online map for the Greenway Trails Plan includes greenway trails in New York City and allows users to zoom to see trails at the block-level (or greater).

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### **Category: Content Suggestions**

*Comment:*

The Plan should provide more specifics regarding trail amenities and consider renaming these items as “supporting infrastructure.”

*Response:*

Details such as the number, cost, and location of these trail components is beyond the scope of this plan. We appreciate the naming suggestion and have made changes where appropriate in the document.

*Comment:*

The Plan could provide more information on potential maintenance through private-public partnerships and sponsorship opportunities.

*Response:*

Chapter 5: Trends and Issues in Greenway Trail Development in this plan contains information on trail maintenance including partnership examples. Additional information on partnerships is included in Chapter 6 of the 2020-2025 Statewide Comprehensive Outdoor Recreation Plan (SCORP) available at: <https://parks.ny.gov/inside-our-agency/master-plans.aspx>

*Comment:*

The terms underserved communities and environmental justice communities are mentioned throughout the document but never defined.

*Response:*

Comment noted. Environmental justice communities are defined on page 52 in the Equity and Inclusion section of Chapter 5. A definition of underserved communities has been added to the first paragraph of the Access and Equity section of Chapter 3.

*Comment:*

The plan should be more clear when using the terms access and accessibility to discuss proximity and availability versus trails that meet the needs of persons with disabilities.

*Response:*

Comment noted. Edits have been made throughout the document to clarify this distinction.

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### **Category: Accessibility Infrastructure**

*Comment:*

The trail map should include public charging locations for electric bicycles and powered wheelchairs to encourage more use by persons with disabilities.

*Response:*

Thank you for your comment. The planning team agrees that listing these amenities provides value, however the scope of the plan and resources available limit our ability to add additional data such as this to the map.

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### **Category: Trail Maintenance and Funding**

*Comment:*

Multiple commenters expressed the need for the prioritization and funding of long-term maintenance on greenway trails.

*Response:*

Comments noted. Maintenance funding is specifically included in Goal 4 of the plan.

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### **Category: Data Collection**

*Comment:*

The commenter encouraged NYS to collect more data on greenway trail use to support trail planning.

*Response:*

Comment noted. OPRHP has collected trail use data on greenway trails for previous planning efforts, most recently in 2015. As noted in the goals and recommendations, we expect to perform additional data collection with partners in future years. The 2015 data report is available on our webpage at: <https://parks.ny.gov/recreation/trails/documents.aspx>.

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### **Category: Trail Identification**

*Comment:*

The plan and trail inventory should better identify by name proposed or potential trail segments and regional corridors.

*Response:*

Comment noted. Whenever possible, regional corridors in the plan and trail inventory have been identified by name.

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### **Category: Language Access**

*Comment:*

Commenter noted the plan should be made available in Spanish.

*Response:*

Thank you for your comment. Document translation requests can be made through the OPRHP Language Access Coordinator by phone at (518) 474-0456 or email at [LAC@parks.ny.gov](mailto:LAC@parks.ny.gov)

## Persons/Organizations Who Provided Comments

(Listed alphabetically by last name)

<b>Name</b>	<b>Title</b>	<b>Organization</b>
Matthew J. Andrews	Deputy Director, Community & Economic Development	City of Rome, NY
Jeffrey Anzevino	Director of Land Use Advocacy	Scenic Hudson, Inc.
Andrea Barber		
Andy Beers	Director	Empire State Trail
Harvey Botzman		
Elyse Buchman		
Martin Buchman	Board Member	New York Bicycling Coalition
Ilze Bullwinkel		
Pauline Burnes		
Elizabeth Campochiaro		Hudson River Valley Greenway
Dylan Carey	Project Director	Parks and Trails NY
Mary Carney		
Jennifer Ceponis	Senior Transportation Planner	Capital District Transportation Committee
Sandy Colvenback	President	Bits N Spurs Equestrian Club
Jerrine Corallo	Chair	Schoharie County Trail Association
Denise Coughlin		
Barb Cunningham	Western Region Director	New York State Horse Council
Peter Dolan	Trail Program Manager	New York-New Jersey Trail Conference
Theresa Draves	Forestry Technician	NYS DEC Region 9
Lisa DuBois		
Andrew N. Dupuy	Director of State-level Policy	Rails-to-Trails Conservancy
Freda Eisenberg	Commissioner	Sullivan County Division of Planning, Community Development & Real Property
Jim Fincher	President	Chautauqua Rails to Trails
Frances Gotcsik		Friends of the Genesee Valley Greenway
Mary Green		
Frances Greenburg		
Audrey Hager		
Barbara Hager		
Jennifer Hamelman		Adventure Cycling Association
Cassandra Harrington		Visit Schoharie County
Guy Jacob	Conservation Chair	Nassau Hiking & Outdoor Club
Allen Kerkeslager		
Morgan Kiefhaber		
David Kreinheder		

Karen Lorf	State Pedestrian and Bicycle Coordinator	NYS Department of Transportation
Mary Misek		
Heide Moore		
Kathy Moser	Chief Conservation Officer	Open Space Institute
Susan Neidlinger		
Jeff Olsen		
Julie Pacatte	Executive Director	Schoharie Economic Enterprise Corp
Bobbi Ryan	President	Schoharie County Chamber of Commerce
Carol Schmelz		
David Schwartz		
Susan Sciortino		
Jessica Shaw		
Laura Shepard		Eastern Queens Greenway
Carter Strickland	New York and New Jersey State Director	Trust for Public Land
Unknown		
Amy Weymouth		Greater Buffalo-Niagara Regional Transportation Council
Melissa Whittington	President	Chautauqua County Equestrian Trail System
Rodney Whittington	President	Lou Eibel Horse Club
Richard Zapke		
Pamela Zygaj		



# Resources

## General

- OPRHP Trails Webpage: <https://parks.ny.gov/recreation/trails/>
- Empire State Trail: <https://empiretrail.ny.gov/>
- Hudson River Valley Greenway: <https://hudsongreenway.ny.gov/>
- Niagara River Greenway: <https://www.niagararivergreenway.com/>
- Parks & Trails NY: <https://www.ptny.org/>
- Rails-to-Trails Conservancy: <https://www.railstotrails.org/>
- People for Bikes: <https://peopleforbikes.org/>
- NY Bicycling Coalition: <https://nybc.net/>
- NYS DOT Bicycle Program: <https://www.dot.ny.gov/modal/bike>
- NYS DOT Pedestrian program: <https://www.dot.ny.gov/display/programs/pedestrian>
- US DOT/FHWA Bicycle & Pedestrian Resources: [https://www.fhwa.dot.gov/environment/bicycle\\_pedestrian/](https://www.fhwa.dot.gov/environment/bicycle_pedestrian/)
- US EPA Smart Growth and Open Space: <https://www.epa.gov/smartgrowth/smart-growth-and-open-space-conservation>

## Benefits of Greenway Trails

- CDC and NPS Parks, Trails, and Health Workbook: [https://www.cdc.gov/healthyplaces/healthtopics/parks\\_trails\\_workbook.htm](https://www.cdc.gov/healthyplaces/healthtopics/parks_trails_workbook.htm)
- The Progress Fund's Trail Town Program: <https://www.trailtowns.org/>
- US DOT Active Transportation: <https://www.transportation.gov/mission/health/active-transportation>
- League of American Bicyclists Commuting Resources: <https://www.bikeleague.org/commutingdata>

## Greenway Trail Design

- US DOT/FHWA Manuals and Guides for Trail Design, Construction, Maintenance, and Operation, and for Signs: [https://www.fhwa.dot.gov/environment/recreational\\_trails/guidance/manuals.cfm](https://www.fhwa.dot.gov/environment/recreational_trails/guidance/manuals.cfm)
- AASHTO Guide for the Development of Bicycle Facilities, 4<sup>th</sup> Edition , 2012: <https://njdotlocalaidrc.com/perch/resources/aashto-gbf-4-2012-bicycle.pdf>
- US Access Board Guidelines and Standards: <https://www.access-board.gov/guidelines-and-standards>

## Equity and Environmental Justice:

- Metro Council's Regional Parks Equity Toolkit: <https://metro council.org/parks/planning/Parks-Equity-Toolkit.aspx>
- NAACP Environmental Justice Resources: <https://www.naacp.org/climate-justice-resources/resource-organizations/>

## Historic Preservation

- OPRHP Historic Preservation Webpage: <https://parks.ny.gov/historic-preservation/>
- Rails-to-Trails Conservancy Historic Preservation and Community Identity Resource: [https://www.railstotrails.org/resourcehandler.ashx?name=historic-preservation—community-identity&id=3074&fileName=tgc\\_historic.pdf](https://www.railstotrails.org/resourcehandler.ashx?name=historic-preservation—community-identity&id=3074&fileName=tgc_historic.pdf)
- National Park Service Historic Preservation webpage: <https://www.nps.gov/subjects/historicpreservation/index.htm>

## New York State Metropolitan Planning Organizations

- Adirondack/Glens Falls Transportation Council: <https://agftc.org/>
- Binghamton Metropolitan Transportation Study: <http://www.bmtsonline.com/>
- Capital District Transportation Committee: <https://www.cdtcmpo.org/index.php>
- Elmira-Chemung Transportation Council: [http://www.chemungcountyny.gov/departments/s\\_-\\_z\\_departments/transportation\\_council/index.php](http://www.chemungcountyny.gov/departments/s_-_z_departments/transportation_council/index.php)
- Genesee Transportation Council: <https://www.gtcmpo.org/>
- Greater Buffalo-Niagara Regional Transportation Council: <https://www.gbnrtc.org/>
- Herkimer-Oneida Counties Transportation Study: <https://www.ocgov.net/planning>
- Ithaca-Tompkins County Transportation Council: <https://tompkinscountyny.gov/itctc>
- Orange County Transportation Council:  
<https://www.orangecountygov.com/961/Transportation-Council>
- New York Metropolitan Transportation Council: <https://www.nymtc.org/>
- Dutchess County Transportation Council:  
<https://www.dutchessny.gov/Departments/Transportation-Council/Transportation-Council.htm>
- Syracuse Metropolitan Transportation Council: <https://smtcmpo.org/>
- Ulster County Transportation Council: <https://ulstercountyny.gov/transportation-council>
- Watertown-Jefferson County Area Transportation Council: <https://www.wjctc.org/>



*Cyclists along the Erie Canalway Trail (Photo: OPRHP)*

# Endnotes

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<sup>1</sup> NY Statewide Trails Plan

<https://www.parks.ny.gov/documents/recreation/trails/StatewideTrailsPlan.pdf>

<sup>2</sup> NY Statewide Comprehensive Outdoor Recreation Plan 200-2025 <https://parks.ny.gov/inside-our-agency/documents/20202025StatewideComprehensiveOutdoorRecreationPlan.pdf>

<sup>3</sup> New York State Open Space Conservation Plan, 2016

[https://www.dec.ny.gov/docs/lands\\_forests\\_pdf/osp2016final1.pdf](https://www.dec.ny.gov/docs/lands_forests_pdf/osp2016final1.pdf)

<sup>4</sup> Empire State Trails Plan, Final June 2018

[https://www.ny.gov/sites/ny.gov/files/atoms/files/EST\\_Final\\_Plan\\_June\\_2018.pdf](https://www.ny.gov/sites/ny.gov/files/atoms/files/EST_Final_Plan_June_2018.pdf)

<sup>5</sup> Greenway definition (landscape) [https://en.wikipedia.org/wiki/Greenway\\_\(landscape\)](https://en.wikipedia.org/wiki/Greenway_(landscape)), Shared use path

[https://en.wikipedia.org/wiki/Shared\\_use\\_path#:~:text=A%20shared%2Duse%20path%20or,and%20mopeds%20are%20normally%20prohibited.&text=Some%20shared%20paths%20have%20been%20built%20as%20rail%20trails](https://en.wikipedia.org/wiki/Shared_use_path#:~:text=A%20shared%2Duse%20path%20or,and%20mopeds%20are%20normally%20prohibited.&text=Some%20shared%20paths%20have%20been%20built%20as%20rail%20trails)

<sup>6</sup> Empire State Trail (<https://www.ny.gov/programs/empire-state-trail>)

<sup>7</sup> Stark, Laura; Rails to Trails Conservancy, October 1, 2012. *Erie Canalway Trail, New York*

<https://www.railstotrails.org/trailblog/2012/october/01/erie-canalway-trail-new-york/>. Accessed 7/17/2020.

<sup>8</sup> <https://www.nps.gov/subjects/nationaltrailssystem/upload/National-Trails-System-Act-Amended-2019.pdf>

<sup>9</sup> Rails-to-Trails Conservancy, July 2006. *Railbanking and Rail-Trails: A Legacy for the Future*.

<https://parks.ny.gov/recreation/trails/documents/RailbankingAndRailTrails.pdf>. Accessed 7/17/2020.

<sup>10</sup> Upper Hudson Rail Trail <http://www.upperhudson.org/> Accessed 8/11/2020

<sup>11</sup> Bronx River Alliance, *Bronx River Greenway Plan*

[http://bronxriver.org/puma/images/usersubmitted/greenway\\_plan/ecoplan/greenway\\_plan\\_full.html](http://bronxriver.org/puma/images/usersubmitted/greenway_plan/ecoplan/greenway_plan_full.html)

<sup>12</sup> *Greenway Trail User Survey: Results and Analysis*, Parks and Trails NY, October 2020

<https://parks.ny.gov/inside-our-agency/master-plans.aspx>

<sup>13</sup> NY Statewide Comprehensive Outdoor Recreation Plan 2020-2025

<https://parks.ny.gov/documents/inside-our-agency/20202025StatewideComprehensiveOutdoorRecreationPlan.pdf>

<sup>14</sup> NC State University, The Center for Universal Design, *The Principles of Universal Design* (Version 2.0 - 4/1/97). [https://projects.ncsu.edu/ncsu/design/cud/about\\_ud/udprinciples.htmci](https://projects.ncsu.edu/ncsu/design/cud/about_ud/udprinciples.htmci). Accessed February 22, 2021.

<sup>15</sup> U.S. Dept. of Health and Human Services, Office of Disease Prevention and Health Promotion. *Top 10 Things to Know About the Second Edition of the Physical Activity Guidelines for Americans*.

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<https://health.gov/our-work/physical-activity/current-guidelines/top-10-things-know>. Accessed July 10, 2020.

<sup>16</sup> *Greenways, Inc., Benefits of Greenways*. <http://www.greenways.com/benefits-of-greenways>. Accessed February 22, 2021.

<sup>17</sup> Zhang et al.: *Modeling spatial accessibility to parks: a national study*. International Journal of Health Geographics 2011 10:31.

<sup>18</sup> M. Hobbs, Mark A. Green, C. Griffiths, H. Jordan, J. Saunders, H. Grimmer, J. McKenna, Access and quality of parks and associations with obesity: A cross-sectional study.

<sup>19</sup> Citation: Barrett, MA, Miller D, Frumkin H. *Parks and Health: Aligning Incentives to Create Innovations in Chronic Disease Prevention*. Prev Chronic Dis 2014;11:130407. <http://dx.doi.org/10.5888/pcd11.130407>.

<sup>20</sup> Merriam, D.; Bality, A.; Stein, J.; Boehmer, T., 2017. *Improving Public Health through Public Parks and Trails: Eight Common Measures, Summary report*. US Department of Health and Human Services, Centers for Disease Control and Prevention and US Department of the Interior, National Park Service. [http://go.nps.gov/improving\\_public\\_health](http://go.nps.gov/improving_public_health). Accessed July 10, 2020.

<sup>21</sup> Barrett, MA, Miller D, Frumkin H. *Parks and Health: Aligning Incentives to Create Innovations in Chronic Disease Prevention*. Prev Chronic Dis 2014;11:130407. <http://dx.doi.org/10.5888/pcd11.130407>.

<sup>22</sup> Shi, Yilin, *Greenway Design and Planning for Healthy Communities: Case Study of Knoxville*. Master's Thesis, University of Tennessee, 2011. [https://trace.tennessee.edu/utk\\_gradthes/1023](https://trace.tennessee.edu/utk_gradthes/1023). Accessed July 10, 2020.

<sup>23</sup> Trust for Public Land, April 14, 2020. *Five takeaways on nature and health during coronavirus* <https://www.tpl.org/blog/florence-williams-nature-fix-coronavirus?> Accessed July 10, 2020.

<sup>24</sup> Barrett, MA, Miller D, Frumkin H. *Parks and Health: Aligning Incentives to Create Innovations in Chronic Disease Prevention*. Prev Chronic Dis 2014;11:130407. <http://dx.doi.org/10.5888/pcd11.130407>.

<sup>25</sup> *Exercise is Medicine: A Global Health Initiative*. Retrieved from <https://www.exerciseismedicine.org/>

<sup>26</sup> Riley, Lori, April 28, 2020; *Connecticut rail trail usage spikes during pandemic with people eager to escape coronavirus isolation*. <https://www.courant.com/coronavirus/hc-news-coronavirus-surge-in-rail-trail-usage-20200428-5zbaep4xajehlaxuyyjfpgzora-story.html>. Accessed July 10, 2020.

<sup>27</sup> New York City Department of Transportation. Retrieved from <https://www.insider.com/cities-closed-streets-for-pedestrians-covid-lockdowns-2020-5#new-york-city-has-opened-40-miles-of-streets-to-pedestrians-throughout-each-borough-residents-are-able-to-use-the-streets-from-8-am-until-8-pm-daily-unless-otherwise-stated-and-can-enjoy-them-as-long-as-they-stay-at-least-6-feet-away-from-other-people-1>

<sup>28</sup> Luz Lazo, April 15, 2020. *Pressure grows on D.C. to close roads to give residents more room for walking, jogging, biking during covid-19 shutdown*, <https://www.washingtonpost.com/transportation/2020/04/15/pressure-grows-dc-close-roads-give-residents-more-room-walking-jogging-biking-during-covid-19-shutdown/>. Accessed July 10, 2020.



<sup>29</sup> Davenport, Coral, June 25, 2020, *Pandemic's Cleaner Air Could Reshape What We Know About the Atmosphere*. The New York Times. <https://www.nytimes.com/2020/06/25/climate/coronavirus-clean-air.html>. Accessed July 20, 2020.

<sup>30</sup> Environmental Defense Fund, *Health impacts of air pollution*. <https://www.edf.org/health/health-impacts-air-pollution>. Accessed July 20, 2020.

<sup>31</sup> Mehl, Chris, August 16, 2018. *City Trails: Improving Equitable Access*. <https://headwaterseconomics.org/economic-development/trails-pathways/city-trails-improving-equitable-access/>. Accessed July 13, 2020.

<sup>32</sup> Law Insider, Dictionary- Underserved populations. <https://www.lawinsider.com/dictionary/underserved-populations>

<sup>33</sup> Common Ground Health, March 2018. *Health Impact Assessment of the Genesee Valley Greenway*, [https://www.gtcmpo.org/sites/default/files/pdf/2018/5241\\_-\\_hia\\_of\\_the\\_genesee\\_valley\\_greenway.pdf](https://www.gtcmpo.org/sites/default/files/pdf/2018/5241_-_hia_of_the_genesee_valley_greenway.pdf). Accessed July 13, 2020.

<sup>34</sup> Barrett, MA, Miller D, Frumkin H. *Parks and Health: Aligning Incentives to Create Innovations in Chronic Disease Prevention*. *Prev Chronic Dis* 2014;11:130407. <http://dx.doi.org/10.5888/pcd11.130407>.

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