

Highlands West Trail Connectivity Plan

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Acknowledgements

The *Highlands West Trail Connectivity Plan* was spearheaded in 2018 by the Open Space Institute and facilitated by The LA Group in coordination with the Orange County Land Trust, Palisades Interstate Park Commission, New York State Office of Parks, Recreation and Historic Preservation, and the New York-New Jersey Trail Conference. Funding for this project came from the Open Space Institute and the Orange County Land Trust.

Project Partners and Contributors



The **Open Space Institute** (OSI) protects scenic, natural, and historic landscapes to provide public enjoyment, conserve habitat and working lands, and sustain communities. Founded in 1974 to protect significant landscapes in New York State, OSI is a leader in land conservation, having partnered in the protection of nearly 2.2 million acres in North America, from Florida up the spine of the Appalachians to southern Canada.



The mission of the **Orange County Land Trust** (OCLT) is to preserve water resources, critical habitat, rural and urban farmland, scenic viewsheds and ecosystems in and around Orange County for the benefit of all who depend on them. Since its founding in 1993, OCLT has helped protect nearly 6,000 acres of land through the negotiation of conservation agreements with private land owners, property donations, and the acquisition of private property.



The **New York-New Jersey Trail Conference** (NYNJTC) is a volunteer-powered organization that builds, protects, and maintains a network of more than 2,150 miles of public trails. Together with its partners, they strive to ensure that their trails and natural areas are sustainable and accessible for all to enjoy for generations to come.



The **Palisades Interstate Park Commission** (PIPC) preserves natural, historic, and cultural resources, and provides for their use by the public for recreational and educational purposes. Formed in 1900, PIPC operates the Palisades Interstate Park in New Jersey and the state parks and historic sites in New York's Palisades Region.



The mission of **New York State Office of Parks, Recreation and Historic Preservation** (NYS OPRHP) is to provide safe and enjoyable recreational and interpretive opportunities for all New York residents and visitors, and to be responsible stewards of the valuable natural, historic, and cultural resources entrusted to the agency.

Project Consultants



Since 1974, **The LA Group** has helped to shape experiences through landscape architecture and engineering that creates space for life and community; family and friendship. Its staff of landscape architects, civil engineers and environmental scientists boasts a robust resume in public space and government projects, resort and commercial development and campus planning and design.

Table of Contents

EXECUTIVE SUMMARY	4
CHAPTER 1. INTRODUCTION	5
Plan Scope	7
Planning Process	8
Regional Vision & Goals	10
CHAPTER 2. HIGHLANDS WEST OVERVIEW	13
Regional Context & Study Area	14
Protected Lands	17
Climate Resilience & Natural Resources	21
Community Connections	22
Transit Hubs	23
Tourism	24
Regional Trails	26
Challenges & Opportunities	28
CHAPTER 3. FOCUS AREAS	30
Schunnemunk North	32
Schunnemunk South	38
Harriman	42
Goosepond	46
Storm King	52
Project Summary	56
CHAPTER 4. RECOMMENDATIONS	58
Plan Implementation	59
Outdoor Recreation	60
Land Conservation	63
Economic Promotion	65
CREDITS	67
References	67
Photo & Map Credits	67

Plan Summary

The *Highlands West Trail Connectivity Plan* establishes a vision for an interconnected trail system linking more than 93,000 acres of protected land to enhance recreational experiences, safeguard natural resources, and support local, sustainable development within the Hudson Highlands West region (“Highlands West”).

The Mid-Atlantic Highlands region is defined as a mountainous “greenbelt” spanning from Litchfield Hills in Connecticut through New York’s Hudson Valley, northern New Jersey, and ending in the Reading Prong region of Pennsylvania. Deemed by Congress as a “Nationally Significant” landscape in 2004 with the passage of the Highlands Conservation Act, this four-state range is considered a high-priority conservation area for protecting wildlife, water quality, forests, agriculture, and significant cultural and historic resources.

This plan focuses on the Highlands West region, a distinctive landscape along the western banks and hinterlands of the Hudson River Valley, boasting picturesque and pastoral views, from craggy outcrops along the mountainous terrain, to gentle rolling meadows in the foothills, and small towns and villages that dot the landscape. The region is primarily defined by its mountains— the Highlands— which comprise many of the protected lands and state parks and support recreation, watersheds, and wildlife habitats. With a year-round population of more than 150,000 people, nearly three million annual visitors, and proximity to major urban centers, the western Highlands are a primary destination for outdoor recreation. The region also exhibits exemplary characteristics of ecological resilience, including diverse topography that creates microclimates, offering local climatic options for plants and animals to adapt to climate change in place. As the climate continues to change, the region’s dense forests play an essential role in mitigating climate change by capturing carbon in trees and soil.

The Highlands are a culturally and ecologically important landscape that have inspired and awed generations of residents and visitors alike, influencing significant moments in the nation’s art, landscape design, conservation, and environmental advocacy movements. However, increasing land development pressures, visitor capacity issues at state parks, land connectivity gaps, and threats to water quality within the western Highlands pose challenges to the continued existence and maintenance of a connected and sustainable landscape.

The vision of this plan is to support the sustainable development and protection of the Highlands West region as a premier destination for magnificent scenery and accessible outdoor recreation. Central to this vision is land and trail connectivity, which will be enhanced by establishing a network of integrated, multi-use trails that connect the region’s existing recreational and natural assets. Trails and open spaces are important resources that enhance communities, foster healthy lifestyles, protect natural areas, and support local tourism and economic development.

This plan focuses on connecting the region's state parks and recommends conceptual trail and connectivity projects for five focus areas within the Highlands West region — Schunnemunk North, Schunnemunk South, Harriman, Goosepond, and Storm King. Proposed projects include new trail creation, realignment of existing trails to make them safer and more enjoyable, planning for new park and trail areas, and trailhead improvements to enhance public access. Local partners helped identify projects and establish priorities to bring the plan’s vision to fruition. The plan also provides recommendations for supporting recreation, conservation, and economic development to ensure that implementation of this comprehensive vision benefits the region’s communities. Through continued cooperation and engagement with our local stakeholders, we hope to build a constituency of advocates and champions to embrace a collective vision for Highlands West.




Storm King Art Center

CHAPTER 1

INTRODUCTION

“From either shore, the hills rise up more than 1000 feet, creating a landscape which is both beautiful and mysterious, a place of many moods, inspiring yet terrifying. So strong is the image of the Highlands that the area has come to symbolize the entire Hudson River...”

- Frances F. Dunwell in *The Hudson River Highlands* (1991)



New York's western Hudson Highlands (“Highlands West”), a more than 93,000-acre network of protected lands in eastern Orange County, offers unparalleled recreational opportunities within a one-hour drive or train ride from New York City. The Highlands also provide vast quantities of clean drinking water and are a designated climate resilient corridor, providing a haven for an incredible diversity of species. The mountains, meadows, lakes, and rivers that define the beauty of this area have and continue to awe and inspire generations of visitors as a special place in one of America’s premier scenic landscapes. The Highlands West region includes six state parks, four long distance trails, and is rich in cultural and historic resources, including some of the Hudson Valley’s most popular destinations such as the U.S. Military Academy at West Point and Storm King Art Center.

Parks and trails are vital recreational, cultural, and economic assets that are increasingly regarded as important aspects of communities that enhance quality of life, foster healthy lifestyles, protect natural areas, and generate economic activity. However, increasing land development pressures, visitor capacity issues at state parks, and existing gaps and barriers within the western Highlands pose challenges to land conservation and the continued development and maintenance of a viable, quality trail system.

While the region boasts more than 500 miles of existing trails, exemplary state parks and recreation areas, and a high level of community support and engagement, the completion of an interconnected trail system throughout the Highlands West region has yet to be successfully coordinated. Realizing the potential for greater impact, connectivity, and investment, OSI joined forces with regional and local partners to establish a vision and planning process that will enhance and transform the region’s trail and open space network. This conceptual plan is the product of more than a year’s worth of planning and stakeholder engagement to develop a regional vision and identify opportunities for meaningful open space protection and trail linkages.

Plan Scope

The *Highlands West Trail Connectivity Plan* establishes a vision for an interconnected trail system to enhance recreational access, protect land, safeguard natural resources, and support local economic development opportunities within the Highlands West region. This plan is intended to serve as a resource to help regional partners communicate a shared vision for the Highlands West trail identity; identify opportunities for strategic land conservation and sustainable development; prioritize goals and implementation strategies; and inspire future trail and conservation initiatives.

The plan includes a brief overview of existing conditions, constraints, and opportunities for new trail connections—especially in areas where there is potential for linking the region’s trail network to state parks, cultural and historic destinations, community and transportation centers, and existing and future protected lands. The general geographic scope of the plan includes the western Hudson

Highlands mountain range and its foothills in eastern Orange County. Five focus areas—Schunнемunk North, Schunнемunk South, Harri-man, Goosepond, and Storm King—are identified as priority areas for connection, trail development, and conservation projects. The plan also provides overarching recommendations to guide development of the broader trail network, including actions to address recreational, conservation, and development goals. These recommendations will guide implementation of long-term capital projects, planning, stewardship, marketing, and other trail development activities; all of which will require coordination, commitment, and creativity among regional partners. Over time, this plan will be reviewed and updated as needed as projects are completed or new ideas emerge. Through continued cooperation and engagement with regional stakeholders, the goal is to build a constituency of advocates and champions to support a collective vision for Highlands West.



PLAN CONTENTS

- ◆ A brief **overview of the region** and its existing resources
- ◆ Opportunities for **new trail connections and projects**
- ◆ **Recommendations for trail development** related to broader outdoor recreation, land conservation, and economic promotion goals

Planning Process

The concepts presented in this plan were developed through a series of stakeholder surveys, meetings, and interviews that identified major challenges and opportunities for enhancing the regional trail network. The planning team further refined the geographic scope and goals of this plan based on an inventory of existing conditions and assets, site visits, feedback from project partners, a survey of regional planning documents, and conceptual design exercises.

As part of the information-gathering phase, the planning team worked with local and regional agencies, organizations, local governments, and associations to ensure that existing regional priorities and ideas were considered in the development of this plan. More than 20 stakeholder representatives were surveyed and interviewed to develop a vision and identify opportunities for the regional trail network. Representatives from the following organizations were engaged throughout this process:

Appalachian Mountain Club (AMC)	Orange County Land Trust (OCLT)
Black Rock Forest Consortium (BRFC)	Palisades Interstate Park Commission (PIPC)
Friends of Schunnemunk State Park (FSSP)	Palisades Park Conservancy (PPC)
Hudson Highlands Land Trust (HHLT)	Residents and land owners
Hudson River Valley Greenway (HRVG)	Scenic Hudson Land Trust (SHLT)
MTA Metro-North Railroad (MTA)	Sterling Forest and Schunnemunk State Parks
New York-New Jersey Trail Conference (NYNJTC)	Storm King Arts Center (SKAC)
New York State Office of Parks, Recreation, and Historic Preservation (NYS OPRHP)	Town of Chester
New York State Thruway Authority (NYSTA)	Town of Cornwall
Open Space Institute (OSI)	Town of Woodbury
Orange County Citizens Foundation (OCCF)	Tuxedo Hudson Company (THC)

This plan serves as the first planning phase for trail development in the Highlands West Region. The projects and recommendations identified in this plan will lay the groundwork for plan implementation with regional partners (phase two).

HIGHLANDS WEST TRAIL SYSTEM PLANNING & DEVELOPMENT PROCESS

Phase 1: Trail Concept Planning



Phase 2: Project Implementation

Upon completion of Phase 1, the following tasks will be coordinated among project partners:

- ◆ Form a steering committee comprised of organizations, partners, and agencies dedicated to overseeing plan implementation
- ◆ Assign a plan coordinator
- ◆ Develop a project roll-out and outreach strategy
- ◆ Coordinate proposed projects
- ◆ Identify grants and funding sources
- ◆ Identify strategies and timelines for implementing plan recommendations

Regional Vision and Goals

The Highlands West region is primed to become a premier destination for accessible outdoor recreation—drawing residents and visitors to an integrated, multi-use trail system that builds upon the region’s existing recreational and natural assets.

The goals for achieving this vision are three-fold:



OUTDOOR RECREATION

To enhance visitor access and experiences



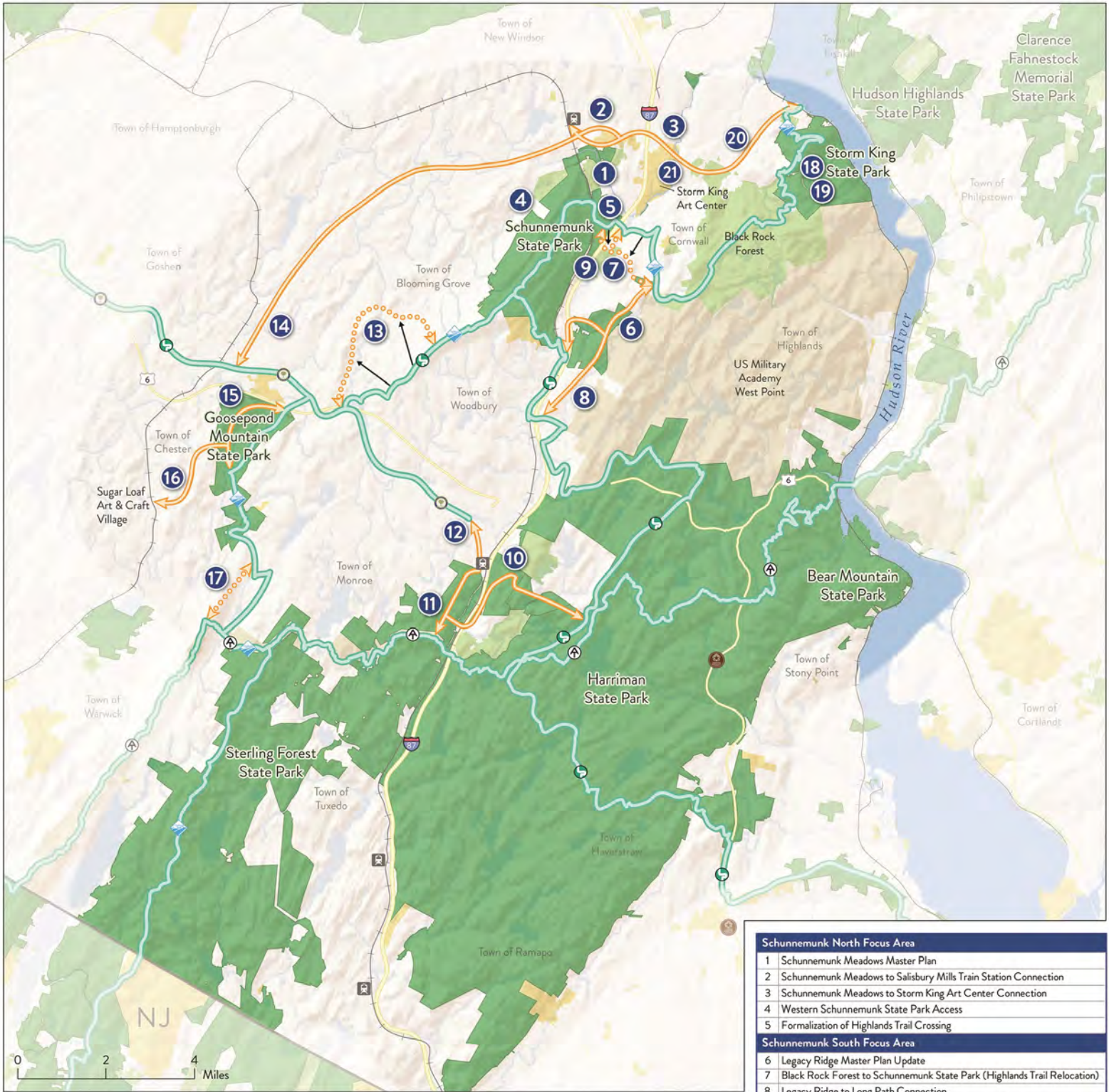
LAND CONSERVATION

To protect land for safeguarding habitats and recreational corridors, protecting and improving water quality, and promoting climate resiliency



ECONOMIC PROMOTION

To support local economies and sustainable development opportunities connected to open spaces



	State Land		Appalachian Trail
	Conservation Easement		Long Path
	Private Conservation Land		Highlands Trail
	Federal Land		Heritage Trail
	Access Improvement		Roads
	New Connection/Improvement		Railroad
	Relocation of and/or Alternate Route		

Schunnemunk North Focus Area	
1	Schunnemunk Meadows Master Plan
2	Schunnemunk Meadows to Salisbury Mills Train Station Connection
3	Schunnemunk Meadows to Storm King Art Center Connection
4	Western Schunnemunk State Park Access
5	Formalization of Highlands Trail Crossing
Schunnemunk South Focus Area	
6	Legacy Ridge Master Plan Update
7	Black Rock Forest to Schunnemunk State Park (Highlands Trail Relocation)
8	Legacy Ridge to Long Path Connection
9	Highlands Land Bridge
Harriman Focus Area	
10	Harriman Connector Master Plan
11	Harriman Train Station Connection
12	Heritage Trail Extension (to Harriman Train Station)
Goosepond Focus Area	
13	Secure Current Long Path Route
14	Heritage Trail Long Path to Schunnemunk North Connection
15	Goosepond Mountain Summit Trail
16	Goosepond Mountain to Sugarloaf Mountain Connection
17	Reroute Highlands Trail
Storm King Focus Area	
18	Butter Hill Trailhead Improvement Plan
19	Bobcat Trail Trailhead Improvement Plan
20	Storm King Bypass (Boulevard Trail/Mountain Rd. to Black Rock Forest)
21	Hudson Highlands Nature Museum to Storm King Art Center





Schunnemunk State Park

CHAPTER 2

HIGHLANDS WEST OVERVIEW

This chapter provides an overview of existing conditions and assets in Highlands West, laying the groundwork for identifying future projects that will increase the connectivity of recreational trails, expand land conservation, and promote sustainable economic development opportunities.

Topics include:

- ◆ Regional Context & Study Area
- ◆ Protected Lands
- ◆ Climate Resilience & Natural Resources
- ◆ Community Connections
- ◆ Transit Hubs
- ◆ Tourism
- ◆ Regional Trails
- ◆ Challenges & Opportunities

Regional Context & Study Area

The Highlands in New York’s Hudson Valley are a section of the Mid-Atlantic Highlands region, which spans from northwestern Connecticut, southwest through northern New Jersey and southeastern Pennsylvania, and ends at the Reading Prong in Pennsylvania. This 3.5 million-acre “greenbelt” includes significant conservation areas and protected lands near some of the Northeast’s densest metropolitan areas, including Philadelphia, New York City, and Hartford. In 2004, the United States Congress designated the Mid-Atlantic Highlands as “Nationally Significant” when it passed the Highlands Conservation Act. Administered through the U.S. Fish and Wildlife Service, this act provides matched funding to preserve and protect high priority conservation areas within the four-state Highlands region. The conservation and stewardship goals of this act include protection of watersheds and drinking water, maintaining productive forest lands, conserving productive farmland, and enhancing the region’s natural, cultural, and historic resources for recreation.

Geographic Scope

The geographic scope of this plan includes the Highlands in eastern Orange County, roughly bounded by Cornwall-on-Hudson and New Windsor to the north, Metro-North Railroad's New Haven Line and the Town of Chester to the west, the northernmost sections of Sterling Forest State Park and Harriman State Park to the South and the Hudson River to the east. The study area is divided into five major focus areas – Schunnemunk North, Schunnemunk South, Harriman, Goosepond, and Storm King. These focus areas include portions of many towns and villages, as well as state parks and other protected lands.



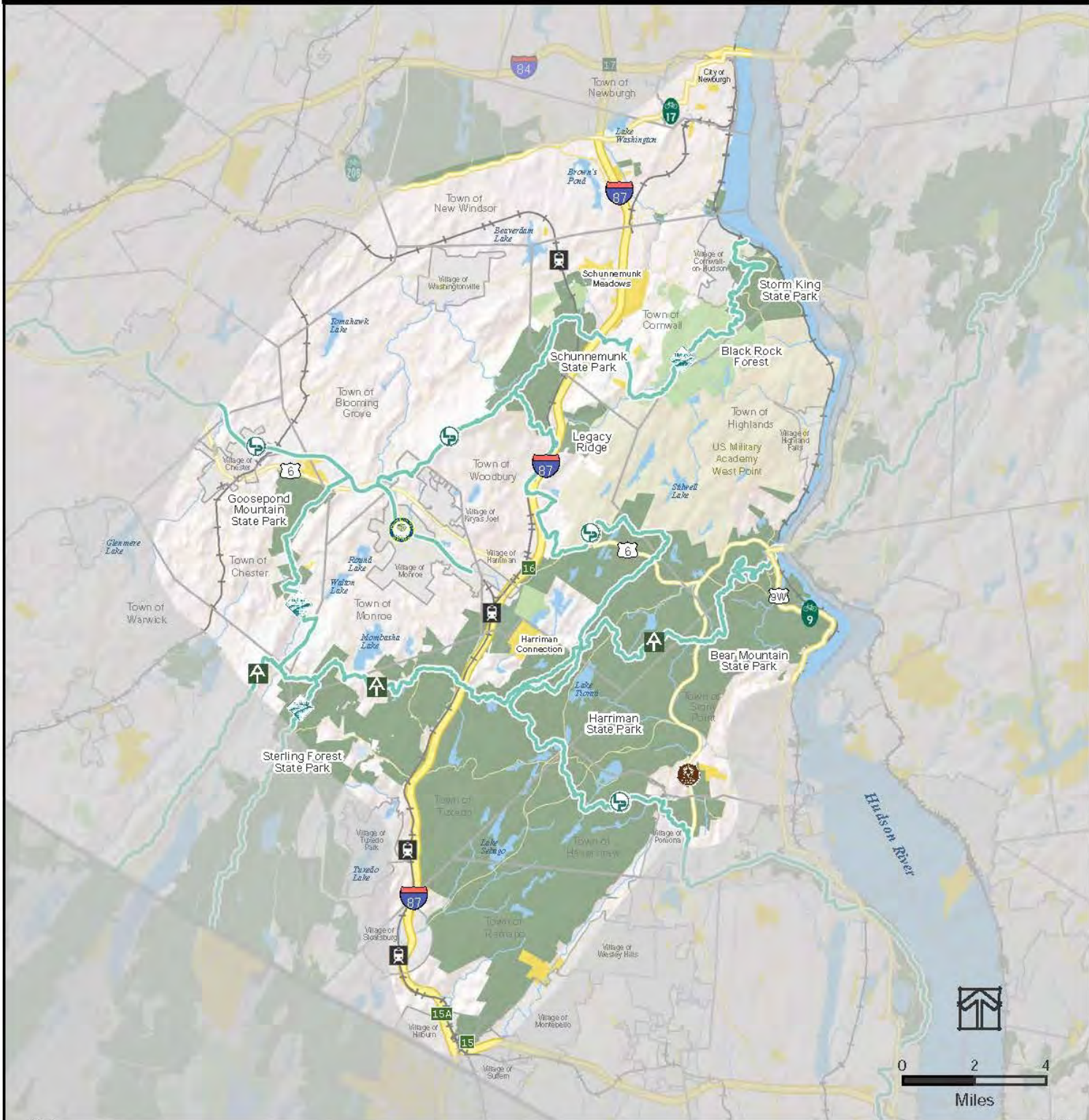
Landscape and Development Trends

The Highlands West region includes a variety of picturesque and pastoral landscapes, from craggy outcrops along the mountainous terrain, to the shoreline of the Hudson River, to gently rolling meadows in the foothills, and small towns and villages that dot the landscape. The region is primarily defined by the Highlands, which form the basis of the protected lands and state parks surrounding them. These landscapes have inspired and awed generations of visitors, influencing significant moments in the nation’s art, landscape design, conservation, and environmental advocacy movements.

The study area includes a continuum of development patterns, including rural farmland, small towns, suburban neighborhoods, industrial parks,

and major commercial corridors. Consideration for how these various land uses relate is important in planning for future trail networks, development, and protection of environmental resources. While there are many open spaces in this region, many communities continue to experience immense development pressures. Orange County’s proximity to dense population areas, easy highway accessibility, myriad recreational opportunities, and availability of shovel-ready sites position this region as ripe for continued commercial and residential development. According to its 2019 Comprehensive Plan, Orange County has been the second fastest growing county in the state since 2000.¹ Continued protection of important open spaces and waterways, concentration of development in downtowns and existing commercial corridors, and improving public and non-motorized transportation networks will become increasingly important to preserving the natural and cultural landscape that the western Highlands are renowned for.

HIGHLANDS WEST BOUNDARY MAP







Legend

-  Town Boundary
-  Village
-  Water Body

Lands

-  Conservation Easement
-  Private Conservation Lands
-  State
-  Federal

-  Highlands Trail
-  Long Path
-  Appalachian Trail
-  Heritage Trail
-  NYS Bike Route

-  Railroad
-  Train Station
-  NYS Thruway Exit
-  Palisades Interstate Parkway

Protected Lands

Highlands West is unique for its large areas of protected land despite mounting sprawl and increasing development pressures. These lands serve as a buffer to the development of the greater New York City metropolitan area, protecting watersheds and important corridors for wildlife migration across the mid-Atlantic region.

The legacy of land protection work and awareness in the region stems from philanthropic contributions and park building efforts dating back to the conservation movement of the late 19th to early 20th centuries. Harriman State Park (1910) and Bear Mountain State Park (1913) were among the earliest state parks to be established in the Hudson Valley. Today there are six state parks in this area of the western Highlands, which continue to expand in size and in their recreational offerings.

The Open Space Institute (OSI), Orange County Land Trust (OCLT), New York-New Jersey Trail Conference (NYNJTC), and many other conservation partners continue to make significant investments around these protected areas and other high priority landscapes within the region. Since its founding in the 1974, OSI has protected more than 38,000 acres in the Highlands West region, creating state parks such as Sterling Forest and Schunnemunk and preserving critical wildlife habitat in open spaces such as Black Rock Forest. OCLT has also played a pivotal leadership role in conserving critical habitats and landscapes throughout Orange County. Since their founding in 1993, OCLT has helped protect more than 6,000 acres of land, including farmland, critical habitat areas, and the establishment of 13 nature preserves. NYNJTC has been an instrumental advocate for creating interconnected landscapes and has engaged thousands of volunteer trail builders to build and maintain a network of more than 2,150 miles of public trails.

State Parks

Harriman State Park

Established in 1910, Harriman State Park is the second largest park in New York State's park system. With a mostly forested landscape and hundreds of miles of trails, Harriman offers a valuable open space and outdoor recreation resource close to New York City. The park contains 31 lakes and reservoirs, 200 miles of hiking trails, two beaches, two public camping areas, group camps, cabins, waterfront facilities, streams, important wildlife species, and many vistas and scenic vantage points.

Schunnemunk State Park

The land that comprises Schunnemunk State Park was originally protected by OSI and transferred to New York State in 2004. The 3,310-acre state park includes Schunnemunk Mountain, offering ridge-top views of the Hudson Highlands to the east and the Shawangunks and Catskills to the west, as well as agricultural fields at its base. Located in the

Towns of Cornwall and Blooming Grove, this state park is a destination for hikers and outdoor enthusiasts. Schunnemunk is the tallest mountain in Orange County and supports rare plants, animals, and ecological communities.

Goosepond Mountain State Park

Goosepond Mountain State Park was established through bond acquisitions in 1960 and 1962. The 1,558-acre park is located approximately six miles west of Interstate 87 in the Town of Chester. The park includes woods, fields, and wetlands; and is a haven for many native species. The preservation of Goosepond Mountain South—the 389 acres added to Goosepond Mountain State Park by OSI in 2014—created a new access point to the park and relocated a portion of the Highlands Trail onto newly preserved land, eliminating a mile-long walk on the road and furthering the goal to connect Goosepond to Sterling Forest.



View from the top of Claudius Smith Rock in Harriman State Park



Black Rock Forest



View of Schunemunk Mountain from Storm King Art Center



Sterling Forest State Park

Sterling Forest State Park

In 1997, after acquisitions spearheaded by OSI and the Trust for Public Land, Sterling Forest was permanently designated as a state park. The park includes 19,096 acres of thick woodland, a protected watershed area, and recreation areas. Amidst a densely populated area, this park provides important habitat for local and migratory species, including black bears, hawks and songbirds, and many rare invertebrates and plants. The park also includes significant historic sites relating to iron mining and production from colonial days through the early 20th century.

Bear Mountain State Park

Located just south of the plan study area in Stony Point, the 5,411-acre Bear Mountain State Park and adjacent Harriman State Park were established by Union Pacific railroad president E.W. Harriman and a group of influential businessmen in the early 20th century. The group donated land and funded the purchase of other properties in response to state plans to construct a prison facility. The park draws more than two million visitors a year and offers playing fields, picnic areas, fishing access, a swimming pool, an outdoor ice-skating rink, Trailside Museums and Zoo, a hand-crafted carousel, and 45 miles of trails.

Storm King State Park

Established in 1917, Storm King State Park offers spectacular views of the Catskills and the Hudson Valley. Its central feature, Storm King Mountain, rises more than 1,300 feet above the Hudson River. In the 1960s, this park became the focus of an environmental campaign to protect the land from the development of a hydro-electric power plant, and was saved by the efforts of citizens and local environmental groups. Today the park is primarily undeveloped, but provides several parking areas and hiking trails.

Other Protected Lands

Black Rock Forest

Created in 1929 by Dr. Ernest G. Stillman, Black Rock Forest is a 3,838-acre preserve that protects

critical habitats and provides important connections to state-owned properties. Black Rock Forest is owned and managed by the Black Rock Forest Consortium (BRFC), a non-profit organization dedicated to maintaining the forest and a scientific field station for forest research and demonstration. In 2014, OSI secured the Hudson Highlands' largest-ever conservation easement on Black Rock Forest. OSI donated the easement to the State of New York two years later, which guaranteed public access to nearly 60 miles of hiking trails and created a land acquisition fund with BRFC to acquire adjacent lands that connect to Schunmunk.

U.S. Military Academy at West Point

West Point, located along the Hudson River between Storm King State Park and Harriman State Park, is the oldest continuously occupied military post in the nation. It is home to one of the country's five military academies and is the only federally-owned land in the western Highlands. More than two-thirds of the over 16,000-acre property is natural wilderness, including several ponds and lakes. The complex also includes an internal road network connecting arms complexes, shooting ranges, riding stables, and other facilities. There are three formal hiking trails, totaling more than six miles, available for use by the public.

Storm King Art Center

Storm King Art Center offers approximately 500 acres of rolling hills, woodlands, and fields containing sculpture collections by acclaimed modern artists. The nonprofit was founded in 1960 by Ralph E. Ogden and H. Peter Stern, former co-owners of the Star Expansion Company, and was originally envisioned as a museum devoted to Hudson River School painting, but became a sculpture garden within five years of the organization's founding. Landscape architect William A. Rutherford designed the Storm King Art Center property. This open-air museum is regarded as one of the largest contemporary outdoor sculpture collections in the nation.



Climate Resilience & Natural Resources

Highlands West exhibits exemplary characteristics of ecological resilience. The area includes diverse topography that creates microclimates, providing options for plants and animals to adapt to climate change. Climate change is resulting in a documented movement of plants and animals northward at rates of six to 12 miles per decade and upslope of 35 feet per decade. Expanding and strengthening the current movement corridor with additional protections is critical to supporting migration.

As a result of the unique geologic history of the Appalachian region, the western Highlands landscape captures a broad range of elevations, which in turn support a broad range of habitats and wildlife. Mid-elevation granite and mafic habitat types dominate the southern region of the study area and are largely protected. The northern portion of the study area exhibits low elevation sedimentary rock type and limestone, which support habitats that are both much less protected across the eastern U.S. and are high priorities for conservation. Expanding the Highlands West trail network, with a focus on increasing protected land in the northern region of the study area will contribute to ensuring important resilient lands are available to support a diversity of plants and animals in a changing climate.

Water quality in the Highlands West watersheds largely remains at “good” to “slightly impacted” levels thanks to the high amount of forest cover in the region.² With many streams running through forest landscapes, the region’s water quality benefits from the 93,000+ acres of protected land.³ The region provides drinking water to tens of thousands of people through reservoirs and well systems, offers habitat for aquatic species, and supports stream-based recreation, which attracts tourism and economic activity to the region.

The National Forest Service assessment, *Forests to Faucets*, ranks the Highlands West watersheds

in the highest quintile based on the number of people relying on surface water drinking sources, the current quality of water, and the threat to loss of water quality.⁴ This points to the national importance of the region for forest protection to improve water quality. Increasing development, especially dispersed development on septic systems, will result in rising pathogens and nutrients that decrease water quality. Orange County’s population has been increasing at as much as 20 percent per decade since 1960.⁵ Land protection, especially of stream corridors, wetlands, and headwaters will support water quality and quantity as populations increase.



Opposite page: A creek on the OSI-protected Northrop Friedman property; Above: View of Black Rock Forest

Community Connections

The study area includes 10 municipalities that are home to more than 150,000 people. Connections among regional population centers, downtowns, and destinations are proposed to promote accessibility to the area's robust park and trail system. Additionally, creating new connections to commercial corridors, downtowns, dense mixed-use neighborhoods, and business districts will open new opportunities for tourism and trail-oriented economic development.

Municipality	Hamlets (H) & Villages (V) in project area	Population*	Total land area (sq. mi.)	Population Density (per sq. mi.)
Town of Blooming Grove	Salisbury Mills (H) South Blooming Grove (V)	17,725	34.74 sq. mi.	510/ sq. mi.
Town of Chester	Sugar Loaf (H) Chester (V)	11,971	25.05 sq. mi.	477.88/ sq. mi.
Town of Cornwall	Cornwall (V) West Cornwall (H) Cornwall-on-Hudson (V) Salisbury Mills (H) Orrs Mill (H) Mountainville (H) Firthcliffe (H)	12,491	26.65 sq. mi.	468.71/sq. mi.
Town of Goshen	Howells (V) Otter Kill (H)	13,864	43.64 sq. mi.	317.69/ sq. mi.
Town of Highlands	West Point (H) Highland Falls (V) Fort Montgomery (V)	12,152	30.41 sq. mi.	399.61/ sq. mi.
Town of Monroe	Harriman (V) Monroe (V)	42,913**	20.1 sq. mi.	2,134.98/ sq. mi.
Town of Palm Tree	Formerly Hamlet of Kiryas Joel	No data available**	1.47 sq. mi.	No data available
Town of New Windsor	Vails Gate (H) Firthcliffe Heights (H)	26,799	34.08 sq. mi.	786.36/ sq. mi.
Town of Woodbury	Woodbury (V/H) Highland Mills (H) Harriman (V) Central Valley (H) Newburgh Junction (H) Lebanon (H)	11,628	36.2 sq. mi.	321.22/ sq. mi.
Town of Tuxedo	Arden (H) Southfields (H) Indian Hill (H)	3,552	47.05 sq. mi.	75.49/ sq. mi.

* 2013-2017 American Community Survey 5-Year Estimates, U.S. Census Bureau

** Population as of 2017, prior to the secession of Kiryas Joel from the Town of Monroe. On January 1, 2019, Kiryas Joel became the Town of Palm Tree, NY.

Transit Hubs

The region is served by several major highways, active railroad lines, Hudson River ferries, and the New York Stewart International Airport.

Interstate I-87, also known as the NYS Thruway, is maintained by the New York State Thruway Authority (NYSTA) and is the central transportation artery of the region. The NYS Thruway bisects the western Highlands with Exits 16 (Harriman/Woodbury) and 17 (Newburgh/Scranton) serving as the primary access point to Highlands West. I-87 poses one of the greatest challenges to trail, open space, and habitat connectivity, with limited options for crossing. There are approximately 14 under- and overpasses across I-87 in the study area, most of which are state and local roads. One pedestrian bridge spans the thruway in Southfields as part of the Nurian Trail.

The Port Jervis Line is an active, passenger rail line operated by Metro North Railroad that runs from New York Penn Station in Manhattan to Hoboken, NJ before continuing along the west side of the Hudson River to the City of Port Jervis. The Harriman and Salisbury Mills Stations bring passengers into the heart of the Highlands West region, with the Tuxedo and Sloatsburg stations further south. The Middletown & New Jersey Railroad LLC rail line services freight trains up to Middletown along the western edge of the study area.



*Top, left to right: Platform at Harriman Train Station; Exit 16 Harriman Sign on the NYS Thruway
Bottom: Southfields pedestrian bridge across I-87*

Tourism

The Highlands’ success as a popular “get-away” destination dates back to the birth of tourism in the United States. In the early-19th century, residents of New York City would take steamboats, and eventually trains, up to the Highlands and broader Hudson Valley to escape the stresses of the industrialized city. Today, tourism is increasingly considered an integral component of the region’s economic development strategy and a mechanism to revitalize local communities. Highlands West contains a diversity of highly regarded, year-round destinations, including vacation and tourist attractions, historic sites, art centers, state parks and trails, local eateries and craft beverage tasting rooms, shopping outlets, and educational facilities. These destinations define this area as a major tourist hub in the lower Hudson Valley, offering unique and authentic experiences for visitors while also providing residents with a variety of work-live-play opportu-

nities. A study by Oxford Economics revealed that the tourism industry and visitor spending is strong in Orange County, accounting for 14 percent of all tourism activity in the Hudson Valley in 2017.⁶

Trails and parks are increasingly becoming part of tourism development strategies, especially as ecotourism and outdoor-based recreation become more popular. Planning for trail connectivity between destinations and communities not only provides alternative, non-vehicular means for visitors to travel, but also opportunities to experience the region in new, engaging ways. While there is much to see and do in the western Highlands, the following “anchor” destinations are among some of the most visited places in the Hudson Highlands.



The United States Military Academy at West Point offers incredible scenic views of the Hudson River and many cultural and historic activities, including the Eisenhower Hall Theatre, Constitution Island, Fort Putnam, and the West Point Museum.



Founded in 1960, **Storm King Art Center** offers an open-air museum and indoor galleries featuring permanent and rotating exhibits by renowned modern and contemporary artists.

NEW YORK STATE PARKS

Orange County is home to six state parks, offering numerous opportunities for hiking, biking, fishing, swimming, boating, and more. In 2018, these parks collectively attracted more than 3.5 million visitors.



STATE PARK	NUMBER OF VISITORS (2018) ⁷
Bear Mountain	2,127,572
Harriman	1,005,661
Sterling Forest	297,659
Schunnemunk	48,950
Storm King	14,505
Goosepond Mountain	6,227



Sugar Loaf Art & Craft Village is a small village with more than 60 artist studios, craft shops, galleries, and restaurants nestled in historic buildings dating back to the 18th and 19th centuries. A mountain bearing the same name is located adjacent to the village and offers panoramic views of the Hudson River and Highlands.



Woodbury Common Premium Outlets is one of the state's most visited destinations, drawing more than 13 million shoppers each year. With 220 stores, it is considered one of the world's largest designer outlet shopping centers.



The Hudson Highlands Nature Museum is the region's premier nature and environmental education center, featuring an Outdoor Discovery Center and a Wildlife Education Center. The museum offers year-round programming on the unique ecology of the Hudson Highlands for students and the general public.

Regional Trails

Several regional trails cross through Highlands West. These trails serve both long-distance and day users.

The **Appalachian Trail**, a National Scenic Trail that spans from Georgia to Maine, is one of the longest continuously marked hiking trails in country. The Appalachian Trail crosses the Palisades region, through the Hudson Highlands, along the northern boundary of Sterling Forest State Park, through Harriman and Bear State Parks, and across the Bear Mountain Bridge to the eastern Highlands. In 2017, 17,404 hikers used this portion of the trail.⁵

The 358-mile **Long Path** traverses north to south across New York State, from the West 175th Street subway station near the George Washington Bridge in Manhattan to the Helderberg Escarpment in John Boyd Thacher State Park in Albany County. In Highlands West, the Long Path co-aligns with portions of the Highlands Trail, Heritage Trail, and Appalachian Trail.

The 150-mile **Highlands Trail** begins on the banks of the Hudson River in Cornwall-on-Hudson and continues 150 miles south through the Delaware Valley in New Jersey. Upon completion, it will extend an additional 150 miles, running from New Jersey through Pennsylvania and extending eastward across the Hudson River to the Connecticut border. In certain areas, the trail is co-aligned with existing trails and roads, such as the Long Path. The Appalachian Trail, Long Path, and Highlands Trail are all maintained by the New York-New Jersey Trail Conference with volunteers and member groups.

The **Heritage Trail** is a 15-mile linear trail from Goshen to Harriman along the former Erie Railroad right-of-way. The trail is owned and managed by Orange County and is the first trail in the county's park system that passes through a nature preserve (OCLT's Birnberg Preserve) and by historic landmarks, while also connecting several of the county's vibrant communities. Plans are underway to extend the trail to the City of Middletown by fall 2020.

This page (top to bottom): *Appalachian Trail marker; the Long Path and Highlands Trail markers; entrance sign to the Heritage Trail in Monroe NY.* Opposite page: *A roadside entrance to the Highlands Trail and Long Path in the Village of Kiryas Joel*





Challenges & Opportunities

Interviews and surveys with more than 20 local and regional stakeholders, as well as a review of existing studies and reports, provided insights into the challenges and opportunities for trail-oriented development and increased connectivity in the region.

The western Highlands' existing physical and natural assets provide ample opportunities for expanded trail development and connectivity to prioritize sustainable and ecologically sensitive land uses. However, challenges identified throughout this process revealed areas for improvement and creative problem-solving, which are addressed in more detail in the Chapter Three focus area project recommendations. The following list of challenges and opportunities highlight some of the topics most frequently raised throughout the planning process.

Challenges

1- Development Pressures & Sprawl

According to Orange County's recent 2019 Comprehensive Plan Draft, nearly 60 million people live within a six-hour driving distance of Orange County.⁸ Orange County is one of the fastest growing counties in the Hudson Valley, serving as a commuter suburb to the New York Metropolitan Area and northern New Jersey. With areas of undeveloped land, easy access via major state thoroughfares, and rail lines passing through the county, sprawl development patterns continue to threaten open spaces and land connectivity. This plan seeks to deter unsustainable growth and land use patterns by coupling trail development with land conservation priorities.

2- Gaps & Barriers

Natural and man-made barriers in the landscape pose various challenges to the existing network of trails and protected lands. Specific examples include major highways (such as the NYS Thruway) and lack of continuity between protected lands, streams, steep ridges, and unsecured paths. These challenges limit opportunities for visitor access and experiences, as well as protecting natural resources. This plan identifies innovative solutions for linking previously unconnected state parks, trails, transit hubs, and popular destinations.

3- Uneven Visitor Distribution

A significant issue in the Highlands West region is uneven distribution of visitors at state parks and existing trail areas that result in capacity issues. As the annual number of people visiting state parks increases, the ability to provide and manage visitor amenities and protect environmentally sensitive areas along trails becomes increasingly challenging and hinders the quality of the visitor experience. Of the 3.5 million people that visited the region's state parks in 2018, more than three million visited Bear Mountain or Harriman. Over-visitation at certain areas may be attributed to ease of access, availability of amenities, unique features and views, and lack of knowledge of other outdoor recreation areas in the region. This plan identifies opportunities for improving park and trail access and wayfinding, creating new hiking and trail recreation opportunities, linking destinations, improving amenities, developing comfort stations, and marketing new or alternative areas to encourage more even distribution of visitors among the state parks. This may include developing new amenities at state parks such as Storm King, Schunnemunk, and Goosepond Mountain, which are considered to be "undeveloped" state parks as they lack basic amenities such as bathrooms and have limited points of access.

Opportunities

1- Land Acquisition & Management

Although threatened by development, Highlands West includes priority conservation lands that can be acquired or eased for preservation purposes and integrated into expanded trail networks. Pursuing additional land conservation, especially adjacent to existing protected lands, will close gaps between protected areas and trails. Long-term stewardship and site improvements identified in this plan will incorporate management of open spaces to enhance their ecological benefits and scenic value. Identifying priority lands and public funding to support acquisition, master planning for recently acquired lands, and developing relationships with local land owners will be critical to pursuing these opportunities.

2- New Trail Connections & Loops

Creating new trail connections and loops will significantly expand trail access to different user groups, providing new opportunities to reach destinations, support different trail-based activities, and accommodate different intensity levels. This plan recommends trail improvements that enhance the region's existing trail and open space network. Trail improvements can be used to leverage new economic promotion and development opportunities in local communities; integrate public transit to reduce congestion and parking demands; and improve access from neighborhoods and downtowns to encourage active, outdoor recreation.

3- Trail & Trailhead Improvements

Developing and improving existing trails and trailheads will significantly expand the capacity of the region to accommodate increased visitation and enhance the visitor experience. Improvements to trailheads and trail access gateways are important for orienting visitors and assisting with wayfinding. Depending on site specifications and annual visitation, additional provisions should be considered for parking, kiosks, trash bins, benches, picnic tables, toilets, handicap accessibility, and other visitor amenities in targeted locations. Additionally, regional train stations, downtowns, and other visitor hubs should consider ways to support pedestrians and cyclists to ensure ease of access into the trail network at more developed access points.



Improved trailhead and parking lot at Goosepond South



The Heritage Trail in Monroe, NY follows the old Erie Railroad right-of-way



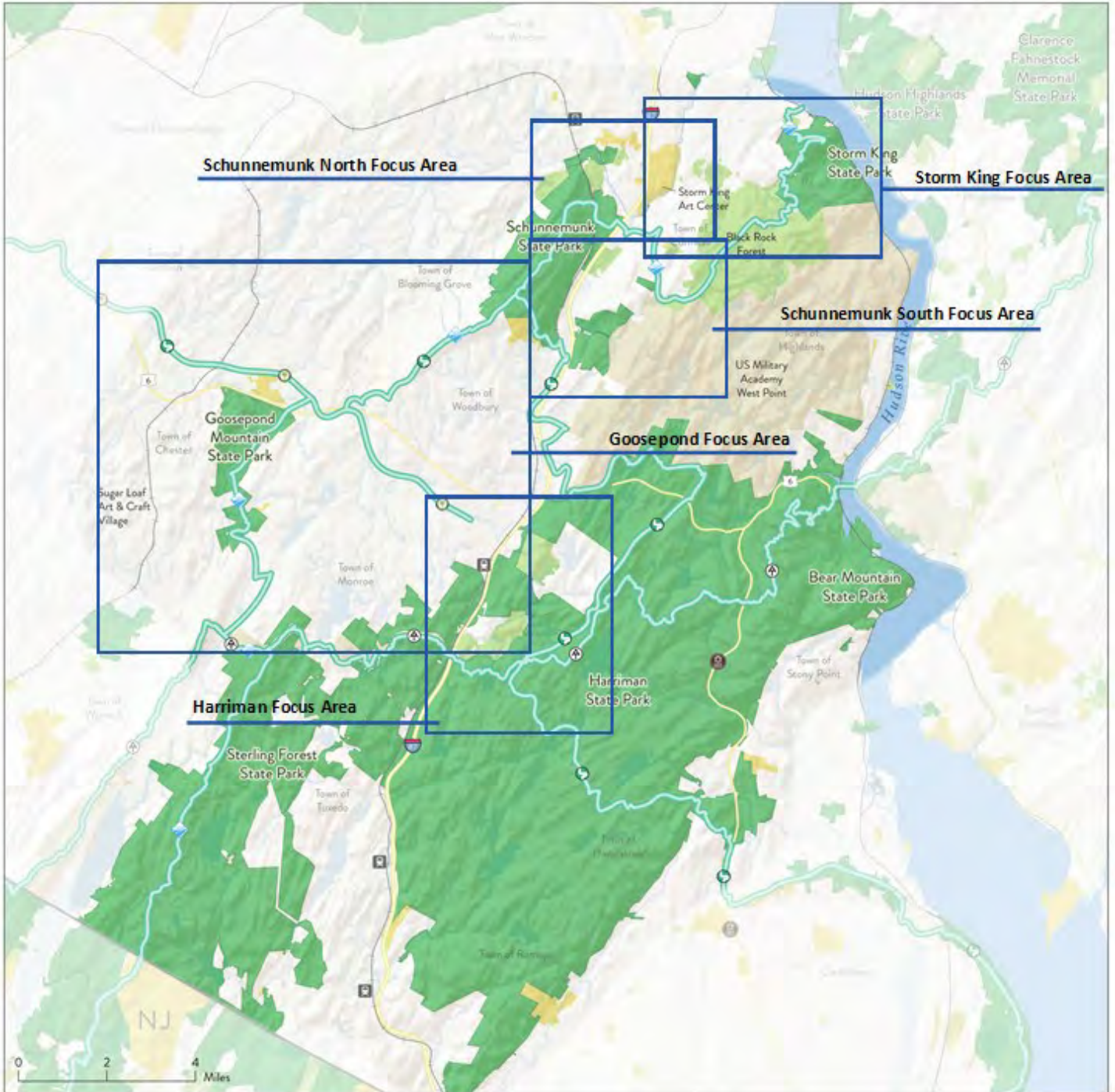
Harriman State Park

CHAPTER 3

FOCUS AREAS

This plan identifies trail and connectivity priorities centered in five focus areas within Highlands West. These focus areas present opportunities for new and improved trail connections based on their unique recreational, conservation, and community assets. The conceptual connections and access improvements presented in the following pages establish priorities for the region and provide a road-map for realizing the vision of this plan.

Highlands West Focus Areas



- | | |
|---|---|
|  State Land |  Appalachian Trail |
|  Conservation Easement |  Long Path |
|  Private Conservation Land |  Highlands Trail |
|  Federal Land |  Heritage Trail |
| |  Roads |
| |  Railroad |



Schunнемunk North

Schunнемunk North showcases some of the hidden gems of the western Highlands, offering unparalleled views of Schunнемunk Mountain, the Moodna Viaduct, and its surrounding foothills referred to as Schunнемunk Meadows. This is the northernmost focus area for proposed projects, which was identified not only for its scenic vistas but also for its protected lands, active and former rail corridors, and proximity to one of the region’s premier destinations, Storm King Art Center. New trail development within the Schunнемunk North focus area would offer abundant opportunities for natural resource stewardship, new trail development, and regional tourism.

DEFINING FEATURES

- Metro North Port Jervis Line
- Moodna Viaduct
- Moodna Creek
- Active farmland
- Diverse habitat and climate resilience
- Rolling hills
- Schunнемunk State Park
- Storm King Art Center
- Highlands Trail

Top photo: The Moodna Viaduct at Schunнемunk State Park

Vision

The vision is to establish the Schunnemunk North focus area as a new major access point to the Highlands West trail and park network. Improvements in this focus area will aim to connect visitors to mass transit and nearby attractions such as Storm King Art Center, as well as establish a new scenic recreation area with trails in Schunnemunk Mountain's bucolic foothills.

Opportunities

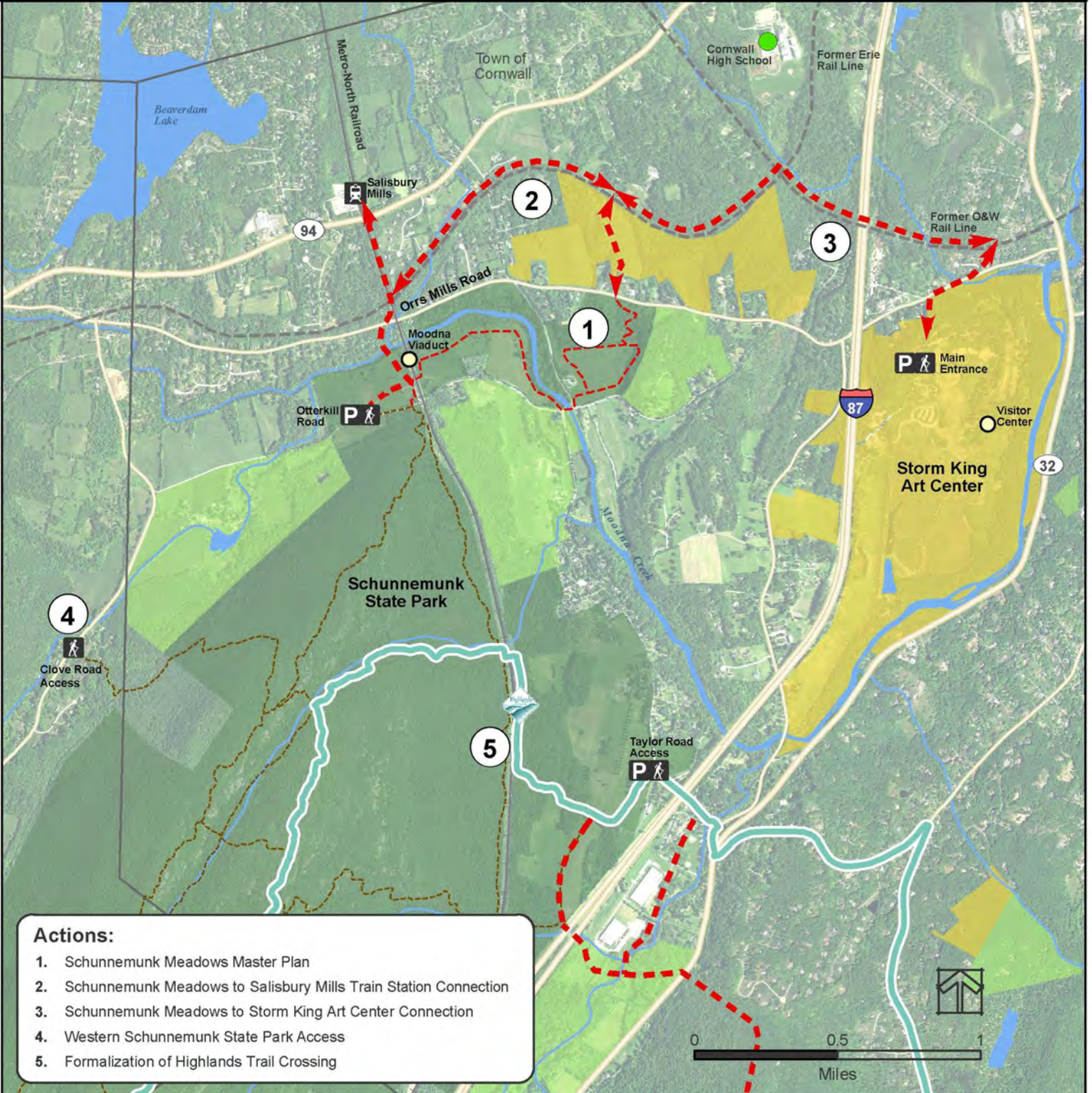
- ◆ Non-active rail rights-of-way (former O&W and Erie rail lines) that cross under the NYS Thruway
- ◆ Proximity to the Salisbury Mills Train Station
- ◆ Recent land additions to Schunnemunk State Park
- ◆ Dramatic views of the Moodna Viaduct and Schunnemunk Mountain
- ◆ Storm King Art Center, a major arts destination
- ◆ Moderate and difficult level hiking trails within Schunnemunk State Park

Challenges

- ◆ Non-existing connection from Salisbury Mills Train Station to regional trails
- ◆ No formal trail access on the west side of Schunnemunk State Park
- ◆ Active rail line through Schunnemunk State Park
- ◆ NYS Thruway acts as a connectivity barrier to the Storm King focus area
- ◆ Limited crossing points across the Moodna Creek



Schunnemunk North Focus Area



Actions:

1. Schunnemunk Meadows Master Plan
2. Schunnemunk Meadows to Salisbury Mills Train Station Connection
3. Schunnemunk Meadows to Storm King Art Center Connection
4. Western Schunnemunk State Park Access
5. Formalization of Highlands Trail Crossing

Legend

- | | | | |
|---------------|----------------------------|--------------------------|---------------------------------|
| Town Boundary | Conservation Easement | Highlands Trail | Trailhead |
| Village | Private Conservation Lands | Long Path | Parking |
| Water Body | State Lands | Appalachian Trail | Train Station |
| | Federal Lands | Existing Trails | Destination |
| | | Railroad | Privately-Owned Park/Open Space |
| | | Unused Rail Right-of-Way | Local Public Park/Open Space |
| | | Proposed Connections | |

Schunnemunk North Projects

1- Schunnemunk Meadows Master Plan

The Schunnemunk Meadows Master Plan will identify opportunities for public access, trailhead improvements, and new trail development along the northern base of Schunnemunk Mountain. Schunnemunk Meadows includes the fields and forests located north of Schunnemunk Mountain along the Moodna Creek. This land offers breathtaking views of Schunnemunk Mountain, Black Rock Forest, the Hudson Highlands, and the Moodna Viaduct, which is the highest and longest iron railroad trestle east of the Mississippi River. The goal of this plan is to incorporate these protected lands into the regional trail network and establish Schunnemunk Meadows as a new gateway, destination, and connection into Schunnemunk State Park. OSI will lead this initiative to design, engineer, and construct trails that provide active and passive recreation opportunities with distinctive scenic views; identify areas for improvements to existing parking and trailhead areas; identify needs for wayfinding, kiosks, and signage; and establish plans for long-term stewardship and maintenance of the trails and its amenities. OSI has entered into a 10-year stewardship agreement with OPRHP and PIPC to actively manage parking and trail amenities and target areas for ecological and agricultural enhancement. The Otterkill Road trailhead is identified as a potential location for siting new comfort stations, as no facilities currently exist within or surrounding this portion of Schunnemunk State Park.

2- Schunnemunk Meadows to Salisbury Mills Train Station Connection

This connection will provide an established path between Salisbury Mills Train Station and Schunnemunk Meadows with the intent to draw visitors to the park and connect them into the regional trail and open space network. Various trail and access point alternatives should be considered to best achieve these connections. This concept plan proposes constructing a trail adjacent to the Metro North rail line that will either lead into the former Erie rail line (if developed as a rail trail) or connect further south to the existing parking lot and trailhead on Otterkill Road. Steps to achieve this connection may include construction of new on- and off-road paths, acquisition and conversion of the former Erie rail line into a rail trail, acquisition of additional land or conservation easements adjacent to Schunnemunk Meadows, development of a safe pedestrian crossing across Route 94, and installation of a new signage and wayfinding along the route.

3- Schunnemunk Meadows to Storm King Art Center Connection

Conversion of the former Erie and O&W rail rights-of-way into a non-motorized rail trail corridor presents an opportunity to connect Schunnemunk Meadows and Salisbury Mills to destinations and trails along the eastern side of I-87, such as Storm King Art Center. Development of this connection will require land acquisition and construction to redevelop the former Erie and O&W rail lines into trails. Alternatively, on-road improvements could be made for pedestrians, cyclists, and other users along Orrs Mills Road to connect Schunnemunk Meadows to Storm King Art Center and beyond.

4- Western Schunnemunk State Park Access

An informal parking area on Clove Road adjacent to Hilmar Lodge offers the only point of access to the western side of the mountain via the Western Ridge Trail. To formalize this access point, the project lead will need to develop an access agreement with the existing landowners and designate the parking area as an official trailhead with signage and other improvements.

5– Formalization of Highlands Trail Crossing

Access and safety issues are a concern where the Highlands Trail converges with Metro North Railroad's Port Jervis Line within Schunнемunk State Park. To accommodate visitation and use of this park and trail network, a formal, at-grade crossing will need to be established to allow hikers and other trail users to safely navigate across this active rail line. Concerns about safety and trespassing have prompted Metro North to prohibit pedestrian access, which threatens the continuity of the Highlands Trail through Schunнемunk and limits access throughout the park. This project would entail developing an access agreement to permit a singular, controlled crossing where the Highlands Trail crosses the rail line. Alternatively, the Highlands Trail would need to be rerouted. To promote additional use and justification for this project, a weekend whistle stop could be established at this site to drop off visitors within the heart of the park and trail network, as has been successfully established at Breakneck Ridge in Hudson Highlands State Park.



Sculptures at Storm King Art Center with Schunnemunk Mountain in the distance



Legacy Ridge

Schunнемunk South

Schunнемunk South includes the southernmost and eastern portions of Schunнемunk State Park and land to the east of the park and NYS Thruway. Like the Schunнемunk North focus area, the NYS Thruway bisects Schunнемunk South. This focus area includes various protected and ecologically important lands, including Legacy Ridge, Black Rock Forest, West Point, and private properties with conservation easements. The addition of Legacy Ridge to Schunнемunk State Park has opened new possibilities for expanding the regional trail network, including the creation of new loops that could connect Schunнемunk Mountain, West Point, and Mountainville. Central to achieving this goal is developing the trail network within Legacy Ridge to serve as a new connector and recreation destination between the Highlands Trail to the north and the Long Path to the south. Further, expanding the trail network within and surrounding Legacy Ridge may enable on-road portions of the Highlands Trail in Mountainville to be rerouted.

DEFINING FEATURES

- Legacy Ridge
- Schunнемunk State Park
- Black Rock Forest
- U.S. Military Academy at West Point
- Highlands Trail
- Long Path
- Mountainville Hamlet
- Woodbury Creek
- Black Rock Fish and Game Club
- High species biodiversity

Vision

The vision is to integrate and enhance Legacy Ridge—a new addition to Schunnemunk State Park—to support connectivity between regional trails and wildlife corridors. Central to achieving this vision is bridging the gap between protected lands on either side of the NYS Thruway, which could be achieved by building a land bridge and/or making on-road bicycle and pedestrian safety improvements. The trail network will be enhanced by rerouting on-road portions of the Long Path and Highlands Trail and creating new loops to support long and short-distance trail users.

Opportunities

- ◆ New trail connections within Legacy Ridge
- ◆ New trail development on protected land and conservation targets
- ◆ High habitat and species diversity, including rare and endangered plants and animals
- ◆ Convergence of multiple long-distance trails within Schunnemunk State Park
- ◆ Undeveloped, privately-owned land holdings with opportunities for establishing new off-road connections
- ◆ Use of Legacy Ridge to reroute the Long Path and develop new access points
- ◆ Existing trailheads and parking areas
- ◆ Cultural, natural, and historic destinations including West Point, Black Rock Forest, and Storm King Art Center

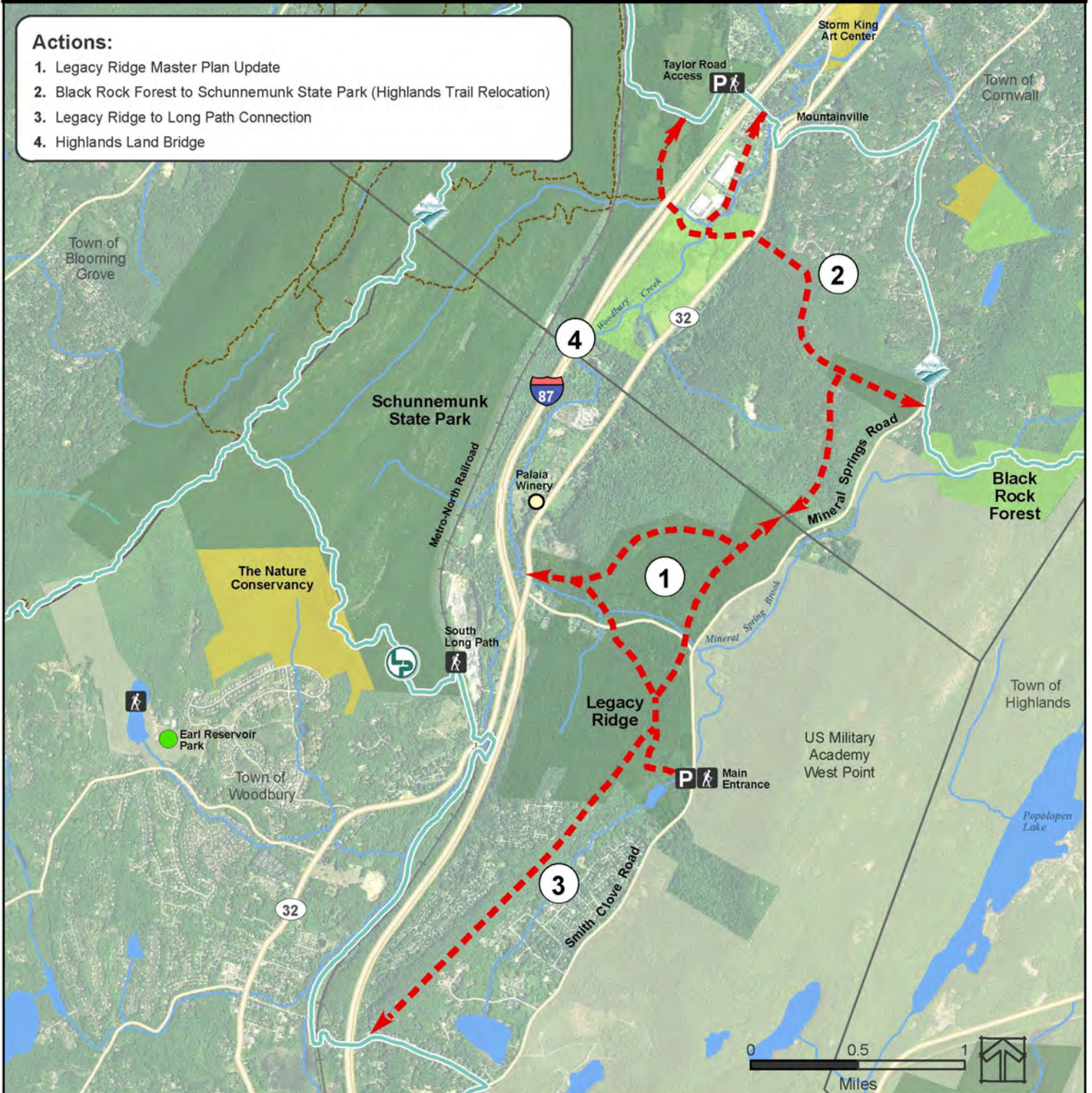
Challenges

- ◆ NYS Thruway as a barrier for wildlife movement and park and trail users between Schunnemunk State Park and Legacy Ridge
- ◆ On-road alignment of the Highlands Trail through Mountainville
- ◆ No existing off-road connections between the Highlands Trail in Mountainville and the Long Path along the eastern side of the NYS Thruway
- ◆ Questions of landowner willingness to consider land acquisition and/or easement agreements
- ◆ Obtaining permits and approvals from the NYS Thruway Authority to establish a culvert trail connecting protected land on both sides of the NYS Thruway

Schunнемunk South Focus Area

Actions:

1. Legacy Ridge Master Plan Update
2. Black Rock Forest to Schunнемunk State Park (Highlands Trail Relocation)
3. Legacy Ridge to Long Path Connection
4. Highlands Land Bridge



Legend

- | | | | |
|---------------|----------------------------|----------------------|---------------------------------|
| Town Boundary | Conservation Easement | Highlands Trail | Trailhead |
| Village | Private Conservation Lands | Long Path | Parking |
| Water Body | State Lands | Appalachian Trail | Train Station |
| | Federal Lands | Existing Trails | Destination |
| | | Railroad | Privately-Owned Park/Open Space |
| | | Proposed Connections | Local Public Park/Open Space |

Schunnamunk South Projects

1– Legacy Ridge Master Plan Update

In 2014, OSI developed a master site plan to guide future development of the Legacy Ridge property with provisions for multiple trail loops, a trailhead and kiosk, parking, gate relocation, and footbridge improvements. Since then, improvements have been made to further develop this property and add it to adjacent state park land. This project calls for updating the master plan to reflect the change in ownership, develop the internal trail network, and establish potential connections to the Long Path, Highlands Trail, and Schunnamunk State Park. Although the property is now owned by NYS OPRHP, OSI has a ten-year management obligation which includes current efforts to expand the trail network within the site.

2– Black Rock Forest to Schunnamunk State Park (Highlands Trail Relocation)

The segment of the Highlands Trail between Schunnamunk State Park and Black Rock Forest is currently aligned on-road from the Taylor Road bridge crossing the NYS Thruway to Pleasant Hill Road (Rt. 79), to Angola Road and on through Mineral Springs Road. This project proposes relocating a portion of the Highlands Trail from the Taylor Road overpass to Black Rock Forest through protected and eased properties. The proposed trail route could be accomplished by establishing a trail adjacent to Industry Drive in Mountainville and the adjacent Houghton Farm property, eventually leading into property owned by Black Rock Fish & Game Club. Alternatively, the series of eight-foot high box culverts beneath the NYS Thruway in Mountainville could be improved to also accommodate trail user access, if deemed feasible. An additional connection southward to the proposed Legacy Ridge loop trail should also be considered to connect the Highlands Trail to the Long Path and Harriman State Park. Property access easement agreements will be required to implement this connection.

3– Legacy Ridge to Long Path Connection

This project seeks to establish a new trail between Legacy Ridge and the Long Path aligned at Pine Hill Road in Highland Mills. This connection would further integrate the trail network by extending connections south of Legacy Ridge into Harriman State Park and the Appalachian Trail. This project proposes acquiring property or obtaining access easements along the ridgeline between the Skyline Drive neighborhood to the west and residential developments to the east of the ridge. Additionally, development of bike paths either along Smith Clove Road (County Route 9) or along Route 32 could provide a bypass for cyclists. Multi-user road improvements may include a combination of side path construction, bikeway signage, painted pedestrian and cycling lanes, designated road crossings, and/or shoulder widening. A feasibility study should be conducted to assess potential costs and impacts of these alternatives.

4- Highlands Land Bridge

The goal of this project is to create a land bridge over the NYS Thruway to provide an ecological and recreational connection from Schunnamunk State Park through protected lands to Black Rock Forest. Black Rock Forest has high species and habitat biodiversity and is especially known for its rare native terrestrial and aquatic ecosystems. A land bridge connecting Black Rock Forest and Schunnamunk State Park would allow for improved connectivity to facilitate the regional flow of species as the climate changes, add a unique recreational passage, and improve safety for drivers by reducing the likelihood for wildlife-vehicle collisions on the NYS Thruway. Land bridge projects have been implemented around the world and provide an innovative infrastructure solution to traversing highway barriers. This project will initially require a research and exploratory phase to determine project feasibility and future implementation steps.



Hiker at Harriman Connection

Harriman

Harriman State Park is the defining landscape of this focus area. As the second largest park in New York State, it serves as a major outdoor recreation hub due to its proximity to New York City. Additionally, the park provides hundreds of acres of undisturbed land that is critical for protecting wildlife habitats. Adjacent to the northwestern part of the park, OSI protected a 469-acre area that fills a critical land gap in Harriman. This connection offers additional contiguous habitat areas in a high-priority conservation area. Further, it provides a new and much needed connection to Harriman Train Station and the Village of Harriman, allowing visitors the ability to enter the trail network upon arrival at the station. Completion of the proposed projects in this focus area will connect three major regional trails, including the Long Path, the Appalachian Trail, and the Heritage Trail, and provide many miles of new multi-use recreational trail routes.

DEFINING FEATURES

- Harriman State Park
- Newly protected lands
- Heritage Trail
- Long Path
- Appalachian Trail
- Sapphire Trail
- Harriman Train Station
- Orange County Historical Society
- Lake Tiorati Recreation Area
- Woodbury Commons

Vision

The vision is to establish Harriman Train Station as a central access hub for connecting people into the Highlands West trail network. As a transportation epicenter, visitors will be able to seamlessly travel by foot or bike to and from town centers along a proposed extension of the Heritage Trail and access a network of trails that lead into the vast Harriman State Park. New trails and wayfinding signage are proposed for recently protected lands added to Harriman State Park, which will improve visitor access in the northwestern section of the park.

Opportunities

- ◆ New access points from mass transit into Harriman State Park to reduce vehicular traffic and open up new park lands for recreational use
- ◆ Proximity of the Heritage Trail to Harriman Train Station and the village
- ◆ Connections to an existing robust trail network within Harriman State Park
- ◆ Large tourist volume at Woodbury Commons
- ◆ Orange County Historical Society as a historic and cultural destination with nearby land for access and trailhead development
- ◆ Existing and well-defined carriage roads with opportunities for improvement throughout the new land addition to Harriman State Park
- ◆ Opportunities to establish new loops connecting to the Appalachian Trail and Long Path
- ◆ Adjacency to highly populated and visited towns

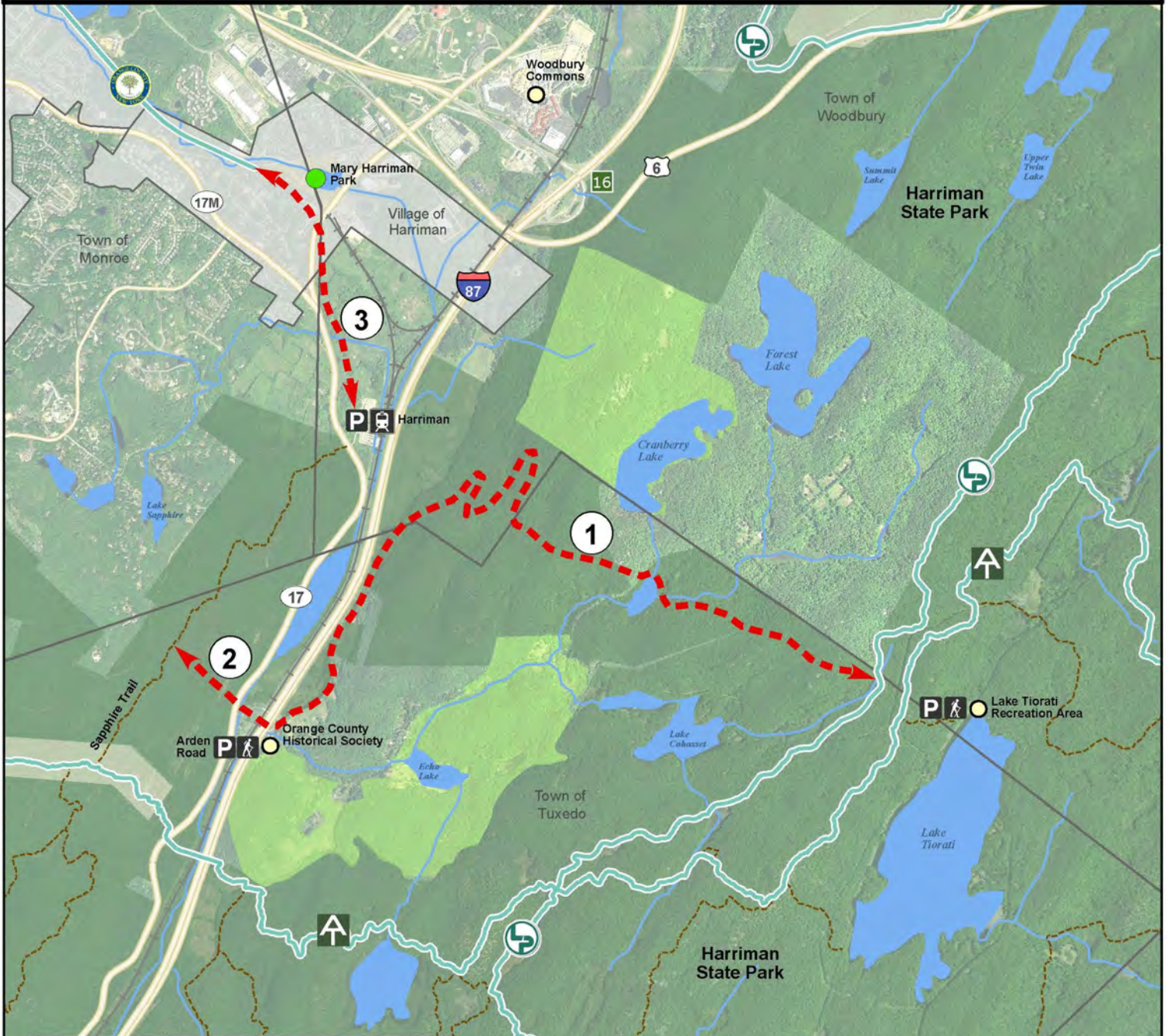
Challenges

- ◆ Limited options for crossing the NYS Thruway and Metro-North rail line
- ◆ Primarily undeveloped area of Harriman State Park with few recreation access points or visitor amenities
- ◆ Privately-owned, undeveloped properties adjacent to and landlocked within Harriman State Park



Orange County Historical Society

Harriman Focus Area



Actions:

1. Harriman Connector Master Plan
2. Harriman Train Station Connection
3. Heritage Trail Extension (to Harriman Train Station)

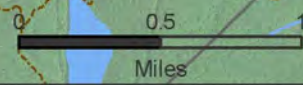
Legend

- Town Boundary
- Village
- Water Body

- Conservation Easement
- Private Conservation Lands
- State Lands
- Federal Lands

- Highlands Trail
- Long Path
- Appalachian Trail
- Heritage Trail
- Existing Trails
- Railroad
- Unused Rail Right-of-Way
- Proposed Connections

- Trailhead
- Parking
- Train Station
- Destination
- Privately-Owned Park/Open Space
- Local Public Park/Open Space



Harriman Projects

1– Harriman Connector Master Plan

In coordination with NYS OPRHP and PIPC, OSI will prepare a plan to develop a trail connection from the Harriman Train Station to the Long Path in Harriman State Park through the new addition to Harriman State Park. This master plan will identify potential trail routes, as well as inform signage, wayfinding, and provision of visitor amenities consistent with existing NYS OPRHP and PIPC guidelines. As per an agreement with NYS OPRHP and PIPC, OSI will be responsible for securing permits and constructing trails on this property and NYS OPRHP and PIPC will be responsible for extending the trail network to the Long Path. The parking area adjacent to the Orange County Historical Society or an eased property located at the corner of Water Street and Arden Station Road could be ideal locations for a new trailhead and visitor comfort stations as a midway point between the Harriman Train Station and the Long Path.

2– Harriman Train Station Connection

As a component of the Harriman Connector master planning process, the Sapphire Trail that runs north to south in Harriman State Park will be used as the primary trail corridor to connect visitors from Harriman Train Station to Harriman State Park on the eastern side of the NYS Thruway. At the end of the Sapphire Trail, users can follow the Appalachian Trail east across the Thruway into Harriman State Park. Alternatively, a shorter, more direct connection could be made by constructing a short path from the Sapphire trail to the Arden Road overpass, which leads directly into newly protected land at Harriman State Park adjacent to the Orange County Historical Society. This project should include provisions for improved visitor orientation and wayfinding signage from Harriman Station at Route 17 where the Sapphire Trail begins (across from Station Drive). While an existing “hiker crossing” sign exists south-bound on Route 17 before the station, additional pedestrian crossing and traffic calming techniques should be provided for safer access. Transportation Alternatives Program (TAP) funding may be used for highway safety improvements.

3– Heritage Trail Extension (to Harriman Train Station)

The Heritage Trail, owned and maintained by Orange County, spans 15 miles from Goshen to Harriman along the former Erie Railroad and ends at River Road in the Village of Harriman. The former rail right-of-way continues from River Road to the intersection of Grove Street and Averill Avenue but has not yet been developed as a formal trail. This former rail line, located between Route 17 and the NYS Thruway, could be developed into a shared-use path to provide a critical connection from the Village of Harriman to Harriman Train Station. A feasibility analysis should be conducted to assess project viability and willingness of land owners to consider either access easements or acquisition. Alternatively, a side path along the heavily-trafficked Route 17 could also provide this connection with improvements. The one-mile connection between the village and train station would allow visitors direct access to the Heritage Trail and local shops, parks, historic sites, and the ability to bike or walk all the way to Goshen. As an additional component to this project, the existing pull-off parking area at the former site of Harriman Station (now demolished) on Grove Street could be improved as a new parking and access point to the Heritage Trail and Mary Harriman Park.



Goosepond Mountain

Goosepond

The Goosepond focus area is largely defined by the segments of the Long Path and Highlands Trail that connect the southern end of Schunnemunk State Park to Goosepond Mountain State Park and Sterling Forest State Park to the south. Goosepond Mountain State Park serves as a trail and conservation hub at the center of this focus area. The park borders the highly-trafficked Route 17 and is adjacent to towns and villages with increasing land development pressures. Goosepond Mountain and its foothills are a critical conservation area in the Moodna Creek watershed, providing climate resilience, landscape connectivity, and habitat protection. However, increased development pressures and suburban sprawl put these landscapes and trail connections at risk, making conservation and trail connectivity an urgent priority for this area. The proposed projects for this area focus on securing land to protect high value conservation landscapes and existing regional trail corridors.

DEFINING FEATURES

- Goosepond Mountain State Park
- Long Path
- Heritage Trail
- Highlands Trail
- Former Erie Rail Line
- Sugar Loaf Mountain
- Sugar Loaf Art & Crafts Village
- Gonzaga Park
- Crane Park
- Town and village centers

Vision

The vision is to integrate Goosepond Mountain State Park and its adjacent conservation lands and trails into the regional trail network by securing existing routes, establishing new connections, and pursuing additional land conservation. This vision will be accomplished by securing existing regional trails where mounting development pressures threaten the existing alignments. Additional priorities include rerouting the Highlands Trail between Goosepond Mountain and Sterling Forest State Parks and creating a new connection to Sugar Loaf Mountain and Hamlet. Further, redevelopment of the former Erie rail line is proposed to offer a new and accessible rail trail to link more of the region's village centers, destinations, and conservation areas. With the proposed improvements, Goosepond Mountain State Park will become a well-established and visible recreation area that will promote greater dispersion of trail and park users within Highlands West.

Opportunities

- ◆ Existing interconnected regional trail network
- ◆ Undeveloped land with potential for future conservation and trail development
- ◆ Many existing trailheads and parking areas for trail and park users
- ◆ Multiple public and private parks within and surrounding town centers
- ◆ Critical area for the continuity of the Long Path and Highlands Trail through the region

Challenges

- ◆ High intensity development pressures and sprawl development patterns threaten the existing Long Path corridor
- ◆ On-road segments of the Long Path and Highlands Trail
- ◆ Privately-owned properties adjacent to and surrounding Sugar Loaf Mountain, which currently limit access and trail development to and from Goosepond Mountain State Park and the Hamlet of Sugarloaf

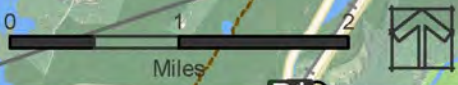
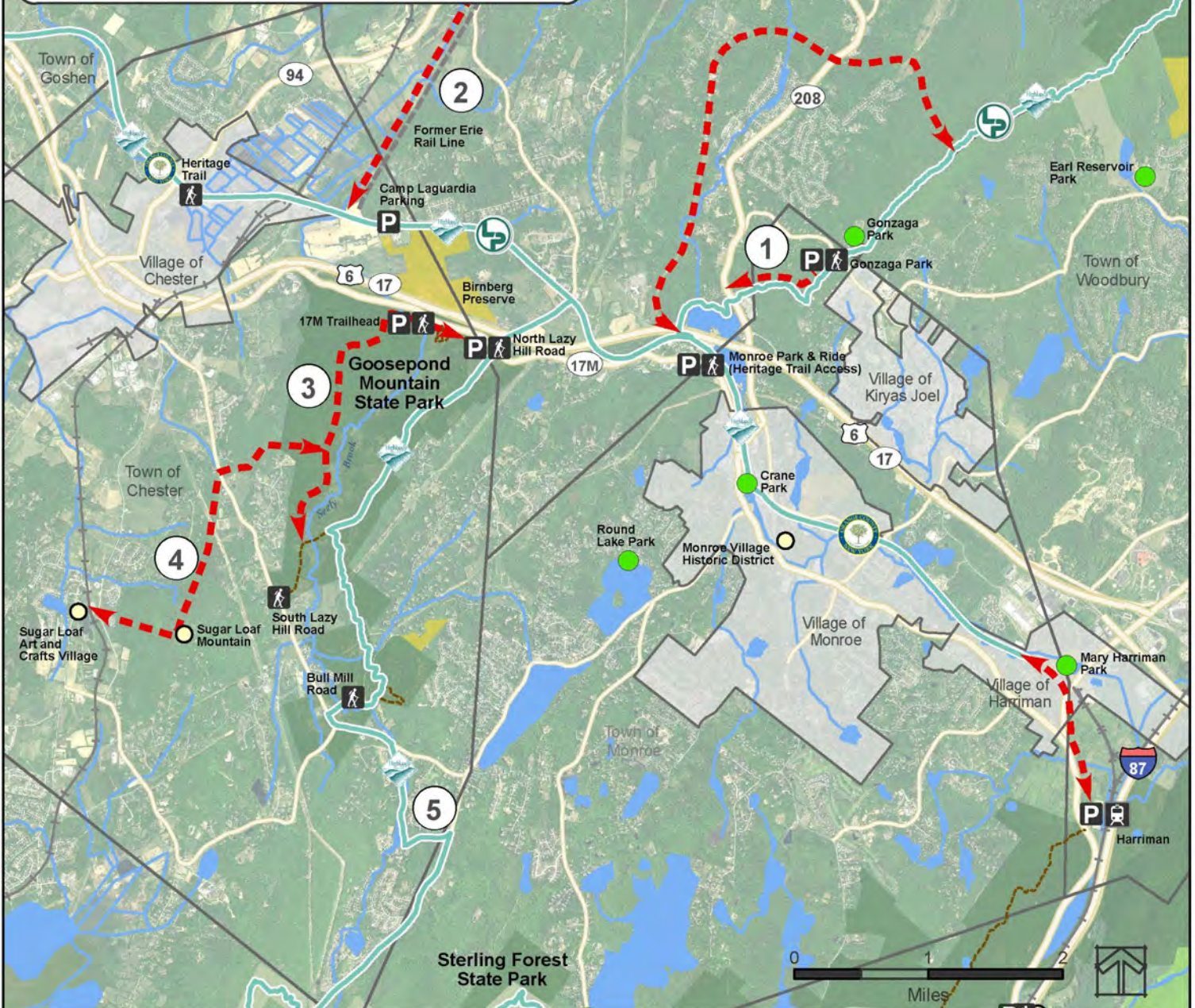


Top to Bottom: *Highlands Trail along Lazy Hill Road in Goosepond Mountain State Park; Snowshoers at Goosepond South*

Goosepond Focus Area

Actions:

1. Secure Current Long Path Route
2. Heritage Trail Long Path to Schunnemunk North Connection
3. Goosepond Mountain Summit Trail
4. Goosepond Mountain State Park to Sugar Loaf Mountain Connection
5. Reroute Highlands Trail



Legend

- Town Boundary
- Village
- Water Body

- Conservation Easement
- Private Conservation Lands
- State Lands
- Federal Lands

- Highlands Trail
- Long Path
- Appalachian Trail
- Heritage Trail
- Existing Trails
- Railroad
- Unused Rail Right-of-Way
- Proposed Connections

- Trailhead
- Parking
- Train Station
- Destination
- Privately-Owned Park/Open Space
- Local Public Park/Open Space

Goosepond Projects

1– Secure Current Long Path Route

The goal of this project is to protect land surrounding the existing Long Path (co-aligned with the Highlands Trail) in Blooming Grove between Route 17 and Schunnemunk State Park, as development pressures surmount and threaten its continuity. Currently, the Long Path connects the Heritage Trail along Route 17 to Gonzaga Park and Schunnemunk State Park to the north via on- and off-road alignments. If the existing Long Path cannot be secured in its existing form, alternative routes should be identified for new trail alignment. One alternative identified in this plan proposes rerouting the trail from the intersection of Old Mansion Road and Museum Village Road (on the western side of Orange Rockland Lake) up through undeveloped lands and a utility right-of-way that would connect back up with the existing Long Path to the north. While this route would bypass Gonzaga Park, it could ultimately provide a new, permanent off-road path along a mostly undeveloped ridge to Schunnemunk Mountain. This project will require development of alternatives and corresponding land acquisition strategies. Existing sections of the Long Path in this focus area should also be inventoried to determine conditions and specific improvements that are needed to enhance the trail corridor.

2– Heritage Trail/Long Path to Schunnemunk North Connection

This project proposes converting the former Erie rail line into a multi-use rail trail. This is an extension of the proposed Erie rail trail acquisition and conversion project for the Schunnemunk North focus area, which will start where the Heritage Trail and Long Path co-align in the Village of Chester, continue up through Washingtonville, and bear east to Schunnemunk State Park. Conversion of the rail corridor will require land acquisition and a feasibility analysis for construction of the approximate 10-mile rail trail.

3– Goosepond Mountain Summit Trail

The goal of this project is to formalize an existing, unmarked trail that leads to the summit of Goosepond Mountain that will increase the park's recreational opportunities and create new linkages between the park's northern and southern trailheads. Formalizing this trail would include connecting the existing path to one or more of the existing trailheads along Route 17M. Formalization will also require trail improvements, new blazing and signage, trailhead improvements, and an update to the park's official trail map. Additional bridges may need to be constructed to connect the summit trail with other existing park trails across the Seely Brook.

4– Goosepond Mountain to Sugar Loaf Mountain Connection

Southwest of Goosepond Mountain State Park is Sugar Loaf Mountain, a small mountain adjacent to a hamlet with a thriving art and crafts community of the same name. For decades the community and NYNJTC have worked to protect and formalize a hiking trail with access points within and surrounding Sugar Loaf Mountain, connecting Goosepond Mountain State Park and Sugar Loaf Hamlet. While a hiking trail existed at one point, fragmentation of the land due to private ownership hindered the ability to permit formalized hiking access. Due to the existing ownership structure of the mountain, negotiating easements or property acquisition will be required to initiate this connection. Rehabilitation of existing trails, new trail development, and construction of new trailheads will also be required to accommodate public access. Connections from either the proposed Goosepond Mountain Summit Trail or the South Lazy Hill Road Trailhead are identified as suitable access points for this project to make the connection from Goosepond Mountain State Park to Sugar Loaf Mountain.

5– Reroute Highlands Trail

This project seeks to reroute the Highlands Trail from on-road to off-road between Goosepond Mountain State Park and Sterling Forest State Park. The goal of this project is to improve the experience and safety of the Highlands Trail for users and to secure a permanent route between Goosepond Mountain State Park and Sterling Forest State Park (including the Appalachian Trail). Preliminary planning should include identification of trail alignment alternatives for rerouting the Highlands Trail. Property access easement agreements or acquisitions will be required to implement this connection.



Foliage reflection at Sterling Forest State Park



Butter Hill in Storm King State Park

Storm King

Once the site of a high profile environmental protection campaign against a proposal to blast into a portion of Storm King Mountain for a pumped storage hydro-electric plant in the 1960s, the Storm King focus area has a long history of environmental protection efforts. This focus area is predominately defined by the Village of Cornwall-on-Hudson along the banks of the Hudson River, West Point, Storm King State Park, and the Black Rock Forest Consortium. Offering majestic views of the Hudson Highlands to the east and west of the Hudson River, this area has inspired generations of visitors, including the Hudson River School painters. This focus area is intended to serve as the major link from the Highlands West regional trail network to the Hudson River, its water trails, and some of the region's most popular visitor destinations.

DEFINING FEATURES

Storm King State Park
Hudson River
Black Rock Forest
U.S. Military Academy at West Point
Storm King Art Center
Hudson Highlands Nature Museum
Village of Cornwall-on-Hudson
Town of Highlands

Vision

The vision is to enhance the Highlands West trail network and its access points, connecting to the majestic Hudson River and beyond. Project goals include enhancing existing connections to and from the Hudson River via adjacent parks, specifically through trailhead improvement projects in Storm King State Park and creating new routes to Black Rock Forest through the Town of Cornwall-on-Hudson. The ultimate goal is to develop this focus area as the eastern most gateway to the trail network within the study area by enhancing recreational amenities within and surrounding this picturesque landscape.

Opportunities

- ◆ Popular tourist hubs at West Point and Storm King Art Center
- ◆ Access to the Hudson River waterfront and the Hudson River Greenway Water Trail
- ◆ Lots of privately and publicly protected lands that can be incorporated into the trail network
- ◆ Potential for improvement of existing trailheads to promote safety, wayfinding, and provide amenities

Challenges

- ◆ Limited parking within Storm King State Park
- ◆ Challenging hiking terrain along Storm King Mountain
- ◆ Need for improvements at existing trailheads to accommodate increased visitation
- ◆ User safety concerns at trailheads and parking lots along major highways within Storm King State Park



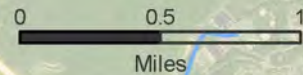
Donahue Memorial Park in Cornwall-on-Hudson

Storm King Focus Area



Actions:

1. Butter Hill Trailhead Improvement Plan
2. Bobcat Trail Trailhead Improvement Plan
3. Storm King Bypass (Boulevard Trail/Mountain Road to Black Rock Forest Connection)
4. Hudson Highlands Nature Museum to Storm King Art Center



Legend

Town Boundary	Conservation Easement	Highlands Trail	Trailhead
Village	Private Conservation Lands	Long Path	Parking
Water Body	State Lands	Appalachian Trail	Train Station
	Federal Lands	Existing Trails	Destination
		Railroad	Privately-Owned Park/Open Space
		Unused Rail Right-of-Way	Local Public Park/Open Space
		Proposed Connections	

Storm King Projects

1- Butter Hill Trailhead Improvement Plan

The Butter Hill Trailhead (also referred to as the Mountain View Rest Area) is an existing parking lot and trailhead located along Route 9W in Storm King State Park that provides direct hiker access to Butter Hill via the Howell Trail and serves as a scenic overlook area. In a preliminary concept study prepared for NYS OPRHP in 2017, the Butter Hill Trailhead was identified as a priority area for physical improvements. The parking lot currently has capacity for 45 vehicles, but has little signage, poor drainage, broken asphalt pavement, limited visibility and sight-distance approaches, and poorly defined trailheads. The concept plan identifies goals for improving this popular trailhead to enhance visitor safety and experiences, and better define the trailhead entrance. Proposed improvements include installation of a low planting buffer between the lot and highway, repaving the parking lot, and adding new kiosks and signage. With the preliminary planning and design already completed, this project will serve as the final design and implementation phase. The Butter Hill trailhead may also be an ideal location for siting new public restrooms in Storm King State Park.

2– Bobcat Trail Trailhead Improvement Plan

The Bobcat Trail Trailhead is a small, gravel parking area located on Route 9W south of the Butter Hill Trailhead in Storm King State Park. This parking area provides trail access to the mountain’s summit, offering spectacular views of the Hudson River and eastern Highlands. The trailhead currently includes few parking spots, no signage, poor drainage, and exposed rocky outcrops and trees that make parking difficult. Improvements to this trailhead are also included in NYS OPRHP’s 2017 preliminary concept study for trailhead improvements at Storm King and Schunnemunk State Parks. Proposed improvements include removal of barriers, grading and drainage improvements, paving and landscaping, installation of new trailhead signage and kiosks, and lot reconfiguration. With the preliminary planning and design already completed, this project will serve as the final design and implementation phase.

3– Storm King Bypass (Boulevard Trail/ Mountain Rd. to Black Rock Forest)

The intent of this project is to develop an easy- to moderate-level route from the Hudson River to Black Rock Forest along existing local roads and trails. This route will become an alternative option to taking the Highlands Trail through Storm King State Park, which is both challenging and heavily trafficked with hikers during peak seasons. The proposed route would start at Donohue Memorial Park on the banks of the Hudson River (where the Highlands Trail begins) and continue up along Dock Hill Road, either on existing trails through Pagenstecher Park or on-road. From Dock Hill Road, users would connect to Boulevard via Hudson Street and Mountain Road, bringing them on a scenic, low-traffic road (or existing trails alongside Boulevard) passing by Roe Park and the Hudson Highlands Nature Museum, and ending at Route 9W. Plans for this connection should include an inventory of side trails, identify roadside improvement needs for pedestrians and cyclists, develop wayfinding and signage, and enhance pedestrian and cyclist crossings at busy intersections.

4– Hudson Highlands Nature Museum to Storm King Art Center

The goal of this project is to explore options to facilitate construction of an easy-level trail connection between the Hudson Highlands Nature Museum Outdoor Discovery Center and Storm King Art Center. This would include construction of a path through conserved properties that connect the two destinations. The path would meet up with the existing trail network at the nature museum, allowing trail users to go further into the Village of Cornwall-on-Hudson. Construction of a safe crossing point across Route 32 and a pedestrian bridge over the Moodna Creek will be critical components to the success of this project.

Project Summary

Schunnemunk North Focus Area

- 1 Schunnemunk Meadows Master Plan
- 2 Schunnemunk Meadows to Salisbury Mills Train Station Connection
- 3 Schunnemunk Meadows to Storm King Art Center Connection
- 4 Western Schunnemunk State Park Access
- 5 Formalization of Highlands Trail Crossing

Schunnemunk South Focus Area

- 1 Legacy Ridge Master Plan Update
- 2 Black Rock Forest to Schunnemunk State Park (Highlands Trail Relocation)
- 3 Legacy Ridge to Long Path Connection
- 4 Highlands Land Bridge

Harriman Focus Area

- 1 Harriman Connector Master Plan
- 2 Harriman Train Station Connection
- 3 Heritage Trail Extension (to Harriman Train Station)

Goosepond Focus Area

- 1 Secure Current Long Path Route
- 2 Heritage Trail Long Path to Schunnemunk North Connection
- 3 Goosepond Mountain Summit Trail
- 4 Goosepond Mountain to Sugarloaf Mountain Connection
- 5 Reroute Highlands Trail

Storm King Focus Area

- 1 Butter Hill Trailhead Improvement Plan
- 2 Bobcat Trail Trailhead Improvement Plan
- 3 Storm King Bypass (Boulevard Trail/ Mountain Rd. to Black Rock Forest)
- 4 Hudson Highlands Nature Museum to Storm King Art Center



Old woods road within the Harriman Connector property



Peak Foliage at Schunemunk Meadows

CHAPTER 4

RECOMMENDATIONS

This chapter provides recommendations for next steps in the development of the Highlands West trail system to strengthen and enhance opportunities for outdoor recreation, land conservation, and community and economic development. These recommendations and implementation steps should be coordinated with the focus area projects identified in Chapter 3 and pursued as a collaborative process with region-

al partners and stakeholders. Recommendations are thematically structured into the following categories:

1. Plan Implementation
2. Outdoor Recreation
3. Land Conservation
4. Economic Promotion

Plan Implementation

Planning, coordination, and project implementation

Recommendation 1.1: Establish a steering committee to oversee implementation of the plan.

- 1.1.1 The steering committee should include representatives from the Open Space Institute, Orange County Land Trust, New York State Office of Parks, Recreation and Historic Preservation, Palisades Interstate Park Commission, the New York-New Jersey Trail Conference, and other organizations and agencies as identified. At a minimum, the steering committee should meet several times a year to share updates and coordinate project implementation.

The guidance committee will be tasked with:

- ◆ Delegation and coordination of trail projects among project partners
- ◆ Planning and prioritizing project implementation
- ◆ Developing a publicity strategy and appropriate messaging for promoting the plan
- ◆ Engaging in the development of a consortium name and brand
- ◆ Identifying grant opportunities and funding sources
- ◆ Developing timelines, benchmarks, and monitoring progress

Recommendation 1.2: Assign a plan coordinator to guide implementation and coordinate the plan's steering committee.

- 1.2.1 The plan coordinator will be tasked with overseeing implementation of the plan and maintaining momentum for the plan's proposed projects. This individual will be tasked with:
- ◆ Supporting the steering committee, which will include correspondence, public outreach, and organizing meetings
 - ◆ Overseeing implementation of the plan's recommendations
 - ◆ Tracking progress of focus area projects assigned to project partners
 - ◆ Marketing and publicity, including website and/or social media development and maintenance
 - ◆ Stakeholder and community outreach
 - ◆ Developing promotional materials, graphics, and maps as necessary
 - ◆ Identifying funding sources and applying for grants as identified
 - ◆ Updating the plan as needed

Outdoor Recreation

Enhance visitor access and experiences

Recommendation 2.1: Identify opportunities to bridge trail, destination, and user accessibility gaps.

- 2.1.1 Identify areas where on-road side paths are more feasible than off-road trail connections. This may be determined by suitability for different user types (e.g. mountain bikers, hikers, equestrians, cross-country skiers, etc.). Coordinate with local municipal agencies to explore possibilities for shared-use modifications to existing roads, where suitable, which may include guard-rail improvements, marked or unmarked bike lanes, and road crossing safety improvements, among other modifications. Encourage municipalities to incorporate “Complete Street” principles in areas where regional trail routes or high volumes of cyclists and pedestrians are expected and desired.
- 2.1.2 Acquire land that completes gaps in the regional trail system through a variety of methods, including but not limited to land dedication, purchase, use of vacated rail lines (rail-banking) and other rights-of-way, donation of land, and/or public easements and use agreements. Specific opportunities for Highlands West may include:
 - ◆ Conversion of former rail lines (such as the Erie and O&W lines), utility corridors, and other underutilized rights-of-way into multi-use trails.
 - ◆ Establish relationships with local land owners with property that may provide critical connections to bridge gaps within the trail network. Discuss easement and acquisition options and connect land owners to resources and local land trusts.
- 2.1.3 Reduce barriers and provide safe crossing points across the NYS Thruway, active railways, and major highways. Work with the NYS Thruway Authority to explore alternative options for creating new connections across the Thruway, including but not limited to:
 - ◆ The creation of a “land bridge” overpass or underpass to support wildlife and recreation crossings, which has been successfully implemented along major highways around the world, including the Trans-Canada Highway in Banff National Park (Alberta, Canada) and Interstate 90 east of Snoqualmie Pass in the Cascades (Washington State), for example.
 - ◆ Utilizing existing culverts beneath the NYS Thruway as possible connections for wildlife and trail users.
- 2.1.4 Establish new loops and connections for different trail-user groups and levels of intensity. Once trail loops are established, trails should be marked to indicate length and any challenging features. Alternative loops should be made available, when feasible, for easier and less strenuous options to increase accessibility to users of all ages and abilities.
- 2.1.5 Prioritize linkages from major transit hubs, such as regional bus depots, train stations, and shuttle stops to major trailheads and parks. Consideration should be given to developing trails from these transportation hubs directly to popular visitor destinations, such as Storm King Art Center and the region’s state parks.

- 2.1.6 Establish and enhance linkages to the Hudson River Greenway Water Trail, which is a designated National Water Trail with over 100 formal access sites along the Hudson River, and other boat or ferry services open to the public. Existing Greenway Water Trail access points in the Highlands West study area include:
- ◆ Kowawese Unique Area, Town of New Windsor
 - ◆ Donahue Memorial Park, Cornwall-on-Hudson
 - ◆ Mine Dock Park, Town of Highlands
 - ◆ Fort Montgomery State Historic Site/ Popolopen Creek
- 2.1.7 Regional partners and stakeholders are encouraged to explore and ground-truth alternative routes and connections. This plan is not exhaustive in ways that connections and improvements can be achieved.

Recommendation 2.2: Develop plans for focus area improvements to promote visitor dispersion and improve orientation.

- 2.2.1 Inventory and document site conditions at existing trailhead entrances and parking lots. Based on these evaluations, work with respective land/trail owners or agencies to identify and prioritize trailhead improvements. At a minimum, the following factors should be evaluated:
- Accessibility and safety
 - Parking lot ingress and egress, including driveway width, curb cut, and sight distance
 - Capacity, size, and condition of parking lots
 - Signage, informational kiosks, and wayfinding (placement, design, visibility, physical integrity, currency, etc.)
 - Site drainage, flooding, and erosion
 - Vegetation
 - Visitor amenities, such as benches, bike racks, toilets, etc. (if appropriate)
- 2.2.2 Identify areas for constructing new park gateways and trailheads to alleviate capacity issues at more popular sites and provide more safe and managed access points. Considerations should be made for road and trailhead signage, ingress and egress, parking (cars, bicycles, buses, horse trailers, etc.), comfort stations, and drop-off/pick-up locations for shuttles, buses, and ride-share services.
- 2.2.3 New comfort stations should be constructed at trailheads and/or parks where there is additional need or in areas where increased park and trail visitation is desired. Comfort stations may include flush toilet facilities, portable toilets, or compostable toilets. Providing comfort stations can be used as a strategy to disperse visitors to less-frequented areas of Highlands West, reducing congestion in more popular areas. The plan identifies preferred locations for new comfort stations at the Otterkill Road trailhead at Schunemunk State Park, Butter Hill trailhead at Storm King State Park, and at the parking lot at the Orange County Historical Society. Alternative locations may include the Taylor Road trailhead in Mountainville, Legacy Ridge main entrance parking lot, or at Goosepond Mountain State Park.

- 2.2.4 Establish cohesive wayfinding, informational signage, and web/mobile guides, especially for long-distance and regional trails. Signage for specific destinations, points of interest, and scenic vistas should be considered along trails or at trail intersections.
- 2.2.5 Develop a comprehensive interpretive and visitor orientation plan to tell the environmental, cultural, and historic story of this region and promote the multitude of recreational opportunities accessible throughout this trail network.
- 2.2.6 Inventory trail conditions to ensure that the existing and proposed trails are safe, accessible, and interesting for users. Provisions should be made for long-term maintenance and stewardship where needed.
- 2.2.7 Coordinate with local emergency service providers to confirm public safety and emergency access strategies. This may include provision of maps, identification of emergency access points, coordination with respective agencies, and developing GPS-integrated numbered trail markers to inform emergency responders.

Recommendation 2.3: Secure and enhance regional trail corridors, including the Appalachian Trail, Long Path, Highlands Trail, and Heritage Trail.

- 2.3.1 Inventory sections of each trail to determine specific improvements needed for the trail corridor. This inventory should include existing locations and conditions of trailheads, parking areas, signage, trail markers, trail conditions, road conditions, on-road to off-road trail transitions, and areas where each of these routes may not be secure in the future.
- 2.3.2 Develop short- and long-term improvement plans for enhancement of trail legs. These plans should include alternative rerouting options where existing conditions are not suitable or are threatened.
- 2.3.3 Work with private land owners to explore the feasibility of obtaining easements or acquisition to ensure long-term preservation of trail routes.
- 2.3.4 Develop an online interactive map for the Highlands trail network to improve user access and trip planning. This map should indicate areas of co-alignment with the Long Path and other regional trails.

Land Conservation

Protect land to safeguard habitats and recreational corridors, protect and improve water quality, and promote climate resiliency

Recommendation 3.1: Coordinate land protection with trail planning and water protection initiatives.

- 3.1.1 Acquire land, secure conservation easements, and/or engage conservation-minded landowners and regional land trusts in areas that have high conservation value. Securing lands for trails can provide conservation co-benefits to protect wildlife habitats, improve water quality, and promote climate resilience. However, plans should limit access to environmentally sensitive areas.
- 3.1.2 Encourage acquisition or easement parcels that enhance land connectivity to reduce landscape fragmentation. Strategic conservation of lands adjacent to protected, undeveloped, and agricultural areas reduces habitat loss, increases wildlife resiliency, and enhances opportunities for new trail connections.
- 3.1.3 Coordinate future open space and watershed protection initiatives with the findings and recommendations of existing regional plans to identify additional opportunities and strategies for conservation. Many plans have been produced over the past two decades addressing local and regional conservation and land use strategies. A list of relevant plans and resources is provided in the Appendix.

Recommendation 3.2: Promote on-going conservation education, programming, and advocacy with community partners.

- 3.2.1 Coordinate with regional environmental, conservation, and outdoor recreation groups to lead tours, educational programs, and media outreach to promote understanding and stewardship. Potential partners may include: NYS Office of Parks, Recreation and Historic Preservation, NYS Department of Environmental Conservation, Orange County Land Trust, Black Rock Forest Consortium, Appalachian Mountain Club, Hudson River Sloop Clearwater, Friends of the Long Path, Orange County Audubon Society, The Nature Conservancy, and Scenic Hudson, among others.
- 3.2.2 Promote the formation of a volunteer Highlands West Friends Group to help steward and advocate for the area's state parks and protected open spaces.
- 3.2.3 Engage local schools, academic institutions, and service organizations in developing stewardship programs that reflect the vision and goals of this plan. This could include opportunities for student and faculty research projects, field trips, volunteerism, and environmental education that support conservation goals.

Recommendation 3.3: Engage local governments and boards to consider land use planning and regulations that balance conservation and development needs.

- 3.3.1 Share the vision, goals, and recommendations of this plan with local officials and boards to encourage buy-in and support for focus area projects. Request local officials and/or boards to sign a memorandum of understanding in support of the plan, or specific projects, as necessary. Foster partnerships and collaborate on projects with local governments when possible.
- 3.3.2 Provide outreach to local planning and zoning officials about key conservation issues in the region and how trail connectivity supports conservation and economic development goals. This information could be presented at a regular meeting or as a separate training session to fulfill annual state-mandated education requirements for local planning and zoning board members.
- 3.3.3 Work with local land use planning departments and boards to identify priority conservation areas with high conservation value, especially those with critical wildlife habitats, unfragmented landscapes, and those critical to protecting watersheds. These findings should inform updates to local comprehensive plans and land use regulations.
- 3.3.4 Encourage municipalities and boards to review current land use regulations and propose revisions, as necessary, to support conservation-minded development. The following best practices should be considered.
 - ◆ Comprehensive plans and local zoning codes should prioritize limiting development in undeveloped, open space corridors to prevent future sprawl development. Development should be encouraged and concentrated in downtowns and existing developed areas.
 - ◆ Conservation subdivision principles should be mandated in areas where greenfield development is permitted to reduce impacts to open space, watersheds, and wildlife habitats.
 - ◆ Local land use planning initiatives should consider both local and regional implications for growing trail usership and its implications for future land use, infrastructure improvements, and comprehensive planning initiatives.

Recommendation 3.4: Initiate outreach and provide engagement opportunities to local communities and key stakeholders to gain buy-in and support for focus area projects.

- 3.4.1 Consider hosting public or focused outreach and informational meetings for certain focus area projects before they are initiated, especially for those proposed through neighborhoods, town centers, commercial corridors, and on privately-owned land. Informational sessions should communicate the intended conservation, recreation, and economic development goals of the project, and how the project would benefit the community and/or stakeholders, as well as address any concerns or misconceptions.
- 3.4.2 Create an online platform for information related to the plan and proposed projects. This could be housed on the website of a regional partner, as an independent website, or through a social media account. Contact information should be provided for questions and comments from the general public. The website would be maintained by staff from a regional partner or a plan coordinator.

Economic Promotion

Support local economies and sustainable development opportunities connected to open space

Recommendation 4.1: Coordinate trail development and promotion with local and regional tourism and marketing initiatives.

- 4.1.1 Share the vision, goals, and recommendations of this plan with Orange County, Orange County Chamber of Commerce, Orange County Partnership, Orange County Tourism, and Pattern for Progress, among other regional agencies, to promote marketing of the region as an accessible and vibrant hub for hiking, biking, and other park and trail-use excursions. Highlight the existing and proposed opportunities for trail- and eco-tourism and how they support connections to major destinations, such as Storm King Art Center, West Point, state parks, and others. While the focus of this plan is primarily in Orange County, regional tourism promotion agencies from adjacent counties should coordinate on broader regional promotion.
- 4.1.2 Coordinate with local planning and economic development agencies to develop a regional outdoor recreation–based tourism strategy that addresses opportunities for sustainable tourism development. This strategy should integrate tourism goals with community, environmental, and economic needs, including consideration for improvements to:
 - ◆ Linking public transportation with major trail network access points
 - ◆ Land use planning and conservation (e.g. identifying strategic locations for new tourism–oriented business development that do not compromise open space)
 - ◆ Improving community access to the trail network
 - ◆ Cultural, environmental, and historical interpretation
 - ◆ Shared branding and marketing of the region
- 4.1.3 Engage in a branding exercise for the study area to determine an identity or coordinate existing identities for the trail network in the region. This may include development of a singular trail region name, new graphic representation, and a marketing strategy. Highlands West has multiple regional trails, including the Long Path, Highlands Trail, and the Appalachian Trail, each of which may benefit from a more cohesive regional brand for the sections of these trails that are within this study area (especially where they are co-aligned). Conversations about marketing and branding should include participation from major land owners, local and state government agencies, and tourism and business promotion agencies.
- 4.1.4 Develop a trail, park, and open space marketing plan that identifies:
 - ◆ Objectives, schedules, and budgets
 - ◆ Market research, identifying various target audiences and their needs
 - ◆ Effective marketing strategies for target audiences
 - ◆ Partnerships and resources
 - ◆ Programming, interpretation, materials, and itineraries
 - ◆ A marketing implementation plan, including proposed timelines, funding, and metrics for tracking progress

Recommendation 4.2: Facilitate trail-oriented development, eco-tourism, and recreation-based business opportunities at appropriate locations within the region.

- 4.2.1 Existing and future trail development plans should be used as a tool to encourage new business opportunities, including lodging, restaurants and cafes, rental shops, environmental education and tour services, camping, geocaching, and related businesses.
- 4.2.2 Seek public and private partnerships and opportunities and identify business recruitment and development strategies.

Recommendation 4.3: Identify additional locations and modes to link public transportation with key trail and recreation access areas.

- 4.3.1 Explore new regional tourism and recreation opportunities that connect the Highlands West region to the Highlands East region. This could be achieved by way of a ferry from Donahue Memorial Park to other trails, town centers, and destinations along the eastern coast of the Hudson River, such as Breakneck Point, Dennings Point State Park, Little Stony Point, Bannerman Island, Coldspring, and beyond.
- 4.3.2 Establish shuttle or bus services to connect travelers arriving from regional train stations to key destinations and trailheads (See Recommendation 2.1.5).

Credits

References

1. Orange County Department of Planning, *Orange County, New York Comprehensive Plan 2018 Update* (January 3, 2019). Available at <https://www.orangecountygov.com/DocumentCenter/View/11613/Orange-County-Comprehensive-Plan-2018-Update---Core-Document-FINAL-DRAFT-1319>.
2. Orange County Water Authority, *Orange County, NY Water Quality Biomonitoring Project Report for Year 2013* (January 2014). Available at http://waterauthority.orangecountygov.com/PROJECTS/BIO-MONITORING_PROJECT/2013%20Stream%20Biomonitoring%20Report.pdf.
3. Orange County Water Authority, *Moodna Creek Watershed Conservation and Management Plan* (March 2010). Available at <https://www.orangecountygov.com/DocumentCenter/View/4133/Moodna-Creek-Watershed-Conservation-and-Management-Plan-2010-PDF>.
4. USDA Forest Service, *Forests to Faucets*. Available at https://www.fs.fed.us/ecosystems/services/FS_Efforts/forests2faucets.shtml
5. Cornell Program on Applied Demographics, “Orange County Profile 2017” (2017). Available at <https://pad.human.cornell.edu/profiles/Orange.pdf>.
6. Orange County, New York Tourism, “Oxford Economics Confirms that Tourism is Growing in Orange County New York” (September 10, 2018). Available at <https://orangetourism.org/news-event/oxford-economics-confirms-that-tourism-is-growing-in-orange-county-new-york/>.
7. NYS Office of Parks, Recreation and Historic Preservation, “New York State Park Attendance” (2017). Obtained from Lohud at <http://lohud.nydatabases.com/database/new-york-parks-attendance> .
8. Orange County Department of Planning, *Orange County, New York Comprehensive Plan 2018 Update* (January 3, 2019). Available at <https://www.orangecountygov.com/DocumentCenter/View/11613/Orange-County-Comprehensive-Plan-2018-Update---Core-Document-FINAL-DRAFT-1319>.

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Front & back cover photo

Moodna Trestle at Schunemunk State Park (Wil Nieves 2019)

Chapter 1

Page 5: *Storm King Art Center (Greg Miller 2017)*

Page 7: *Northrop Friedman Property (Greg Miller)*

Page 10 (icons): *Hiking (Think Tifferent, Noun Project); Pine Trees (Destdesignmarket, Noun Project); Dollar Sign (Miroku Sama, Noun Project)*

Page 11: *Highlands West Vision Map (OSI)*

Chapter 2

Page 13: *Drone footage of Schunemunk State Park (OSI)*

Page 15: *Highlands Region Map (HeNRI)*

Page 16: *“Highlands West Boundary Map” (LA Group)*

Page 18 (top to bottom): *View from the top of Claudius Smith Rock in Harriman State Park (NYNJ Trail Conference); Black Rock Forest (Greg Miller); View of Schunemunk Mountain from Storm King Art Center (Brett Cole); Sterling Forest State Park (Brett Cole)*

Page 20: *A creek on the Northrop Friedman property (Greg Miller)*

Page 21: *View of Black Rock Forest (Greg Miller)*

Page 23: (top row, left to right; bottom): *Platform at Harriman Train Station (Michaela Sweeney); Exit 16 Harriman Sign on the NYS Thruway (Google Maps); Southfields pedestrian bridge (Appalachian Trail connection) across I-87 (Google Maps)*

Page 24: *United States Military Academy at West Point* (Wikipedia; https://upload.wikimedia.org/wikipedia/commons/c/c2/United_States_Military_Academy_11-1-2008.jpg); *Visitors at Storm King Art Center* (Greg Miller)
Page 25 (top to bottom): *Bear Mountain* (Historic Hudson River Towns, Inc.); *Sugar Loaf Art & Craft Village* (Michaela Sweeney); *Woodbury Common Premium Outlet* (Michaela Sweeney); *Hudson Highlands Nature Museum* (Michaela Sweeney)
Page 26 (top to bottom): *Appalachian Trail marker* (Chiot's Run-Flickr); *Long Path and Highlands Trail markers* (Michaela Sweeney); *Heritage Trail Welcome Sign— Monroe, NY* (Michaela Sweeney)
Page 27: *Roadside entrance to the Heritage Trail and Long Path in Kiryas Joel* (Michaela Sweeney)
Page 29: *Goosepond South Trailhead* (OSI); *Heritage Trail* (Michaela Sweeney)

Chapter 3

Page 30: *Harriman State Park* (NY-JTC)
Page 31: *"Focus Areas" Map* (LA Group)
Page 32: *Moodna Viaduct crossing Schunnemunk Meadow* (Greg Miller)
Page 33 (left to right): *Otterkill Road Trailhead* (Michaela Sweeney)
Page 34: *"Schunnemunk North Focus Area" Map* (LA Group)
Page 37: *Storm King Art Center and Schunnemunk Mountain* (Greg Miller)
Page 38: *Legacy Ridge* (Greg Miller)
Page 40: *"Schunnemunk South Focus Area" Map* (LA Group)
Page 42: *Hiker at Harriman Connection* (Greg Miller)
Page 43: *Orange County Historical Society* (Michaela Sweeney)
Page 44: *"Harriman Focus Area" Map* (LA Group)
Page 46: *Goosepond Mountain* (Greg Miller)
Page 47 (top to bottom): *Highlands Trail in Goosepond Mountain State Park* (NYNJTC); *Snowshoers at Goosepond South* (OSI)
Page 48: *"Goosepond Focus Area" Map* (LA Group)
Page 51: *Sterling Forest* (Brett Cole)
Page 52: *Butter Hill in Storm King State Park* (Karl Tsakos)
Page 53: *Donahue Memorial Park in Cornwall-on-Hudson* (Michaela Sweeney)
Page 54: *"Storm King Focus Area" Map* (LA Group)
Page 57: *Old woods road in Harriman Connection* (Greg Miller)
Page 59: *Peak Foliage at Schunnemunk Meadows* (Greg Miller)

