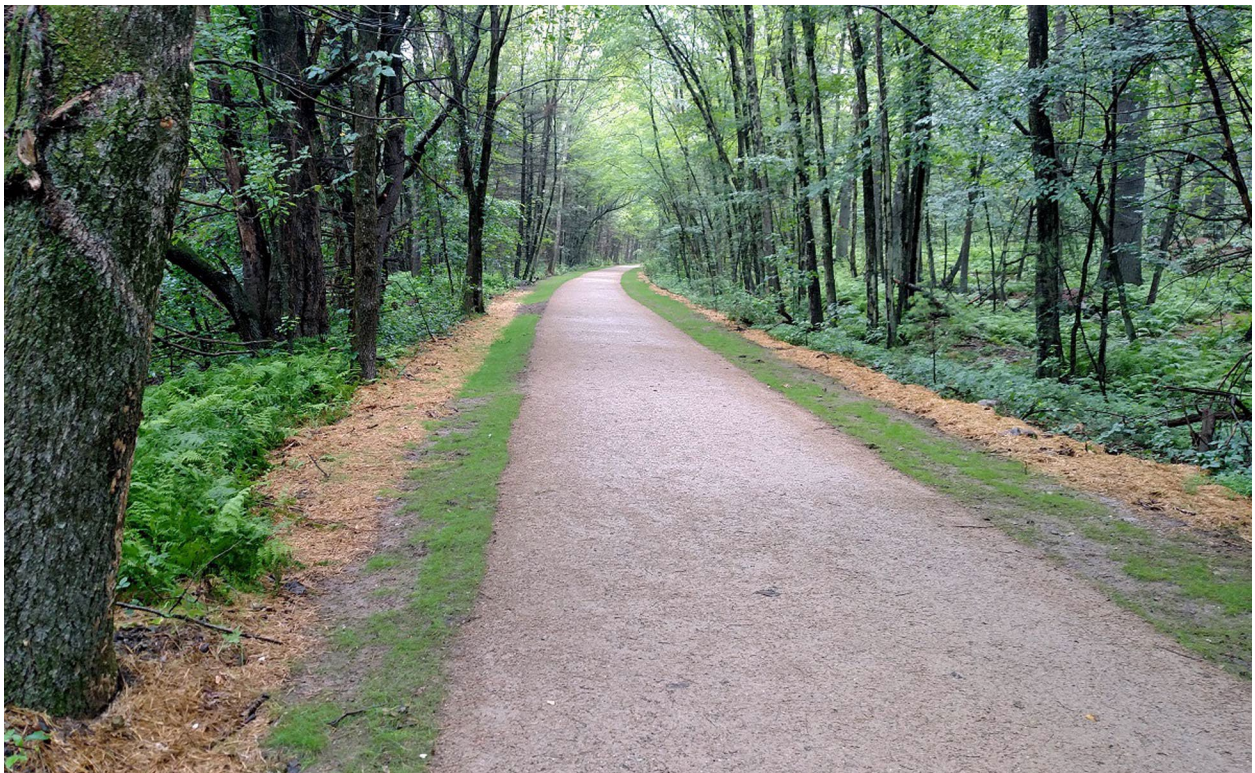




Resource Management Plan Southern New England Trunkline Trail



Adopted by the DCR Stewardship Council February, 2025

Massachusetts Department of Conservation and Recreation
Division of Conservation and Resource Stewardship
Office of Cultural Resources

Maura T. Healey, Governor
Kimberley Driscoll, Lieutenant Governor
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Purpose

Resource Management Plans (RMPs) are foundational documents that identify a park, forest, or reservation's defining natural, cultural, and recreational resources and identify potential threats and opportunities to guide DCR's continued stewardship of the property and to inform future decisions about the property in a way that celebrates and preserves its identity.

RMPs are prepared for "all reservations, parks, and forests under the management of the department" (M.G.L. c. 21, § 2F). These plans "shall include guidelines for the operation and land stewardship of the aforementioned reservations, parks and forests, shall provide for the protection and stewardship of natural and cultural resources and shall ensure consistency between recreation, resource protection, and sustainable forest management." DCR finalizes RMPs following a public process and adoption by the DCR Stewardship Council. The contents of this RMP represent the best available information at the time of adoption by the Stewardship Council.

Mission and Core Principles

The Massachusetts Department of Conservation and Recreation (DCR), an agency of the Executive Office of Energy and Environmental Affairs, oversees 450,000 acres of parks and forests, beaches, bike trails, watersheds, dams, parkways, and over 100 National Register listed properties. The agency's mission is to protect, promote, and enhance our common wealth of natural, cultural, and recreational resources for the well-being of all.

DCR strives to be an exemplary leader in conservation and recreation. DCR's staff is passionate, dedicated, and continuously employs best practices, expertise, and a sense of place in carrying out the mission. The following core principles ground the agency in its work. For the benefit and well-being of all—people and the environment—DCR pledges to:

- Provide access to a diversity of outdoor recreational experiences and unique landscapes that is equitable, inclusive, and welcoming.
- Conserve lands, water, and forests by integrating science, research, and technical expertise into the management of our natural resources.
- Advance climate change mitigation and adaptation efforts by implementing sustainable practices and advancing resiliency across our infrastructure, assets, and resources.
- Support healthy communities by providing places for people to connect with nature and each other.
- Inspire generations of stewards by recognizing and honoring our legacy through partnerships, public engagement, and education.

Stewardship

DCR honors Indigenous peoples for their care, throughout many generations, of the land that DCR now stewards on behalf of the people of the Commonwealth. DCR embraces this legacy of stewardship, fostering a sense of shared responsibility by all people for protection of the waters, lands and living things for the enjoyment and appreciation of all.

To learn more about the DCR, its facilities, and programs please visit us www.mass.gov/dcr. Contact us at mass.parks@mass.gov.



Southern New England Trunkline Trail

<https://www.mass.gov/locations/southern-new-england-trunkline-trail>

1. PROPERTY OVERVIEW

Characteristic	Value
Date Established	1984
Location	Bellingham, Blackstone, Douglas, Franklin, Millville, Uxbridge
Ecoregion	Southern New England Coastal Plains and Hills
Watershed	Blackstone, Charles, & Quinebaug
DCR Region	Central
DCR District	Central Valley
DCR Complex	Blackstone
Management Forestry District	Mid-State, Southeast
Fire Control District	Norfolk, South Worcester
Size (acres)	366.5
Boundary Length (miles)	45.0
Elevation - Minimum (feet)	147.7
Elevation - Maximum (feet)	695.5
Environmental Justice (acres)	15.8
Annual Attendance (2023)	400,000
Interpretive Programs (number of programs, 2023)	0
Interpretive Programs (number of attendees, 2023)	0

2. LANDSCAPE DESIGNATIONS

Designation	Acres
Parkland	40.8
Reserve	64.1
Woodland	0.0
No Designation	256.1

3. REGULATORY DESIGNATIONS

Designation	Acres
National Register Historic District - Blackstone Canal Historic District	2.3
National Register Historic District - Blackstone Manufacturing Company Historic District	1.4
National Register Historic District - Central Street Historic District	2.8
National Register Individual Property - Blackstone Viaduct	N/A
Priority Habitat (MESA)	33.5

4. LONG-TERM AGREEMENTS

Agreement	Expiration Year
None identified	N/A

5. CONCESSIONS

Concession Type
None

6. PARTNERS & FRIENDS

Group(s)
Bay State Trail Riders Association (BSTRA)
Franklin and Bellingham Rail Trail Committee

7. FEATURES OF INTEREST

Feature
22-mile-long rail trail corridor
Blackstone River
Blackstone Viaduct
Millville Lock
Playground
Stone arch bridge

8. NATURAL RESOURCES

Resource	Number
Tree Canopy (acres)	347.5
Rivers and Streams (miles)	2.5
Open Water (acres)	2.3
Wetlands (acres)	14.3
Certified Vernal Pools (number)	0
Potential Vernal Pools (number)	3
State-listed Species (number Regulatory)	4
State-listed Species (number Non-Regulatory)	3
Federally Listed Species (number)	0
Aquatic Invasive Plants (number of known species)	0
Terrestrial Invasive Plants (number of known species)	5

9. FOREST MANAGEMENT (SINCE 2012)

Management Objective	Acres
N/A	0.0

10. CLIMATE CHANGE (BY 2070)

Type of Change	Amount of Change
Increase in annual days above 90° F	>30
Change in annual maximum daily rainfall (inches)	>10
Massachusetts Coastal Flood Risk Model area of inundation (acres)	N/A

11. NATURAL HAZARDS

Hazard Type	Acres
Flood (1.0%-chance)	7.6
Flood (0.2%-chance)	16.1
Hurricane Inundation (Category 1)	N/A
Hurricane Inundation (Category 4)	N/A

12. CULTURAL RESOURCES

Resource Type	Number
Archaeological - listed in the Massachusetts Cultural Resource Information System (MACRIS)	2
Historical - Listed in MACRIS	25
National Register-listed	4
National Historic Landmark	0

13. RECREATION RESOURCES

Resource	Number
Healthy Heart Trail	1
Multi-use path	1
Picnic sites	1
Playground	1
Seating areas	3

14. RECREATION ACTIVITIES

Activity
Bicycling, mountain
Bicycling, road
Dog sledding
Dog walking, on-leash
Hiking/Walking
Horseback riding
In-line skating
Nature study/Photography
Playground use (Central Section)
Running/Jogging
Running, races (road or trail)
Scenic vista viewing
Skateboarding
Skiing, cross-country
Snowmobiling
Snowshoeing
Wildlife viewing

15. ROADS AND TRAILS

Metric	Number
Roads - Unpaved (miles)	Unknown
Roads - Paved (miles)	Unknown
Forest Roads - Unpaved (miles)	Unknown
Forest Roads - Paved (miles)	Unknown
Trails - Unpaved (miles)	Unknown
Trails - Paved (miles)	Unknown
Trails - Unauthorized (miles)	Unknown
Trail Density (miles/acre)	Unknown
Area of Impact (acres)	Unknown

Roads and Trails data are unavailable for the SNETT and are not included in this RMP.

16. PARKING

Parking Resources	Number
Lots (DCR)	5
Parking Spaces (DCR) - Total	137
Parking Spaces (DCR) - Accessible (HP)	4
Parking Spaces (DCR) - Other	133
Lots (Municipal)	4
Parking Spaces (Municipal) - Total	49
Parking Spaces (Municipal) - Accessible (HP)	0
Parking Spaces (Municipal) - Other	49

INTRODUCTION

The Southern New England Trunkline Trail (SNETT or the Park) is an approximately 22-mile-long rail trail in the Towns of Douglas, Uxbridge, Millville, Blackstone, Bellingham, and Franklin. It is situated approximately 30 miles southwest of Boston, 15 miles southeast of Worcester, and 16 miles northwest of Providence, Rhode Island. The Park is located within the Southern New England Coastal Plain and Hills Ecoregion.

The SNETT consists of three separate sections, each with its own distinct character. The West Section extends approximately 11.2 miles from the Connecticut border at Douglas State Forest to Route 146 in Uxbridge and is the least developed section of the Park. The Central Section extends approximately 4.1 miles from Route 146 in Uxbridge to near Route 122 in Blackstone. It passes through a densely developed landscape, is mostly paved, and runs concurrent with the Blackstone River Greenway. The East Section extends approximately 4.9 miles from Route 122 in Blackstone to Grove Street in Franklin, passing through a largely residential landscape and Franklin State Forest. From Route 126, Bellingham to Grove Street, the East Section's trail surface is stabilized aggregate. These three sections are isolated from one another by highways, the Blackstone River, and discontinuities of the railroad bed due to private or municipal ownership. For additional information on the sections of the SNETT see National Park Service ((NPS) 2014).

The Park is on land shaped by generations of Indigenous peoples and non-Indigenous inhabitants. Past and present Indigenous residents embody fluid, relational connections to the places and spaces now known as the Southern New England Trunkline Trail. Groups and individuals, including Indigenous peoples known as the Nipmuc(k), Pokanoket, and Wampanoag, are recorded in available documentation (Native Land Digital 2023) as having relationships to this place over seasons and generations. Following Indigenous peoples' dispossession, the towns along the route of today's SNETT were incorporated between 1719 and 1916. (Massachusetts Historical Commission (MHC) 1980a, 1980b, 1983a, 1983b, 1984a, 1984b). The SNETT was established in 1978, with the acquisition of the portion of the Park that runs through Douglas State Forest. The remainder of the DCR-owned portion of the SNETT was acquired in 1984. At the time of acquisition, the SNETT was an overgrown, out of service railroad bed. The long-term vision for the property was the creation of a contiguous 22-mile-long rail trail with an improved multi-use path. Great progress has been made toward making this vision a reality.

As a linear park with multi-use trail segments, virtually all recreation along the SNETT is trail-based. The SNETT is primarily used for walking, running, bicycling, and horseback riding. Types of activities and levels of use vary with trail surface, which varies with trail segment. The West Section has a gravel trail surface. The Central Section is paved and has the highest level of recreation development. There is a mixture of trail surfaces along the East Section. This section has an intermediate level of park amenities; being more developed than the West Section but less developed than the Central Section. Along the SNETT are picnic tables, seating areas, and a playground that provide additional recreation opportunities.

Traditionally, the portion of the SNETT that passes through Douglas State Forest has been mapped as part of that forest and not as a separate park. At the time of acquisition (1978) it was unclear if the Commonwealth would be able to acquire other portions of the out of service railroad bed, so the segment through Douglas State Forest was programmatically viewed as an expansion of that property. Since then, additional sections of the SNETT have been acquired and improved, and the SNETT is now considered a distinct park. For the purposes of this RMP, the portion of the SNETT through Douglas State

Forest is solely considered part of the SNETT. This change is reflected in RMPs for both the SNETT and Douglas State Forest.

PARK IDENTITY

The SNETT and its identity are in transition. This linear park was once known as a series of gravel surfaced trail segments used primarily by equestrians, hikers, and mountain bikers; its continuity lost to development and the decay of railroad bridges. Today, the SNETT's identity is that of a park whose vision is coming to fruition, as its trail surfaces are improved, connections restored, and recreationists respond with increased use. With these changes comes the developing sense that one day soon park users will be able to travel from Douglas to Franklin almost entirely along the SNETT. Because of this, there is an increasing awareness that the SNETT is a key component of several long-distance trails. All future uses and development should be consistent with this Park's identity.

DEFINING RESOURCES AND VALUES

Resources and values that define the Park include:

- Entire Park
 - A 22-mile-long railroad bed in various stages of recreational development. It provides a safe, dedicated area for trails-based recreation near Massachusetts' and Rhode Island's largest metropolitan areas.
 - The trail exemplifies DCR's joint mission of conservation and recreation through its repurposing of an abandoned railroad line to create new public recreation opportunities.
 - Historic railroad landscapes that include extant railroad beds, culverts, and retaining walls. These provide context for the industrialization of Massachusetts and are components of several inventoried historical areas and National Register of Historic Places (National Register) historic districts.
 - Wetland and forest communities that provide habitat for native plants and wildlife and potentially function as a wildlife corridor.
 - The SNETT is a National Recreation Trail, an honorary National Park Service designation that recognizes trails of the highest caliber.
 - It is part of a broad, regional trails network that connects to trail systems in Massachusetts, Rhode Island, Connecticut, and New Hampshire
- West Section
 - This section passes through Douglas State Forest and provides access to that forest's trails network, to Air Line State Park Rail Trail (CT), and to the Mid-State Trail (MA and NH).
 - The ca. 1850 stone arch bridge beneath Wallum Lake Road is one of the most recognizable features in the Park. It is owned by the Town of Douglas and is a contributing element of the railroad landscape.
- Central Section
 - A 3.7-mile-long paved multi-use trail, within a former railroad corridor, that serves as part of both the SNETT and as Segment 1 of the Blackstone River Greenway.

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- The Blackstone River, which flows beneath and is visible from the multi-use trail.
- A narrow railroad corridor, near-level railroad bed, and 11 railroad bridges offer evidence of this section's historic use as a railroad.
- Millville Lock, part of Blackstone River and Canal Heritage State Park, is only accessible from this section of the SNETT.
- The Blackstone Viaduct, an ornate stone railroad bridge with multiple arches, supports a portion of the SNETT near the Rhode Island Connector. This feature is individually listed in the National Register.
- A trail segment between Saint Paul Street, Blackstone and the Rhode Island border on the west bank of the Blackstone River is under construction as of this writing. Once completed, it will link the SNETT to the Blackstone River Bikeway (RI).
- East Section
 - The Park provides recreational amenities to, and enhances environmental quality and equity for, Environmental Justice (EJ) communities in Blackstone and Bellingham.
 - This section passes through Franklin State Forest and provides access to that forest's trails network and resources.

STATEMENTS OF SIGNIFICANCE

Statements of Significance describe the importance or distinctiveness of a place and its resources (NPS 1998). These statements reflect current scholarly inquiry and interpretation and go beyond a simple listing of resources to include contextual information that makes the facts more meaningful. When developing significance statements, the following criteria are considered:

- The property's significance at the time of its establishment.
- How the property, or society's understanding of the property, has changed since its acquisition that makes it significant or unique within the state park system today.
- The property's role in recreation and its importance to the community it supports, particularly regarding activities that are unique to that property.

For park planning, these statements focus management actions on the preservation and enjoyment of those attributes that most directly contribute to the importance of the place. For interpretive planning, they comprise the information upon which the interpretive themes and overall program are built.

The following Statements of Significance have been identified for the Southern New England Trunkline Trail. The sequence of these statements does not reflect their level of significance.

- As a rail trail, the SNETT connects communities inside Massachusetts and beyond via connections to the Midstate trail, the Blackstone River Greenway, and the Airline trail. Together, these trails connect over 40 communities in Massachusetts, Rhode Island, Connecticut, and New Hampshire.
- The Park helps preserve the story of the railroads in New England. Although they might not be readily apparent, most of the historic resources of the site are directly or indirectly related to the railroad. More broadly, the linear nature and route of the park is unique to former rail corridors and helps show the paths that these trains once took. The trail shares the story of the rail lines part of the experience.

- The reuse of the rail line to construct it results in a trail with gradual changes in elevation. This makes the SNETT attractive to many recreationalists and provides an opportunity for visitors with a range of capabilities and comfort with nature. The paved sections offer a place for those with mobility limitations who might not be able to use a traditional park trail and visitors do not need to worry about getting lost in a maze of trails. The geographic location of the SNETT adds to its overall accessibility as it is more easily reached than many other parks.
- The landscape of the SNETT shows its history as a railroad. Cutting through the landscape in such a way to minimize grade changes and sharp turns, the pathway cuts the adjoining landscape in half. The creation of the railroad corridor influenced the local ecology by fragmenting the natural landscape and influencing new land uses/development.

UNIFYING THEME

The Unifying Theme is a statement that ties a property's stories together and shapes the overall interpretive message that DCR wants to share with visitors in their experience at the property. The theme provides an overarching conclusion for visitors to contemplate (Ham 2013) and answers the question "so what?" The theme guides all interpretation for the park, both personal (i.e., formal and informal interactions with visitors) and non-personal (e.g., exhibits, signage, brochures).

The Unifying Theme for the Southern New England Trunkline Trail is:

As an area evolves, we can adapt or reuse resources while still preserving its history.

VISITOR EXPERIENCE

- Entire Park
 - **Virtual Experience.** Potential visitors will find detailed information about the SNETT on DCR's web site. The Park has its own web page that provides potential visitors information needed to plan a visit. (<https://www.mass.gov/locations/southern-new-england-trunkline-trail>)
- West Section
 - **Entering the Park.** There are two main parking areas in Douglas for visitors to access the SNETT. The first is located on Route 96 and the second on Depot Street. At each lot, visitors arrive to find a Site/Facility Identification Sign that informs them that they have arrived at the SNETT. A kiosk with a Welcome Wayside panel for Douglas State Forest greets visitors arriving at the Route 96 lot. Visitors may also access the SNETT from Wallum Lake Day Use Area in Douglas State Forest and from a variety of road crossings along the eastern half of this section.
 - **Trail-based Passive Recreation.** Trail surface in this section of the SNETT is unpaved, making it best suited for hiking, horseback riding, and mountain biking, although some segments are passable on a road bikes. DCR allows the use of Class 1 e-bikes on "improved trails of an appropriate width," including on this section of the SNETT (<https://www.mass.gov/e-bikes-on-dcr-property>). Oftentimes visitors incorporate trails in both the SNETT and Douglas State Forest into their day of recreation.
 - **Picnic Tables.** Visitors may stop at the location of the former East Douglas train depot and avail themselves of the picnic tables.

- Central Section

- **Entering the Park.** Most visitors arrive at one of this section's three parking lots. Two are on DCR property and the third, on Adams Drive, Uxbridge, is located outside the Park. All provide dedicated parking for this section of the SNETT. Visitors entering either of the DCR lots find a welcoming environment with a Site/Facility Identification Sign, designated accessible parking, and easy trail access. The lots are well designed, with ornamental plantings, DCR regulations signs, bike racks, benches, trash barrels, a kiosk, engraved granite posts, and boulders with names and images of native wildlife engraved on them. Confusingly, the identification sign, granite posts, and DCR regulations signs all bear the name Blackstone River Greenway; none identify the park as the SNETT. Local users may access the park from road crossings or abutting properties.
- **Trail-based Passive Recreation.** The section's paved trail is a destination for visitors seeking opportunities to walk, run, walk their dog, in-line skate, bicycle, and cross-country ski. DCR allows the use of Class 1 e-bikes on "improved trails of an appropriate width," including on this section of the SNETT (<https://www.mass.gov/e-bikes-on-dcr-property>). The trail's surface is particularly welcoming for those with strollers or using wheelchairs or other mobility devices. In the winter, this unplowed section may be used for activities such as cross-country skiing.
- **Blackstone River.** The Blackstone River may be viewed by recreationists along much of this segment. Bridges over the river provide visitors a variety of scenic views of the Blackstone.
- **Seating Areas.** Well-defined spaces with benches, located just off the path, are designed into four major bridges. These spaces offer a calm resting area outside the flow of recreational traffic; most provide views to the Blackstone River. Visitors use these areas to rest, converse, read, and take in the scenery.
- **Picnic Tables.** Picnic tables are located on the lawn at the Margaret M. Carroll Memorial Access Area (see Massachusetts General Court 2022), Hope Street, Millville. (See Figure 1, Inset Map F, page 28 for the location of the Carroll Memorial Access Area)
- **Playground.** A nature-themed playground allows children to enjoy net climbers, walk beneath an artificial stone arch, and crawl through a hollow artificial log while their caregiver looks on from a nearby bench. The blue and green pattern of the playground's mat evokes the flowing waters of the nearby Blackstone River. There is no parking near this playground; most users are local. (See Figure 1, Inset Map G, page 28 for playground location.)

- East Section

- **Entering the Park.** Many visitors park in the Town of Franklin's dedicated parking lot and enter the SNETT via the Grove Street trailhead. A Site/Facility Identification Sign, identifying the Park as the SNETT, is located at the trailhead, as are benches and a kiosk. This trailhead clearly indicates to visitors that they are entering a state park. Visitors may also access the Park from three non-DCR parking lots associated with road crossings. Cantilevered Identification Signs at each lot inform visitors that the location is a trailhead for the SNETT, a DCR park.
- **Trail-based Passive Recreation.** This section of the SNETT has a mix of natural and aggregate trail surfaces. Visitors to areas with natural trail surfaces (i.e., west of Route 126) enjoy hiking, dog walking, mountain biking, and horseback riding along the SNETT. Those visiting areas with aggregate trail surfaces (i.e., east of Route 126) find them particularly welcoming for riding road bikes and the use of strollers, wheelchairs, and other mobility devices. DCR allows the use of Class

1 e-bikes on “improved trails of an appropriate width,” including on this section of the SNETT (<https://www.mass.gov/e-bikes-on-dcr-property>). In the winter, visitors use this unplowed section for snow-dependent activities such as cross-country skiing.

THREATS AND OPPORTUNITIES

The following information identifies potential threats to the park’s natural and cultural resources and identifies opportunities to enhance their protection and stewardship. Although recreation is not considered a resource under statute (M.G.L. c. 21, § 2F), it is included below because recreation is an important part of the park-going experience, helps define a park’s values, and is a key part of assessing the consistency of activities taking place in the Commonwealth’s forests, parks, and reservations.

Threats and opportunities identified below are used to inform the development of management recommendations. Potential recommendations must meet prioritization criteria to be included in the Priority Recommendations table (Table 18, page 32).

Natural Resources

Threats

- Entire Park
 - Unauthorized off-highway vehicle (OHV) use damages unpaved trail surfaces, creates unauthorized trails, may lead to sedimentation of streams and wetland resources, and may degrade soils and vegetation.
 - Five plants characterized by the Massachusetts Invasive Plant Advisory Group (MIPAG 2024) as Invasive or Likely Invasive have been recorded along the SNETT. This includes common reed, Japanese knotweed, Oriental bittersweet, spotted knapweed, and winged *Euonymus* (i.e., burning bush). All these species have the potential to crowd out native vegetation.
 - When the railroad was abandoned in 1969, drainage maintenance stopped, and water began to accumulate in sections of the railroad bed. Many of these areas have become vegetated and developed hydric soils (i.e., soils formed under conditions of saturation, flooding, or ponding) and are now regulated under state and federal regulations. Such wetlands may be impacted by recreational use and trail improvement; and make permitting and design of trail improvements challenging.
- West Section
 - Approximately 5,800 linear feet of this section is within either the 1.0%-chance or the 0.2%-chance flood zone. Flooding may cause physical alterations, deprive the public of access to recreation resources, and impact public health and safety.
 - Beaver activity near where the Mid-State Trail crosses the SNETT has blocked culverts, resulting in the flooding of trails in the adjacent Douglas State Forest. This flooding has the potential to damage this portion of the SNETT.
- Central Section
 - An approximately 400-foot-long section of paved multi-use path along the west bank of the Blackstone River, between the Blackstone Viaduct and the Rhode Island border, is in the 1.0%-chance flood zone and subject to flooding.

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- The Massachusetts Department of Environmental Protection (MassDEP) has classified two segments of the Blackstone River adjacent to the Central Section of the SNETT (i.e., segments MA51-05 and MA51-06) as not suitable habitat for sustaining a native, naturally diverse community of aquatic flora and fauna (MassDEP 2021). Because MassDEP updates its Integrated List of Waters on a regular basis (e.g., MassDEP 2023), readers are directed to refer to the most recent version of that document for current information.
- East Section
 - Harris Pond in Blackstone (MA51-36) and Mine Brook in Franklin (MA72-14) are classified as not suitable habitat for sustaining a native, naturally diverse community of aquatic flora and fauna (MassDEP 2021). Because MassDEP updates its *Integrated List of Waters* on a regular basis (e.g., MassDEP 2023), readers are directed to refer to the most recent version of that document for current information.

Opportunities

- Entire Park
 - Prior to the preparation of this Resource Management Plan, the boundaries of the SNETT had not been mapped and only the portion passing through Douglas State Forest was assigned a Landscape Designation. Assigning Landscape Designations to the approximately 256 acres previously unmapped could help with management of associated natural resources and ensure management consistent with other DCR properties statewide.
 - In addition to Priority Habitat in the Park (i.e., Regulatory Habitat), there is also Non-Regulatory habitat for three MESA-protected species. Non-Regulatory habitat is based on the presence of suitable habitat for state-listed species; there is no associated mapped Priority Habitat. On state lands, both are protected under the Massachusetts Endangered Species Act (MESA; 321 CMR 10.00). Requesting pre-filing consultation with the Massachusetts Natural Heritage and Endangered Species Program (NHESP) for “all works, projects, or activities” in the Park, regardless of location in or out of Priority Habitat, will ensure continued protection of this habitat and compliance with MESA.
 - Six streams classified by the Massachusetts Division of Fisheries and Wildlife (MassWildlife) as Coldwater Fish Resources pass beneath the SNETT via culverts. Projects involving improvement of the trail surface should include the assessment and potential replacement of these culverts, to ensure stream connectivity for coldwater species.
 - Although the Park has not been identified as a priority site for invasive plant management, implementing general management guidance from the Central Region Invasive Plant Management Plan (BSC Group 2017) can help limit the spread of invasive plants, protect historic landscapes, improve park aesthetics, and benefit native plants.
 - Some of the Park’s three potential vernal pools may “support rich communities of vertebrates and invertebrates” (MassWildlife 2009) and serve as important habitat components for other wildlife, including one of the Park’s state-listed species. Surveying and certifying these pools (DCR (n.d.) and MassWildlife (2009)), as appropriate, may help better protect these animals.
 - Developing and implementing a monitoring program for nesting turtles would minimize impacts to nests and turtles while maintaining the trail corridor.

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- Development of an invasive plant spread prevention BMP would reduce the spread of invasive plants by maintenance equipment such as mowers and tractors.
- West Section
 - Planned improvements to the trail surface between the Connecticut border and Depot Street, Douglas provide an opportunity to identify culvert-related issues and replace or supplement existing culverts as needed to ensure year-round stream continuity for streams with Coldwater Fish Resources (i.e., Tinkerville and Centerville Brooks) and to address beaver-related flooding issues.
- Central Section
 - Portions of the Blackstone River, within the Towns of Millville and Blackstone, are located within waters with a Total Maximum Daily Load (TMDL) report required to address water quality impairments (per MassDEP 303d list). Although segments MA51-05, MA51-06 are listed as requiring a TMDL (Category 5 of the 303d list), a TMDL has not yet been developed. Designers of future projects along the Central Section of the SNETT should focus on addressing identified impairments, in accordance with the DCR Stormwater Design Handbook (VHB 2022).
- East Section
 - Harris Pond in Blackstone (MA51-36) is located within waters with a TMDL report required to address water quality impairments (per MassDEP 303d list). Although listed as requiring a TMDL (Category 5 of the 303d list), a TMDL has not yet been developed. Designers of future projects along portions of the SNETT adjacent to Harris Pond should focus on addressing identified impairments, in accordance with the DCR Stormwater Design Handbook (VHB 2022).
 - The easternmost 4,200 feet of the SNETT, in the Town of Franklin, is located within the DCR Priority Watershed “Upper/Middle Charles River Watershed.” DCR construction projects within Priority Watersheds maximize Stormwater Control Measures, potentially beyond those necessary to meet regulatory criteria (VHB 2022). By maximizing treatment, DCR addresses existing impairments in the receiving waters and contributes to improving water quality in the Priority Watershed. Designers of future projects along the easternmost section of the SNETT should review the latest MassDEP 303d list to understand other impairments of the receiving water and to fine tune stormwater treatment to address these pollutants, in accordance with the DCR Stormwater Design Handbook (VHB 2022).

Cultural Resources

Threats

- Entire Park
 - Activities that result in loss of ground cover and erosions, such as OHV use, new construction, incorrectly performed right-of-way maintenance, and the creation of unauthorized trails on slopes may expose archaeological resources.
- West Section
 - A two-car garage along South Street, Douglas, is believed to be within the Park and thus the property of the Commonwealth. This mid-20th-century building is being used by an abutter for storage of a personal vehicle.

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- An estimated 2,700 linear feet of the West Section are predicted to be exposed to 1.0%-chance floods, and an additional 3,100 feet are predicted to be exposed to 0.2%-chance floods. Areas likely to be affected are adjacent to unnamed wetlands within Douglas State Forest, Morse Pond, Southwick Brook, Scadden Brook, and Lee Pond. Many of the West Section's railroad-related cultural resources will be exposed to this flooding.
- Central Section
 - The absence of rails, rail ties, telegraph poles, and signs has led to this section losing the appearance of, and connection to, its railroad history. Loss of these features threatens the identity of the Park as a historical railroad corridor.

Opportunities

- Entire Park
 - Prior to the preparation of this Resource Management Plan, the boundaries of the SNETT had not been mapped and only the portion passing through Douglas State Forest was assigned a Landscape Designation. Assigning Landscape Designations to the approximately 256 acres previously unmapped could help with management of associated cultural resources and ensure management consistent with other DCR properties statewide.
 - Developing an inventory of extant railroad-related cultural resources would help inform a Park Profile and serve as a basis for interpretation.
 - Significant ancient Indigenous peoples and early Historic Period archaeological resources may be present under railroad fills.
- West Section
 - New parking, signs, kiosks, and interpretation programs are all being considered within the most recent design project for the Douglas section of the SNETT. There is an opportunity to implement these once the design is finished.
 - Redevelopment of the parking area along the SNETT at Depot Street provides an opportunity to include interpretive panels depicting the historic depot site and the Park's previous role as a transportation corridor.
 - Planned improvements to the trail surface between the Connecticut border and Depot Street, Douglas provide an opportunity to identify and implement any needed repairs or maintenance to historic culverts.
- Central Section
 - The original survey for the Blackstone River and Canal National Register Historic District was performed in the 1990s. Advancements in technology since this survey provide an opportunity to improve the mapping of existing canal-related features, and to identify any existing natural soils that may contain intact, significant Indigenous peoples archaeological resources.
 - Archaeological reconnaissance surveys could provide information needed to support interpretation of railroad related resources.
 - Additional signage and interpretation of the Blackstone Viaduct would highlight the importance of this cultural resource.

- Existing historic resources along the railroad bed are excellent candidates for preservation and interpretation.

Recreation

Threats

- **Entire Park**
 - Trail data are out of date and do not reflect the current extent, surface, or condition of trails in the Park, making park planning and trail maintenance difficult.
 - The ability to differentiate the SNETT from adjacent properties is highly variable and is greatly influenced by adjacent land use. Where the Park borders undeveloped land, the property boundary may be difficult to identify thereby increasing the likelihood of recreationists entering abutting private property and abutters encroaching on the Park.
 - Kiosk designs vary among Park sections, and among groups responsible for kiosk construction. The name of the Park and management authority information is also not consistent, potentially creating confusion among recreationists. In addition, kiosks are not installed at the appropriate height or in appropriate locations for universal access.
 - The West and East Sections are under the management of Douglas State Forest, while the Central Section is under the management of Blackstone River and Canal Heritage State Park. It is not always clear to the public who to contact to report issues with various sections of the SNETT.
 - Unauthorized OHV use is common. In the West and East Sections frequent unauthorized OHV use has damaged trail surfaces and adjacent areas. Along the entire SNETT, OHV use creates public safety issues for recreationists.
- **West Section**
 - The West Section has a Landscape Designation of Reserve (DCR 2012). In contrast, Parkland is the standard Landscape Designation applied to DCR rail trails. The inconsistent designation creates inappropriate restrictions on the West Section of the SNETT.
 - A potential encroachment appears to have occurred along South Street, Douglas.
 - A potential encroachment appears to have occurred along Railroad Avenue, Douglas.
 - Although design plans for improvements to the SNETT have been developed for the area between the Massachusetts-Connecticut border and Depot Street, Douglas (VHB 2021), there are no similar plans for improvements to the SNETT between Depot Street and Route 146, Uxbridge.
 - All parking areas in this section are in Douglas; parking is needed in the Uxbridge portion of this section (NPS 2014).
 - Route 146 and 146A are formidable barriers to travelling between the West and Central Sections. Trail users must leave the SNETT and travel a series of secondary roads, without bike lanes or trail signs, to make the connection.
 - An estimated 2,700 linear feet of the West Section are predicted to be exposed to 1.0%-chance floods, and an additional 3,100 feet are predicted to be exposed to 0.2%-chance floods. Areas likely to be affected are adjacent to unnamed wetlands within Douglas State Forest, Morse Pond, Southwick Brook, Scadden Brook, and Lee Pond. Much of the West Section's trail infrastructure will be exposed to this flooding.

- Central Section

- An accessibility assessment identified 10 issues in this section of the SNETT, in such areas as access routes, parking, amenities (e.g., benches, drinking fountains, tables), trash/recycling containers, and wayside panels (Institute for Human Centered Design 2021).
- The identity of this section is confusing. There is no uniform park name used on signs along the entire length of the SNETT. Along the Central Section of the SNETT, which is also part of the Blackstone River Greenway, only the Greenway's name, and not the SNETT's, may be found. Here the relationship between the SNETT and Blackstone River Greenway is unclear to visitors.
- Much of the Central Section has metal signs bearing the text "East Coast Greenway: Linking Cities Maine to Florida." In the absence of information on the relationship among this segment's different designations (i.e., both the SNETT and the Blackstone River Greenway), these signs may serve to further confuse visitors.
- An approximately 400-foot-long section of the west bank of the Blackstone River associated with the Rhode Island Connector is within the 1.0%-chance flood zone.
- Water quality in the eastern portion of this section is impaired to the point it cannot support the consumption of fish by humans (Massachusetts Department of Public Health (DPH) 2023). There are currently no signs informing visitors of the risks associated with consuming fish caught along this segment (DPH 2023).
- Bike path rules differ between Rhode Island and Massachusetts, creating a potential safety hazard near the state line. In Rhode Island, the rules are that riders stay right, and walkers stay left. In contrast, in Massachusetts all trail users stay right and pass on the left.
- GIS data has not kept up with improvements to the Central Section, making planning for this section difficult.

- East Section

- Potential encroachments appear to have occurred along Edgewater Drive, Rathbun Street, and David Drive, Blackstone, and Center Street, Bellingham.
- Approximately 100 linear feet of DCR-owned trail, associated with Arnolds Brook, Bellingham, is exposed to 1.0%-chance floods. An additional 80 feet of City of Woonsocket-owned railroad bed is exposed to 1.0%-chance floods and approximately 1,100 feet of Town of Blackstone-owned railroad bed is exposed to 0.2%-chance floods; both areas are adjacent to Harris Pond, Blackstone.
- Trailhead signs, mile markers, town line signs, and trail markers are of inconsistent design, and many do not meet DCR sign standards.

Opportunities

- Entire Park

- There is strong support from user groups and local communities to continue improving the SNETT. This support is a large reason for the condition of the SNETT today. However, these groups often work independently, with no standard kiosk design, inconsistent mile markers, lack of DCR branding, etc. An opportunity exists to increase engagement with these supporters to form a

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Friends group for the entire Park. This would ensure that DCR standards, regulations, and applicable laws appropriate for the SNETT are being applied consistently throughout the Park.

- An opportunity exists to enhance the visitor experience by developing and posting an official Park trail map, based on spatial data generated during the RMP planning process, that includes information on navigating among sections of the SNETT.
- Cuts through bedrock associated with the construction of the railroad right-of-way offer an opportunity to develop interpretive materials and programming to educate Park visitors about the geology of the Park.
- Additional presence of DCR Rangers and Environmental Police Officers would help decrease unauthorized OHV use.
- Encouraging Park visitors to report the date, time, and location of unauthorized OHV use and other depreciative activities, and downed trees or branches to mass.parks@mass.gov would help inform law enforcement and maintenance activities along the SNETT.
- West Section
 - Designs for additional improvements between the Connecticut border and Depot Street, Douglas, are being brought to completion. Implementing proposed improvements and improving trailheads and associated parking would increase recreation opportunities along this section of the SNETT.
 - Application of DCR's draft Agency-wide guidance and Best Management Practices (DCR 2019a) to potential encroachments would identify and resolve encroachments, if any, and ensure public access to public land.
 - Constructing a parking area in Uxbridge would increase public access and use in this part of the West Section.
 - In 2008, the Massachusetts Department of Transportation (MassDOT) proposed a 3,150-foot-long "soft surface bicycle trail" to connect the West and Central sections of the SNETT (Project Number 605215). As of December 2024, the MassDOT Project Information web page (<https://hwy.massdot.state.ma.us/projectinfo/projectinfo.asp>) identifies the project's status as "in the preliminary design phase." When completed, trail users will be able to travel between the Central and Western sections.
- Central Section
 - New and updated signage clarifying the trail name and overlap with the Blackstone River Greenway would improve visitor understanding of the Park and provide context for the greater network of trails in the region.
 - Installation of bike repair stations and seasonal water fountains would allow cyclists to fix or adjust their bikes and refill their water bottles. It would provide other recreationists, and their pets, with a source of drinking water.
 - Reconstructing all historic bridges would provide safer routes for recreationists while also maintaining the railroad corridor's significance.
 - Trail construction at the Blackstone Viaduct can address potential encroachment issues with adjacent property owners.

- East Section

- A permanent easement from Main Street to Farm Street, Blackstone was gifted to the Commonwealth (DEM and Design Ventures, Inc. 1984; Book 8461 Page 90). Although the easement exists on paper, a designated trail corridor has not yet been laid out within the property. The opportunity exists to formalize the layout of the Commonwealth’s corridor through this area in anticipation of connecting the SNETT to Main Street, Blackstone.
- The Town of Blackstone owns approximately 0.48 miles of the former railroad bed, between Castle Hill Condominium Homes and Farm Street. This area is included in the easement gifted to the Commonwealth in 1984 (DEM and Design Ventures, Inc. 1984; Book 8461 Page 90). This section of former railroad bed is overgrown with vegetation and fenced off from public access. An opportunity exists to work with the Town of Blackstone to develop an agreement to allow DCR to expand the SNETT across this property.
- A 0.16-mile-long section of the former railroad bed, east of Farm Street, Blackstone, is owned by the City of Woonsocket, Rhode Island. An opportunity exists to work with the City of Woonsocket to develop an agreement to allow DCR to expand the SNETT across this parcel.
- Posting Trail Crossing (W11-15) signs, Trail Crossing supplemental plaques (W11-15PO, and supplemental distance plaques to the north and south of the Center and Lake Street trail crossings in Bellingham may increase driver awareness of trail users at these locations.
- Portions of the SNETT are within and contiguous with Environmental Justice tracts. There may be opportunities to further the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) EJ Policy (EEA 2021) in alignment with the Executive Order on Environmental Justice (No. 552) (Patrick 2014).
- Application of DCR’s draft Agency-wide guidance and Best Management Practices (DCR 2019a) to potential encroachments would identify and resolve encroachments, if any, and ensure public access to public land.
- In November 2024, The Franklin Town Council passed a resolution to purchase 19.51 acres of land from CSX for the purpose of creating a 1.7-mile-long rail trail extension from Grove Street eastward to Union Street. This creates an opportunity for DCR to work with the Town to expand the visitor experience along the SNETT and to make the Park accessible by commuter rail.
- Installation of benches that meet accessibility and DCR design standards, and bike repair stations would enhance the visitor experience along this section of the SNETT.

CLIMATE CHANGE

Climate change impacts nearly every aspect of DCR’s properties, from ecosystem health, to infrastructure, to recreation. (See DCR 2024 for an overview of these impacts.) The Department is actively working to mitigate and adapt to current and future impacts through such actions as forest management; decarbonizing DCR’s buildings, vehicles, and power equipment; protecting wetlands; and using nature-based solutions to minimize stormwater impacts. Information on these, and other, efforts is incorporated into RMPs as available and appropriate.

Any discussion of climate change requires a shared understanding of terminology. Because of this, this RMP section adopts commonly accepted terms to the greatest extent possible. In general, climate-related technical terms used in this RMP are as defined in the Sixth Assessment Report of the

Intergovernmental Panel on Climate Change (IPCC 2021). Exceptions to this are the terms Adaptation, Risk, and Sensitivity, which are used as defined in DCR's Climate Change Vulnerability Assessment (CCVA; Weston and Sampson 2022).

DCR manages its forests to provide a range of ecosystem services such as recreation, clean water, wood commodities, and wildlife habitat (DCR 2020). For ecosystems under its management, DCR carefully considers both their vulnerability to climate change and their ability to mitigate the effects of climate change by storing carbon in ecosystems and harvested wood products. Several approaches are used to monitor DCR forests and to design forest management strategies to adapt to climate change and provide ecosystem services. (See Swanston et al. (2016) for information on adaptation strategies and approaches associated with DCR's forest management.) Established in 1957, DCR's Continuous Forest Inventory (CFI) system uses a network of more than 2,000 permanent plots on which repeated measurements are taken on an ongoing basis. The CFI measures the status, size, and health of over 100,000 trees; other vegetation; down woody material; and the forest floor. (See DCR 2022 for additional information on the CFI system.) This information helps DCR understand at a strategic scale the current character, condition, and trends of forest ecosystems under its care. DCR also uses operational inventory to help plan specific treatments and evaluate their outcomes. Using these different scales of information, remotely sensed data, and local and regional external expertise, DCR plans projects that help its stands, forests, and other lands adapt to climate change and mitigate greenhouse gas emissions. The conservation and science-based management of forest lands are an essential element to ensuring crucial carbon storage and advancing climate change resilience (Massachusetts Executive Office of Energy and Environmental Affairs (EEA) 2024). For additional information on the relationship between DCR's forest management practices and climate change, please see pages 77–85 in Massachusetts Forest Action Plan 2020 (DCR 2020) and Managing Our Forests...For Carbon Benefits (DCR 2023).

The Department is actively assessing and addressing the vulnerability of its properties and facilities to the impacts of climate change. In 2022, DCR conducted a Climate Change Vulnerability Assessment (Weston and Sampson 2022). Findings from this CCVA are being used by DCR to enhance park operations and maintenance, inform resilient investment, and provide a framework for hazard mitigation and climate adaptation for natural resources, cultural resources, recreational activities, buildings, facilities, and other infrastructure. Property-specific climate change information from the CCVA is included in the Climate Change (by 2070) table (Table 10) at the beginning of this RMP. An overview of the impacts of climate change on DCR facilities and operations is presented in the DCR Climate Impacts Story Map (DCR 2024).

Climate Exposure and Impacts

A summary of the ways in which the Commonwealth's natural, cultural, and recreational resources may be impacted by climate change is provided below. During the preparation of RMPs some resources may be identified as having particularly high exposure and/or sensitivity to the anticipated hazards or consequences of climate change. When this occurs, these resources and the projected impacts to them are described. In some instances, the potential impacts of climate change on a given resource are not well understood. When this occurs, only exposure is discussed.

Natural Resources—General Impacts

Climate change affects temperature, precipitation, and atmospheric and ocean chemistry, which in turn directly and indirectly affect the natural environment, including the plants, animals, and natural communities of DCR’s forests, parks, and reservations.

Climate is known to influence the presence, absence, distribution, reproductive success, and survival of both native and non-native plants (Finch et al. 2021). Native northern and boreal species, including balsam fir, red spruce, and black spruce may fare worse under future conditions, but other species may benefit from the projected changes in climate (Janowiak et al. 2018). Some non-native invasive species will be affected by climate change while others will remain unaffected, and some non-invasive non-native species are likely to become invasive (Finch et al. 2021). In general, elevated temperature and CO₂ enrichment associated with climate change increases the performance of non-native plants more strongly than the performance of native plants (Liu et al. 2017). Climate change may result in the presence of new non-native invasive plants on a property, and changes to the distribution and/or abundance of invasives already present on a property.

Exposure to a changing climate affects wildlife in a variety of ways. For animals that live in or near aquatic environments, “changes in habitat and hydrological regimes are expected to shift their abundance and distribution” (Isaak et al. 2018: 89). Impacts to terrestrial animals are expected to be highly variable (Halofsky et al. 2018) but may be considered to fall into the following four categories: 1. habitat loss and fragmentation; 2. physiological sensitivities (i.e., innate characteristics that influence the ability to cope with changing temperature and precipitation conditions); 3. alterations in the timing of species’ life cycles; and 4. indirect effects (e.g., disruption of ecological relationships) (Friggens et al. 2018). Although all Northeast wildlife are exposed to hazards associated with climate change, some groups, “including montane birds, salamanders, cold-adapted fish, and freshwater mussels, could be particularly affected by changing temperatures, precipitation, sea and lake level, and ocean processes” (MassWildlife 2015: 357). In addition, it is the position of the Massachusetts Natural Heritage and Endangered Species Program that state-listed species and Priority Natural Communities are likely to be highly sensitive to climate change and that all state-listed species will be negatively affected by hydrologic changes, changes in water, soil, and air temperature, and changes in forest composition.

Natural Resources—Property-Specific Exposure and Impacts

Responses of Massachusetts’ invasive plants (i.e., those categorized as Invasive by MIPAG (2024)) to a changing climate are largely unknown. However, sufficient information exists to project the likely future trend for common reed and Oriental bittersweet. Lineages of common reed in New England exhibit strong growth and photosynthetic response to elevated temperature and increased levels of CO₂, such as those associated with climate change (Eller et al. 2017). Because of this, it is anticipated that common reed will further expand along the SNETT and throughout Massachusetts. “Available data suggest that bittersweet is likely to benefit from the warming and increased precipitation that are predicted for the Northeast” (Rustad et al. 2012), resulting in expansion throughout New England. Areas where the forest canopy or forest floor has been disturbed are particularly susceptible (McNab and Loftis 2002). Because of this, it is anticipated that Oriental bittersweet will continue to expand along the SNETT in response to climate change.

Six streams that intersect the Park have been identified as Coldwater Fish Resources by the Massachusetts Division of Fisheries and Wildlife (MassWildlife). This includes Rocky Brook, Tinkerville Brook, and Centerville Brook in Douglas, Emerson Brook in Uxbridge, and Arnolds Brook and Peters River in Bellingham. Such streams provide important habitat for coldwater species, which are typically more sensitive than other species to alterations in stream flow, water quality, and temperature (Massachusetts Bureau of Geographic Information (MassGIS) 2021).

Climate change may cause some vernal pools to dry earlier in the season than they have historically, potentially interfering with amphibian life cycles (Cartwright et al. 2022). Similar impacts may occur at the Forest's potential vernal pools that function as vernal pools.

Cultural Resources—General Impacts

Climate change may negatively affect cultural resources, their preservation, and maintenance (EEA 2022a; International Council on Monuments and Sites (ICOMOS) Climate Change and Cultural Heritage Working Group 2019; Rockman et al. 2016: 3, 18; United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Center 2007). In Massachusetts, cultural resources may be exposed to the following natural phenomena that are correlated with adverse impacts: higher annual average temperature (especially in winter), increased numbers of freeze-thaw cycles, increased precipitation intensity, higher relative humidity, higher wind speeds, an increase in severe storm events, increased numbers and severity of wildfires, more severe seasonal droughts, increase in number and severity of inland flood events, increased coastal flooding and erosion, increased probability of landslides, changes in groundwater levels, shifts in native and invasive species distribution, performance, and phenology; and changes in oceanic and atmospheric chemistry (Rockman et al. 2016; Commonwealth of Massachusetts 2023: 5.1-31–5.1-61).

The phenomena listed above may produce a variety of adverse impacts to Massachusetts' cultural resources. Sensitivity and potential impacts vary based on resource category (i.e., archaeological sites, cultural landscapes, ethnographic landscapes and sites, and buildings and structures). Resource-specific factors such as location, design, materials, condition, etc. will also influence sensitivity and consequent impacts. All categories of cultural resources may be subject to complete or partial destruction through wildfire, inland flooding, sea level rise, storm surge, or landslides. Additionally, these resource categories may be subject to other types of impacts, as follows. Archaeological sites may have site stratigraphy disrupted by changes in hydrography, may suffer accelerated decomposition of artifacts and features, and may be impacted inadvertently during disaster response. Cultural landscapes may lose plantings due to a variety of stressors (e.g., drought or flood, pests, soil salinity), may be infiltrated by invasives, may be eroded by surface runoff, may experience more rapid deterioration of hardscaping and site furnishings, and may be damaged by high wind or heavy snow events. Ethnographic landscapes, traditional cultural places, and associated communities (including Indigenous peoples) may suffer both tangible and intangible impacts such as loss or diminishment of natural species used for food, ceremony, or medicine; alterations in timing of hunts, etc.; increased difficulty of vulnerable subgroups (e.g., the elderly) to perform outdoor tasks; and a loss of cultural knowledge associated with resources and practices. Buildings and structures may be damaged or destroyed by high wind or heavy snow events, suffer accelerated deterioration through a variety of mechanisms (e.g., elevated humidity, chemical reactions, destructive pests and organisms), may be destabilized by hydrological changes, or be damaged by inadequate gutters or drainage systems (ICOMOS Climate Change and Cultural Heritage Working

Group 2019: 73–89; Rockman et al. 2016: 20–24). (See Rockman et al. 2016: 19–24 for a detailed assessment of the potential impacts of climate change on cultural resources.)

Cultural Resources—Property-Specific Exposure and Impacts

The SNETT’s known cultural resources with a high exposure to climate change hazards are the railroad-related resources that fall within: 1) an estimated 2,700 linear feet of the West Section predicted to be exposed to 1.0%-chance floods; and 2) an additional 3,100 feet are predicted to be exposed to 0.2%-chance floods (MassGIS 2023). (Precipitation changes due to climate change (see EEA 2022b and Weston and Sampson 2022) are not factored into FEMA flood plain modeling. Climate change may result in additional exposure to and impacts from flooding for cultural resources in the future. A FEMA-contracted report (AECOM 2013) finds that: “For the riverine environment, the typical 1% annual chance floodplain area nationally is projected to grow by about 45%, with very large regional variations ... approximately 70% of the 45% (or 31.5%) growth in the 1% annual chance floodplain is due solely to climate change” (AECOM 2013: ES6–ES7). Site-specific projections for future floodplain areas were not available at the time this RMP was prepared.)

Recreation—General Impacts

Outdoor recreation and park visitation are dependent on weather and climate and will be affected by a warming climate (Wilkins and Horne 2024). Higher temperatures positively affect participation in most outdoor activities, except snow-based activities (Wilkins and Horne 2024). “Winter is warming substantially faster than other seasons, and winter warming is especially pronounced in the...Northeastern United States” (Wilkins and Horne 2024: 15). Exposure to this climate change phenomenon is projected to significantly reduce the length of winter recreation seasons for downhill skiing, cross-country skiing, and snowmobiling, decreasing recreational opportunities and causing substantial economic impacts (Wobus et al. 2017). Whitewater rafting, primitive area use, and hunting are also projected to be negatively impacted by exposure changing weather patterns associated with climate change (Askew and Bowker 2018). Although “coldwater fishing habitat is expected to decline under a warming climate, which will likely result in fewer fishing days,” overall fishing participation in the Northeast is projected to rise “due to the more favorable temperatures” (Wilkins and Horne 2024: 11). Horseback riding on trails, boating, swimming, and visiting interpretive sites are also expected to see higher participation in the Northeast under climate change (Askew and Bowker 2018). Temperature preferences of campers indicate that the “number of ideal days” for camping will also increase (Wilkins and Horne 2024: 13). Participation in biking is also projected to increase, especially in the winter and shoulder months (Wilkins and Horne 2024: 13). Climate change may also impact outdoor recreation through increased impacts to recreation infrastructure (e.g., flooding impacts), and increased exposure to disease vectors (e.g., mosquitoes and ticks), longer pollen seasons, and heat-related illnesses (O’Toole et al. 2019).

Recreation—Property-Specific Exposure and Impacts

Recreation activities likely to be negatively impacted by exposure to weather changes resulting from climate change are the snow-dependent sports (i.e., cross-country skiing, dog sledding, snowmobiling, and snowshoeing). Participation in biking, hiking, inline skating, jogging, running, skateboarding, and walking are likely to experience increased participation.

Recreation infrastructure with exposure to increased precipitation and flooding associated with climate change consists of: 1) approximately 5,800 linear feet of the West Section path within either the 1.0%-chance or the 0.2%-chance flood zone; and 2) approximately 400 linear feet of Central Section path along the west bank of the Blackstone River in the 1.0%-chance flood zone (MassGIS 2023). (As noted above, precipitation changes due to climate change are not factored into FEMA flood plain models and projections for future floodplain areas were not available at the time this RMP was prepared.)

APPLIED LAND STEWARDSHIP ZONING

DCR assesses the appropriate uses and stewardship of its properties at two spatial scales: the landscape level and the property level.

Landscape Designation

In 2012, DCR engaged in a comprehensive system-wide assessment of lands managed by its Division of State Parks and Recreation, designating them as Reserve, Woodland, or Parkland. (See Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines (DCR 2012) for details.) Multiple Landscape Designations may apply to individual properties with diverse resources and levels of development. Because most of the SNETT was not mapped at the time of the Landscape Designation process, most of the SNETT is without a Landscape Designation. Of those areas mapped at the time of the Landscape Designation process, most of the SNETT was designated Parkland and the portion running through Douglas State Forest was designated Reserve. Identification of Land Stewardship Zones within the SNETT was performed in the context of the Parkland Landscape Designation, the standard Landscape Designation for a DCR rail trail.

The following Land Stewardship Zoning is recommended to guide management and any future development. (See Figure 1. Land Stewardship Zoning Map, page 28, and the Land Stewardship Zoning layer on DCR's Stewardship Map: <https://dcrsgis-mass-eoeaa.hub.arcgis.com/>.)

Zone 1

Zone 1 areas have highly sensitive ecological and/or cultural resources that require additional management approaches and practices to protect and preserve these special features and their values (DCR 2012). The following areas of the SNETT have been designated Zone 1.

- No sections of the SNETT have been designated Zone 1.

Zone 2

Zone 2 areas provide for a balance between resource stewardship and recreational opportunities that can be appropriately sustained. They include stable yet important cultural and natural resources. These areas provide a buffer for sensitive resources, recharge areas for surface and groundwaters, and large areas where existing public recreation activities can be managed at sustainable levels (DCR 2012). The following areas of the SNETT have been designated Zone 2.

- All sections of the SNETT not designated Zone 3 (see below for additional information) have been designated Zone 2.

Zone 3

Zone 3 areas include altered landscapes in active use and areas suitable for future administrative, maintenance, and recreation areas (DCR 2012). The following areas of the SNETT are currently developed, appropriate for potential future development, or intensively used for recreation. They have been designated Zone 3.

- Existing Route 96 (i.e., South Street, Douglas) parking lot.
- Northeast corner of intersection with Route 96 (South Street, Douglas), for potential future horse trailer and tow vehicle parking lot.
- Depot Street parking area; Douglas. This includes the existing parking area, along with room for potential expansion, between the multi-use path and Railroad Avenue.
- Hope Street, Millville, parking lot and trailhead area (i.e., Carrol Access Area).
- Playground, Mendon Street, Blackstone.
- Canal Street, Blackstone, parking lot and trailhead.
- An approximately 200 by 50-foot area on the west side of Route 98 (Aldrich Street), Uxbridge, for a potential future parking area.
- An approximately 80 by 30-foot area in Uxbridge, on the west side of Chocolog Road and north of the multi-use trail. For a potential future parking area, as recommended in NPS (2014).

Significant Feature Overlay

Significant Feature Overlays provide precise management guidance in order to maintain or preserve recognized resources features regardless of the zone in which they occur. The following Significant Feature Overlays were developed for the SNETT:

- **Multi-Use Path Overlay.** This overlay includes the existing multi-use path and adjacent vegetation within 10-feet of either side of that path. Areas within this overlay are managed for recreational purposes. In contrast, areas outside of this overlay are primarily managed for their cultural and natural resource values, in order to protect and promote a park aesthetic and visitor experience.
- **National Register Overlay.** This overlay includes all National Register of Historic Places listed resources within the Park's boundary. This includes the following:
 - Blackstone Canal Historic District (Adams et al. 1995);
 - Blackstone Manufacturing Company Historic District (Schuler and Friedberg 1995);
 - Blackstone Viaduct (Kierstead et al. 2002); and
 - Central Street Historic District (Larson and Friedberg 2003).

Resources within this overlay that contribute to the significance of these National Register-listed properties are to be managed in accordance with M.G.L c. 9, § 27; applicable DCR BMPs for historic and/or archaeological resources, The Secretary of the Interior's (SOI) Standards for the Treatment of Historic Properties (Grimmer 2017), and, where applicable, the SOI's Standards for the Treatment of Historic Landscapes (Birnbaum and Peters 1996). Proposed management activities, construction and maintenance projects, and forestry projects within the overlay, including all ground-disturbing activities, should be reviewed by the DCR Office of Cultural Resources to

determine whether cultural resources that contribute to the significance of the National Register-listed property will be impacted.

- **Wellhead Protection Overlay.** This overlay includes a Zone I Wellhead Protection Areas associated with a private well, just outside the Park, near the intersection of Routes 146 and 146A. DCR activities within the overlay area should be consistent with MassDEP Guidance (MassDEP 2011) and with Wellhead Protection Tips (MassDEP 1995).

DCR STEWARDSHIP MAP TOOL

This RMP should be viewed in conjunction with DCR’s Stewardship Map, a GIS-based tool that allows users to view a property’s natural, cultural, and recreational resources. The Stewardship Map tool is dynamic, and information continues to be updated after adoption of an RMP. Guidance for using the tool, as well as Best Management Practices for resource stewardship, are located on the Stewardship Map site: <https://dcrsgis-mass-eoeea.hub.arcgis.com/>.

Because authorized trails are located within known habitat of state-listed species on this property, managers should consult an additional GIS-based tool, the NHESP 2022 Guidance Codes for DCR Trail Maintenance Map. (<https://mass-eoeea.maps.arcgis.com/home/item.html?id=cb252e8df40d408c81fe8fcf690e14f6>) This tool allows users to select specific trail segments and identify restrictions and regulatory review associated with performing 10 common trail maintenance activities on these segments. Because site-specific rare species information is confidential under Massachusetts law (M.G.L. c. 66, §17D), access to this tool is restricted.

CONSISTENCY REVIEW

Resource Management Plans “shall ensure consistency between recreation, resource protection, and sustainable forest management” (M.G.L. c. 21, § 2F). For planning purposes, an activity is considered consistent with resource protection if it has no significant, long-term, adverse impact on resources. To this end, a series of indicators were developed to evaluate the impacts of recreation and forest management on natural and cultural resources.

Many activities with the potential to negatively affect resources are already subject to agency and/or regulatory review (e.g., forest management activities, projects within Priority Habitat). For these activities, compliance with state regulations, regulatory authority guidance, DCR policies and processes, and Best Management Practices (BMPs) is considered an indicator of consistency between park use and resource protection. New indicators were generated for activities not subject to agency or regulatory review, and are based on available data, information readily identifiable via aerial imagery or site visits, assessments by DCR subject matter experts, or the property manager’s knowledge of park conditions and use. (See Table 17, page 29.)

Indicators are applied during the RMP planning process in order to ensure a standardized assessment of consistency across all properties in the DCR system. Inconsistencies identified via the application of indicators are used to inform the development of management recommendations.

The status of indicators (Yes, No, Unknown, and N/A) were accurate at the time this RMP was prepared and were used for planning purposes. However, they represent a snapshot in time and may not reflect future conditions. In addition, the status of indicators will change as recommendations get implemented.

MANAGEMENT RECOMMENDATIONS

Twenty-nine priority management recommendations were developed for this property. They are presented in the Table 18, page 32. All recommendations are of equal importance.

Priority management recommendations derive from Threats, Opportunities, and Consistency Assessment information presented in this RMP. For a recommendation to be considered a priority and listed in the table, it must meet one or more of the criteria listed below. Maintenance and management needs not meeting one or more of these criteria are not included in the table but are identified in the Threats and Opportunities sections.

The following types of recommendations are considered priority:

- Natural resource stewardship and restoration activities consistent with park identity and intended to improve ecological function and connectivity.
- Cultural resource management activities consistent with park identity and intended to prevent the loss of integrity of significant cultural resources.
- Improvements consistent with park identity that are needed to support intended park activities.
- Actions required for regulatory compliance or compliance with legal agreements.
- Activities that prevent or ameliorate threats to the health and safety of park visitors and employees.
- Activities that address inconsistencies among recreation, resource protection, and sustainable forest management, as identified through use of the Consistency Assessment checklist.

Progress toward implementing priority recommendations is tracked through the use of DCR's Capital Asset Management Information System (CAMIS). The property manager should enter each recommendation listed in Table 18 (page 32) into CAMIS as a separate work order, noting "*RMP" in the description field. Non-traditional work orders (e.g., volunteer trail work, posting of DPH Fish Consumption Advisory posters, certification of vernal pools) should be closed out by the property manager, once the recommendation has been implemented.

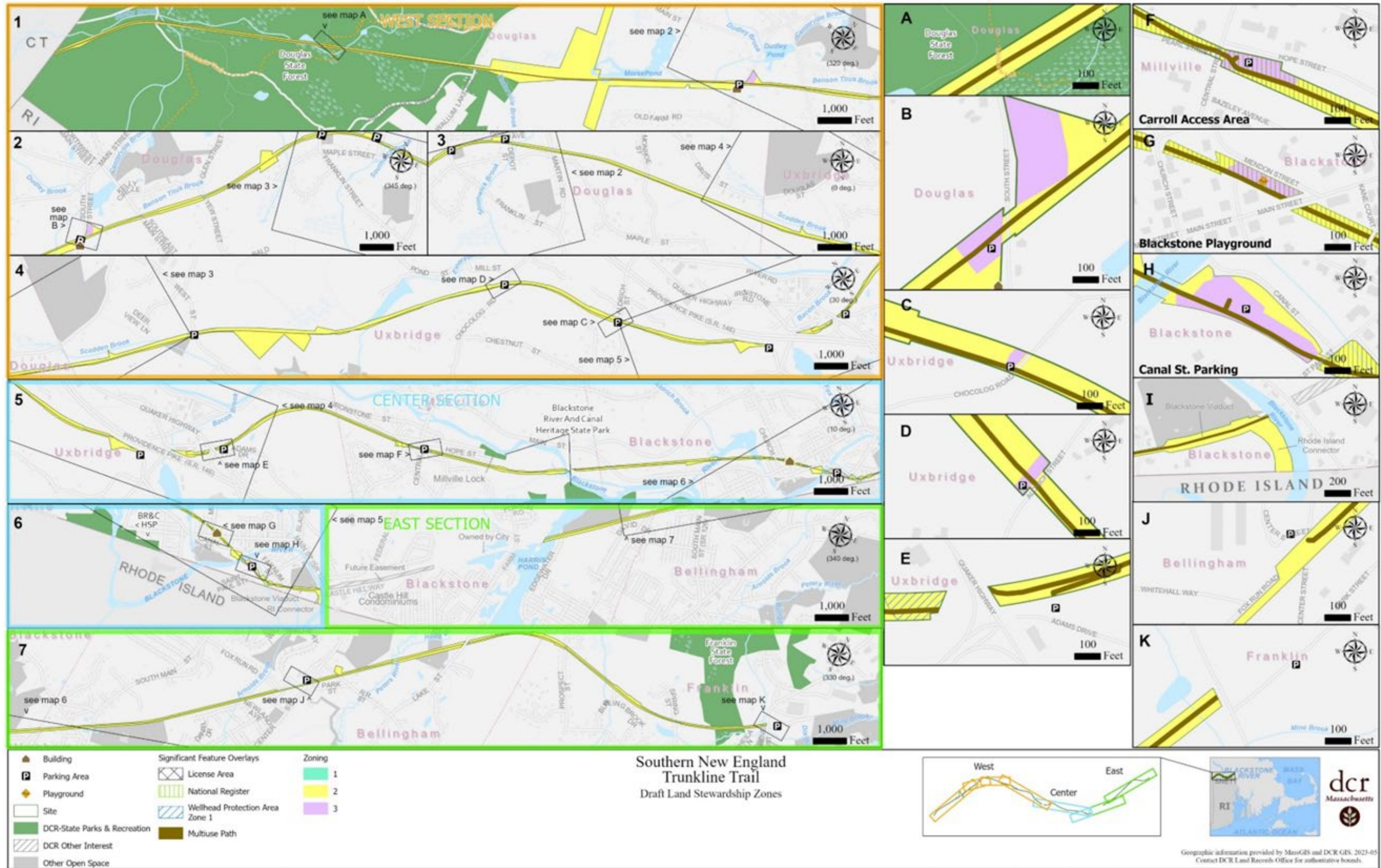


Figure 1. Land Stewardship Zoning Map.

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Table 17. Consistency Assessment for Southern New England Trunkline Trail. This assessment represents a snapshot in time and may not reflect future conditions.

Category	Metric	Status
Landscape Designation	1. All development and uses of the park since 2012, or currently planned for the park, are consistent with its Landscape Designation(s).	No
Natural Resources	1. All projects (normal maintenance activities, special projects, volunteer projects) conducted within Priority Habitat were reviewed and approved through DCR's internal review process and by NHESP for potential impacts to rare species and their habitats.	Yes
Natural Resources	2. All projects conducted within areas subject to state and/or federal wetlands or waterways regulations were reviewed and approved through DCR's internal review process; reviewed and approved through the appropriate, local, state, and/or federal review process; and were carried out in accordance with the terms of a valid permit.	Yes
Natural Resources	3. Sensitive resource areas, such as steep slopes, riverbanks, streambanks, pond and lakeshores, wetlands, and dunes are free of desire paths and other user-created trails.	No
Natural Resources	4. Aquatic areas adjacent to beaches, boat ramps and launches, roads, and hiking trails are free of eroded sediments.	No
Natural Resources	5. The extent of exposed soil in campground and/or picnic sites is stable or decreasing.	Yes
Natural Resources	6. The extent of native vegetation in campground and/or picnic sites is stable or increasing. (As assessed by property manager.)	Yes
Natural Resources	7. Area of trail impacts in Reserves is less than 50% of area. (See Naughton (2021) for information on primary area of trail impacts.)	N/A
Natural Resources	8. Congregations of breeding, migratory, or wintering wildlife are protected from disturbance by temporary (e.g., seasonal) restrictions on recreational access.	N/A
Natural Resources	9. Geocaches, letterboxes, orienteering control locations, and other discovery destinations are located outside sensitive natural resource areas and their locations have been reviewed and approved by park personnel. (As assessed by property manager.)	No

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Category	Metric	Status
Natural Resources	10. Zone I wellhead protection areas are free of vehicle parking, chemical storage, or concentrated recreation.	Yes
Natural Resources	11. All boat ramps and launches have cleaning stations and/or educational signs and materials on preventing the spread of aquatic invasive organisms. (As assessed by property manager.)	N/A
Natural Resources	12. For each barrier beach there is a current, approved Barrier Beach Management Plan and all beach-related activities are conducted in accordance with this plan.	N/A
Cultural Resources	1. All maintenance activities and projects with the potential to cause sub-surface disturbance are being reviewed by the DCR archaeologist for potential impacts to archaeological resources.	No
Cultural Resources	2. All maintenance activities and projects affecting historic properties (buildings, structures, and landscapes over 50-years-old) are being reviewed by the Office of Cultural Resources to avoid adverse impacts.	No
Cultural Resources	3. Historic buildings, structures, and landscapes are being used, maintained, and repaired in a manner that preserves their cultural integrity and conveys their historic significance to park visitors.	Yes
Cultural Resources	4. Recreational activities such as hiking, biking, and boating are not eroding cultural properties such as archaeological sites or historic landscapes through creation of desire lines, rutting in the landscape, damage to historic built features, or excessive scouring (erosion) of coastal and shoreline areas.	Yes
Cultural Resources	5. Geocaches, letterboxes, and other discovery destinations are located away from sensitive cultural resources, and their locations have been reviewed and approved by park personnel.	Yes
Cultural Resources	6. Historic buildings, structures, landscapes, archaeological sites, and concentrations of historic resources are located outside of areas predicted to be subject to flooding, storm surge, or sea-level rise.	Yes

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Category	Metric	Status
Recreation	1. Types of recreation, levels of recreational use, and types and extent of recreation infrastructure are consistent with the park's identity statement.	Yes
Recreation	2. Trail density is consistent with the park's Landscape Designation(s). (See Trails Guidelines and Best Practices Manual (DCR 2019b) for density thresholds.)	Unknown
Recreation	3. All authorized trail construction was performed in accordance with an approved Trail Proposal Form.	Yes
Recreation	4. Over 90% of the park's official trails network is classified as being in Fair or better condition.	Unknown
Recreation	5. Recurring use by OHVs is restricted to authorized trails. (As assessed by property manager.)	No
Recreation	6. There is a high level of compliance with dog leash regulations and policies. (As assessed by property manager.)	Yes
Recreation	7. Athletic fields are free of recreation-caused impacts (e.g., bare spots) to turf. (As assessed by property manager.)	N/A
Recreation	8. Water-based recreation is consistent with "Uses Attained" designation as identified by MassDEP in its most current integrated list of waters (e.g., MassDEP 2023); DPH fish consumption advisories; and/or water quality testing at waterfront areas.	No
Recreation	9. Recreation facilities are located outside of areas subject to flooding, storm surge, or sea-level rise.	Yes
Sustainable Forest Management	1. Forestry activities are consistent with Landscape Designation and associated forestry guidelines.	N/A
Sustainable Forest Management	2. Forestry activities are consistent with current Forest Resource Management Plan.	N/A
Sustainable Forest Management	3. Tree cutting is performed in accordance with an approved cutting plan, if required under the Massachusetts Forest Cutting Practices Act (M.G.L. Ch. 132, Sections 40-46).	N/A

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Table 18. Priority Recommendations for Southern New England Trunkline Trail. All recommendations are of equal importance. When multiple parties are responsible for implementing a recommendation, they are identified parenthetically in the Implementation column. Property managers should enter these recommendations as work orders in CAMIS to ensure their tracking and implementation.

Category	Recommendation	Implementation
Natural Resources	Monitor available water quality test data from the Blackstone River to keep informed of impairments and to help make decisions on appropriate recreational uses within the park.	Park Operations (Co-Lead), Office of Natural Resources (Co-Lead), Partner
Natural Resources	Regularly inspect and clean culverts; replace as needed following appropriate internal and regulatory reviews.	Park Operations
Cultural Resources	Develop an inventory of railroad-related cultural resources along the entire length of the SNETT.	Office of Cultural Resources (Lead), Interpretive Services, Park Operations, Partners, Volunteers
Cultural Resources	Prepare a Park Profile and develop and install railroad-themed interpretive panels along the length of the SNETT.	Office of Cultural Resources, Interpretive Services (Co-Lead), Park Operations (Co-Lead)
Cultural Resources	Resolve potential encroachment along the west side of South Street, Douglas, with draft Agency-wide guidance and Best Management Practices (DCR 2019a).	Contractor, Management Forestry (Lead), Office of the General Counsel, Park Operations
Cultural Resources	Install a cantilevered sign along the Central Section at the trail entrance to the Millville Lock indicating "Millville Lock, Blackstone River & Canal Heritage State Park."	Park Operations
Recreation	Post Department of Public Health Fish Consumption Advisory Posters (https://www.mass.gov/doc/fish-consumption-advisory-poster-for-marine-and-fresh-water-bodies-0/download) at fishing access points along the Central section of the SNETT.	Interpretive Services, Park Operations (Lead)

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Category	Recommendation	Implementation
Recreation	Update GIS data for the entire SNETT to reflect current conditions; add trail access information (e.g., slope, surface materials, obstacles) to data set, regularly update this information as additional Park improvements are completed.	GIS Program (Co-Lead), Universal Access Program (Co-Lead)
Recreation	Clearly identify and communicate to the public the DCR entities responsible for managing the different sections of the SNETT. Provide this information to the public via the DCR web page and at all DCR kiosks along the SNETT.	Director of Partnerships (Co-Lead), Park Operations (Co-Lead)
Recreation	Install DCR mile markers from the Connecticut line (i.e., Mile 0), eastward to Grove Street, Franklin.	Contractor, Park Operations (Lead)
Recreation	Ensure consistent kiosk design and contents, identification of park as the SNETT, and identification of DCR as the managing authority, at all kiosks on DCR land along the SNETT. At each DCR kiosk, provide contact information so that the public may report OHV use, other depreciative activities, or downed trees or branches.	Interpretive Services (Co-Lead), Park Operations (Co-Lead), Universal Access Program (Co-Lead)
Recreation	Establish consistent branding along all sections of the SNETT. Within the Central Section, the branding should differentiate the SNETT from the Blackstone River Greenway.	Director of Partnerships (Co-Lead), Interpretive Services (Co-Lead), Trails and Greenways Section (Co-Lead)
Recreation	Encourage the development of a Friends group for the entire length of the SNETT.	Director of Partnerships (Co-Lead), Park Operations (Co-Lead)
Recreation	Assess reclassifying the section of the SNETT passing through Douglas State Forest as Parkland in order to be consistent with the rest of the SNETT and with DCR rail trail Landscape Designations statewide.	Management Forestry (Co-Lead), GIS Program (Co-Lead)
Recreation	Incorporate culvert assessment and improvements into the design of planned trail improvements between the Connecticut state line and Depot Street Douglas.	Contractor, Office of Natural Resources, Office of Cultural Resources, Partner, Trails and Greenways Section (Lead)

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Category	Recommendation	Implementation
Recreation	Implement planned trail improvements between the Connecticut state line and Depot Street, Douglas.	Contractor, Trails and Greenways Section (Lead)
Recreation	Resolve potential encroachments in accordance with draft Agency-wide guidance and Best Management Practices (DCR 2019a).	Contractor, Management Forestry (Lead), Office of the General Counsel, Park Operations
Recreation	Conduct a design study for trail improvements along the section of the SNETT between Depot Street, Douglas, and Route 146, Uxbridge; program funding, and implement as funds become available.	Contractor, Trails and Greenways Section (Lead)
Recreation	Establish a trail connection from west of Route 146 to the existing trail east of Route 146A.	MassDOT (Lead), Trails and Greenways Section
Recreation	Install a bike repair station and water fountain at the Canal Street, Blackstone, trailhead.	Park Operations (Co-Lead), Trails and Greenways Section (Co-Lead)
Recreation	Install benches that meet accessibility and DCR design standards, and bike repair stations along the East Section of the SNETT, consistent with similar amenities in the Central Section.	Park Operations (Co-Lead), Trails and Greenways Section (Co-Lead)
Recreation	Request that the Bellingham Department of Public Works install Trail Crossing signs (W11-15), Trail Crossing supplemental plaques (W11-15P), and supplemental distance plaques to the north and south of the Center and Lake Street trail crossings.	Park Operations (Co-Lead), Trails and Greenways Program (Co-Lead)
Recreation	At the Massachusetts-Rhode Island state line and at all trailheads in the Central Section, install signs informing trail users from Rhode Island to keep right and to pass on the left.	Park Operations (Lead), Trails and Greenways Section
Recreation	As appropriate, promote EEA's Environmental Justice Policy goals along the SNETT.	Land Protection Program (Co-Lead), Trails and Greenways Section (Co-Lead), Interpretive Services (Co-Lead), Partners

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Category	Recommendation	Implementation
Recreation	Work with Design Ventures, Inc., or their successor, “to determine a safe and convenient corridor width to develop a multi-use trail” on DCR’s permanent easement through Castle Hill Condominium property.	Land Protection Program (Lead), Office of the General Counsel, Recreation Facilities Planning, Trails and Greenways Section
Recreation	Establish on-road connection, with signs, between the eastern end of the Blackstone Viaduct and the permanent easement through Castle Hill Condominium property.	Park Operations
Recreation	Obtain legal access to, and the ability to construct and maintain a multi-use trail on, segments of the SNETT owned by the Town of Blackstone and City of Woonsocket.	Land Protection Program (Lead), Office of the General Counsel, Trails and Greenways Section
Recreation	Following establishment of legal agreements, construct a hard-surfaced multi-use trail between Route 122 in Blackstone and Route 126 in Bellingham; program funding, and implement as funds become available.	Contractor, Engineering, Trails and Greenways Section (Lead)
Recreation	Pursue opportunities to extend the SNETT eastward to downtown Franklin. Pending successful acquisition of the CSX right-of-way by the Town of Franklin, work with the Town to extend the SNETT eastward to downtown Franklin.	Land Protection Program

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