



Cuyahoga Valley National Park Community Access Plan

July 2022 | Draft



EXECUTIVE SUMMARY

Cuyahoga Valley National Park (CUVA) encompasses 33,000 acres along the Cuyahoga River between the cities of Cleveland and Akron in Ohio. The park is less than a one-hour drive for more than 4.3 million people. Its metropolitan setting and combination of scenic, natural, historic, recreational, and education values make it a well-loved gem in the national park system.

CUVA is a partnership park. Of the park's 33,000 acres, the National Park Service (NPS) manages approximately 20,000. The remainder is owned or managed by other public and private entities, including Cleveland Metroparks and Summit Metro Parks. Three nonprofit partners—the Conservancy for Cuyahoga Valley National Park (Conservancy), Countryside, and the Cuyahoga Valley Scenic Railroad—support park operations. The park is located within a national heritage area, the Ohio & Erie Canalway, which expands partner opportunities. The heritage area connects the park, Cleveland, and Akron.

This community access plan (CAP) identifies ways to improve opportunities and address challenges related to visiting the park. Visitation has grown significantly since the park's general management plan (GMP) was completed in 1977. The park consistently ranks among the country's most-visited national parks, with more than 2.2 million visitors per year. Crowding and conflicts between visitor uses have resulted. Visitor needs and expectations have also changed.

CUVA was established in 1974 as part of the federal Parks to the People initiative. This program created national park units in metropolitan areas to make national park experiences more accessible. The Parks to the People initiative also came with an expectation that Parks to the People units would serve demographically diverse visitors. However, CUVA's visitation does not reflect the diversity of its metropolitan community. Broadening participation in the park to create inclusive and equitable visitor access is a park priority.

General Management Direction

The CAP provides broad guidance about how to offer high-quality visitor experiences while protecting park resources. The CAP outlines the following goals:

- Visitors find recreational opportunities for a range of interests, ages, skill levels, and abilities. Accessibility is prioritized so that all visitors have access to the full range of park experiences.
- The integrity of cultural, archeological, ethnographic, and traditional cultural resources and landscapes is maintained. Park interpretation includes stories that reflect the diverse and complex history of the Cuyahoga Valley.
- Sensitive natural resources are protected. Degraded resources are restored. Healthy tributaries contribute to clean water flowing into the Cuyahoga River.
- Facilities harmonize with the natural and cultural landscape. They support desired visitor experiences via a welcoming and consistent visual identity.

To support ongoing and future park decision-making, the CAP divides the park into geographic zones and describes desired conditions for each. This zoning is an update to the park's 1977 GMP. The zoning is complementary of current and future land use for much of the land within the park boundary not under NPS management and ownership, including lands owned and managed by Cleveland Metroparks and Summit Metro Parks. The CAP identifies four zones:

1. The High-value Experience Zone includes the most-visited areas of the park. Visitor experiences focus on enjoyment of significant natural and cultural resources.
2. The Natural Zone focuses on protecting and enhancing natural resources and biological integrity while preserving cultural landscapes. Visitors have opportunities to experience natural sights, sounds, and ecological processes.
3. The Cuyahoga River Corridor Zone focuses on the scenic, natural, and cultural values and recreational experiences within the river corridor.
4. The Sensitive Zone focuses on providing the highest level of protection for areas with a high concentration of sensitive natural resources.

Management Strategies and Actions

The CAP identifies strategies and actions to improve visitor opportunities and address current issues related to visiting the park. They focus on the visitor experience in the park and community connections to the park. Major strategies and actions include the following categories:

- Improved access and reduced congestion
- Wayfinding, circulation, and visitor information
- Experience and protection of cultural resources
- Experience and protection of natural resources
- Relationships with communities
- Diverse camping opportunities
- Equitable and inclusive experiences
- Visitor services

Improved access and reduced congestion

Visitor use is concentrated in certain areas of the park. This results in crowding, visitor use conflicts, and challenges for visitors seeking to access recreational experiences. Key locations include Brandywine Falls, Boston, Blue Hen Falls, Peninsula, and the Hunt House area. The Cuyahoga River Water Trail was designated in 2019, increasing demand for river access. Expanding access including river access while decreasing congestion is addressed by this plan.

Key Actions:

- Improve facilities for paddlers and create additional river access locations
- Resize parking lots to match current and future use levels
- Introduce time-limited spaces in parking lots that have short- and long-term uses
- Improve marketing and communication about how to visit the park using Cuyahoga Valley Scenic Railroad as an alternative to personal vehicles For new trail development, prioritize the north end of the park to redistribute visitation and improve trail access near Cleveland and its immediate suburbs

Wayfinding, circulation, and visitor information

Finding and navigating the park can be challenging. The park has more than 25 points of entry. Within the park, dispersed destinations are accessed by local roads managed by multiple jurisdictions. A complex network of 200 miles of trails is provided by the National Park Service and other organizations.

Key Actions:

- Develop an updated parkwide wayfinding and sign plan
- Work with local governmental organizations to create more consistent visual identity along roads
- Improve the ability to circulate within the park by bicycle via multi-use connector trails

Experience and protection of cultural resources

CVNP has more than 600 historic structures and archeological sites. They contribute to cultural landscapes related to Native American and Euro-American settlement, transportation, agriculture, industry, and recreation. Of the resources, the Ohio & Erie Canal is among the most nationally significant. Many historic structures have been repurposed for visitor and administrative use. Opportunities to view cultural resources are common along roads, trails, and the Cuyahoga Valley Scenic Railroad. Some are in isolated locations and can be a target for vandalism.

Key Actions:

- Use chip-sealed asphalt as the surface treatment for the Ohio & Erie Canal Towpath Trail
- Enhance visitors' ability to visualize the Ohio & Erie Canal by implementing the Ohio & Erie Canal cultural and landscape report (CLR)
- Develop a parkwide viewshed management plan
- Partner with Countryside to develop the Countryside Center as a hub for learning about agriculture and the park's rural landscape at Hammond Cranz Farm
- Partner with affiliated Tribal Nations to expand on-site interpretation of Native American cultural and ethnographic resources
- Develop a treatment plan for the Greenwood Village site to better protect earthworks and highlight the site's significance

Experience and protection of natural resources

CUVA is an island of high ecological integrity in a densely populated urban region. Because of its location, glacial history, and varied topography, the park supports a unique and diverse mix of plants, animals, and geological features. The Cuyahoga River ecosystem is key to ecological diversity. Many park experiences provide opportunities for visitors to enjoy natural scenery and wildlife. Visitor use impacts include trampling of sensitive species, soil compaction and erosion, dispersal of invasive species, and vehicular collisions with wildlife. Visitor use infrastructure can contribute to erosion and habitat fragmentation.

Key actions:

- Address visitor-created trails via trail formalization or restoration to natural conditions. Key sensitive areas include the Ledges, Brandywine Gorge, Blue Hen Falls, and wildflower viewing areas near Everett Covered Bridge.
- Create river-focused visitor experiences on the former Brandywine Golf Course in partnership with the Conservancy.
- Create a 0.25-mile trail at the former site of the Richfield Coliseum with a small, elevated viewing platform and parking.

- Create a protocol for short-term trail closures when use in wet conditions causes excessive trail widening.
- Monitor and treat invasive species along trails.
- Partner with local governments to implement wildlife crossing on roads with an emphasis on amphibians.
- Improve visitor experiences and resource conditions at Blue Hen Falls, including adding limited mobility parking closer to the falls.

Relationships with communities

The park is located within 15 municipalities and between two cities in Northeast Ohio. The park has many opportunities to partner with communities to achieve mutual benefit. Improving access between the park and communities can provide park experiences for people without access to a vehicle, increases use of local business districts, and reduces demand for parking. The park can build on existing relationships with community-based organizations and local governments to help achieve this work.

Key Actions:

- Participate in main street and gateway community initiatives with local communities.
- Collaborate in regional trail planning to achieve better connectivity within the region with a focus on underserved communities.
- Improve trail connectivity between the park and large regional trails.
- Extend Cuyahoga Valley Scenic Railroad to Cleveland.
- Partner with regional transit authorities to improve public transit access to the park.
- Provide shuttle service from community-based locations to the park with an emphasis on communities with lower rates of car ownership.

Diverse camping opportunities

Public requests for camping opportunities are routine. A small camping area developed as a pilot project has been discontinued. Backpacking sites are offered by Cleveland Metroparks. Private camping is nearby. Camping is considered in the context of other opportunities in the region, partnerships, and its role in enhancing trail use.

Key Actions:

- Implement hike-in/backpacking sites along the Buckeye Trail in three locations.
- Provide gravel bar camping along the Cuyahoga River.
- Develop group camping opportunities near Howe Meadow.
- Track emerging developed camping opportunities by partners and the private sector. If suitable facilities do not emerge within five years, complete a market analysis for park-provided developed camping.

Equitable and inclusive experiences

CUVA's visitation does not reflect the diversity of its metropolitan community. Many communities that are not well-represented in park visitation face issues tied to poverty and disinvestment. These issues include less access to green space and high-quality parks and poorer health outcomes. This

plan builds on programs and activities to reverse this trend. It also adds an emphasis creating a welcoming and accessible park experience for diverse visitors.

Key Actions:

- Add small-scale amenities that support diverse forms of recreation and create a welcoming environment. Examples include bicycle maintenance stations, electric-bike-charging stations, gender inclusive restroom signage, and clusters of picnic tables for use by larger families and groups.
- Assess community needs and improve facilities for those coming to the park with picnicking as a primary activity.
- Provide programming and events targeted to the interests of diverse communities, including LGBTQ+, minority, and immigrant groups.
- Provide Americans with Disabilities Act of 1990 (ADA)-accessible experiences to primary park resources. This includes adding ADA accessible routes at the Ledges.
- Improve opportunities for people with disabilities to use adaptive recreational equipment to access diverse park experiences.
- Redesign the Howe Meadow area to better accommodate special events and public use. Implement programs that promote the park for physical and mental health, wellness, and healing.

Visitor services

The National Park Service has a variety of administrative tools that allow other organizations to provide visitor services in the park. This plan highlights areas of focus for providing opportunities.

Key Actions:

- Provide mobile or load-and-go bicycle-rental opportunities.
- Provide rental equipment for water-based recreation (canoes, kayaks, paddle boards, and fishing equipment).
- Minimize new facility development associated with rentals.
- Allow for guide services for fishing, long-distance hiking, bike packing, hike-in camping, river use, and beginner outdoor recreation.
- Provide kayak drop-off and pickup services at locations that are inadequately served by Cuyahoga Valley Scenic Railroad's kayak shuttle service.
- Broadly advertise opportunities to provide services to demographically diverse small businesses.

Monitoring, Adaptive Strategies, and Visitor Capacity

The CAP includes tools to help park managers adapt to changes related to park visitation. Appendices A and B map out monitoring programs to provide park managers with data for decision-making. The CAP also highlights management strategies and mitigation measures for responding to changes. Appendix C identifies visitor capacities for different areas of the park, providing a benchmark for assessing trends in levels of visitation.

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Chapter 1

Introduction to the Plan



Photo Credit: Ted Toth

CHAPTER 1. INTRODUCTION TO THE PLAN

THE PLANNING PROCESS AND BACKGROUND

This CAP and GMP amendment (CAP/GMP referred to throughout as CAP) develops a collaborative vision for proactively managing visitor use by aligning visitor activities, services, and experiences with the park's purpose and providing direction for protecting fundamental resources and values. The CAP amends the 1977 GMP by providing updated desired conditions and zoning as well as meeting the requirements for the identification of and implementation commitments for visitor carrying capacities for all areas of the park (in this document, referred to as "visitor capacity") (NPS Director's Order #2: Park Planning).

This CAP provides overarching guidance for managing CUVA visitor use while addressing new and emerging visitor needs and ensuring connection with and protection of key resources. In this plan, visitor use refers to human presence in an area for recreational purposes, including education, interpretation, inspiration, and physical and mental health. Visitor use goes beyond the types of activities that people engage in at parks by addressing the dynamic nature of visitor use. This includes the amount, timing, and distribution of visitor activities and behaviors. While the plan largely provides guidance for managing visitor use, there is strong emphasis on improving inclusive and equitable access to the park and collaborating with nearby communities.

Plan development was guided by the following goals:

- Visitors find recreational opportunities for a range of interests, ages, skill levels, and abilities. Accessibility is prioritized, so that all visitors have access to the full range of park experiences.
- The integrity of cultural, archeological, ethnographic, and tradition cultural resources and landscapes is maintained. Park interpretation includes stories that reflect the diverse and complex history of the Cuyahoga Valley.
- Sensitive natural resources are protected. Degraded resources are restored. Healthy tributaries contribute to clean water flowing into the Cuyahoga River.
- Facilities harmonize with the natural and cultural landscape. They support desired visitor experiences via a welcoming and consistent visual identity.

This plan uses the Interagency Visitor Use Management Council (IVUMC) Visitor Use Management framework to develop a long-term strategy for managing visitor use in the park. The general planning process used for this plan is outlined below and is consistent with the guidance outlined by the IVUMC (IVUMC, www.visitorusemanagement.nps.gov).

The management strategies identified in this plan will be accomplished over the years as the plan is implemented and will be updated and adjusted as needed during the implementation phase. Implementation of management strategies and actions is dependent on funding availability.

In 2013, CUVA completed a foundation document, which is an NPS document that identifies the core mission of the park and provides basic guidance for planning and management decisions. It includes the park's significance and fundamental resources and values and prioritizes planning needs. That document identified a visitor use management plan (now known as the CAP) as one of its highest-priority planning needs across the park.

In 2019, park staff evaluated issues occurring throughout the park, resulting in the recommendation for a parkwide plan. During internal scoping, park staff identified key issues and opportunities to be addressed by the CAP.

A civic engagement strategy was initiated to coordinate communication and collaboration related to the planning effort. The first round of civic engagement was completed in the spring of 2021 to inform the development of desired conditions, zoning, and management strategies. The park hosted 10 virtual meetings and received more than 1,000 substantive comments.

PARK DESCRIPTION

CUVA encompasses 33,000 acres along the Cuyahoga River between Cleveland and Akron, Ohio. CUVA is less than a one-hour drive for more than 4.3 million people, according to the 2010 census. CUVA consistently ranks among the country's most-visited national park units. Annual visitation has grown significantly since the original GMP was completed in 1977. The plan's visitor use guidance inadequately addresses current and projected visitation to maintain a quality visitor experience and desired resource conditions.

CUVA is a partnership park that relies on innovative contributions of its partners to achieve park purposes to the highest degree possible. The park has three primary nonprofit partners: the Conservancy, Countryside, and the Cuyahoga Valley Scenic Railroad. These organizations support operations and programming of park facilities and are integral in providing park visitor opportunities. In addition, Cleveland Metroparks and Summit Metro Parks maintain and operate facilities within the park boundary and the park is situated within the Ohio & Erie Canalway National Heritage Area. The partnerships with the park districts and heritage area provide a continuity of experiences for visitors and the local community that transcends specific land ownership within park boundaries. Park staff also work closely with local municipalities, governments, and community organizations to meet the needs of park visitors as well as the community.

The Cuyahoga River Water Trail was designated as an Ohio State Water Trail in October 2019. The park is one of 12 managing partners on the Water Trail along the entire length of the Cuyahoga River. This designation necessitates improvements at river-access points, addition of new access points, improved river and land-based signs, and improved recreational opportunities. The designation also provides additional partnership opportunities and connections. To date, the park has developed small-scale access sites, installed informational and orientation signage, implemented a river patrol volunteer group, and created an interdivisional river operations team to respond to issues and opportunities on the water trail. Water trail partners have improved river access locations outside the park as well.

The park contains hundreds of cultural assets, including the Ohio & Erie Canal, the Cuyahoga Valley Scenic Railroad, and the historic communities of Everett, Peninsula, Boston, and Jaite. Historic farms, country roads, the Virginia Kendall State Park Historic District, and industry remnants are some of the diverse cultural assets. The Cuyahoga Valley's human story began when the modern valley landscapes began to evolve after glaciation and Paleo-Indian, Archaic, Woodland, and Whittlesey cultures left their marks on the landscape via archeological sites and earthworks. Following the departure of the Whittlesey people in the early 1600s, the Lenape, Oneida, Ottawa, and Wyandot Tribal Nations, among others, were associated with Cuyahoga Valley until European settlement in the late 1700s and early 1800s.

The park's topography and geography allow for rich biodiversity. Cuyahoga Valley is at a transition between two major US physiographic divisions: the Appalachian Mountains and the Great Plains, near the southern edge of Ice Age glaciation. Cuyahoga Valley's uplands, steep slopes, moist ravines, and floor support mixed deciduous forests, wetlands, and other habitat types in a variety of successional stages. These provide a refuge for an assortment of plants and wildlife, including rare, threatened, and endangered species. Some of the largest remaining forest tracts in northeast Ohio, as well as stunning exposed rock ledges and waterfalls, all add to the natural scenic value.

The Cuyahoga River drains into Lake Erie, part of the Great Lakes ecosystem and the largest system of freshwater lakes in the world. Once known as the "river that burned," the Cuyahoga served as a symbol of the plight of America's rivers and the need for federal clean-water legislation. The beauty of its surrounding landscape and abundance of wildlife species today is in sharp contrast with the environmental abuses of a few decades ago.

Regional Recreation and Socioeconomic Context

CUVA is in the center of the 15th largest metropolitan area in the United States, with a population of 2,881,937 in 2010 (US Census Bureau, Cleveland-Akron-Elyria Combined Statistical Area). About 13,000 people live within the park boundary, including those in Peninsula. About 112,350 people reside less than half a mile beyond the park boundary, with 340,980 living within two miles outside the park boundary and 3.3 million within twenty-five miles outside the park boundary. About 10.3 million people reside within 100 miles of the park, generally up to a two-hour car drive. (US Census, 2010). Populations in central US cities have declined in the past ten years; suburban outlying communities have continued to grow but at a slower rate during the past ten years.

The park boundary contains portions of fifteen local municipalities and two counties. It is directly between the major metropolitan areas of Cleveland and Akron. The local communities are small villages, towns, and suburban cities. Many large neighborhoods are along the edge of the park boundary; these include Greenwood Village in Sagamore Hills, Echo Hills in Brecksville, and neighborhoods in Cuyahoga Falls on both sides of the southern part of the park.

Disparity within this community is clear, particularly regarding a lack of vehicles that directly relates to visitors' ability to access key services. The US Census Bureau's American Community Survey 2020 identifies the number of households that have no motor vehicle. In 2020, 70,400 Cuyahoga County households had no motor vehicle; this represented 12.9 percent of county households. In the same year, 18,400 households in Summit County had no motor vehicle; this represented 8.1 percent of the county's households.

The local communities have commercial areas that are close to the park and its trails. The commercial areas have restaurants and shops that park visitors utilize when travelling to and from the park. Adjacent to the Towpath Trail, commercial areas include downtown Peninsula in the central part of the park, Thornburg Station along the park's northern boundary in Independence, and the Merriman Valley District in northern Akron. Other extended commercial areas near park entrance points include Sagamore Hills near Holzhauer Road, downtown Brecksville on Route 82, the Richfield commercial area on Route 303, and the downtown Hudson and Valley View commercial areas. Within the park boundary, Szalay's Farm & Market, a privately owned, seasonal business, offers produce, prepared food and drinks, and other seasonal items.

Local communities and regional and state governments maintain roadways in the park. The local municipalities, in cooperation with the park, provide emergency services to park visitors as needed. The park also coordinates with local communities and other organizations on events and programs.

About 20 percent of the park’s visitation comes from out-of-state. A 2015 CUVA visitor survey showed that park and nearby park-related expenditures included lodging (36 percent of total expenditures in the area), snacks/beverages (12 percent of total expenditures in the area), and buying gas (12 percent of total expenditures in the area) (RNPS, 2015). In 2017, the National Park Service reported more than \$63 million in visitor spending in nearby communities, supporting 931 jobs in the local area and with a cumulative local economic benefit of all activities of more than \$78 million since tracking began.

CUVA visitation demographics do not match those of nearby metropolitan areas in terms of Summit County and Cuyahoga County census data. Table 1 compares demographics from the 2015 CUVA visitor use survey with the 2019 US Census for Cuyahoga County and Summit County (NPS, 2015; US Census 2019a; US Census 2019b). According to the Trust for Public Land’s ParkServe, of the 23,654 people who live within a 10-minute walk of the park, 17 percent are not white and more than 1,800 are low-income (Trust for Public Land, 2022). Disadvantaged communities, identified via the Climate and Economic Justice Screening Tool, are less than a mile from the park on the northernmost boundary and two miles from the southernmost boundary (Council on Environmental Quality, 2022). Communities identified as disadvantaged by the tool are those that are marginalized, underserved, and overburdened by pollution. These communities are at or above combined thresholds in one or more of eight criteria: climate change, clean energy and energy efficiency, clean transportation, sustainable housing, legacy pollution, clean water and waste infrastructure, health burdens, and workforce development (Council on Environmental Quality, 2022).

TABLE 1 DEMOGRAPHICS OF CUVA AND NEARBY METROPOLITAN AREAS BASED ON CENSUS DATA

Category	CUVA 2015	Cuyahoga County 2021	Summit County 2021
Ethnicity			
Not Hispanic or Latino	98%	59%	76%
Hispanic or Latino	2%	6%	2%
Race			
White	94%	64%	78%
Asian	3%	3%	4%
Black or African American	1%	31%	15%
American Indian or Alaska Native	1%	0.3%	0.2%
Native Hawaiian or other Pacific Islander	less than 1%	N/A	N/A

Overview of Use at CUVA

In 1978, CUVA recorded almost 500,000 visitors. In 2019, more than 2.2 million people visited the park, with increased regional, national, and international visitation in recent years (NPS, 2015). Figure 1 shows this increase, although accuracy was reduced as counting procedures changed several times, including updating the person-per-vehicle multiplier and changes regarding counts on non-

NPS lands. For this plan, data from 2020 and 2021 were not used for visitor-use statistics due to significant increases in visitor use tied to the COVID-19 pandemic. It is uncertain as to whether such high visitor use will continue; therefore, those data points were excluded. The park will continue to monitor long-term visitation trends.

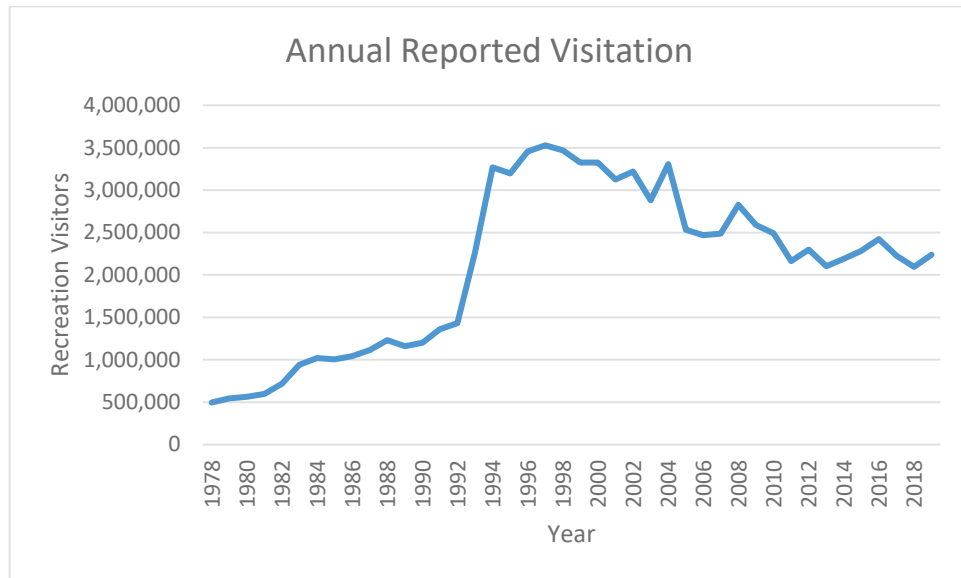


Figure 1 Annual Reported Visitation to CUVA, 1978-2019

Source: NPS Visitor Use Statistics. Note: Counting procedures changed in 1982, 1989, 1991, 1992, 1997, 2003, 2007, 2008, 2009, and 2011

Visitors participate in recreation opportunities year-round at CUVA. These include hiking, biking, fishing, birdwatching, backpacking, paddling, horseback riding, questing, picnicking, golfing, snowshoeing, cross-country skiing, ice fishing, sledding, downhill skiing, and riding the scenic train.

The extensive trail system, anchored by the Towpath Trail and enhanced by the scenic railroad and the Cuyahoga River, supports active and diverse recreational opportunities and experiences for visitors. Maintaining recreational open space in connection to the urban environment is important to CUVA goals, ensuring that recreational and educational needs of the visiting public are met.

Most visitors are drawn to three key park resources: Brandywine Falls, the Virginia Kendall Ledges, and the Towpath Trail, which runs the length of the park from north to south. These and other popular resources include sensitive resource areas such as riparian corridors, wetland areas, and microclimates. The Cuyahoga Valley Scenic Railroad also attracts an increasing number of visitors, currently averaging 15 percent of all recreational visits. The residential Environmental Education Center serves more than 10,000 people each year. Overnight experiences are provided at leased properties.

More than 115 special-use permits are granted each year for a range of activities, including weddings, equestrian competitive rides, residential uses, agriculture uses, cultural events, and sporting events. In 2017, 78 commercial-use authorizations were provided in the park, ranging from guided hiking or walking to photography instruction to farmers' markets. In 2018, about 53,000 visitors participated in activities via special-use permits. In 2019, about 24,000 visitors participated in activities via special-use permits. In recent years, there has been increased interest and diversified use throughout the

park, including the Cuyahoga River for paddling, mountain -biking on recently completed trails, continued upticks in railroad passenger numbers, robust farmers' market attendance, and many formal and informal trail-running events. In addition, the park's partnership Countryside Initiative program supports park agritourism using park land. Countryside's mission is to build a thriving local community by connecting people, food, and land in and beyond CUVA. Farmers in the Countryside Initiative program host educational programs and pick-your-own-produce opportunities and provide event rentals. Countryside hosts a summer farmers' market on Saturdays in Howe Meadow and park visitors often visit individual farm stands to purchase products. The Countryside Initiative program attracts visitors to the park while the farmers serve as informal park ambassadors.

WHY IS THIS PLAN NEEDED?

This plan is needed to identify management actions to improve opportunities and address challenges related to visiting the park. Issues include vehicle and visitor congestion at many key locations, including roads, parking lots, trails, and river-access points that can diminish the overall park experience and degrade resources. Challenges to wayfinding and orientation in the park reduce the national park experience for many visitors and diminish opportunities to fully take advantage of all the park offers. Additional negative changes to resource conditions resulting from visitor use, such as habitat fragmentation, soil and river ecology degradation, wildlife disturbance, and cultural-resource vandalism, can damage the park's ecological health and its overall natural and cultural landscapes. These challenges to visitor use and resource protection necessitate new and creative strategies to connect visitors more effectively to the park and provide continued high-quality visitor services and experiences. A long-term approach for managing visitor use at the park will provide managers the strategies and plans necessary to address current and expected challenges.

As the park continues to grow in popularity and more communities desire to engage with the park, the park needs a comprehensive management framework to provide a range of experiences and protect park resources (CUVA foundation document, 2013). The management zones from the 1977 GMP are outdated and no longer providing meaningful management direction for this complex urban NPS unit, partly because the plan was completed prior to establishment of the Towpath Trail and many of the park's programs, trails, and infrastructure. The Towpath Trail and recreational use of the Cuyahoga River and its tributaries run the entire length of this multijurisdictional park and have fundamentally changed visitor use patterns. Therefore, this visitor-use management (VUM) planning effort will amend the GMP with updated guidance for visitor use and experiences. This plan also provides updated desired conditions and zoning.

This plan is part of the CUVA "planning portfolio," a compilation of individual plans that guide park decision-making and satisfy law and policy. The CUVA CAP is a comprehensive plan that will inform future planning for specific areas. This plan amends the 1977 GMP. The NPS planning portfolio enables the use of targeted planning products to meet a broad range of park planning needs. The CUVA planning portfolio creates a logical, trackable guide for park-management actions. The CAP includes guidance on resource preservation, the types and general intensities of development, and identification and implementation commitments for visitor carrying capacities (referred to in this document as "visitor capacity"), as required by the National Parks and Recreation Act of 1978 (54 USC 100502).

The following statements define and articulate the specific needs to take action:

- Provide new and more relevant guidance for better managing changing CUVA visitation.

- Provide a range of recreational opportunities in a variety of settings to reduce congestion and user conflicts
- Improve wayfinding, circulation, and visitor information
- Address impacts on natural and cultural resources
- Intentionally plan for and design sites to manage river access
- Address changing demographics and audience needs

RELATIONSHIP TO OTHER PLANNING EFFORTS AND ACTIONS

The CAP builds on the foundation laid by previous planning efforts for the park. The following plans and programs at the park helped inform the development of the CAP.

General Management Plan (1977). The CUVA GMP provides direction for long-term park management, including high-level guidance on visitor use. Relevant guidance that will inform VUM planning includes general measures for circulation, commercial services, and resource management. This current VUM planning effort builds on and in some cases amends guidance related to VUM by adding more specific VUM guidance, as noted above. The CAP proposes an amendment to the 1977 plan to update parkwide zoning and the associated desired conditions due to significant changes in amounts and types of use, as well as changes to infrastructure that support visitor experiences. The CAP will also update visitor capacity based on changes in visitor-related infrastructure, resource condition, and amounts and types of use since the completion of the 1977 GMP.

Foundation for Planning and Management (2013). The park's foundation document provides the underlying principles that guide plan development. It identifies what is most important to CUVA (including the park's purpose and significance), notes special mandates and administrative commitments that affect park management, and identifies fundamental park resources and values. This plan was designed to be consistent with park purpose and significance and to ensure that protection of fundamental resources and values related to visitor use are used to guide the CAP. These fundamental resources and values are:

- Cuyahoga River ecosystem
- Forest ecosystem
- Ohio & Erie Canal
- Cuyahoga Valley Scenic Railroad
- Agricultural resources and rural landscape
- Virginia Kendall State Park Historic District
- Trail, water, and rail network
- Place-based education
- Community engagement

Boston Mills Conceptual Development Plan and Environmental Assessment (2012). The Boston Mills development plan identified current and potential NPS facilities in the CUVA Boston area to address circulation, parking, visitor service needs, and local resident needs. Guidance pertaining to circulation and signage informs VUM planning strategies; however, significant changes in visitor use, facilities, and circulation have occurred since the development of the 2012 environmental assessment.

Trails Management Plan and Environmental Impact Statement (2013). This statement developed a blueprint to guide the expansion, restoration, management, operations, and use of the trail system and associated amenities. The preferred alternative included an increase of 37 miles of trails, the addition of mountain-bike trails, improved river access, hike-in and paddle-in camping, and new and expanded parking areas. Some of the actions, such as the East Rim Mountain Bike Trail system and several of the river access locations, have been completed. The CAP builds on the preferred alternative and brings in additional concepts from civic engagement efforts from the CAP, such as additional accessible trails and Towpath Trail connector trails. It adds updated detail and specificity to the river access and parking recommendations consistent with current visitor-use trends and needs. New trail plan actions as well as those that have been prioritized for implementation from the 2013 trail plan are highlighted throughout this plan.

Commercial Services Strategy (2019). In 2019, CUVA completed a commercial services strategy plan to better serve park visitors, particularly with regard to new and evolving recreational amenities and uses for park land and river trails and train excursions. The National Park Service has developed this strategy to identify opportunities to enhance the park's mission and the visitor experience via the evaluation of commercial services.

Brandywine Golf Course Property . In September 2021, the Conservancy acquired the former Brandywine Golf Course in the Village of Peninsula. The Conservancy intends to retain a portion of the property and the National Park Service intends to purchase the rest. The course has been closed since 2018. Located on 215 acres on both sides of Akron-Peninsula Road south of Peninsula and adjacent to the Cuyahoga River, Brandywine Golf Course opened in the 1960s. It is south of the Village of Peninsula; west of the Virginia Kendall area of the park, Camp Manatoc, and Camp Butler; and east of the Cuyahoga River. As of July 2022, the Conservancy had begun a focused planning effort for the parcel. The National Park Service will continue to collaborate on that planning effort in addition to complementary uses that may occur on the NPS portion of the parcel.

Cultural Program and Reports

CLRs and programs focus on preserving the landscapes physical attributes, biotic systems, and use (when that use contributes to historical significance). These efforts guide long-term decision-making and management. These reports and programs include:

- **Cultural Landscape Report (1987).** This plan identified the cultural landscape of the then Cuyahoga Valley National Recreation Area and made recommendations for protection. The plan considered six themes: prehistory, settlement, transportation, agriculture, industry, and recreation in evaluating the cultural landscape.
- **Rural Landscape Management Program (2003).** This program focused on the preservation of lands and structures modified by humans for agricultural use.
- **Ohio & Erie Canal CLR (in process).** This report focuses on preserving, rehabilitating, and maintaining character-defining features associated with the Ohio & Erie Canal Historic District.
- **Cuyahoga Valley National Park ORV & Eligibility Summary (in progress).** This document identifies 16.1 miles of the Cuyahoga River, from Bath Road to the vicinity of the former Brecksville Dam, as a river with the following outstandingly remarkable values (ORV) at specified locations or segments: recreation, scenery, cultural-historic and ecological-botany. Free-flowing condition was also identified to have a riverine character, subject to a future suitability determination. This document recommends the development of interim

management strategies consistent with a recreational river, including a comprehensive river management plan, as important to the river, regardless of National Wild and Scenic Rivers status.

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Chapter 2

Existing Conditions Summary, Related Issues, and Opportunities



Photo Credit: Joe Prekop Jr.

CHAPTER 2. EXISTING CONDITIONS SUMMARY, RELATED ISSUES, AND OPPORTUNITIES

INTRODUCTION

This chapter describes the issues and opportunities addressed in this plan and summarizes related existing information and current conditions (e.g., natural and cultural resources and recreation and visitor experience opportunities in the area).

ISSUES AND OPPORTUNITIES ADDRESSED IN THIS PLAN

This section describes the key issues and opportunities addressed in this plan. The summaries and descriptions of visitor experiences and resources serve as an account of baseline conditions.

Improved Access and Reduced Congestion

Visitor use is concentrated in certain park areas. According to the 2015 visitor use survey, the most frequently visited sites were the Towpath Trail (68 percent of respondents), the Boston Store Visitor Center (27 percent), and Brandywine Falls (26 percent). The sites most reported as crowded were the Towpath Trail and Brandywine Falls. Historically, many visitors used the park for driving and picnicking and use was spread across many locations where picnicking was available. With the construction of the Towpath Trail and the Bike & Hike Trail and increased popularity of kayaking and canoeing with the designation of the Cuyahoga River Water Trail, many more visitors are experiencing the park via active recreation such as paddling, biking, hiking, and running. These activities often involve parking for several hours near one of several major north-south connectors in the park: the Towpath Trail, the Cuyahoga River Water Trail, and the Bike & Hike Trail. The Cuyahoga Valley Scenic Railroad also contributes to this trend, as visitors may park to ride the train for up to a half-day. Visitors also visit locations with amenities such as food, restrooms, and water fountains, further concentrating traffic at several locations such as Boston Store and Hunt House (NPS, 2017a).

Concentrated visitor use taxes resources in every program area and creates visitor safety issues. Program areas such as law enforcement and visitor services have limited resources to manage parking congestion and traffic issues caused by parking that overflows onto roadways. Maintenance staff have noted an increase in supplies related to visitor use and challenges in keeping up with facility cleaning and trash management because of increased and concentrated visitation at many locations. An informal 2017 study showed the Brandywine Falls parking lot full or near full 77 percent of the time during peak visitation (10 a.m. to 4 p.m.). On days when the lot was full, visitors parked on nearby roadways, decreasing visibility and causing safety concerns. At another popular park waterfall, Blue Hen Falls, the survey showed that 46 percent of the times surveyed (daily during summer months from 10 a.m. to 4 p.m.), visitors parked in non-designated areas and caused damage to vegetation or were forced into the roadway, creating unsafe conditions. That lot was full or near-full 64 percent of the time during peak visitation times (daily from 10 a.m. to 4 p.m.) and full more than 85 percent of the time on weekends. These lots have been closed due to safety concerns.

Traffic congestion is a particular challenge for CUVA and associated municipalities. Between regional traffic, multiple park entries, and the lack of connections to neighboring public transit systems, park staff spends increasingly more time managing traffic and parking. Traffic congestion is mainly on weekends and holidays during peak hours, when many visitors arrive to recreate across the park. According to the 2017 congestion assessment, “Each year the congestion issues seem to grow bigger, start earlier in the season, and last later into the fall.”

Parking areas have been identified as focal points for increased congestion, and some lots were identified in the park’s 2017 congestion assessment as having moderate to major congestion issues. Parking lots can fill quickly on weekends and during peak hours with low turnover, leading some visitors to leave, wait, or park illegally and unsafely along roads or in other areas. While some lots regularly reach capacity, others have many available spaces and are not being used close to full capacity. Full lots can deter visitation or lead to visitor conflicts. Parking lot congestion can lead to roadside overflow parking, reducing visibility and safety for passing cars and pedestrians

Varied user groups can lead to conflicts between drivers, pedestrians, cyclists, horses, and boaters in areas where groups share areas, such as along the Towpath Trail in the Village of Boston and around Cuyahoga River-access points. Visitor conflicts often result from various challenges, including crowding, competition for experiences (i.e., a lack of opportunity for temporal and spatial visitor experience dispersion), incompatible activities in the same area (e.g., bikes and dogs), and variance in desired experiences.

There is also often a mismatch between visitor demand and infrastructure scale or availability. This is most common with parking and in areas where trail and river access overlap. Ensuring that the scope and scale of access to the facilities match visitor experiences and expectations is also important. Parking resources are a main factor impacting congestion. Ultimately, CUVA parking areas must fit into the surrounding cultural and historic landscapes, limiting opportunities for too much expansion or expansion sufficient to accommodate all visitors at peak times.

Special events in the park, including park partner events such as farmers’ markets and Steam in the Valley (an annual locomotive-themed cultural event), and permitted events such as organized races can increase congestion and potential conflicts. While visitors have reportedly perceived crowding as being relatively low, congestion can lead to unacceptable impacts on visitor safety and park resources (NPS, 2017b).

Congestion, concentrated use, and visitor conflicts are of greatest concern at: Brandywine Falls, an iconic spot where many users, including large groups, visit and stay for long intervals but that has limited parking; the Boston area, where several park uses intersect and parking lots become congested on weekends; Blue Hen Falls, where parking was recently removed to direct visitors away from a dangerous road crossing; Lock 29, which is a convergence of river and Towpath Trail access, a scenic valley train station, and inadequately designed, unsafe parking areas in the community of Peninsula; the Indigo Lake parking area, which has regular parking congestion and high visitor use, and Szalay’s Farm & Market, a privately owned and operated business in the park that attracts a level of customers that exceeds the facility’s ability to accommodate them. This causes overflow into park areas such as Hunt House and Howe Meadow.

Improvements in water quality as well as improved access resulting from the designation of the Cuyahoga as an Ohio Water Trail has increased river use. There is a need to evaluate types and amounts of use at river-access points in VUM planning in conjunction with a comprehensive river

management plan to effectively manage land and river use in the corridor. The park has had no previous river management planning.

Wayfinding, Circulation, and Visitor Information

Within the 156-mile CUYA legislative boundary are 33,000 acres of woodland, wetland, meadows, farmland, and residential and public facilities in public and private ownership. The boundary abuts property that is zoned for residential, commercial, agricultural, and local parkland. There are 140 miles of primary roadway and 7 miles of secondary roadway in the park. The National Park Service manages 110 miles of hiking, equestrian, and multiuse trails. The park is within the Ohio & Erie Canalway National Heritage Area, which in total includes 110 miles of the canal corridor. Visitors can experience the heritage area using the Towpath Trail, the Cuyahoga Valley Scenic Railroad, and the Ohio & Erie Canalway America's Byway. The latter is managed by the heritage area.

The park sits within 15 municipalities. Its boundary is porous, with more than 25 entrances and many trail connections with neighboring trails managed by county or local park districts. The 2015 visitor study showed increased nonlocal CUYA visitation, with visitors relying heavily on signage and visitor information to plan visits and to navigate the park, given the complexity of jurisdictions and ownership surrounding and within its boundary.

The absence of clear signage creates wayfinding challenges and an impaired sense of place. Park areas such as Brandywine Falls have duplicate and conflicting signage from the National Park Service and other management entities. Signage and orientation for basic services such as restrooms are insufficient, contributing to visitor-created trails and associated resource damage. Some off-trail use creates safety hazards when visitors venture to dangerous ledges and waterfalls. Digital information, including website and social media, is also insufficient for trip planning and wayfinding. Information is often difficult to find and is sometimes inconsistent across internal and external platforms. The park should be leveraging multiple platforms to disseminate information.

Because of limited or confusing signage, visitors and people traveling through often do not realize if or when they have entered the park. This contributes to vandalism, illegal dumping, theft, and other undesirable behavior. The issue is exacerbated by global positioning system and recreation apps that have incorrect location information and that direct visitors to undesirable locations.

The park has many vehicular roads and road-trail crossings. Major high-speed commuter roads and highways (such as State Route 303 in Peninsula) and a lack of pedestrian and cyclist connections create safety concerns for hikers and cyclists at road crossings. High-speed traffic in important wildlife corridors also disrupts wildlife. Trail crossings of roads can be confusing and dangerous if not properly marked or if there is insufficient infrastructure (e.g., crosswalks, signs, speed bumps) to raise awareness for recreationists, to slow drivers, or to inform rights-of-way. There are also safety concerns in areas with railroad crossings, such as in Peninsula, where visitors who park at the Lock 29 lot must cross the railroad to get to the train platform. Poor road conditions also create safety issues for cyclists. Jurisdictional complexity creates challenges for repairs and long-term solutions to safety for cyclists and pedestrians. The 1977 GMP emphasized how valley floor road systems limit circulation by large numbers of people in private automobiles; the most feasible solutions to problems concerning access, circulation, and transportation modes will be identified and implemented in cooperation with all concerned agencies and organizations in the region.

Specific areas of concern for wayfinding, circulation, and visitor information include Lock 39, the Canal Exploration Center, Station Road, park headquarters, Brandywine Falls, the Village of Boston, the East Rim Trail, Blue Hen Falls, Lock 29, Hunt House, and Howe Meadow.

Improve Experience and Protection of Cultural Resources

CUVA has hundreds of cultural resources, including archeological sites and earthworks of the American Indian peoples who were influenced by the Adena and Hopewell mound-builders of southern Ohio and the more local Whittlesey tradition. Archeological sites, historic properties such as farms and villages, and the rural cultural landscape associated with European-American western migration and settlement are representative cultural resources. There are also historic structures and cultural landscapes of the 19th and early 20th centuries associated with the Ohio & Erie Canal, the Cuyahoga Valley Scenic Railroad, and the historic communities of Everett, Peninsula, Boston, and Jaite. Historic farms, country roads, the Virginia Kendall State Park Historic District, and industry remnants are elements of the Cuyahoga Valley's diverse cultural environment (NPS Foundation Document, 2013).

A primary cultural resource is the Ohio & Erie Canal and the associated Ohio & Erie Canalway National Heritage Area that surrounds the park and extends 110 miles from Lake Erie to the Ohio River. About 22 miles of the Towpath Trail and Canal extends the length of the park, including a section designated as a national historic landmark (NPS preliminary project planning report, 2019; Heberling, 2019; NPS, 2009). Extant canal features in the park include the remains of many historic structures, locks, feeders, and aqueducts, the canal prism (the water-filled earthen channel, wider at the top than at the bottom, through which boats moved as they navigated the canal), and sections of the historic towpath. The northern six miles of the canal in the park remain in a watered condition (Heberling, 2019). The canal and associated resources provide many opportunities for recreation and interpretation (NPS P3 report, 2019).

The park leases a fluctuating number of historic properties for long-term protection and preservation to private individuals; these leases are entered into when the park and its partners have had no current need for the property to fulfill broader park goals (NPS Foundation Document, 2013). The park's Countryside Initiative program, begun in 1999, is a long-term farmstead leasing program that focuses on rural landscape preservation while encouraging modern sustainable farming methods appropriate for a national park. The program helps sustain the park as an undeveloped island preserving American farm life and the rural heritage of the Cuyahoga Valley among increasing industrialization. The rural landscape is an important visitor experience at the park. Along with Countryside, many educational programs at these historic farms support new farmers and engage with and educate the general public about sustainable agriculture via tours, classes, special events, and produce for harvesting or purchase. Finally, in addition to leases of historic properties, the park administers more than 100 easements and restrictive covenants from private property owners to fulfill park goals and protect cultural resources (NPS Foundation Document, 2013).

Many historic buildings in the Boston Mills Historic District have been repurposed for visitor and administrative use, including the Boston Mill Visitor Center, the Boston Store facility, and the Stanford House. In this district, a maintained section of the canal prism, river access, and multiple heavily used trailheads, including the Towpath Trail and the Buckeye Trail to Blue Hen Falls, create experiences that immerse visitors in the cultural landscape and provide access to recreational opportunities.

The Virginia Kendall unit is one of the most valued recreational areas in the park. This area includes the Virginia Kendall State Park Historic District, which features a Civilian Conservation Corps camp; the Ledges, Octagon, and Kendall Lake shelters; and Happy Days Lodge, all constructed by the Civilian Conservation Corps. The historic district has many trailheads and a trail network that provides access to sandstone ledges and seeps, springs, forests, and other valuable natural and cultural resources (Heberling, 2019; NPS P3 report, 2019; NPS Foundation Document, 2013; NPS, 2009).

In 2020, park staff began working on a CLR for the Ohio & Erie Canal. A CLR is the primary document for guiding management and preservation of cultural landscapes. It provides managers with in-depth understanding of a property's history, evolution, and significance to enable informed and thoughtful stewardship. Treatment recommendations are consistent with the landscape's significance, condition, and planned use, and consider management goals for public access, visitor use, preservation of natural resources, and interpretation. Three of the most complex areas along the canal corridor (the Canal Exploration Center, Peninsula Lock 29, and the Boston area) were studied in more detail. The CLR treatment recommendations were developed in coordination with CAP development to ensure that actions and strategies for public access, circulation, and wayfinding are consistent across park planning efforts (NPS 1998, 2009, 2020).

CUVA's rich cultural resources are being degraded unintentionally and intentionally by visitor activities such as off-trail use, vandalism, visitor-created trails, concentrated use, and overuse. These activities, along with freeze-thaw cycles, are contributing to deterioration of the Ohio & Erie Canal and its features, including lock ruins. CUVA also has many individual historic buildings, structures, and objects. While some are adaptively reused by the park or its partners, others are vacant and in various states of disrepair. Some vacant structures that the park has been unable to stabilize have deteriorated or collapsed and are now public safety hazards. Additionally, abandoned structures represent a constant security problem, inviting vandalism and arson and degrading the visitor experience (NPS P3 report, 2019).

Visitor off-trail use and visitor-created trails are degrading historic properties, cultural landscapes, and archeological sites, including the Ohio & Erie Canal, the Wallace Farm, Brandywine Falls, and the Virginia Kendall State Park Historic District. Visitor-created river-access points are degrading the Ohio & Erie Canal and Valley Railway Historic Districts, specifically Locks 29 and 39 (NPS P3 report, 2019). Additional visitor safety, congestion, and accessibility issues further complicate cultural resource protection in high-use recreational areas. For example, the Hunt House has higher parking congestion on weekends because of Szalay's Farm & Market activities. The Virginia Kendall State Park Historic District and cultural resources along the river corridor are negatively impacted by concentration of various user groups and activity types, particularly those that cause erosion.

Since viewsheds and scenic views are not currently managed in the park, many opportunities were discussed, such as developing a comprehensive viewshed management plan; better understanding of the historic viewshed; and changes that have led to current viewsheds. Key areas needing viewshed and scenic view management were identified along the Towpath, the Cuyahoga Valley Scenic Railroad, the Cuyahoga River Water Trail, Ledges Overlook, Brandywine Falls (north and south rims), the Village of Boston, the Everett Covered Bridge, Station Road Bridge, and in draft zones such as the river corridor zone. Park staff completed a visual resources inventory in 2018 and a CLR is underway (2022) for the canal and Towpath Trail in the river corridor.

Improve Experience and Protection of Natural Resources

CUVA is an island of high ecological integrity in a densely populated urban region. The Cuyahoga Valley sits at a transition between two major US physiographic divisions (the Appalachian Mountains and the Great Plains) and is near the southern edge of Wisconsin glaciation, which receded 14,000 years ago. The Cuyahoga Valley's uplands, steep slopes, moist ravines, and floor support mixed deciduous forests, wetlands, riparian habitats, and other habitat types in various successional stages.

Because of its location, glacial history, and varied topography, the park supports a unique and wide biodiversity mix, providing corridors for migratory species and serving as a biological refuge in the context of development and climate change. The park is home to more than 900 plant species, 194 bird species, 91 aquatic macroinvertebrate species, 50 fish species, 32 mammal species, 22 amphibian species, and 20 reptile species.

CUVA contains some of the largest deciduous and mixed-forest stands in northeastern Ohio. Secondary succession and reforestation have recovered approximately 25,000 acres of forested land in the park; 42 percent of the park is "mature forest" (14,023 acres) and 31 percent is successional forest (10,412 acres). Recovering forests reflect a diverse land-use history of agriculture, residential development, timber removal, and tree plantations.

Key to the ecological diversity of the Cuyahoga Valley is the Cuyahoga River Ecosystem. It includes 24 miles of river, streams, and canals; floodplains; and more than 1,500 identified wetlands. The Cuyahoga River drains into Lake Erie, which is part of the Great Lakes ecosystem and the world's largest freshwater lake system. Once known as the "river that burned," the Cuyahoga served as a symbol of the plight of America's rivers and the need for federal clean-water legislation. The river ecosystem has been altered and confined by park infrastructure (roads, rails, trails, and structures) but maintains natural river characteristics and its health and recovery are central to park biodiversity.

CUVA's rich natural resources are being damaged unintentionally and intentionally by visitor activities related to off-trail use, fragmentation (a network of roadways, rails, and trails), and runoff and erosion. Off-trail use has degraded vegetation, soils, and sensitive riparian areas such as waterfalls, seeps, and springs. Off-trail use has also contributed to the local spread of invasive species that "hitchhike" on visitors from one part of the park to another and degraded native vegetation communities. Control of invasive species is a particularly challenging resource-management issue. In areas that are sensitive to off-trail use, soil compaction alters water infiltration and runoff patterns, promoting erosion and degrading native plant communities. High visitor use can also exacerbate hill-slope sloughing and sedimentation of riparian areas, degrading fish, salamander, and macroinvertebrate habitat in rivers and streams. This is of particular concern at visitor-created access points along headwater streams and in the river corridor. Visitor-created trails from adjacent communities and new developments to access and connect to the Towpath Trail and to access outstanding natural features off existing trails and parking areas are proliferating.

The extensive network of roadways, rails, and trails (formal and visitor-created) across the park tend to fragment habitat and create disturbances that negatively impact wildlife and degrade park ecosystem health. The direct and indirect effects of roads and trails lead the list of CUVA resource-management issues. Direct effects include mortality of deer, small mammals, birds, amphibians, and reptiles. Roadways alter water movement and retention across the park, contributing to flooding and increasing water velocity, promoting erosion. There are opportunities to create wildlife crossings at

roads, reassess parkwide speed limits, and work with local authorities to reduce speed limits. Reducing speed limits in the park would also benefit the soundscape and reduce the frequency of user conflicts such as bicyclist/automotive issues.

Impervious surfaces such as roads and parking lots also contribute to runoff and erosion. Runoff pollutes streams and wetlands with sediment, nutrients, and chemical contaminants, and winter salting leaches into wetlands and vernal pools, altering water chemistry and negatively impacting wildlife. Parking lot runoff can lead to erosion in adjacent permeable and vegetated areas. Maintenance of roads, rails, and trails can restrict river and stream natural geomorphological processes and degrade system health and related habitat. Fragmentation as a result of roads, trails, and rails degrades CUVA habitat quality by limiting the amount of “interior” habitat and maintaining extensive habitat “edges” throughout the park. These edges help provide a buffer between developed areas with high human activity and undeveloped areas with high wildlife activity. Roads and trails function as corridors for nuisance wildlife species such as raccoons and brown-headed cowbirds that thrive in edge habitats and provide a vector for the spread of nonnative invasive plant species. These corridors make it easier for nuisance species to penetrate the forest interior and further degrade these habitats.

Climate change is projected to degrade natural resources and change recreation patterns, further exacerbating ongoing natural resource impacts. The CUVA climate is typical of northeast Ohio, with four distinct seasons and many temperate days year-round. Climate projections for the next 100 years forecast higher temperatures and increased precipitation, which could alter vegetation types from temperate mixed forest to temperate broadleaf forest. Invasive species, degraded river water quality, and higher flood intensity present additional challenges that are expected to increase as a result of climate change (Fisichelli et al., 2015). Flooding can damage visitor infrastructure such as river-access points, the Towpath Trail, and parking areas. In addition, there is a high correlation between CUVA temperature and historical visitation. Projected temperature changes are expected to result in a 2%–4% increase in annual NPS visitation from 1979–2013 to 2041–2060, with a 7%–15% increase in shoulder-season visitation, a 1%–3% decrease in peak-season visitation, and a 13- to 31-day expansion of the visitation season overall (ibid.). CUVA currently has multiple spring periods and inconsistent winter freezes, resulting in increased visitation on warm days, further exacerbating poor trail conditions, visitor-created trails, and resource degradation. Shifting and increased visitation related to climate change will likely further exacerbate CUVA natural resource impacts.

Diverse Camping Opportunities

There are opportunities for new and improved camping activities at CUVA. Current camping opportunities are minimal and limited to private properties near the park. Until recently, five primitive campsites were available in the park at the Stanford Campsite near Boston Mills Road. The five primitive campsites were intended for Towpath Trail and other recreation trail users, with vehicle drive-in camping prohibited. The campsites required reservations during the summer and park staff reported that demand for these sites and for other CUVA overnight experiences exceeded supply. These sites were managed by the Conservancy. Operations were discontinued after the 2019 summer season because of many factors, including undesirable campsite locations due to proximity to interstate bridges and a lack of trees. User data suggest limited repeat visitation to these sites.

Opportunities for the park to provide diverse camping experiences are considered in the context of regional opportunities, partnerships, and long-distance trail use for experienced and inexperienced campers. A range of camping opportunities might include car camping, primitive camping along

trails or the river, backpacking, cycling, and boating campsites. There is potential for a concessions contract or other partnership support to manage or physically locate campsites. Partners already operate several backcountry campsites along the river and trails, and there is an opportunity to provide longer-distance hiking or paddling experiences. Other landowners in and near the park are also considering camping; their efforts need to be factored into park decision-making.

Relationships with Communities

The park has many valuable partnerships throughout the region, including Eastern National, the Conservancy, Countryside and the farmers of the Countryside Initiative, the Cuyahoga Valley Scenic Railroad, and the Ohio & Erie Canalway National Heritage Area. Other partners include Cleveland Metroparks and Summit Metro Parks agencies; the Village of Peninsula, Boston Township, and several other local municipalities; and many other groups, organizations, and businesses with strong ties to local communities. There are also opportunities to increase collaboration and strengthen relationships with current partners, including those involved in regional transit and public health, and to seek potential new partners. Partnerships can support CUVA in addressing current issues and provide expertise, resources, and support, expanding CUVA organizational capacity.

CUVA geography physically connects the park to many partners; increased coordination can help standardize resource monitoring and park messaging across jurisdictions, enabling better resource management and visitor experiences. Resource management such as invasive species removal and stormwater management can improve via collaboration with neighboring partners so that similar methods are used around park boundaries, improving CUVA resource conditions. There are also opportunities for partnerships to preserve land and protect resources across different land ownerships. When parking lots are full, visitors often park along roadsides, which degrades vegetation and soils. Areas with observed negative resource impacts that are directly tied to off-trail use include Brandywine Falls; Blue Hen to Buttermilk Falls; Twin Sisters Falls; Virginia Kendall Ledges; other areas connected to sensitive waterfalls, seeps, springs, and riparian areas; and Locks 29 and 39, which have issues related to visitor-created river-access points.

Partnerships with gateway communities and neighborhoods to improve signage and connector trails could enhance access and connectivity. Messaging and visitor information can be enhanced if partners promote unified messaging about CUVA and reinforce its national park identity. The park can partner with local jurisdictions to improve the NPS identity, such as via changes to guardrails, signs, and utilities.

Close partnerships also provide the opportunity for the park to become more integrated with surrounding communities and for park staff to better understand communities' needs and look for ways that the park can serve as a resource or a catalyst for achieving shared goals.

Visitor Services

CUVA manages a commercial services program that includes several commercial-use authorizations, fifteen short- and long-term leases, and a number of cooperative agreements that include elements of commercial uses. There are currently no concessions within the park.

Opportunities related to commercial use are abundant, as CUVA has diverse recreational activities and a large regional population. Public outreach completed in 2019 as part of the development of the commercial services strategy identified commercial opportunities for visitor activities on the river, the Towpath Trail, and the Cuyahoga Valley Scenic Railroad. Additional civic engagement

completed for this plan in the spring of 2021, identified opportunities for new commercial uses including bikeshares or rentals, rivercraft rentals, and guided adventures. Additionally, updates to permitting and partner operation policies, including how, when, or where they take place and accompanying fee agreements, can streamline uses and raise funds to support park projects. There are also opportunities for improved visitor experiences that may arise from the park's special-use program or lands and leasing programs. These include providing access to new visitor experiences and potential business opportunities for the community.

Opportunities for commercial services are specified in the park's commercial services strategy plan (2019). Special park uses are currently evaluated via common criteria to determine appropriateness and potential impacts on resources and mitigations.

Equitable and Inclusive Experiences

CUVA is located between two demographically diverse metropolitan areas and is surrounded by urban, suburban, rural, and pastoral landscapes. The park was established as part of the Parks to the People initiative in the 1970s, with a goal of bringing national park units to urban areas. However, the long-lasting implications of historic and systemic exclusion of people of color at CUVA, as with other US national parks and public lands, continues today: CUVA visitation does not reflect the diversity of its surrounding communities. Thirty percent of Cuyahoga County residents and fifteen percent of Summit County residents identify as Black or African American while one percent of visitors in 2015 identified as Black or African American (NPS, 2015; US Census, 2019a and 2019b). Other racial and ethnic groups are also underrepresented (table 1, above). The park is currently involved in activities to engage underrepresented groups, including a robust community-engagement program and new partnerships with local and diverse public-school districts. These activities include youth engagement, service opportunities, an African American scholars round table, and incorporation of diverse stories, perspectives, and representation in interpretation and marketing materials. These efforts, although substantial, have not substantially increased CUVA visitor diversity to more closely reflect surrounding communities. CUVA needs to identify and mitigate barriers to recreation for diverse populations via this planning effort.

The park has established partnerships with organizations to serve marginalized populations and park staff have a strong desire to more effectively integrate the park experience with nearby communities' identities. This planning process provides the opportunity to engage with these organizations, their members, and communities to evaluate the issues and opportunities identified by park staff, as well as to identify new issues and opportunities. The evaluation and comparison of issues and opportunities will contribute to the development of actions and strategies that aim to provide equitable and inclusive access to serve neighboring communities. There is an opportunity to address low vehicle ownership in the area and its resulting limitations to park access by improving multi-modal access to the park. Evaluation of existing conditions for visitor activities, facilities, and services with a focus on access and a diverse range of visitor experiences will allow park staff in consultation with communities, affinity groups, local schools, and others to identify and prioritize opportunities to improve equitable and inclusive access and experiences, including optimizing CUVA health benefits. Additional possibilities to improve equitable and inclusive access include offering new experiences and services such as lodging, programming, or guiding and improvements to facilities such as picnic areas, parking areas, trailheads, and visitor centers.

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Chapter 3

General Management Direction



Photo Credit: Tim Fenner

CHAPTER 3. MANAGEMENT DIRECTION

INTRODUCTION

This chapter outlines the general VUM direction for CUVA. The management plan provides high-level guidance on how the park will be managed. This chapter expands on the GMP and answers the question, “What are we managing for?” with regard to visitor use. This includes descriptions of park zoning and desired conditions.

DESIRED CONDITIONS

Desired conditions outline the vision for resource conditions, visitor experiences and opportunities, and facilities and services that an agency strives to achieve and maintain in a particular area. They help park managers answer the question, “What are we trying to achieve?” Desired conditions focus on fundamental resources and values (see chapter 1); the visitor experience opportunities associated with them; and the types and levels of management, development, and access that would be appropriate in a particular location. The desired conditions for zones articulate what kinds of experiences and opportunities should be provided for specific areas of the park (these are presented in the zoning section of this chapter below).

Desired conditions for this plan were initially developed by an interdisciplinary park team. Those draft desired conditions were then refined with input from operating partners and additional park staff. Public input to inform desired conditions, zoning, actions, and strategies was collected via a robust civic-engagement process that included the general public and other stakeholders. This input was incorporated in the zoning and desired conditions descriptions below.

ZONING

Park managers use zoning to delineate geographic areas for which desired conditions and appropriate management actions differ. The zoning as defined in the 1977 GMP is in some areas outdated and no longer accurately reflects CUVA management strategies. In the more than 45 years since the GMP was developed, the park has undergone substantial changes, making GMP zoning inadequate to guide management decisions. Key changes include: restoration of degraded sites such as the Krejci Dump and the former site of the Richfield Coliseum; construction and further development of a robust trail network, including the Towpath Trail and the Cuyahoga River Water Trail; changes in recreation patterns such as increased mountain biking and river recreation; and years of ecological, cultural resource, and visitor use data collection. Therefore, this plan proposes new zones and descriptions to clarify the context and direction for these zones.

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Cuyahoga Valley National Park

Community Access Plan

Proposed Management Zones

Legend:

- Boarding Station for Scenic Railroad
- Key Location
- Ohio & Erie Canalway America's Byway
- Ohio & Erie Canal Towpath Trail
- Bike & Hike Trail
- Trail
- Railroad
- Cleveland Metroparks
- Summit Metro Parks
- National Park Service Boundary

Proposed Zones:

- High Value Experience Zone
- Natural Zone
- River Corridor Zone
- Sensitive Resource Zone

*Ohio & Erie Canal Towpath Trail is within the Canal Cultural High Value Experience Zone

The map displays various management zones along the Cuyahoga River corridor, including:

- Canal Cultural High Value Experience Zone*
- Pinery Narrows Sensitive Resource Zone
- Station Road Wetlands Sensitive Resource Zone
- Station Road Bridge
- Twin Sisters Falls
- Station Road to Boston Mills River Corridor Zone
- Red Lock/Jaite Area
- Brandywine Ski Area
- Stanford Run/Hines Hill High Value Experience Zone
- Boston Area & Boston Mill Visitor Center
- Boston Mills Historic District High Value Experience Zone
- Brandywine Falls
- Stanford Run/Hines Hill High Value Experience Zone
- A-P North Sensitive Resources Zone
- Peninsula Land Property
- Virginia Kendall High Value Experience Zone
- Peninsula Kendall Area High Value Experience Zone
- Peninsula to Bath Road River Corridor Zone
- Blossom Woods Natural Zone
- Blossom Music Center
- Hunt House/Beaver Marsh/Ira Area
- Adams Run Natural Zone
- Botzum to Akron Northside Station
- Botzum Natural Zone
- Everett Covered Bridge
- Indigo Lake/Howe Meadow
- Hale Farm & Village
- Everett Cultural High Value Experience Zone
- Furnace Run South - Oak Hill Natural Zone
- Coliseum Natural Zone
- Columbia Sensitive Resources Zone
- Blue Hen Falls Natural Zone
- Interstate Natural Zone
- Peninsula/Lock 29 Area
- Oak Hill/Everett Area
- Peninsula to Bath Road River Corridor Zone
- Furnace Run South - Oak Hill Natural Zone
- Cuyahoga Valley Environmental Education Center
- Wheatley Rd
- Ira Rd
- W Bath Rd
- W Steel Corners Rd
- W Bath Rd
- Akron Peninsula Rd
- Rockside Rd
- Alexander Rd
- Pleasant Valley Rd
- Brecksville Rd
- Snowville Rd
- Boston Mills Rd
- Main St
- Wheatley Rd
- Ira Rd
- W Bath Rd
- W Steel Corners Rd
- W Bath Rd
- Akron Peninsula Rd

Scale: 0 0.5 1 2 Miles

North

Produced by Denver Service Center Planning Division 7/5/2022

Produced by Denver Service Center Planning Division 7/5/2022

Figure 2 CUVA CAP Proposed Management Zones

Summaries and Desired Conditions for Zones

Table 2 provides the zone summary and desired conditions by resource for each zone.

TABLE 2 MANAGEMENT ZONES					
Resource	Across All Zones	High-value Experience Zone	Natural Zone	Cuyahoga River Corridor Zone	Sensitive Resource Zone
Summary	Management actions and visitor experiences align with the NPS mission to preserve unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. Emphasis is placed on those fundamental resource values (Foundation Document, 2013) essential to achieving the park’s purpose and maintaining its significance.	This zone includes some of the most exceptional resources at CUVA and encompasses the most-visited areas in the park, including Brandywine Falls, the Ledges, and the Village of Boston. This zone provides visitors with opportunities to experience exceptional cultural, natural and scenic resources via facilitated programming and self-guided learning. Facilities balance protection of key/sensitive resources with high-volume visitation and are built to support larger groups of visitors. These areas involve more management than other zones because of higher use levels and protection of key natural and cultural resources.	This zone protects and enhances natural resources, preserving their biological integrity and maintaining ecosystem health with an emphasis on the forest ecosystem fundamental resource value. This zone provides visitors with opportunities to experience natural sights and sounds, ecological processes, historic properties, and cultural landscapes. Trails and other facilities in this zone provide visitors with opportunities for self-reliance and solitude. Resource management in this zone is focused on natural processes.	This zone maintains and enhances the scenery, natural and cultural resources, and recreational experiences in the river corridor. The zone emphasizes the fundamental resource of the Cuyahoga River ecosystem and its outstandingly remarkable values (scenery, recreation, cultural-historic/pre-historic, and ecological-botany). This zone provides visitors with opportunities to experience natural sights and sounds and the Cuyahoga River, cultural resources of the Ohio & Erie Canal, and the agricultural resources of the rural landscape in the river valley. Facilities and infrastructure in this zone align with the free-flowing nature of the river. Riverbank stabilization is pursued as necessary to maintain essential park infrastructure (roads, towpath, and railroad), but comprehensive management throughout the zone promotes free-flowing conditions to allow natural processes and improved ecological health.	This zone provides the highest level of protection of the park’s most sensitive natural resources. Resource management preserves and protects the ecological integrity of mature forests, high-quality wetlands, rare plant communities, unique geologic features, and habitats such as seeps and springs.
Visitor Use and Experience	<ul style="list-style-type: none">Recreation opportunities are compatible with enjoyment and protection of resources.Viewsheds are maintained for visitor enjoyment via driving, riding the scenic railroad, paddling, and hiking through the park.Visitors have equitable access to a full range of park experiences. Accessibility is prioritized and provided for via ADA facilities and access to adaptive mobility devices. Cost does not prohibit participation in recreational opportunities. Visitors feel safe, welcome, invited, and encounter diverse park staff and volunteers reflective of the broader community.Interpretation promotes personal connections and includes stories of diverse communities.The park serves as a community gathering and stewardship learning hub.Visitors can experience personal renewal via scenic beauty, healthy foods, and recreation opportunities.	<ul style="list-style-type: none">Visitors have opportunities to view and connect with high-quality natural and cultural resources such as Brandywine Falls and the Ledges.Visitors have access to orientation, wayfinding, signage, and facilitated experiences such as interpretive programming and media, small-scale events, and informal contacts with park staff and volunteers.Visitors access this zone’s resources and interpretive materials via vehicles and trails.Visitors appreciate the park’s urban context and its connection to the Ohio & Erie Canalway National Heritage Area, the rural countryside, and regional communities.Visitors may experience higher visitor density with less crowding outside of key areas.	<ul style="list-style-type: none">Visitors have opportunities to engage in low-impact recreation such as hiking, birdwatching, and interpretive walking.Interpretive services emphasize natural features, high-quality streams, rare plants and animals, and large forest tracts.Visitors access this zone via trails.Visitors experience natural sounds and connection to nature.Visitors experience minimal crowding and a sense of remoteness.	<ul style="list-style-type: none">Visitors have opportunities for enjoyment and self-reliance along the Cuyahoga River, its banks, point bars, and other features.Visitors have access to orientation, wayfinding, signage, and facilitated experiences such as interpretive programs and media, small-scale events, and informal contacts with park staff and volunteers. Signs along the river corridor orient visitors without detracting from scenic values.Visitors have opportunities for multimodal connections between hiking trails, the Cuyahoga Valley Scenic Railroad, the Towpath Trail, and the Cuyahoga River Water Trail.Visitors can experience natural sights and sounds and historic viewsheds, with an appreciation of the park’s urban context and its connection to the Ohio & Erie Canal heritage corridor.High visitor use occurs in developed areas and is less common in more remote areas.Visitors are aware of river-access points and are prepared for variable river conditions with necessary skills and equipment. Visitors have access to water quality information and can learn about flooding as a natural process.Visitors are aware that the river corridor connects the park to Cleveland and Akron, and trails link the river corridor to neighboring communities.	<ul style="list-style-type: none">Visitors are aware of their surroundings and understand their role in conservation while enjoying a relatively primitive experience.Dark night skies and natural sounds are a priority in this zone.There is little to no evidence of visitor use impacts on sensitive resources. Trails and facilities available to visitors in this zone are limited and restricted to appropriate areas.Visitors are aware that this zone is managed differently because of resource sensitivity.

Resource	Across All Zones	High-value Experience Zone	Natural Zone	Cuyahoga River Corridor Zone	Sensitive Resource Zone
	<ul style="list-style-type: none"> ○ Camping and overnight use provide a range of visitor experiences, including connection with natural and cultural settings, opportunities to experience natural sounds and night skies, and opportunities for self-reliance. 			<ul style="list-style-type: none"> ○ Multiple-use areas on the Towpath Trail are separated to promote safety. 	
Cultural Resources	<ul style="list-style-type: none"> ○ Cultural resources related to pre-contact Indigenous people, Euro-American settlement, transportation, agriculture, industry, and recreation are protected in the park landscape. ○ Stories connected to cultural resources that reflect the diverse and complex history of the Cuyahoga Valley, the people, and the park are interpreted. Traditional ecological knowledge and Native American perspectives are featured. African American perspectives are prominent and interpreted. First-person accounts are used to communicate stories as much as possible. ○ Historic properties tied to industrial and economic growth in the Cuyahoga Valley provide opportunities for visitors to understand and connect with complex stories and impacts on communities and the natural environment. ○ Traditionally associated people have access to and use of park resources in accordance with applicable law. Traditional cultural properties are maintained to achieve national register eligibility and the expectations of traditionally associated people and Tribal Nations. 	<ul style="list-style-type: none"> ○ Visitors have opportunities for immersive experiences with historic properties and cultural landscapes. ○ Historic districts provide a sense of history and place. ○ Park actions enhance the cultural environment via adaptive reuse, rehabilitation, maintenance, and preservation of significant features and views. 	<ul style="list-style-type: none"> ○ Historic properties and cultural landscapes are maintained to convey their architectural significance and associations with nature and the historic setting. ○ Land is restored after materially degraded historic and non-historic structures that do not meet historic preservation objectives are removed. ○ The rural agriculture program is sensitive to natural resource needs. ○ Natural resource management integrates cultural landscape protection. 	<ul style="list-style-type: none"> ○ Historic properties and their cultural landscapes convey their architectural significance and associations with the river, canal, and railroad. ○ The Ohio & Erie Canal corridor is preserved as a cultural landscape to help visitors visualize its history and function. ○ The Ohio & Erie Canal corridor's national historic landmark-designated sections are balanced with long-term maintenance and sustainability of the Cuyahoga River watershed. ○ Adaptive reuse of historic buildings complements and enhances qualities of the cultural and natural landscape. ○ The railway's historic character is protected and preserved, along with scenic views from the train. 	<ul style="list-style-type: none"> ○ Historic properties and cultural landscapes are maintained to convey their architectural significance and associations with nature and the historic setting. ○ Land is restored after materially degraded historic and non-historic structures that do not meet historic preservation objectives are removed. ○ The rural agriculture program is sensitive to natural resource needs. ○ Natural resource management integrates cultural landscape protection.
Natural Resources	<p>Natural resources stand out in a regional and national context.</p> <ul style="list-style-type: none"> ○ Streams provide high-quality habitat and support native aquatic resources. Healthy tributaries contribute to clean water flowing into the Cuyahoga River. ○ Sensitive natural resources are protected from trampling, 	<ul style="list-style-type: none"> ○ Natural resource priorities guide programs and management decisions, including trail design and maintenance actions that can affect visitor use and experiences. ○ Ecosystem restoration efforts consider and integrate visitors in a way that the public feels invested. 	<ul style="list-style-type: none"> ○ Large forested tracts are protected and expanded where possible. ○ Sensitive resources are protected and natural processes prevail in high-value ecological areas. ○ There is minimal evidence of natural resource disturbances that are directly tied to visitor use, such as trampling, invasive species, and graffiti. 	<ul style="list-style-type: none"> ○ Cuyahoga River biological health is emphasized and natural fluvial processes such as flooding and erosion are permitted as infrastructure protection allows. ○ Natural landscapes in the river corridor contribute to a relatively wild and primitive river-based experience. ○ Floodplain connectivity and natural conditions are restored to the extent possible to achieve healthy vegetation and to maximize stormwater storage capacity along the river. 	<ul style="list-style-type: none"> ○ Natural resources are maintained or restored to their highest possible ecological integrity. ○ Protection of sensitive natural resources is prioritized over visitor access. ○ External threats to resources, such as watershed development and erosion, are explored and actively addressed.

Resource	Across All Zones	High-value Experience Zone	Natural Zone	Cuyahoga River Corridor Zone	Sensitive Resource Zone
	<ul style="list-style-type: none"> visitor-created trails, and other damage. Forest tract size is increased. Fragmentation and edge-effect impacts are reduced. Degraded natural resources are restored and invasive species do not impair native ecosystems. Wildlife-vehicle collisions are minimized and mitigated, with specific emphasis on amphibians on roads. Prescribed fire is an allowable management tool for invasive species control and habitat health improvement. Dark night skies and natural soundscapes are preserved as possible. Leave-no-trace principles and resource manage strategies are routinely communicated to reduce visitor impacts and improve understanding of resource protection. The park's high-quality resources are interpreted to counter the notion that ecosystems in a metropolitan area are too degraded to merit protection. 		<ul style="list-style-type: none"> Natural communities and processes are restored following human-caused disturbance. 	<ul style="list-style-type: none"> Designated ORV are preserved, highlighted, and enhanced consistent with eligibility language under the Wild and Scenic Rivers Act. Other river segments protect valuable cultural resources and infrastructure. The viewshed along the river provides for year-round visibility of the river and associated features. Use of rip rap and engineering of banks is minimal. 	
Infrastructure, Facilities, and Services	<ul style="list-style-type: none"> Infrastructure is sized to fit the zone and experience so that visitors can recreate near sensitive resources but not threaten preservation for future public enjoyment. Facilities and infrastructure along roadways, trailheads, and parking lots enhance the visitor experience and the landscape. Infrastructure provides optimal visitor experiences and minimizes safety risks near roadways, rail crossings, and other potential hazards. Facility design minimizes potential flood impacts. Visual identity is consistently welcoming and includes visual cues such as design elements on park signs, use of natural materials, and clarity on where to park, walk, and access park resources. Visitor services provide opportunities for visitors to 	<ul style="list-style-type: none"> High-quality trails and recreation facilities are designed and managed to prevent resource damage, enhance the visitor experience, and meet diverse visitor needs and expectations. Key visitor-use areas (i.e., Boston Mills, Brandywine Falls, Kendall Lake, the Ledges, and Canal Exploration Center) provide comprehensive information and orientation about trails, features, and resources. Mowing and other grounds work highlights and enhances fundamental resources while accommodating high visitation. Administrative functions are kept to a minimum and support visitor experiences. New construction, modification, or expansion of facilities is compatible with existing cultural and natural landscapes in terms of size, scale, scope, and design. 	<ul style="list-style-type: none"> Facility scale does not impose on a natural experience. Sustainable trail practices match trail designs to natural resource conditions. Wayside exhibits are used sparingly and describe critical resources in this zone from parking areas and other developed sites. Environmental Education Center operations enhance and do not detract from the natural environment. Students at the center can experience diverse, representative ecosystems and cultural resources. 	<ul style="list-style-type: none"> Facilities and services support visitor experiences and do not detract from scenic values. New infrastructure and hardened surfaces are minimized to improve drainage, habitat, and resiliency to climate change. Future development matches the character of the Cuyahoga River corridor. Operations balance the preservation of natural, cultural, and pastoral landscapes in the river floodplain while promoting a water-based recreational experience and protecting designated ORVs. Infrastructure supports multimodal experiences for visitors such as hiking, the Towpath Trail, and the water trail. River access is sustainable, resilient to climate change impacts, harmonizes with the natural landscape, and does not alter fluvial processes. 	<ul style="list-style-type: none"> Facilities and services support the protection, restoration, and enhancement of ecologically and culturally sensitive resources in this zone. New infrastructure and facilities are minimized to ensure protection, restoration, and enhancement of ecologically and culturally sensitive resources. Administrative activities are limited to reduce unnecessary disturbance.

Resource	Across All Zones	High-value Experience Zone	Natural Zone	Cuyahoga River Corridor Zone	Sensitive Resource Zone
	<p>engage in diverse recreational opportunities that fit in the context of the zone description (e.g., guided hiking, cross-country skiing, and birding). These visitor services are provided by diverse vendors and partners.</p> <ul style="list-style-type: none">o Facilities that are inconsistent with the viewshed are blocked from view.				

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Chapter 4

Management Strategies and Actions



Photo Credit: DJ Reiser

CHAPTER 4. MANAGEMENT STRATEGIES AND ACTIONS

INTRODUCTION

This chapter identifies management strategies and actions to achieve and maintain the desired conditions described in chapter 3 related to visitor use of the park and to resolve issues described in chapter 2. This chapter begins with parkwide actions. Actions for specific zones and locations follow.

In this document, the terms “options” and adaptive actions are used to describe management strategies and actions that are being considered but are not proposed as those which staff believes are the most feasible to implement. Options are strategies and actions that park staff believe may be feasible but would require additional evaluation. The term is also used for strategies and actions that provide an additional or different approach to the proposed action. Adaptive actions are those that would be considered if visitor experience or resource condition indicates that a change in management is needed.

Actions directed by the CAP will be accomplished in the years following plan creation and will be updated as needed. Future funding needs for actions are evaluated in the plan; however, there is no guarantee that the actions proposed in this plan will be funded. Park staff will continue to look for creative and diverse ways to leverage funding opportunities for plan implementation. Budget restrictions, requirements for additional data or regulatory compliance, and competing national park system priorities may prevent implementation of some actions.

Many of these actions will require the collaboration with regional and local partners from a variety of disciplines due to the complex jurisdictions in the park, as well as park commitment to work with community partners to achieve shared goals.

The map displayed in Figure 3 provides a geographic orientation to some key management strategies and actions in the plan.

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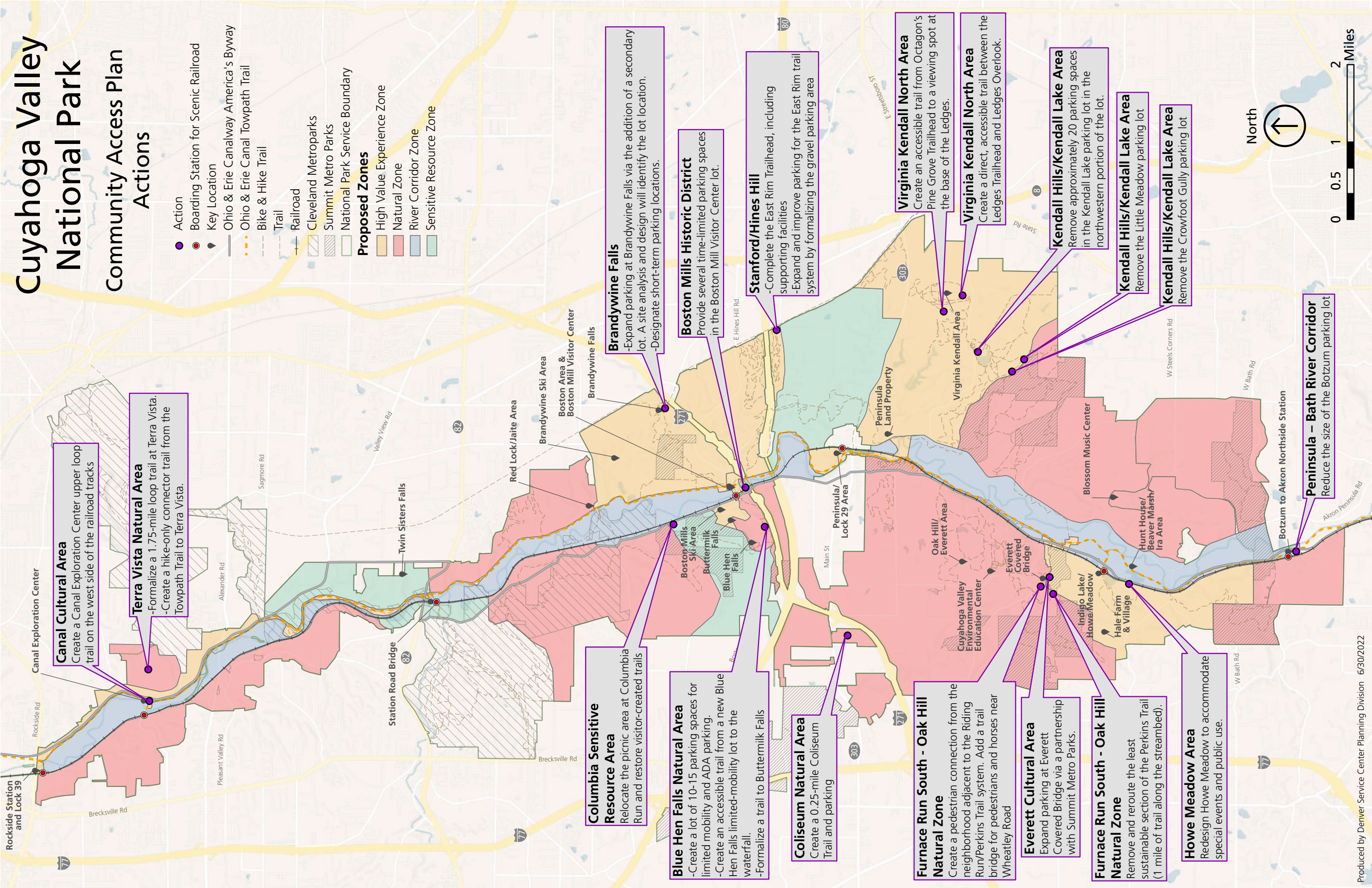


Figure 3 CUVA CAP Actions

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PARKWIDE AND GENERAL ACTIONS/COMMON TO ALL OR MULTIPLE ZONES

Improved Access and Reduced Congestion

River Access

- Improve facilities for paddlers and create additional river access locations (see table 3 and figure 4).

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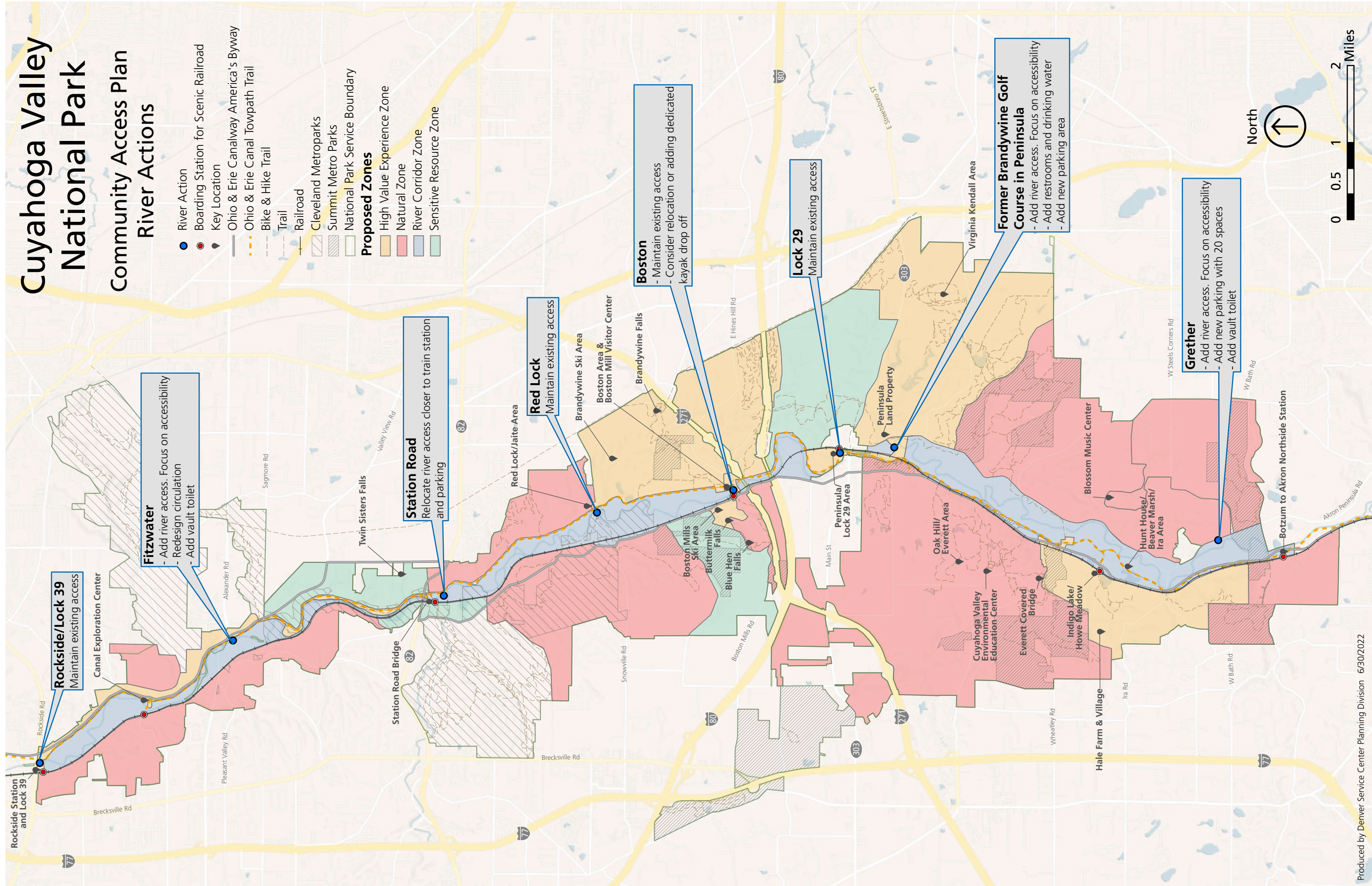


Figure 4 CUVA CAP River Actions

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TABLE 3 SUMMARY OF RIVER ACCESS ACTIONS AND LOCATIONS

Site	Analysis Area and Visitor Capacity*	Status	Parking	Accessible (ADA) Path to River	Restroom/ Water	Train Access	Towpath Trail Connection
Grether	Peninsula to Bath Road River Corridor - increase	New	New parking with 20 spaces	Add	Add vault toilet/no water	No	No
Former Brandywine Golf Course in Peninsula	TBD after land acquisition occurs	New	New parking: larger lot; accommodates buses	Add	Add restrooms, drinking water station	Consider future development	Consider future development with the addition of a bridge over the river
Lock 29 – at or near current site	Peninsula/ Lock 29 - decrease	Existing: small scale access	No change	No	Existing	Existing	Existing
Boston	Boston Mills Historic District - maintain	Existing	No change	No	Existing	Existing; consider relocating or adding a dedicated kayak-only drop-off east of current depot	Existing
Red Lock	Station Road to Boston River Corridor - maintain	Existing	No change	No	Existing/no water	No	Existing
Station Road	Station Road to Boston River Corridor - maintain	Existing	No changes	Add	Existing	Existing; relocate river access closer to station	Existing
Fitzwater	Rockside to Station Road River Corridor - increase	New	No changes to parking; redesign circulation to accommodate oversized vehicles shuttling boats	Add	Add vault toilet/no water	No	Existing
Rockside/ Lock 39	Canal Cultural - increase	Existing	No changes	No	Existing/no water	Existing	Existing

* Each river access site is within an analysis area for determining visitor capacity. See appendix B for more information about how the river access actions align with the visitor capacity for that analysis area.

- Improve accessibility for river use
 - Design more accessible ramps by reducing slopes and widening access trails at Grether, the former Brandywine Golf Course, Station Road, and Fitzwater.
 - Evaluate river fishing opportunities to identify and improve locations for river fishing access.
 - Support organized group access to the edge of the river in select locations (Grether, Boston, Peninsula, and Rockside/Lock 39).

- Provide for more accessible access (gentle slopes to river and areas for groups as large as fifteen to gather).
- Ensure that areas are supported by bus parking and restrooms.

Parking

- Resize parking lots to match current and future use levels (see table 4 for summary. See specific locations for more details) (Note: Expansion and reduction of parking lots were evaluated on a site-by-site basis to better match parking availability to current and planned needs. All lot expansion and reduction projects would prioritize ecological sustainability, such as avoiding sensitive areas and following sustainable design and construction practices with an emphasis on stormwater management.)

TABLE 4 SUMMARY OF PARKING ACTIONS AND LOCATIONS

Parking Area	Proposed Changes	Details	Options
Blue Hen Falls	Parking improvements	Provide access to Blue Hen Falls from the Boston area via improved signage and additional formalized parking. Establish a small, limited-mobility-only lot at the location of the former trailhead.	Implement parking reservations at the planned limited mobility lot
Boston Mill Area	Parking improvements	Provide several time-limited parking spaces at the Boston Mill Visitor Center to ensure parking availability to people coming specifically for the visitor center.	N/A
Boston Mill Area	Partnership parking actions	Partner with Vail Resorts to provide additional parking in the Boston area at the Boston Mills Ski Area, including a more formalized Blue Hen Falls Trailhead.	N/A
Botzum Trailhead	Parking removal or decreases in number of parking spaces	Reduce the parking lot size, retaining the northern portion near the current trailhead and boarding station.	N/A
Brandywine Falls	Parking improvements	Provide for large vehicle and bus parking.	Implement parking reservations
Brandywine Falls	Parking expansions or new parking	Add a secondary lot. A more detailed site analysis will be completed to identify the location.	N/A
Coliseum Site	Parking expansions or new parking	Add a small lot to support a 0.25-mile trail.	N/A
Crowfoot Gully	Parking removal or decreases in parking spaces	Fully remove the lot.	N/A
East Rim Mountain Bike Trails	Parking expansions or new parking	Formalize the gravel parking area, adding spaces.	Construct a second parking area near the former Lorenz property.
Everett Covered Bridge	Parking expansions or new parking	Expand parking via a partnership with Summit Metro Parks to address equestrian/oversized vehicle parking and provide for additional passenger vehicle parking.	N/A

Parking Area	Proposed Changes	Details	Options
Everett Village	Parking removal or decreases in parking spaces	Remove informal, roadside parking.	N/A
Happy Days North Lot	Parking improvements	Redesign the lot to improve ecological function. Move parking away from the forested edge, creating a buffer between sensitive forest to the west and north. Provide for a small expansion of the lot to the east.	N/A
Hunt House/ Bolanz Road	Parking removal or decreases in parking spaces	Remove informal, roadside parking.	N/A
Hunt House/ Bolanz Road	Partnership parking actions	Collaborate with Szalay's Farm & Market to address parking challenges near Hunt House.	N/A
Ira Trailhead	Parking improvements	Provide for large vehicle and bus parking.	N/A
Kendall Lake	Parking removal or decreases in parking spaces	Remove about 20 parking spaces in the northwestern portion of the lot.	N/A
Ledges Trailhead	Parking improvements	Provide for large vehicle and bus parking.	N/A
Little Meadow	Parking removal or decreases in parking spaces	Fully remove the lot	N/A
Red Lock	Parking improvements	Work with local jurisdictions to improve roadside parking, bike crossing, and safety for river users. Formalize a pull-off area on the south side of Highland Road for river access drop-off and pickup, including improved signage.	N/A
Terra Vista	Parking improvements	Formalize the trailhead parking.	N/A

Access to Trails and Park Facilities

- For new trail development, prioritize the north end of the park to redistribute visitation and improve trail access near Cleveland and its immediate suburbs.
- Mitigate congestion and visitor use conflicts via a suite of communication tools.
 - Employ parking notification and information features available via the NPS content management system and other digital platforms.
 - Increase staffing and volunteers for parking management and improved visitor information.
 - Improve signage for parking, including variable message signs and temporary signage to disperse visitors and alleviate parking lot congestion.
 - Improve digital trip planning with an emphasis on dispersing visitation.
- Improve marketing and communication about how to visit the park using Cuyahoga Valley Scenic Railroad as an alternative to personal vehicles. Include an emphasis on parking at Rockside and Akron Northside stations.

- Resize parking lots to match current and expected use levels.
- Introduce time-limited spaces in parking lots that have short- and long-term uses as needed.

Wayfinding, Circulation, and Visitor Information

Wayfinding

- Develop an updated comprehensive park sign and wayfinding plan to provide:
 - Improved trail signage, particularly at trailheads, key trail junctions, and in developed areas where trails may be difficult to find.
 - Wayfinding between locations and trails managed by the National Park Service and other entities within park boundaries.
 - Visitor information related to park regulations, trail etiquette, and resource protection.
 - Integration of sign and wayfinding programs from the Ohio & Erie Canalway, the Buckeye Trail, and other long-distance trail networks that use park trails.
 - Alignment with the Ohio State Bike Route system.
 - Wayfinding from highways, including signage that lets people know that the park is ahead.
 - Signage in local communities to improve awareness of the park.
 - Signage between neighboring business districts and the park.
 - Increased awareness of the location of the park between Akron and Cleveland.
 - Sign and vegetation design that conveys entrance into a national park at major entrances.
 - Identification of pickup locations for ride-hailing services at Boston Mill Visitor Center, Ledges Trailhead, and Brandywine Falls.
- Maintain and share accurate trail geographic information system geodata to provide wayfinding information via apps and websites maintained by the National Park Service and other organizations.
- Develop a printed comprehensive trail map.
- Work with local government organizations to create more consistent visual park identity along access roads. Ensure that protocols related to management of signs, guardrails, and utility lines are aligned. Strive for greater consistency across jurisdictions and improved integration with the park environment.
- Work with community partners to increase awareness in Akron and Cleveland via signs, waysides, temporary exhibits, and public art projects.

Circulation

- Improve the ability to circulate within the park by bicycle via multi-use connector trails.
 - Support Cleveland Metroparks and Summit Metro Park development of the multi-use Sagamore Connector Trail from Canal Road to the Bike & Hike Trail.
 - Evaluate environmental and cost feasibility of multi-use connector trail(s) between the Towpath and Bike & Hike Trail that generally follow the routes of the closed sections of Stanford Road and Akron-Peninsula Road.
 - Expand access, improve signage, and increase communication about access to park trails from the Bike & Hike Trail.
- Communicate about park trails that are part of long-distance trail networks (Buckeye Trail, Ohio to Erie Trail, Towpath Trail, Cleveland to Pittsburgh Trail Corridor) via signs, digital communication, and trip-planning tools.

Experience and Protection of Cultural Resources

- Preserve the Ohio & Erie Canal corridor cultural landscape and enhance visitors' ability to visualize the canal by implementing the Ohio & Erie Canal CLR.
- Use chip-sealed asphalt as the Towpath Trail surface treatment.
- Develop a viewshed management program associated with roads, trails, railroad, and overlooks.
- Partner with Countryside to develop the Countryside Center as a hub for learning about agriculture and the park's rural landscape at Hammond Cranz Farm. Include information about park farms, local foods and farming, and opportunities for demonstration gardens, workshops, and food events.
- Conduct oral history interviews to better understand ethnographic resources and their continued importance to visitors, affiliated Tribal Nations, and other associated communities. Ensure that oral histories are publicly accessible.
- Partner with affiliated Tribal Nations to expand on-site interpretation of Native American cultural and ethnographic resources in locations where this can be accomplished without compromising resource protection.

Option

- Retain crushed limestone as the primary Towpath Trail surface.

Experience and Protection of Natural Resources

- Address visitor-created trails via trail formalization or restoration to natural conditions, prioritizing areas with rare plant communities and other sensitive resources. Key areas include the Ledges, Brandywine Gorge, Blue Hen Falls, and wildflower viewing areas near Everett Covered Bridge.
- Install educational signs explaining the sensitive nature of resources and the ecological reasons for restoring visitor-created trails to natural conditions.
- Partner with local governments to implement wildlife road crossings, with an emphasis on amphibians.
- Work with local communities to determine an appropriately scaled local road system that allows for visitor and community access while reducing fragmentation of sensitive forest.
- Implement boot-brush wayside exhibits that highlight the role of trail use in spreading invasive plants.
- Monitor and treat invasive species along trails, targeting "watch list" or new invading species.
- Create a protocol for short-term trail closures when use in wet conditions causes excessive trail widening.
- Create a robust citizen science program.

Relationships with Communities

Gateway Communities

- Participate in main street and gateway community initiatives with local communities.

Public Transit and Transportation

- Partner with regional transit authorities to improve service to the park.
 - Market existing routes that are near the park. Provide clear information about how to access the park from these routes. Ensure well-marked sidewalk and trail connections between transit stops and park amenities. Highlight transit connections to Cuyahoga Valley Scenic Railroad boarding stations.
 - Work towards future expanded bus service to the park.
 - Improve use of existing services for people with disabilities or who are low-income.
- Partner with relevant jurisdictions to improve road safety on corridors not owned by the National Park Service to:
 - Plan for signage, pedestrian crossing facilities, and traffic calming at high-volume pedestrian/bike locations, with a focus on Boston, Blue Hen Falls, and Peninsula.
 - Conduct planning activities with the US Federal Highway Administration, including a road safety audit, a local road safety plan, and a Safe Transportation for Every Pedestrian workshop.
 - Create bike lanes along the Cuyahoga Valley floor and roads leading into the valley. Prioritize Riverview Road and roads with connections to bicycle trails, such as Truxell and Vaughn.
 - Reduce speed limits in the park to benefit wildlife, visitor safety, sound quality, and air quality.
- Provide funding support to schools and community groups for transportation to the park for park-based programs.
- Provide shuttle service from low-income, community-based locations to the park.
- Actively work with Cuyahoga Valley Scenic Railroad and other partners to extend rail access to Cleveland.
- Collaborate in regional trail planning to improve regional connectivity, with a focus on underserved communities.
- Improve trail connectivity between the park and large regional trails that connect to smaller, local trail systems.

Diverse Camping Opportunities

- Provide primitive camping opportunities to support multi-day kayak, bike, and long-distance hiking experiences. Primitive campsites would have minimal facilities that blend into the landscape and have minimal impact on park resources.
 - Implement campsite recommendations along the Buckeye Trail from the 2012 trail plan and environmental impact statement (EIS). These include three locations: 1) West, between Boston Mills and Columbia Roads; 2) Dugway, between Old Akron-Peninsula Road and the interstate bridges; and 3) O'Neil Woods, between Bath and Ira Roads.
 - Improve public communication about similar camping opportunities offered by other landowners within park boundaries.
 - For kayak/river-based opportunities, provide gravel bar camping as conditions allow, available via a permit or reservation system. Available areas will be determined seasonally based on river conditions. Camping will be limited to 3-4 tents per gravel bar.
- Work with partners and the private sector to track emerging developed camping opportunities and identify whether those will meet park visitor needs.

- Develop group camping opportunities at Howe Meadow and manage via a permit system or in connection with special events or special park uses.

Options

- Developed camping: If a suitable partner or private facilities do not come to fruition within five years, following a market analysis, provide camping experiences such as vehicle-based camping, recreational vehicles, and camping trailers. The following locations will be considered:
 - The former Brandywine Golf Course
 - Howe Meadow
 - Robinson Field
- Group camping: Provide group camping at the Cuyahoga Valley Environmental Education Center for education groups using the Center.
- Primitive camping: If actions for camping in support of a trail or river experience do not meet demand, add primitive hike-in/bike-in/boat-in camping at the former Brandywine Golf Course property.

Equitable and Inclusive Access

In-park Visitor Experiences

- Add small-scale amenities that support diverse forms of recreation and create a welcoming environment. Examples include bicycle maintenance stations, electric-bike-charging stations, gender-inclusive restroom signage, and clusters of picnic tables for use by larger families and groups.
- Expand use of dog-waste-bag stations.
- Assess community needs and improve picnic facilities for those coming to the park with picnicking as a primary activity.
- Tell stories of diversity, inclusion, and exclusion via wayside exhibits. Provide a reflection area with a setting that is conducive to this kind of experience. Consider the former Brandywine Golf Course as a location.
- Create or enhance partnerships to provide programs and events targeted to the interests of diverse communities, including LGBTQ+; Black, Indigenous, and People of Color; and immigrant groups.

Accessibility

- Develop an accessibility self-evaluation and transition plan for the park. This will include an analysis of parkwide accessibility and a transition plan with recommendations to remove accessibility barriers and update services, activities, and programs to effectively support and communicate to visitors with disabilities. It will also identify opportunities to promote and facilitate universal design.
- Evaluate locations throughout the park for expansion of ADA-accessible experiences and focus on providing access to all fundamental resources as identified in the park's foundation document. Ensure a variety of accessible trail opportunities, including diverse terrain and distances. Site-specific recommendations are highlighted in the zones in which they occur.
- Ensure that the Towpath Trail is completely accessible, particularly addressing issues south of Frazee House.

- Update trail maps and bulletin boards to show grade changes and other information needed for people with mobility challenges.
- Assess relatively flat trails for opportunities to install additional benches and handrails.
- Provide clear facility descriptions via web-based platforms and apps so that visitors with disabilities can plan visits in detail.
- Install a lift that allows adaptive sports equipment to be loaded onto the train.
- Add adaptive platforms to aid visitors in mounting/dismounting horses at relevant bridle trailheads.
- Determine approaches to accommodate adaptive mountain biking equipment on East Rim Trail.
- Provide visitor information on accessibility services provided by external organizations to complement park-provided services.
- Routinely offer programs that orient staff from organizations that serve people with disabilities to view CUVA accessibility improvements and explain how to use the park safely.

Health and Wellness

- Implement programs that promote the park for physical and mental health, wellness, and healing, including:
 - Increase use of currently underutilized playfields in Virginia Kendall Park, Howe Meadow, and at Canal Exploration Center via programs and services that support health and wellness, including providing equipment supporting field games as part of picnic shelter rentals.
 - Create spaces for relaxation, meditation, and mindfulness, including strategic placement of benches and other comfortable seating with pleasant views; inclusive programming such as yoga, meditation, restorative walks, and healing hikes; and self-guided mindfulness experiences.
 - Introduce signage, publications, and digital communication that is fun, aesthetically pleasing, and informative about exercise and mindfulness for youths and adults.
 - Promote spaces as gathering places for community members and to facilitate social interaction.
 - Routinely integrate social-emotional learning in youth and education programs.
 - Partner with health and wellness providers to share information about how to visit the park and offer programs and services for health and wellness.
 - Develop health and wellness programs and messages to recruit diverse individuals and community organizations to participate in the park. Work with community partners to co-design programs that achieve community needs.
 - Participate in community-led healthy aging initiatives to promote volunteerism, outdoor recreation, and park programs.
 - Expand and emphasize healthy eating in partnership with Countryside as part of health and wellness programming.

Community Partnerships

- Work with community partners to increase awareness about visiting the park.
 - Increase presence of NPS staff and volunteers in community locations to promote the park.
 - Recruit community-based ambassadors/park experts to promote the park.

- Provide information to community residents via partner communication channels.
 - Partner with organizations that create community via social media, especially for people who do not have friend or family networks that are involved in outdoor recreation.
- Engage in regional partnerships that address equitable access to parks and open space in northeast Ohio more broadly.

Visitor Services

- Use administrative tools such as commercial-use authorizations, leases, and special-use permits to expand visitor services. Promote opportunities to diverse providers, making sure to reach minority, women, and LGBTQ+-owned businesses. Provide mobile or load-and-go bike-rental opportunities at select locations.
- Provide rental equipment for water-based recreation (i.e., canoes, kayaks, paddle boards, fishing equipment).
- Continue to provide free access to adult and child cross-country skis and snowshoes in the Village of Boston.
- Limit new facility development associated with rentals and recreational equipment storage. Work with providers that operate outside of park boundaries or on private lands in the park via the commercial-use authorization program.
- Allow for the following guide services:
 - Fishing (lake and river)
 - Long-distance hiking (all trails in park)
 - Bike packing (Towpath Trail)
 - Hike-in camping
 - River use
 - Beginner outdoor recreation with an emphasis on diverse audiences
- Provide kayak drop-off and pickup services at locations that are inadequately served by Cuyahoga Valley Scenic Railroad's kayak shuttle service, including:
 - Grether
 - Former Brandywine Golf Course
 - Station Road
 - Fitzwater
 - Rockside

Additional background and information on commercial services can be found in the 2019 commercial services strategy.

DESCRIPTION OF MANAGEMENT ACTIONS FOR SPECIFIC ZONES

High-value Experience Zone

Common to the Entire Zone or Multiple Locations In the Zone:

- Provide nature-based art and play opportunities, such as participatory art installations.
- Allow food trucks in parts of the high-value experience zone.

Everett Cultural Area

Improved Access and Reduced Congestion

- Expand parking at Everett Covered Bridge via a partnership with Summit Metro Parks to address equestrian/oversized vehicle parking and provide for additional passenger vehicle parking.
- Collaborate with Szalay's Sweet Corn Farm & Market to address parking and congestion challenges near Hunt House. Separate vehicular traffic from pedestrian traffic via construction of a walkway between the two locations. Remove informal parking.
- Remove informal parking in the Everett area, including near the Everett Ranger Station.

Wayfinding, Circulation, and Visitor Information

- Improve the visual quality at the Everett Covered Bridge to create a more welcoming experience. This includes improving the landing areas at each end of the bridge and improving viewing areas along the creek towards the bridge.
- Improve access to Furnace Run for education programs.
- Establish an Ira-Howe Meadow connector trail between Hammond-Cranz to Hale Farm & Village as part of the creation of the Countryside Center, as identified in the trail plan.
- Evaluate the environmental and cost feasibility of a bicycle connector trail between Everett Covered Bridge and the Towpath Trail. Implement if feasible.

Experience and protection of cultural resources

- Interpret prehistoric resources in this area.
- Restore the historic character and appearance of Everett Village. Consider adaptive reuse and including buildings in the park leasing program.

Experience and protection of natural resources

- Formalize existing visitor-created trails that provide access to wildflower viewing in the area and remove and naturalize extraneous visitor-created trails.

Equitable and Inclusive Access

- Address wheelchair circulation issues in Hunt House.

Option

- Evaluate horse parking on Everett-Wheatley connector for direct access to Riding Run trail.

Howe Meadow Area

Wayfinding, Circulation, and Visitor Information

- Pursue a development concept plan to redesign Howe Meadow to better accommodate special events and public use. Integrate Indigo Lake into the planning area.
 - Identify long-term facility, infrastructure, and sustainability needs. Consider bringing municipal water to the site, expanding restrooms, refurbishing the Howe Meadow barn for programming and large group use, improving picnic opportunities, and improving connections to local roads.
 - Create a multi-use trail between Indigo Lake and Howe Meadow to provide bicycle access from the Towpath Trail to Howe Meadow.

- Locate the Indigo Lake train boarding station so that it can serve Howe Meadow, Indigo Lake, and Hale Farm & Village.
- Plan for accessibility and stormwater runoff mitigation in the site design.
- Provide for paddling opportunities at Indigo Lake that are tied to special events, permits, and administrative use.

Kendall Hills/Kendall Lake Area

Improved Access and Reduced Congestion

- Remove approximately 20 parking spaces in the Kendall Lake parking lot in the northwestern portion of the lot.
- Remove the Crowfoot Gully and Little Meadow parking lots.
- Promote this area for use during peak times.
- Continue directing most cross-country and other large-scale trail-running events to Pine Hollow Trailhead. Assess feasibility of improving facilities (i.e., restrooms, trash) to support large groups.

Wayfinding, Circulation, and Visitor Information

- Formalize Pine Hollow as a trailhead for hikers to the Wetmore trail system via messaging and signage. Address safety issues related to the road crossing.
- Improve wayfinding at Kendall Lake to disperse use to underused trails.

Experience and protection of natural resources

- Manage aquatic plants/resources to facilitate fishing.
- Reduce Canada geese impacts on the grounds adjacent to Kendall Lake.

Equitable and Inclusive Access

- Make the Kendall Lake shelter available for public rental via managed access.
- Improve the condition of Kendall Lake for fishing and non-motorized boating.

Virginia Kendall North Area

Improved Access and Reduced Congestion

- Redesign Happy Days north lot to improve ecological function. Create a buffer between the lot and sensitive forest to the west and north. Provide for a small expansion of the lot to the east.
- Improve restroom facilities at the North Happy Days lot to support use as a trailhead.
- Communicate peak times at the Ledges via the website, social media, and signage. Direct visitors to the Octagon and Kendall Lake parking lots during peak times. Encourage off-peak use.

Wayfinding, Circulation and Visitor Information

- Connect Peninsula to Virginia Kendall hiking trails via the former Brandywine Golf Course.

Experience and protection of cultural resources

- Complete a CLR for the Virginia Kendall area.

Experience and protection of natural resources

- Employ education, engineering, and enforcement actions to reduce trampling of native plants and soil compaction.
 - Add boardwalks in sensitive areas such as Ice Box Cave and near seeps/springs.
 - Improve trail delineation.
 - Temporarily close areas to off-trail travel.
 - Formalize areas for off-trail exploration.
- Evaluate effectiveness of current enforcement of climbing regulations and enhance efforts where needed via staff or volunteer presence.

Equitable and Inclusive Experiences

- Create a direct, accessible trail between the Ledges Trailhead and Ledges Overlook.
- Create an accessible trail from Octagon's Pine Grove Trailhead to a viewing spot at the base of the Ledges.
- Improve the visibility and accessibility of picnic areas, ensuring their effectiveness in meeting current community needs and expectations. Remove underused picnic areas.

Options

- Improve the tunnel leading to Happy Days Lodge from the north parking lot.
- Evaluate removal of Shady Knoll picnic area because of current low use.
- Identify connector trails in the Virginia Kendall area and designate with wayfinding.
- Evaluate a bicycle trail from the Bike & Hike Trail to the Happy Days Lodge area to provide bicycle access to the Virginia Kendall area.
- Make the Ledges Trail unidirectional to reduce visitor encounters.

Peninsula/Lock 29 Area

Improved Access and Reduced Congestion

- Implement recommendations in the Ohio & Erie Canal CLR in the Lock 29 area, including separating pedestrian and bicycle traffic on the Towpath Trail and improving trail access from Lock 29 trailhead.
- Create a trail connection between the Lock 29 trailhead and the Lock 29 overflow parking areas.
- Promote travel to Peninsula via the train rather than departing from Peninsula by directing passengers to park at the Rockside Station, the Akron Northside Station, or other stations when possible.
- Monitor Lock 29 trailhead use to observe any effects of Peninsula parking fees.
- Discontinue large-scale special events in the Peninsula area during peak visitation periods.
- Improve railroad crossings per recommendations in the 2017 rail station area safety study.
- Work with the Conservancy for Cuyahoga Valley National Park to plan and implement river-focused park amenities on the former Brandywine Golf Course. Include parking to relieve pressure at the Lock 29 trailhead and in the community.

- Promote Deep Lock Quarry Metro Park as alternative parking in Peninsula to access the Towpath Trail.

Experience and Protection of Cultural Resources

- Implement recommendations in the Ohio & Erie Canal CLR in the Lock 29 area, including improving access and interpretation of significant cultural resources and reestablishing historic viewsheds.

Options

- Identify and implement additional parking proposals based on village-wide parking analysis.
- Add an alternative train boarding location on the former golf course.
- Construct a pedestrian bridge over the river from the former Brandywine Golf Course to the Towpath Trail.

Brandywine Falls Area

Improved Access and Reduced Congestion

- Expand parking at Brandywine Falls by adding a secondary lot. A more detailed site analysis and design will be completed to identify the lot location and connections to the existing trailhead.
- Provide for large vehicle parking (RVs and buses) in the existing park lot.
- Promote Stanford Trailhead (in development in Boston) as an alternative Brandywine Falls trailhead.
- Implement improvements to the existing parking lot to improve circulation and entering/exiting, including restriping and formalizing delineation.
- Designate short-term parking locations for visitors only going to the falls on the boardwalk. Monitor and evaluate effectiveness of implementation, including enforcement of short-term parking.
- Promote picnic areas in other locations to disperse long-term visitation.
- Harden targeted segments of the Gorge Trail.
- Include signage and messaging about congestion at Brandywine Falls to encourage use of other areas in the park.

Wayfinding, Circulation, and Visitor Information

- Formalize a waterfall viewing area on the north side of the gorge. Provide for visitor circulation to the viewing area.
- Explore options with Summit Metro Parks to promote accessing Brandywine Falls by bicycle from alternative access points.
- Expand the picnic area to the east of the restrooms.
- Emphasize safety messages related to risk of falling at Brandywine Falls and creek water quality via signs, bulletin boards, and digital communication.

Experience and Protection of Natural Resources

- Formalize opportunities to view Brandywine Creek along the Brandywine Gorge Trail. Restore and naturalize visitor-created trails.

Adaptive Actions

- Implement a timed entry or reservation system.
- Establish a Seven Falls Trail to disperse use and create an additional access point. The 1.5-mile Seven Falls Trail would provide a multiple-loop-option connection to Brandywine Falls and the proposed Highland Connector Trail to the Bike & Hike Trail and the Towpath Trail.
- Alter the lower observation deck to discourage visitors from hopping the railing in sensitive areas.

Boston Mill Historic District

Improved Access and Reduced Congestion

- Provide several time-limited parking spaces in the Boston Mill Visitor Center lot to ensure parking availability to people coming specifically for the visitor center.
- Implement recommendations in the Ohio & Erie Canal CLR in Boston to improve visitor circulation via accessible walkways throughout the district and formalize Boston trailhead parking, redesigning it to provide for improved ecological conditions and stormwater runoff. Visually screen the lot with vegetation. Specifics will be informed by an archeological site study and analysis of parking needed once the Stanford trailhead opens.
- Implement facility and landscape improvements that provide for use of the Johnston Rhode building and associated grounds for community and education programs.
- Provide additional long-term parking by completing Stanford trailhead parking and communicating its use to trail visitors.
- Divert visitors not needing to specifically access the Boston Mill Visitor Center or other facilities in the Boston area to other Towpath Trail or river-access points.
- Distribute visitors using the train by marketing the Boston Mill train-boarding station as a shuttle stop rather than as a starting point for park excursions. Work with the Cuyahoga Valley Scenic Railroad to monitor use levels and adjust messaging as needed.
- Formalize signage and parking for Blue Hen Falls access in the Boston area.

Experience and Protection of Cultural Resources

- Implement recommendations in the Ohio & Erie Canal CLR in Boston focused on improved visibility and visitor understanding of the Ohio & Erie Canal.

Stanford/Hines Hill

Improved Access and Reduced Congestion

- Complete the East Rim Trailhead, including supporting facilities.
- Expand and improve parking for the East Rim trail system by formalizing the gravel parking area.
- Add signage to redirect visitors to other popular areas to visit, thereby dispersing use.

Wayfinding, Circulation, and Visitor Information

- Reroute the Stanford Trail around Stanford House as part of the project to develop the Stanford Trailhead.

- Evaluate environmental and cost feasibility of multi-use connector trail(s) between the Towpath and Bike & Hike Trail that generally follow the route of the closed section of Stanford Road.

Experience and Protection of Cultural Resources

- Pursue removal of structures targeted for vandalism, when feasible.

Option

- Provide additional parking for East Rim Trail via construction of a second parking area near the former Lorenz property.

Adaptive Actions

- Monitor use of the planned Stanford Trailhead.

Canal Cultural Area

Improved Access and Reduced Congestion

- Implement recommendations in the Ohio & Erie Canal CLR for Canal Exploration Center to improve visitor circulation via implementation of a bicycle bypass around the west side of Canal Exploration Center to reduce congestion in front of the building.
- Promote multimodal opportunities from Rockside Station in partnership with Cuyahoga Valley Scenic Railroad.
- Prioritize programs and services that enliven the area and complement the interpretive experience provided by Canal Exploration Center in order to encourage park visitors in other areas to disperse to the Canal Cultural Zone.
- Promote the proximity of this area to Cleveland-area residents.

Wayfinding, Circulation, and Visitor Information

- Promote multimodal opportunities from Rockside Station in partnership with Cuyahoga Valley Scenic Railroad.
- Provide safe pedestrian/bicycle access to the Countryside farms on the east side of Canal Road from the Towpath Trail.

Experience and Protection of Natural Resources

- Improve scenic quality via vegetation management and ensure that management is consistent with recommendations in the Ohio & Erie Canal CLR.
- Formalize visitor-created trails along the riverbank to minimize erosion and provide access for fishing.
- Create a Canal Exploration Center upper loop trail on the west side of the railroad tracks, as defined in the trail plan (pages 68 and 76).

Experience and Protection of Cultural Resources

- Implement recommendations in the Ohio & Erie Canal CLR for the Canal Exploration Center to improve access and protection of significant cultural resources including Lock 38

and provide additional opportunities for visitors with disabilities. The CLR also recommends adding a covered picnic shelter.

- Support the area's graphic identity via actions described in the CLR.

Visitor Services

- Provide bike rentals/bikeshare program based out of Canal Exploration Center or Rockside Station.

Adaptive Actions

- Formalize a viewing location for the new heronry near Stone Road if the viewing area becomes congested.
- Monitor visitor-created trails from river fishing and restore to natural conditions as needed.

River Corridor Zone

Common to Entire Zone

Improved Access and Reduced Congestion

- Encourage use of Station Road Bridge Trailhead to reduce congestion in more crowded locations such as Boston.
- Provide amenities, including kayak and bike lock areas, to facilitate single-vehicle paddle trips.

Wayfinding, Circulation, and Visitor Information

- Connect the Valley Trail to Jaite parking.
- Manage vegetation along the Towpath Trail corridor to direct use to appropriate locations.

Experience and Protection of Cultural Resources

- Implement recommendations in the Ohio & Erie Canal CLR that improve visibility and protection of the canal corridor landscape. Prioritize maintenance of the canal prism with special focus on the watered segment between Station Road and Rockside. Implement recommendations to maintain water in the canal.
- Rehabilitate significant views.

Visitor Services

- Implement boat/bike/fishing rentals to draw visitors to new areas in the river corridor. Locate rentals, except for temporary, small-scale "pop-up" operations, outside the river corridor.
- Implement shuttle and/or kayak ferry service to meet needs beyond what can be accommodated by the train.

Relationships with Communities

- Partner with Cleveland Metroparks and Summit Metro Parks to increase and improve river access along the Cuyahoga River Water Trail and connections to Lake Erie Water Trail.

Peninsula – Bath River Corridor

- Provide for large vehicle and bus parking at Ira trailhead.
- Expand pull-off locations on the Beaver Marsh boardwalk.
- Reduce the size of the Botzum parking lot, retaining the northern portion near the current trailhead and boarding station.

Rockside to Station Road Corridor

- Evaluate locations on the Towpath Trail for viewpoints/platforms separated from trail for visitors to linger, enjoy the scenery, and view wildlife.

Station Road Corridor to Boston Mills Corridor

- Improve circulation in the Red Lock parking lot.
 - Work with local jurisdictions to improve roadside parking, bike crossing, and safety for river users.
 - Formalize a pull-off area on the south side of Highland Road for river access drop-off and pickup, including improved signage.

Natural Zone

Common to Entire Zone

Experience and Protection of Cultural Resources

- Preserve the rural landscape, manage buffer zones with farmers, and ensure appropriate use of agricultural fields included in the Countryside Initiative to minimize impacts of agriculture on natural resources while improving views to enhance visitor engagement with the park farms.

Experience and Protection of Natural Resources

- Develop a seasonal management plan for resource protection of springs to reduce visitor use impacts.
- Monitor social media and websites for posts that geographically tag sensitive resources.
- Remove or restore roadside pullout areas, targeted to sensitive areas.
- Work with partners and municipalities to reduce infrastructure in the natural zone to reduce fragmentation (e.g., removal of roads, rights-of-way) and limit spread of invasive species.

Botzum Natural Area

- No actions identified.

Blossom Woods Natural Area

- Evaluate removal of Maple Wood picnic area because of current low use levels.
- Increase communication about the Wetmore trail system to redirect visitors to the area.
- Communicate to public that Pine Hollow is an alternative parking area (including for horse trailers) when Wetmore is full.

Adams Run Natural Area

- Partner with Blossom Music Center to decrease impermeable surfaces and enhance stormwater management (i.e., pollinator gardens, native plantings).
- Educate visitors about Summit Metro Park opportunities.
- Educate visitors about the connection between Sarah's Vineyard and the park, via signs and web presence.
- Monitor off-trail use in collaboration with Summit Metro Parks.

Furnace Run/Oak Hill Natural Area

Improved Access and Reduced Congestion

- Provide information and orientation that increases use of the non-reservable picnic shelter at Horseshoe Pond.
- Improve access to the edge of Sylvan Pond for school and public pond programs.
- Reduce washboarding of gravel entrance drive and parking area at Oak Hill Trailhead.
- Expand Tree Farm Trail parking capacity per the trail plan. Evaluate whether a 20 percent expansion will meet needs..
- Direct visitation to the day-use areas at this location via improved signage and online communication.
- Assess installing a simple pole shelter with picnic tables at the south edge of Oak Hill Trailhead to serve educational groups.

Circulation

- Connect Tree Farm Trail to Peninsula.
- Following up to Everett Road removal, create a pedestrian connection from the neighborhood adjacent to the Riding Run/Perkins Trail system. Add a trail bridge for pedestrians and horses near Wheatley Road to allow loop trail experiences that combine Perkins and Riding Run trails.
- Establish a trail connection from Everett Covered Bridget to Hale Farm & Village.

Experience and Protection of Natural Resources

- On the Environmental Education Center property, pursue restoration and resource-management efforts to create best examples of native habitats and resources (e.g., wetlands, pollinator gardens, maintained meadows) and make them accessible for teaching purposes.
- Remove and reroute the least-sustainable section of the Perkins Trail (one mile of trail along the streambed), as identified in the trail plan (page 53.)

Coliseum Natural Area

- Create a 0.25-mile Coliseum Trail with a small, elevated viewing platform and small parking area, as identified in the trail plan (page 76).

Blue Hen Falls Natural Area

Improved Access and Reduced Congestion

- Create a seasonal agreement with Boston Mills and Brandywine to use a portion of their parking lot from spring to fall to provide visitor access to Blue Hen Falls.
- Create a lot of 10-15 parking spaces for limited mobility and ADA parking to provide closer access to Blue Hen Falls at the former Blue Hen Falls parking area. This action adds detail to the proposed action in the trail plan (page 61).
 - Reroute Buckeye Trail from main driveway to limited-mobility parking.
- Provide access to Blue Hen Falls from the Boston area with improved signage and additional formalized parking to serve the entire area.

Option:

- Implement managed access for limited mobility parking at Blue Hen Falls.

Wayfinding, Circulation, and Visitor Information

- Create an accessible trail from a new Blue Hen Falls limited-mobility lot to the waterfall.

Experience and Protection of Natural Resources

- Formalize a trail to Buttermilk Falls that replaces visitor-created trails and provides for sensitive resource protection, as identified in the trail plan.
- Formalize a visitor-created trail to allow creek access below the waterfall while protecting off-trail resources.
- Close areas with sensitive resources to off-trail travel.
- Restore areas with soil compaction, eroded banks, and loss of native plants.
- Install signs to support wayfinding and show where off-trail use is prohibited.

Old Carriage Natural Area

Improved Access and Reduced Congestion

- Maintain landscape in a way to make it noticeably less developed than the Towpath and maintain the historic landscape.
- Maintain buffer zones at the edge of CUVA to ensure quiet and sense of remoteness.

Experience and Protection of Cultural Resources

- Collaborate with affiliated Tribal Nation communities to develop a treatment plan for the Greenwood Village site and improve its interpretation and education.

Snowville Woods Natural Area

Improved Access and Reduced Congestion

- Direct visitors to this area for long, primitive hikes.
- Improve wayfinding and connector trails from headquarters to the Buckeye Trail.
- Monitor parking on the roadside to access trails.

- Improve trail connectivity to the Towpath Trail for loop and long-distance hiking via increased maintenance of the connector trail from Riverview Road at Snowville to Vaughn Road.

Terra Vista Natural Area

Improved Access and Reduced Congestion

- Create a formal trailhead with additional signage and information (page 66 of the trail plan).
- Formalize and maintain a 1.75-mile loop trail at Terra Vista as ecological conditions improve with restoration.
- Create a hike-only connector trail from the Towpath Trail to Terra Vista (pages 65 and 75 of the trail plan).

Experience and Protection of Cultural Resources

- Develop interpretation information and programs that focus on site restoration.

Sensitive Zone

Common to Entire Zone

Experience and Protection of Natural Resources

- Monitor and restore to natural conditions visitor-created trails that extend from park trails.
- Install educational signs explaining the sensitive nature of resources and the ecological reasons for restoring visitor-created trails.
- Add signage for on-trail travel, encouraging visitors to stay on designated trails.
- Enforce parking in designated spots to prevent roadside parking damage.
- Prevent the spread of invasive species via increased education and tools such as boot brushes for visitors to remove seeds from shoes.
- Perform early detection and removal of invasive species by establishing a volunteer program and supporting citizen science detection of invasive species.
- Increase staff and volunteer presence in this zone to monitor use levels and provide education about sensitive resource protection. Educate park staff and visitors about why this zone is sensitive and how management is therefore unique in this area. Provide public education via a variety of methods including signs, social media, and interpretive activities.

Adaptive Actions

- Consider managed access in this zone (i.e., permits, restricted use days).

Pinery Narrows Sensitive Resource Area

Adaptive Actions

- Monitor visitor use from the south on the Towpath Trail
- Close the steep slope along the canal near Pinery Narrows and Twin Sisters Fall if necessary, based on resource conditions.

Columbia Sensitive Resource Area

Experience and Protection of Natural Resources

- Relocate the Columbia Run picnic area to a natural or high-value experience zone location.
- Restore visitor-created trails from Columbia Picnic area to the Buckeye Trail.

MANAGEMENT ACTIONS AND STRATEGIES EVALUATED AND REMOVED FROM FURTHER CONSIDERATION

Standard and Expanded Amenity Fees

Public comments indicate support for implementation of standard (entrance) and expanded amenity fees to address parking and congestion issues. Park staff considered this option and determined that it was not preferable and was not aligned with the purpose and need for the plan, for several reasons. Park staff conducted a feasibility study on fees in 2007 and concluded that collection costs would be high and that fees charged might not cover collection costs. Park staff acknowledged that technology improvements could reduce collection costs; however, implementation costs and fee program compliance were concerns. Park staff also identified socioeconomic concerns, particularly for low-income visitors. Cleveland and Akron socioeconomics were a consideration, with Cleveland's poverty level ranking number one in the nation for cities of more than 200,000 residents (US Census Bureau, 2020). Park staff also proposed options to address parking issues, including new and larger parking lots or fee-free or low-cost reservation or permit systems.

Park-operated Shuttles

Supported by public comment, park staff considered park-sponsored or park-operated shuttle systems for visitor circulation. Park staff have determined that the cost and visitor expectations to use personal vehicles make this idea impractical. If pursued in the future, a value analysis would be needed to implement any park-operated or park-sponsored shuttle system. Local shuttle service from neighborhoods to the park, whether operated by the National Park Service or partners, could accomplish some goals of a park-sponsored shuttle system; park staff will look into the viability of those partnerships with an emphasis on providing transportation to and from communities with limited access to personal vehicles.

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Chapter 5

Consultation and Coordination

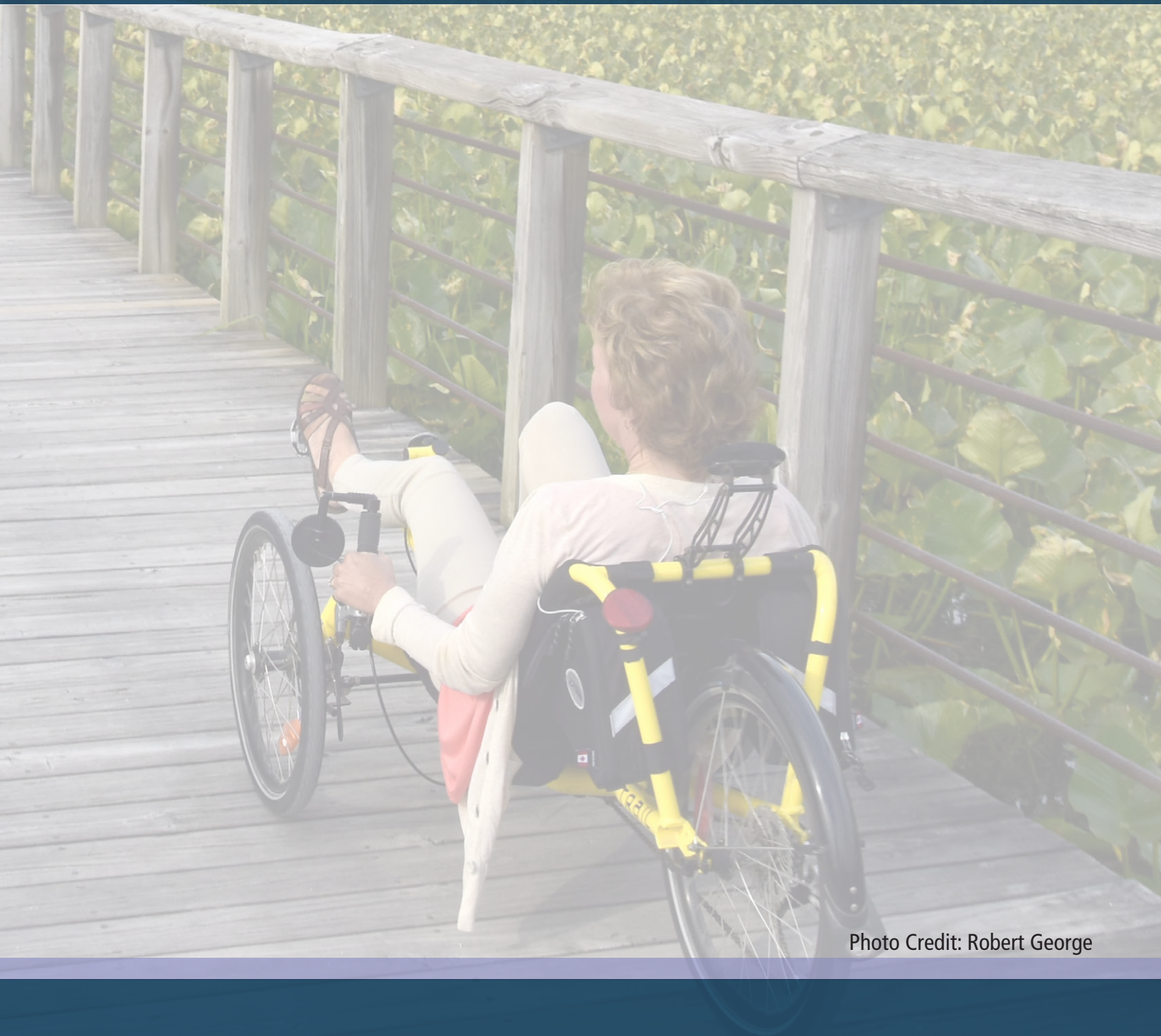


Photo Credit: Robert George

CHAPTER 5. CONSULTATION AND COORDINATION

PUBLIC INVOLVEMENT

The planning process was informed by information and ideas solicited during a robust public and stakeholder engagement period in the spring of 2021. The park conducted ten public and stakeholder virtual meetings, including public meetings and meetings with affiliated Tribal Nation representatives, local and regional municipalities, community groups, and transportation and regional planning organizations.

The summer 2022 comment period marks the second round of public and stakeholder involvement. In this comment period, the National Park Service is seeking public input on the draft CAP. After incorporating public comments on this draft, park staff will finalize the plan and identify preferred options. The park will then undertake an environmental compliance process prior to implementation of any actions in this plan.

FUTURE COMPLIANCE

Plan approval would not guarantee the funding or staffing that the plan would require. Implementation would depend on funding and could also be affected by factors such as changes in NPS staffing, visitor use patterns, and partners' staffing and financial abilities. Full implementation could be years in the future. Appropriate compliance would continue as the CAP is updated and implemented and as planning and design for individual elements are underway.

Potential impacts on the park's cultural resources will be addressed under the provisions for assessing effects outlined in 36 Code of Federal Regulations (CFR) Part 800 and regulations issued by the Advisory Council on Historic Preservation implementing section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (NHPA; 54 USC 306108). Under the "Criteria of Effect" (36 CFR Part 800.9(a)), federal undertakings are considered to have an effect when they alter the character, integrity, use of cultural resources, or the qualities that qualify a property for listing in the National Register of Historic Places. Compliance with these laws and associated policies will be accomplished via specific project consultation with the Ohio state historic preservation office (the Ohio Historic Preservation Office), tribal historic preservation officers, and other consulting parties.

Pending further development of the proposed actions, additional compliance for natural resources could be required under the Clean Water Act, the Endangered Species Act, and applicable director's orders. Compliance with these regulations would occur as necessary.

For the CAP to be adaptive to changing conditions, the National Park Service would regularly review the status of threatened and endangered species and revise conservation measures as needed. Any plans or actions that include changes to the types, levels, or locations of visitor use that may cause or contribute to cumulative impacts to threatened and endangered species would be subject to consultation with the US Fish and Wildlife Service. Future implementation projects resulting in site-specific plans, such as transportation infrastructure, would include conservation measures for threatened and endangered species, following appropriate review and consultation with the US Fish and Wildlife Service.

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Appendixes



Photo Credit: Neil Evans

APPENDIX A. MONITORING AND ADAPTIVE STRATEGIES

INTRODUCTION

Establishing indicators and thresholds and identifying and implementing visitor capacity are key components of the IVUMC VUM framework applied by the National Park Service. Indicators measure conditions related to visitor use and monitoring is conducted to track those conditions over time. Monitoring results are used to inform and select park management strategies that do not exceed maximum visitor use that can be accommodated for sites (visitor capacity identification). Potential management strategies are described for each indicator below and are applied in conjunction with the actions presented in this plan. This iterative practice of monitoring, implementing adaptive strategies, and continuing to monitor to gauge effectiveness of management actions allows park managers to maximize visitor benefits while achieving and maintaining desired conditions for resources and visitor experiences in a dynamic setting. This section presents indicators to be monitored at CUVA. The associated thresholds and adaptive strategies included below will be used to inform the visitor capacity identification found in chapter 5.

Indicators. Indicators translate broadly desired conditions into measurable attributes (e.g., people at one time, or PAOT, at key locations, or the number of visitor-created trails) that can be tracked over time to evaluate changes in desired conditions. These are a critical component of the VUM framework. The planning team considered many potential issues and related indicators that would identify impacts of concern, but those described below were considered the most noteworthy, given the importance and vulnerability of the resource or visitor experience affected by visitor use. The planning team also reviewed the experiences of other park units with similar issues to identify meaningful indicators.

Thresholds. Thresholds that represent minimum acceptable conditions for each indicator were then established, considering qualitative descriptions of desired conditions, data on existing conditions, relevant research studies, and staff management experience. Although defined as “minimally acceptable,” thresholds still represent acceptable conditions. Also, establishing thresholds does not imply that no action would be taken prior to reaching the threshold. One VUM goal is to make progress toward desired conditions. Thresholds identify the point at which visitor use effects on desired conditions are anticipated to become enough of a concern that a management action is needed to achieve and maintain desired conditions.

Triggers. For some indicators, triggers have been developed. A trigger reflects a condition of concern for an indicator that is enough to prompt a management response to ensure that desired conditions continue.

Indicators and thresholds that will be implemented as a result of this planning effort are described below, including rationales for these indicators and thresholds, triggers, and associated potential management strategies.

TABLE 5 TRAIL CONDITIONS - INDICATORS AND THRESHOLDS

Indicator
Trail-widening - Change in trail width
Threshold
Trail width increases no more than 25 percent from baseline conditions and adheres to desired conditions in this plan and trail type as defined by the 2012 trail plan (NPS, 2012c).
Rationale
<p>Following sustainable trail guidance ensures that trails are in good condition, provides an appropriate visitor experience, and minimizes visitor-created resource impacts. CUVA trails are impacted by wet conditions throughout the year, particularly in December-March. High trail use contributes to trail damage and widening as users pass one another and avoid wet spots. There is additional impact on certain trails because of large groups and people hiking three to four across. Impacts of these behaviors and patterns can readily be seen as trailside vegetation is trampled and trails widen in formerly vegetated areas.</p> <p>This indicator is closely related to soil erosion and compaction, water quality, and vegetation trampling. Monitoring trail width is important to the plan, as it helps achieve two plan goals: providing a range of recreational opportunities in a variety of settings to reduce congestion and user conflicts and addressing impacts on natural and cultural resources. Growing and eroding trails require more trail maintenance and contribute to bankside erosion and soil runoff that enters CUVA waterways and increases water turbidity. Popular destinations for spring wildflower viewing have been lost because of trail widening, hindering visitor experience and resources. Monitoring and managing trail width is important to reduce impacts on natural and cultural resources.</p> <p>Threshold rationale:</p> <p>This indicator measures trail width compared to baseline conditions and desired conditions in this plan and trail type from the 2012 trail plan. Baseline conditions are established when width is first measured as part of the monitoring strategy. Desired conditions are stated in chapter 3 in this plan and the trail types are defined in the 2012 trail plan and accompanying sustainable trail guidelines. The threshold is a 25 percent increase in trail width from baseline conditions or when monitoring shows that the trail has either strayed from desired conditions for the zone or has reached the maximum width allowed for the trail class, whichever is less.</p>
Monitoring
The park will use sustainable trail protocols (NPS, 2012c) and monitoring protocols developed in 2019 to monitor trail width on a recurring basis on the most-used trails.
Management Strategies and Mitigation Measures
<ul style="list-style-type: none"> • Educate visitors about sensitive resources and the importance of staying on trails Encourage visitors to travel single file to prevent trail widening. • Identify existing trails that do not meet sustainability guidelines. • Relocate, reconstruct, or close consistently unsustainable sections or trails. • When specific trail sections are widened, restore trail to original width. • Prioritize maintenance on trails that widen the most. • Rehabilitate trails that exceed the width threshold as soon as possible to discourage further widening. • Identify trails where the baseline is wider than appropriate for the trail class. • Narrow some trails to provide a more primitive experience. • Improve drainage on trails that are widening to reduce or eliminate wet spots.
Adaptive Management Strategies
<ul style="list-style-type: none"> • Close trails seasonally (supported by civic engagement) to support restoration and soil stabilization. • Construct definitive trail edges along widening trails using natural or synthetic materials such as fencing, rocks, logs, or other appropriate physical barriers. • Use large rocks, logs, trees, or other obstacles staggered on either or both sides of the trail that serve as physical and visual barriers to keep users on trails. • Install boardwalks or other forms of elevated trail construction where trails widen in low, wet areas that cannot be rerouted or given drainage solutions.

TABLE 6 VISITOR- CREATED TRAILS - INDICATORS AND THRESHOLDS

Indicator
Condition of visitor-created trails
Threshold
<p>No more than 50 percent of each visitor-created trail is category 2 or higher at priority locations (listed in monitoring section).</p> <p>Category definitions (from 2020 volunteer training manual):</p> <p>Category 1: Barely or only just distinguishable from surrounding vegetation and no soil disturbance.</p> <p>Category 2: Retains some vegetation cover or organic litter within the tread but is obviously distinguishable from the surrounding environment (this category is minimally acceptable.)</p> <p>Category 3: Vegetation cover and organic litter is lost within tread.</p> <p>Category 4: Soil erosion is obvious and in wet conditions the treadway may be excessively muddy; roots are exposed and rocks are gullyng (eroding). A category 4 trail segment is a category 3 in poor condition.</p>
Priority Monitoring Locations
<ul style="list-style-type: none"> • Blue Hen/Buttermilk • Virginia Kendall Ledges • Columbia Run • Five Falls (north of Red Lock) • Twin Sisters • Stumpy Basin • Blossom Woods • Furnace Run • Brandywine Gorge
Rationale
<p>Visitor-created trails are related to vegetation trampling and soil loss. In areas with significant visitor-created trail proliferation, direct impacts include vegetation trampling, higher-than intended visitor exposure to sensitive resources, soil erosion due to climbing on steep slopes or unstable soils, and aesthetic impacts such as litter and people in viewsheds where not desired. Indirect impacts include spread of noxious weeds, soil erosion due to water-flow changes, damage to sensitive plant communities, introduction of invasive species, soil loss, and impaired visitor experience, particularly via viewshed impacts. Grasslands and meadow research suggests that visitor-created trails in these habitats can contribute to fragmentation. Although not dominant habitat types at CUVA, CUVA's meadows and grasslands are susceptible to visitor-created trails. Such trails may serve as conduits or vectors for edge species such as racoons, opossums, and brown-headed cowbirds to penetrate deeper into forests, with negative effects on interior species. Research conducted outside CUVA suggests that brown-headed cowbirds use trails to penetrate deeper into forests. Visitor-created trails can also lead to undesired visitor access to sensitive historical or archeological sites.</p> <p>This indicator will allow park staff to focus management actions and strategies on direct and indirect impacts of visitor-created trails by monitoring visitor-created trail conditions and associated trails at key locations. Monitoring locations were selected for sensitivity to visitor-created trail impacts. This will help the park achieve desired conditions, specifically protection of sensitive and exemplary resource areas such as rare plant sites and cold-water streams and limiting visitor-caused impacts on natural and cultural resources.</p>
Monitoring
Utilize trail monitoring protocol. Frequency of monitoring will be determined in the future.
Management Strategies and Mitigation Measures
<ul style="list-style-type: none"> • Educate visitors about sensitive resources and the importance of staying on trails. • Improve trail identification via signage and wayfinding. • Restore or formalize prominent visitor-created trails to natural conditions and continue monitoring. Consider using low ropes or other barriers during initial restoration efforts. • Protect natural and cultural resources by diverting visitors from areas that have undesired visitor impacts. • In areas where visitor-created trails appear to be leading to a "destination" such as water access, evaluate whether to formalize access via trail construction.

<ul style="list-style-type: none"> • Evaluate whether trails are accessing sensitive cultural sites. • Evaluate visitor-created trails to determine if they should be eliminated or formalized, and reduce the number of existing visitor-created trails. • Utilize Youth Conservation Corps or similar volunteer programs for recurring trail maintenance. • If a category 1 trail leads to a site with evidence of digging and disruption, report to CUVA Visitor and Resource Protection. • If visitor-created trails originate from an informal pullout, evaluate restoring the pullout to natural conditions.
Adaptive Management Strategies
<ul style="list-style-type: none"> • Consider boardwalks on trails over sensitive resources.

TABLE 7 VISITOR-RELATED IMPACTS TO CULTURAL AND NATURAL RESOURCES - INDICATORS AND THRESHOLDS

Indicator
Number of graffiti/vandalism/human-caused degradation incidents to cultural and natural resources reported in the NPS incident reporting system per month.
Threshold
No more than three reported incidents per location per year. Trigger at two reported incidents per year.
Monitoring
Based on damage reports in Computer Aided Dispatch/Incident Management Analysis and Reporting System.
Rationale
<p>CUVA protects a large and diverse collection of cultural and natural resources. Cultural resources include more than 600 historic structures, cultural landscapes, and archeological sites. Natural features include forest vegetation, waterfalls, and rock outcroppings. Many cultural resources are central to the visitor experience and are in areas with high visitor use. Structures and the landscapes associated with the Ohio & Erie Canal are nationally significant and are on or adjacent to Towpath Trail visitor facilities and other high-use areas. The Virginia Kendall State Park Historic District, a Civilian Conservation Corps-era site, has historic integrity and high visitor use. Other cultural resources are located away from high-use areas and can appear abandoned, inviting vandalism and looting. Many natural resources are central to the visitor experience and are in areas with high visitor use. Waterfalls are popular visitor sites and trails leading to them are among the most trafficked in the park. A major rock outcropping of the Sharon Conglomerate geologic formation—the Ritchie Ledges—is central to the visitor experience in the Virginia Kendall State Park Historic District. Other natural features, including rock outcroppings and forest vegetation, are located away from areas with high visitor use, inviting vandalism. The combination of sensitive resources with intense visitor use in some locations, and resources situated in more remote areas away from constant monitoring, can lead to intentional and unintentional impacts on these resources. Cultural and natural resources are irreplaceable, making any damage notable.</p> <p>The primary resource management concern is to minimize loss or degradation. Baseline documentation is needed to identify cases of new degradation and vandalism (NPS Director’s Order #28). Baseline documentation of natural resources is needed to provide analysis regarding integrity of conditions. Examples of intentional impacts include graffiti, removing artifacts from historic properties and archeological sites, and carving on trees. Unintentional impacts include damage to lock structures, waterfalls, and rock outcroppings as a result of climbing and off-trail use. Monitoring these sites and using the incident reporting system to track resource damage provides information to address key resource issues and enables the park to achieve desired conditions for cultural and natural resources. These desired conditions include minimal loss or degradation, ensuring that cultural resources are available for visitors to enjoy, and maintaining and enhancing natural resource conditions to stand out in regional and national contexts.</p>
Monitoring
<p>Volunteer monitoring of priority sites.</p> <p>Incorporate data from the Cultural Resource Information System, which identifies cultural resource conditions.</p> <p>Use work order tracking from the Facility Management Software System to monitor vandalism events to historic resources.</p> <p>Install trail cameras to monitor impacted locations.</p> <p>Review incident reports quarterly.</p>

Management Strategies and Mitigation Measures
<ul style="list-style-type: none"> • Prioritize resource documentation to fulfill baseline documentation requirements and recommended treatment strategies. • Continue monitoring and patrolling and have a higher frequency of condition assessments, including archeological site monitoring, in sensitive areas with high visitor use (per trail counters). • Educate visitors on resource sensitivity and the need to protect these resources. • Educate groups that access areas with historical and cultural sites and sensitive natural areas. • Increase ranger presence or patrols. • Increase trail-watch volunteering. • Prioritize and increase enforcement and documentation. • Reroute trails and examine potential temporary closures. • Create physical barriers. • Improve maintenance around structures so that they do not appear abandoned.
Adaptive Management Strategy
<ul style="list-style-type: none"> • Area closures would only be considered after a range of management strategies have been implemented and have not demonstrated effectiveness.

TABLE 8 CROWDING AT KEY DESTINATIONS - INDICATORS AND THRESHOLDS

Indicator
People per viewscape (PPV) at scenic overlooks, waterfalls, river-access points, and other key destinations.
Threshold
<p>No more than the PPV amount stated for each location below, 90 percent of the sampled time.</p> <p><u>Scenic Overlooks</u></p> <ul style="list-style-type: none"> • Brandywine Falls lower deck: 20 PPV • Brandywine Falls upper deck: 20 PPV • Blue Hen: 10 PPV • Ledges overlook: 30 PPV <p><u>Towpath Access</u></p> <ul style="list-style-type: none"> • Lock 29 Towpath Trail in Peninsula: 20 PPV • Beaver Marsh viewing platform: 30 PPV • Station Road Towpath Trail pedestrian bridge: 18 PPV • River overlook at the depot along the tracks: 10 PPV • Stumpy Basin: 10 PPV • Canal Exploration Center at lock: 40 PPV • Lock 32 Towpath Trail: 6 PPV <p><u>All River-access Points:</u> 15 PPV</p> <p><u>Other Locations:</u> Everett Covered Bridge: 30 PPV</p>
Monitoring Locations
<p>(Bolded locations are high-priority monitoring sites where monitoring may take place more frequently.)</p> <p><u>Scenic Overlooks</u></p> <ul style="list-style-type: none"> • Brandywine upper deck, lower deck, and Champion Electric • Blue Hen (along the fence line) • Ledges Overlook (with additional monitoring at Icebox Cave, rock carvings, and base of stairs) <p><u>Towpath Access</u></p> <ul style="list-style-type: none"> • Lock 29 (at split of Towpath Trail, in front of the lock, along the steps, and on the incline leading to the Towpath Trail) • Beaver Marsh viewing platform • Station Road Towpath Trail pedestrian bridge

- River overlook at the Peninsula Depot along the railroad tracks
- Stumpy Basin (at narrow boardwalk along Towpath Trail)
- Canal Exploration Center at lock
- Lock 32 (alongside the historic canal lock and the Towpath Trail)

River-access Points

- **Lock 29**
- **Boston**
- **Red Lock**
- **Station Road/Brecksville**
- **Rockside/Lock 39**
- **Grether***
- **Fitzwater***

Other Locations

- Everett Covered Bridge (in front of bridge)

**New river-access locations*

Rationale

Crowded viewpoints can hinder visitor experience. PPV metrics aid managers in understanding visitor-use density at key destinations. This allows NPS staff to quantify the people visible at one time in a landscape and compare those numbers to desired conditions. PPV is also used by park managers and researchers to quantify visitor crowding impacts on resources such as trail widening. Via monitoring and protecting visitor experience at key destinations, the effectiveness of management strategies that influence specific destinations can be assessed and adjusted as needed. Research suggests that visitors can identify site-specific standards for crowding. These visitor-based standards can be used to guide development of social indicators and thresholds for crowding.

Monitoring

During a specific period, such as one hour, quantify the people visible at one time from specific vantage points associated with key destinations. Monitoring would take place at as many different times of the day and year as practical, ensuring that the busiest days and high-use locations are captured. Monitoring would be via automatic trail cameras set to capture photographs at designated times or via manual photography. Volunteers may assist with monitoring. At Stumpy Basin and Lock 32, user groups such as hikers and bicyclists would also be documented.

Management Strategies and Mitigation Measures

- Develop and implement a public information effort about desired park conditions, NPS actions to achieve those conditions, and how visitors can best experience the park. This information could be distributed via direct visitor contact, publications, wayside exhibits, maps, social media, websites, and partners. The goal would be to have visitors self-disperse to alternative approved sites or come during lower-use times or seasons to accommodate similar use levels without concentrating use during peak periods. Include education on leave-no-trace ethics.
- Ensure that informational materials such as locations for permitted activities, trail rules and regulations, and leave-no-trace practices are available for visitors in a variety of languages.
- Use up-to-date technology to provide information to visitors before and during their visits.
- Collect data at specific trails, the river, or destinations where visitor use patterns, levels, and behaviors could further inform thresholds.
- Encourage hikers and boaters to take certain routes during peak-use times.
- Increase maps and signage about various destinations in and near the park to disperse crowding at key destinations.
- Ensure that appropriate commercial services allocations are followed.
- Coordinate with Cuyahoga Valley Scenic Railroad to manage the number of visitors that depart the train at one time and to limit the number of boats, bikes, and individuals dropped off at specific locations.
- Designate user group access points and lots.

Adaptive Management Strategies

- Increase enforcement related to permit and reservation systems in order to prevent crowding at key destinations.
- Make changes to reservation or permit systems such as reducing group size and adjusting timing and distribution of visitor use.
- Consider introducing a permit/reservation system for day hikers in high-use areas.

APPENDIX B. OTHER RELATED MONITORING

In addition to thresholds, managers may establish specific, positive targets or objectives for resource conditions or visitor experiences. Unlike a threshold, an objective or other related monitoring is defined as a specific result that an agency aims to achieve in a specified timeframe. If thresholds are markers to prevent negative consequences and unacceptable conditions, objectives are markers to help ensure positive progress toward achieving and maintaining desired conditions. Another distinction between objectives and thresholds is that objectives typically reflect conditions that are affected directly by agency action, such as staffing levels, whereas thresholds reflect conditions that result from visitor-use effects under a particular management strategy. In practice, objectives are typically stated as managerial performance goals whereas thresholds are typically based on physical, biological, or social conditions (IVUMC, 2019). Several factors can decide if monitoring without indicators and thresholds is appropriate. In areas where thresholds are already being exceeded, management actions would be implemented immediately.

PARKING LOT AND ROADWAY CONGESTION

CUVA parking lots frequently reach or exceed capacity, often leading to unauthorized parking on nearby roadways and other areas. Congested parking lots and roadways can inhibit access for emergency services, equipment, and personnel. Many roadways adjacent to parking lots are managed by another entity, such as the Ohio Department of Transportation or county, city, or township governments. While the National Park Service does not manage these roadways, monitoring indicates a need for additional parking lot capacity. Unauthorized parking can damage vegetation, expose soil, and create hazards such as reduced road lane width, a higher number of pedestrians in the roadway, and pavement damage at road edges. Unauthorized parking can also hinder the visitor experience by detracting from scenic views along the roadway, creating difficult visitor mobility and circulation, and surpassing other thresholds such as PPV. Additionally, unauthorized parking on roadways can negatively impact residents who live along the roadway or who use the roadways. By monitoring vehicles in authorized and unauthorized parking areas, the National Park Service will be able to make informed decisions related to parking infrastructure and the timing and level of visitor use in an area.

Monitoring objective. The National Park Service will monitor the number of vehicles at one time (VAOT) in parking lots and along roadways. VAOT on roadways will be documented separately from VAOT in parking lots, since parking along roadways may be unauthorized. VAOT may be monitored by cameras, staff, or volunteers.

Lot turnover rates or the estimated number of vehicles that use each parking stall during a particular period will also be monitored. Lot turnover may be calculated by counting the number of vehicles observed in a given timeframe and dividing by the number of parking spaces in the facility per day. For example, if a parking lot has 100 spaces and during the day 250 different vehicles occupy the lot, the turnover is 2.5.

Length of stay, or the estimated time that a vehicle utilizes a parking space, may be monitored by staff or volunteers by counting cars and documenting the time at which the lot reaches capacity or documenting license plates and noting arrival and departure times. Frequent monitoring will take place at Brandywine Falls, Boston Mill (visitor center main lot, RV lot, Boston Store limited mobility

lot, and Boston Trailhead), Blue Hen Falls, and Bolanz lots and adjacent roadways. Additional monitoring will take place less frequently at Tree Farm Trail, Everett Covered Bridge, Stanford House, Ira Trailhead, Vaughn Road/Red Lock, Frazee, Pine Lane, and Peninsula. Monitoring at Peninsula will focus on how well overall parking in Peninsula meets park and community needs. Monitoring locations will be revisited and reevaluated based on emerging needs.

Management strategies and mitigation measures include:

- Identify and document authorized parking capacity of parking lots and authorized roadside parking areas to establish monitoring baselines.
- Monitor parking turnover rates.
- Open overflow parking.
- Actively manage crosswalks.
- Use temporary parking lot closures when parking areas are full.
- Post signs indicating that parking is at capacity, with a suggestion to return at a later designated time.
- Provide forecasts or real-time information regarding parking conditions such as text alerts, radio station updates, and dynamic signage to inform visitor decisions regarding trip timing and encourage voluntary redistribution of use to off-peak times.
- Continue and/or expand visitor information regarding alternate trail access points.
- Enforce parking and access restrictions as well as site management (e.g., signage, curbing, paving, revegetation) to resolve overparking and visitor-created parking.
- Provide education on designated parking and the importance of parking in designated areas (e.g., resource damage, safety, pavement deterioration).
- Increase NPS patrols and parking enforcement in designated areas.
- Adjust timing, number, or size of special-use permit groups or commercial use authorization tours.
- Establish time limits for parking spaces.
- Document impacts caused by roadside parking.
- Install parking barriers such as fences and rocks along roadways.
- Conduct extended multi-agency road-safety visitor-education campaigns on topics such as biking, road crossing, parking, and speed limits.

Adaptive management strategies include:

- Establish a reservation system for parking areas.
- Expand existing or build new parking lots such as at Brandywine Falls and Everett Covered Bridge.

WAYFINDING AND ACCESSIBILITY

Wayfinding and accessibility improvements were identified as key issues in this plan. To monitor the effectiveness of improved wayfinding and accessibility, park staff will monitor the percent of first-time visitors who are able to successfully navigate the park and locations where visitors experience wayfinding challenges and accessibility barriers.

Monitoring objective. This information may be collected via visitor satisfaction surveys (site-specific surveys to understand issues with wayfinding and sense of arrival), the decennial visitor survey, and first-hand information from park staff and volunteers. Accessibility barriers could be

inspected by park staff, volunteers, or an advisory group of people with disabilities and/or professionals supporting people with disabilities.

Management strategies. If the percent of first-time visitors who are unable to successfully navigate the park increases or if there are locations where wayfinding issues persist (including low- and high-volume areas, based on staff judgement), the following management strategies may be implemented:

- Provide strategic trip recommendations for visitors and promote certain areas. Trip recommendations could change depending on visitor use patterns.
- For locations where wayfinding issues persist, conduct site visits with multidisciplinary teams to evaluate issues such as vegetation overgrowth, missing signs, and sign confusion.
- Revise existing signage.
- Evaluate improvements to information and education efforts.
- Coordinate with local land managers and road management agencies to address signage and wayfinding issues.
- Engage with new visitors to test wayfinding problem spots and provide feedback for improvement. The Canalway Questing program and other programs such as Park for All have been identified as possible supports for this endeavor.
- Assess and document park areas for accessibility barriers and identify mitigation or improvements.

RAILROAD TRACK AND TOWPATH TRAIL SAFETY

Visitor safety is a CUVA priority. Visitor injuries and safety-related concerns are mitigated as much as possible but visitors crossing railroad tracks in unauthorized locations can increase safety issues and accident frequency. User conflicts and associated safety issues on the Towpath Trail are also concerns.

Monitoring objective. The National Park Service may monitor railroad-track-to-Towpath-Trail safety by quantifying the number of times that rangers stop visitors from walking on tracks, the number of ranger responses to trespassing on closed train-track areas, the number of near misses per train run, and the number of reported Towpath Trail safety incidents. Park staff may monitor this information via incident management analysis and reporting systems (Computer Aided Dispatch/Incident Management Analysis and Reporting System and emergency medical services reports). The National Park Service may coordinate with the Cuyahoga Valley Scenic Railroad to improve the reporting form for safety incidents and use a similar form for CUVA maintenance staff reporting and to collect information from volunteers about speed and control issues. Additional safety and user conflict information may be collected in visitor satisfaction surveys. Towpath Trail safety incidents can also be examined via volunteer observations and reports.

Management strategies. Management strategies and mitigation measures may involve:

- Provide information and visitor education about hazards and risks.
- Increase patrols of high-risk/congested areas and increased visitor contacts.
- Establish designated walk-your-bike zones in congested areas.
- Implement a speed limit for bikes on the Towpath Trail in congested areas.
- Direct people to less-crowded trail sections and to use the trail during less-crowded times.

- Implement appropriate engineering, education, enforcement, emergency services, and operations mitigation strategies at stations where safety incidents are increasing, per recommendations in the 2017 rail station area safety study.
- Evaluate effectiveness of safety measures and mechanisms at the Boston Mills crossing and whether such strategies should be applied at other crossing locations in the park.

DECEASED AMPHIBIANS ON ROADWAY

As an urban park, many CUVA roadways intersect wildlife corridors. Amphibians often cross roads for migration and breeding, resulting in vehicle-animal collisions. Amphibians are often killed without drivers noticing because of amphibians' relatively small size. By monitoring the number of deceased amphibians on roadways, park staff will be able to implement appropriate management strategies to address the issue.

Monitoring objective. Timing is key to monitoring amphibian mortality because other wildlife often pick up amphibian remains by dawn. The highest rate of amphibian mortality is from 8:40 p.m. to 9:40 p.m. at the park (NPS, 2017). Monitoring to quantify deceased amphibians on roadways should occur at around 10 p.m.

Management strategies. Management strategies and mitigation measures may include:

- Utilize decision-support models to implement temporary seasonal road closures to reduce mortality rates below desired thresholds.
- Implement engineering solutions identified in the focused condition assessment.

APPENDIX C. VISITOR CAPACITY

INTRODUCTION

This chapter provides visitor capacity information and identification as it relates to the VUM framework for the CUVA CAP. For a full description of the IVUMC framework and additional resources, visit <http://visitorusemanagement.nps.gov>.

The IVUMC defines visitor capacity as the maximum amounts and types of visitor use that an area can accommodate while achieving and maintaining desired resource conditions and visitor experiences that are consistent with the purposes for which the area was established. By managing amounts and types of use, the National Park Service can help ensure that resources are protected and that visitors have the opportunity for a range of high-quality experiences. Visitor capacities are used to inform and implement management strategies in this CAP. Identifying visitor capacity is also directed by legal mandates that require the National Park Service to identify and implement commitments for visitor capacities for all areas of a park unit per the National Parks and Recreation Act of 1978 (IVUMC, 2016-2019). Visitor capacities were identified using best practices and examples from other plans and projects across the National Park Service. Based on these best practices, the planning team used the following steps to identify capacity:

1. Determine the analysis area(s)
2. Review existing direction and knowledge
3. Identify the limiting attribute(s)
4. Identify visitor capacity

This chapter section outlines the considerations and process used to identify visitor capacity for key destinations.

Guideline 1. Determine the Analysis Area(s)

Analysis areas¹ are destinations where high visitor use causes or is projected to have negative effects on resources and visitor experience. For these locations, detailed analysis has been conducted to identify the appropriate amounts and types of use. For each analysis area, an overview of the setting, relevant indicators, visitor-use issues, current use levels, and visitor-capacity identifications are described. Current use levels have been informed by relevant studies and data, and the actions contained in this plan were considered as part of the visitor capacity identifications.

The sites listed below, where most visitors are likely to congregate, were selected as analysis areas. Following IVUMC guidance, the level of analysis during VUM planning and visitor capacity identification is determined on a sliding scale depending on impact risk, issue uncertainty,

¹ Several of the analysis areas have similar names and geographic scope as the zones; however, they are not identical. The geographic area considered for each analysis area is noted for each area below.

stakeholder involvement, and controversy level related to the plan scope. Additional analysis is necessary for the following ten analysis areas because of visitor use issues there:

- Pinery Narrows
- Station Road to Boston River Corridor
- Brandywine Gorge Trail Area
- Boston Mills Historic District
- Columbia
- Blue Hen Falls
- Peninsula/Lock 29
- Virginia Kendall North Area
- Kendall Hills and Kendall Lake
- Peninsula to Bath Road River Corridor

For these and other locations, visitor capacities will be monitored as described; if associated thresholds are exceeded, adaptive management strategies will be implemented to ensure that capacities are not exceeded. For other locations, desired conditions are being met under current use levels and a lower level of analysis is being used. The visitor capacities at these other locations have largely been identified to be near, at, or slightly above current use levels. Future monitoring of use levels and indicators will inform the National Park Service if use levels are nearing capacity. If so, adaptive management strategies as outlined in this plan will be taken.

This analysis fulfills the requirements of the 1978 National Parks and Recreation Act (54 US Code 100502) to identify visitor capacity for all areas that this planning effort addresses. These analysis areas comprise most visitor use areas in the plan scope. Strategies to achieve desired visitor capacities have also been identified as part of this process.

Guideline 2. Review Existing Direction and Knowledge

During this step, the planning team reviewed existing direction and knowledge, including:

- applicable law and policy,
- prior applicable planning and guidance,
- existing conditions in the analysis area,
- existing indicators, triggers, thresholds, and objectives,
- applicable existing management strategies and actions, and
- use patterns for commercial and other allocation categories

These plans provided important overarching guidance for managing the amounts, timing, distribution, and types of use throughout CUVA, including providing descriptions of desired conditions, visitor experiences, resource conditions, visitor capacities, and appropriate support facilities. An overview of visitor use issues and current use levels for each key area are provided for each analysis area.

The 1977 GMP identified visitor capacities in the form of acceptable daily use levels for the major use areas in the park, with an estimated 35,000-45,000 maximum visitors in the park per day. As with

management zoning, visitor capacity from the GMP is outdated, as the park has undergone substantial changes in the past 45 years.

During the past ten years, there have been more than 2 million visits to the park each year. In 2021, there were 2.57 million visits, compared with almost 2.1 million in 2011 (NPS, 2022). Visitors participate in a number of recreation opportunities at CUVA, including hiking, biking, fishing, birdwatching, backpacking, bikepacking, paddling, kayaking, horseback riding, questing, picnicking, golfing, snowshoeing, cross-country skiing, ice fishing, sledding, downhill skiing, and riding the scenic train. The extensive trail system, anchored by the Towpath Trail and enhanced by the scenic railroad, the Cuyahoga River Water Trail, and the Cuyahoga River, supports active, diverse, and multimodal recreational opportunities and visitor experiences.

Most visitors are drawn to three key resources: Brandywine Falls, Virginia Kendall Ledges, and the Towpath Trail, which runs the length of the park from north to south. These resources, in addition to other frequently visited areas, are in sensitive resource areas such as riparian corridors, wetland areas, and microclimates. The Cuyahoga Valley Scenic Railroad also contributes to visitation, accounting for 15 percent of CUVA recreational visits in 2015. The Environmental Education Center and the Stanford House combined serve roughly 10,000 people each year. More than 60 special-use permits are granted each year for a wide range of activities, including weddings, competitive equestrian rides, residential use, agriculture use, cultural events, and sporting events. More than 20,000 visitors participate in activities via special-use permits annually. Commercial-use authorized services provided in the park range from guided hiking and walking to photography instruction to farmers' market vendors.

In recent years, there has been increased interest and uses throughout the park, including river paddling, mountain-biking on recently completed trails, the railroad, the farmers' market, and many formal and informal trail-running events. In addition, the park's Countryside Initiative partnership supports agritourism in the park. Farmers in the Countryside Initiative host educational programs and pick-your-own-produce opportunities and provide event rentals. Countryside hosts a farmers' market on summer Saturdays in Howe Meadow and at an indoor location adjacent to Howe Meadow during the winter. The farms are an important component of the park's rural, pastoral landscape and attract visitors for the scenery and the services and events at the farm properties.

This plan evaluates types and amount of use at river-access points but does not include visitor capacity identifications or implementation commitments for on-river use. Visitor capacities for on-river use will be evaluated for river planning.

The planning team used the IVUMC sliding analysis scale to ensure that the investment of time, money, and other resources to identify visitor capacity is appropriate to project complexity and decision consequences. The sliding scale focuses on four criteria: issue uncertainty, impact risk, stakeholder involvement, and level of controversy/potential for litigation (IVUMC, 2016). Issue uncertainty is low because there is a good amount of data and information to support issue identification. Impact risk is moderate to high because in some of the locations the resources and visitor experiences are compromised. Stakeholder involvement is high because CUVA has many interested and involved stakeholders throughout the planning process. Level of controversy is moderate because highly engaged stakeholders are sensitive to changes in park management. Therefore, overall, the visitor capacity for this project is considered to warrant a moderate level of investment on the sliding scale of analysis, as evaluated using the four criteria. This analysis is informed by existing data, guidance, and managers' best judgment. Visitor capacities have been

identified based on the best available information and will be reviewed and updated with additional planning.

Methodological Considerations

To determine the appropriate amount of use for each analysis area, a variety of data were reviewed to understand current conditions compared to desired conditions. Annual visitation data collected by NPS staff include levels of visitor use parkwide and by area. Inductive loop traffic-counters capture monthly use levels at 16 park locations, and fifteen additional location traffic counts are estimated using regression formulas based on areas with traffic counters. Traffic count data were converted into the number of people visiting by applying a 2.1 person-per-vehicle multiplier. The park also collects visitor use data including TRAFx traffic and trail counts, resource conditions, and other data. A visitor study was conducted in summer 2015 by Resource Systems Group with support from the NPS Social Science Branch to understand visitor demographics (including group size and type), visit characteristics, services and facilities used, etc. (NPS, 2015).

Extensive parking lot data collected in summer 2017 were used to estimate use levels at six of the busiest locations. The data were collected by park staff and volunteers and included time of day, lot-use proportion, weather, length of stay, and related visitor information (NPS, 2017b). TRAFx infrared traffic and trail counter data were used to estimate visitation to destinations and trails, where available. The most recent available data collected for various locations were used. Because of the COVID-19 pandemic and associated park operational changes and visitation pattern changes, 2020 and 2021 data were not used. Where available, 2019 data were used. However, since 2019, it is likely that annual park visitation has increased. Similarly, user groups and visitation patterns have likely shifted since 2019 because of recent infrastructure changes. In 2022, the park has resumed and expanded use of TRAFx trail counters to gather hour-by-hour visitation data that will inform decision making and future planning.

Guideline 3. Identify the Limiting Attribute

Guideline 3 requires the identification of limiting attributes, which are defined as factors that limit visitors from using particular resources or areas in a way that achieves desired conditions, improves access, connects visitors to key experiences, and protects resources. The limiting attributes may vary across the analysis areas and are described in the Limiting Attribute and Relevant Indicators section. This is an important step, given that CUVA could experience a variety of challenges regarding visitor-use issues, and there could be more than one limiting attribute for identifying the amounts and types of use that the analysis area can accommodate. Relevant indicators to monitor limiting attributes will be noted for each analysis area for location-specific indicators. Visitor-related impacts on cultural resources and trail condition-monitoring locations vary depending on high-risk locations and may be used to monitor any of the analysis areas with related limiting attributes.

Guideline 4. Identify Visitor Capacity and Implementation Strategies

To identify the appropriate amounts and types of use at key areas, outputs from previous steps were reviewed to understand current conditions compared to desired conditions for the area. This analysis informed the identification of visitor capacities for each analysis area. Management strategies and actions have been identified to achieve desired visitor capacity.

Visitor capacity metrics used in the analysis include PAOT, people in one day (PIOD), and people per hour (PPH). Park staff identified the metric for each area that was most meaningful to manage to the capacity in that area. The metric is specified in guideline 4 in each analysis area.

PINERY NARROWS

Review of Existing Direction and Knowledge

This analysis area is bound by Sagamore Road to the north, Route 82 to the south, Chaffee Road to the east, and the Ohio & Erie Canal to the west. The analysis area and park boundary are adjacent to private property on the west side of Chaffee Road. The area includes steep valley walls above the canal, associated ravines/waterfalls, and a narrow bit of uplands. It is in the sensitive resources zone, which focuses on natural tracts with a high concentration of sensitive natural resources. Visitors have the opportunity for a relatively primitive experience, with few encounters with others, and opportunities to engage with nature.

Pinery Narrows contains extensive natural resources, including the Twin Sisters and Mudcatcher waterfalls, seeps and springs, rare plants, and an area important to songbirds and raptors. There is low visitor use in this area, with access via off-trail use. Visitor-created trails lead to more highly visited locations in this area. Since the canal in this area is not currently watered, visitors are able to cross the canal and access the waterfalls. Twin Sisters Falls is the most-visited location. Mudcatcher Falls is also visited, though it is harder to access. Park staff estimate fifteen PIOD at Pinery Narrows.

Limiting Attributes and Relevant Indicators

As noted in guideline 2, there is limited visitor access to this area, and it is not managed or maintained for visitor use. Topographic barriers such as steep slopes, impacts on ravines from visitor use, and private property constrain this analysis area's ability to accommodate use. To maintain desired conditions, the high concentration of sensitive resources should be preserved, and visitors should have opportunities for a primitive experience to engage with nature and have few encounters with others. The most relevant indicator that park staff would monitor related to this limiting attribute is the condition of visitor-created trails.

Visitor Capacity and Implementation Strategies

Current Pinery Narrow use levels are not achieving or maintaining desired conditions. Visitor use in this area, particularly accessing the waterfalls, leads to visitor-created trails and other sensitive resource disturbances and impacts. Visitor use levels are constrained by these resource impacts, steep slopes, and private property. Park management has assessed existing conditions relative to desired conditions and has identified the need to decrease use levels to 10 PIOD in order to achieve and maintain desired conditions.

Management strategies to implement visitor capacity include:

- Monitor social media and crowdsourced trail location websites/apps and request that any sensitive resource locations in this area are removed from websites/apps.
- Restore visitor-created trails to natural conditions.

Adaptive management strategies to be implemented only as thresholds are approached or exceeded include:

- Monitor visitor use from the south via the Towpath Trail and close the steep slope along the canal near Pinery Narrows and Twin Sisters Falls if resource conditions indicate that closure would be necessary.

STATION ROAD TO BOSTON RIVER CORRIDOR

Review of Existing Direction and Knowledge

This analysis area is an approximately four-and-a-half-mile section of the river corridor bound by Route 82 to the north, Boston Mills Road to the south, Riverview Road to the west, and the Ohio & Erie Canal and the Towpath Trail to the east. The Ohio & Erie Canal, the Towpath Trail, the Cuyahoga Valley Scenic Railroad, the Station Road Bridge Trailhead, and associated historic structures and locks are all found in this area. It is in the river corridor zone, which focuses on enhancing and maintaining scenic, natural, and cultural values and recreational experiences in the river corridor. Desired conditions for the visitor experience in this zone include the opportunity to access natural sights and sounds, experience preserved natural and historic viewsheds, and experience self-reliance and challenge. Visitors can linger and enjoy river scenery and have multimodal experiences with the river, train, and Towpath. Visitors may experience higher encounters and crowding in the developed areas in this zone.

This river section is potentially eligible for scenic or recreational designation under the Wild and Scenic Rivers program and is part of the eight-mile river segment in the park listed on the Nationwide Rivers Inventory with ORVs for recreation, scenery, cultural-historic, and ecological-botany. There is river access at the Boston Store and the Red Lock Trailhead areas. Much use in this area also originates from the Boston Mill Visitor Center, parking surrounding the visitor center, and associated amenities in the Village of Boston. The Station Road Bridge Trailhead is a major trailhead for Towpath Trail access and Red Lock provides some access. This section passes the former Jaite Paper Mill and Trestle Bridge and other historic structures (bungalows) in the Jaite Mill Historic District and company town. The Jaite site is temporarily a designated Comprehensive Environmental Response, Compensation, and Liability Act (“Superfund”) site. There are archeological sites throughout this area.

Cross-country teams (groups of 5-15 or more people) practice at Station Road and run south on the Towpath Trail. Birding and NPS-led groups (also 5-15 or more people) also use this area. This river corridor segment is also popular for wildlife viewing and active recreation on the Towpath Trail. Special-use permits have been issued at Station Road Bridge for events such as running events on the Towpath Trail that start from this location or for wedding photos. Running and other large events were permitted to host up to 200 people, and wedding photo special-use permits were requested two to three times per year during spring and fall for groups of typically 4-20 people.

Trail count data collected in the summers of 2016 and 2017 at Station Road and in the Boston area on the Towpath Trail found daily Towpath Trail at Station Road use of 282 PIOD. The busiest days were Saturdays and Sundays with 413 and 560 PIOD, respectively. Assuming use is spread over a ten-hour period, there were approximately 50 people per hour in this area on the busiest days. Average use levels at the Towpath Trail in Boston were 283 PIOD, with the highest use on Saturdays and

Sundays (average daily totals of 421 and 386, respectively). Assuming use was spread over a ten-hour time period, there were approximately 40 people per hour in this area on the busiest days. Using combined data from Station Road and the Boston counters, the average people per hour for the analysis area on the busiest days was 45.

Limiting Attributes and Relevant Indicators

The attributes that most constrain use in this area are visitor experience and cultural resources. Specifically, in the less-developed sections (areas with fewer facilities) of this analysis area, visitor experience is a limiting attribute. Desired river corridor zone conditions include opportunities to experience natural sights and sounds, preserved natural and historic viewsheds, and self-reliance and challenge. There should be opportunities for visitors to linger and enjoy the river scenery. Visitors may experience higher encounters and crowding in developed areas in this zone but there should be less crowding outside of these areas. As there are multiple use modes in this area, there is potential for user group conflict as crowding increases. It is important to ensure that visitor experience continues to align with desired conditions; therefore, visitor experience in the river corridor, particularly in less-developed areas, constrains this area's ability to accommodate use. As amounts and types of use increase, visitors may have fewer opportunities to experience natural sights and sounds, preserved natural and historic viewsheds, and self-reliance and challenge. The most relevant indicator the park would monitor related to this limiting attribute is PPV at Red Lock River Access and Station Road River Access.

Visitor use is also constrained by the need to protect significant cultural resources of the Ohio & Erie Canal. The entire portion of the Ohio & Erie Canal in the park is listed in the National Register of Historic Places (1979, 1984, and 2004), and contributes to the Ohio & Erie Canalway National Heritage Area, designated by Congress in 1996 to preserve and celebrate the culture, history, and heritage of this resource. Therefore, protecting the canal and associated structures such as the locks is critical, and general recommended treatment for the canal and associated features can be found in other park planning documents (Heberling, 2019). Locks can be damaged by visitors climbing or walking on and around the structures. This becomes a greater risk as area visitor use increases. The most relevant indicator the park may monitor related to this limiting attribute is the number of visitor-related impacts to cultural resources per month.

Visitor Capacity and Implementation Strategies

Current use levels in this area are achieving and maintaining desired resource conditions and visitor experiences. Opportunities to linger and experience natural sights, sounds, viewsheds, scenery of the river, and low amounts of crowding in less-developed areas inform the amount of use this area can accommodate. Park management has assessed existing conditions relative to desired conditions and has identified the need to maintain use levels at up to 45 PPH. As described in chapter 4, Red Lock, Station Road, and Fitzwater river access sites would be maintained, which aligns with the visitor capacity of maintained use.

Management strategies to implement visitor capacity include:

- Implement boat, bicycle, and fishing gear rentals to draw visitors to underused areas or areas with adequate parking in the river corridor (such as Station Road Bridge Trailhead) to disperse visitors.

- Locate facilities that support rentals, except for temporary, small-scale “pop-up” operations, outside the river corridor.
- Increase staffing for parking management and visitor information.
- Manage signage (“lot full” and other signs).
- Use the train to provide shuttle services for river users
- Implement additional shuttle services, if needed.
- Encourage use of Station Road Bridge Trailhead to reduce congestion at Boston.
- Improve pre-visit communication about best times and places to access this area away from peak times and locations.

BRANDYWINE GORGE TRAIL AREA

Review of Existing Direction and Knowledge

This analysis area includes Brandywine Falls overlook area, the Brandy Gorge loop, and the Inn at Brandywine Falls. It is in the high-value experience zone, which focuses on active management of areas with sensitive resources and high visitor use. In this zone, visitors can expect frequent opportunities to engage in interpretive programming and media and informal contacts with park staff. Visitors have access to facilitated experiences providing opportunities to connect to fundamental park resources via trails and interpretive materials. Visitors may experience higher encounters and crowding in the visitor experience portals in this zone.

Brandywine Falls is the most popular park destination for first-time visitors, including families and groups (NPS, 2015). The Brandywine Gorge Trail provides access to the creek and Brandywine Falls. Use is concentrated around the waterfalls and on the boardwalk to the waterfalls. Visitors depart from the trail, boardwalk, and viewing deck to access the stream bed, leading to visitor-created trails and resource impacts such as exposed roots. There are public health concerns with visitors interacting with the water because of poor water quality from upstream runoff contaminants. Another concern is the increased possibility of high flows because of extreme weather events. Two to six special-use permits are issued at Brandywine Falls each year, mainly for weddings but occasionally for hiking events. Permits are issued only for Monday-Friday, with a 30-person maximum for weddings and a 40-people maximum for hiking events. The events are typically in the spring and fall.

The 90-space parking lot frequently fills, with sometimes extensive illegal overflow roadside parking. Illegally parked cars lead to safety issues with visitors walking in the roadway and conflicts with neighboring landowners. The National Park Service manages this congestion with staff, but this approach is unsustainable. Recently, the National Park Service has been eliminating and enforcing no-roadside parking.

Visitors enjoy hiking and picnicking in this area, contributing to low turnover in the parking lot. Demand for picnicking in this area often exceeds the capacity. Despite the lot having no oversized spaces, large RVs and motor homes often use the lot, and tour buses occasionally park here. Groups such as cross-country teams also park in the Brandywine Falls lot on weekends and run on the Bike & Hike Trail.

In summer 2019, there were approximately 23,000 visitors per month to the Brandywine Falls parking area and approximately 1,500 PIOD on weekend days. A 2017 parking study found Saturday

and Sunday as the busiest days at Brandywine Falls, with the lot filling by noon (NPS, 2017b). Staff have observed the lot filling by 10:30 a.m. in recent years. During peak times when the lot is full, some vehicles park illegally along the adjacent roadway and, as other visitors arrive by foot or bicycle, there are approximately 340 PAOT at the Brandywine Gorge trail area.

Limiting Attributes and Relevant Indicators

The primary attribute that constrains this area's ability to accommodate use is the visitor experience in developed portions, such as at the falls viewing areas as well as trails, parking, and picnic areas surrounding the falls. Desired conditions for this area include opportunities to connect to fundamental resources and values and directly view and engage with intact natural resources and landscapes. Fundamental resources and values connected to the visitor experience in this area include the Cuyahoga River ecosystem, the forest ecosystem, and the trail network. Fundamental resources and values include agricultural resources and the rural landscape, of which cultural resources such as Wallace Farm, listed on the National Register of Historic Places (1985), contribute. This analysis area provides prime examples and visitor access to these resources, which are called out in the park's foundation document as essential to achieving the park purpose and maintaining its significance. While visitors may experience higher encounters and congestion in the parking and boardwalk areas, there is less density on trails. The most relevant indicator the park would monitor related to this limiting attribute is PPV at the upper and lower decks of Brandywine Falls and at the ruins of the old gristmill from the Champion Electric Company.

Other limiting attributes include sensitive plants in the mature forest community of this area, which could be degraded as visitor use increases and as visitors leave designated walkways and trails. Inability to expand viewing areas because of steep topography and creek protection issues also constrains use. The most relevant indicator CUVA would monitor is therefore the condition of visitor-created trails.

Visitor Capacity and Implementation Strategies

Current use levels in the Brandywine Gorge trail area are not achieving or maintaining desired resource conditions and visitor experiences. Opportunities to view and engage with intact resources, sensitive plant communities, and topography inform the amounts and types of use that this area can accommodate. Park management has assessed conditions relative to desired conditions and has identified the need to decrease use levels across activity types by 20 percent from current levels. Park staff determined that a 20 percent decrease to 270 PAOT would enable the park to achieve and maintain desired conditions.

Management strategies to implement visitor capacity include:

- Include detailed trip-planning information on the park website and app, such as times when parking lots typically fill.
- Include signage and messaging about congestion at Brandywine Falls to encourage use of other areas in the park.
- Redirect visitors attempting to park on the roadside to park at the Stanford Trailhead (currently in development).
- Improve the parking lot for circulation and entering/exiting, including restriping and formalizing delineation.

- Designate short-term parking for visitors going only to the falls on the boardwalk; monitor and evaluate effectiveness of implementation, including enforcement of short-term parking.
- Promote picnic areas in other locations; develop new picnic areas nearby to disperse long-term visitation.
- Harden targeted segments of the Gorge Trail.
- Create new, large parking areas that can accommodate oversized vehicles.

Adaptive management strategies to be implemented as thresholds are approached or exceeded include:

- Implement a timed entry or reservation system.
- Establish a Seven Falls Trail to disperse use and create an additional access point. The 1.5-mile Seven Falls Trail would provide a multiple loop option connection to Brandywine Falls and the proposed Highland Connector Trail to the Bike & Hike Trail and the Towpath Trail.
- Alter the lower observation deck to discourage visitors from hopping the railing in sensitive areas.

BOSTON MILLS HISTORIC DISTRICT

Review of Existing Direction and Knowledge

This analysis area includes the entire Boston Mills Historic District, including the Village of Boston, the Boston Mill Visitor Center, the Boston Store, the MD Garage, volunteer program offices and facilities, open spaces for unstructured visitor use, temporary access to the Cuyahoga River Water Trail, and trailhead access for the Valley Trail, the Towpath Trail, and the Buckeye Trail.

This analysis area is in the high-value experience zone, which focuses on active management of areas with sensitive resources and high visitor use. In this zone, visitors can expect frequent opportunities to engage in interpretive programming and media and informal contacts with park staff. Visitors should have access to facilitated experiences providing the opportunity to connect to fundamental park resources via trails and interpretive materials. Visitors may experience higher encounters and crowding in the visitor experience portals in this zone.

The Boston Mill Visitor Center and associated grounds are designed to provide first-time visitors with a welcome experience; the facility serves as the primary CUVA visitor center. The area is intended to support a pedestrian-focused experience, connecting the visitor center and the associated 105-space parking lot with other facilities in the historic district, including commercial services and river access. The visitor center typically provides interpretation, information, and orientation services for more than 100,000 visitors annually (NPS Servicewide Interpretive Database, 2016–2019).

Visitors access the Cuyahoga River via this district. Visitor access to the Cuyahoga River is currently on the east side of the Cuyahoga River near the site of the pedestrian bridge that will connect the east and west sides of the river. Although special events pass through this area, many larger special events such as the Towpath Marathon have been moved to less-congested areas. The park is currently not issuing permits to events that originate in the Boston area because of parking limitations and congestion.

In the historic district, since 2020, the Conservancy has operated the historic Boston Store as a park store. It is operated via a two-year lease. Several other historic buildings serve administrative and visitation purposes. MD Garage serves as a boathouse and as an equipment storage area for NPS river operations and supports public programming and interpretation. Multiple buildings serve a large number of volunteers and house primarily interpretive staff. The Conservancy runs a gallery space in the former Trail Mix Boston space; its future use is to be determined. In 2021, the Conservancy introduced short-term arts installations and performances in Boston as part of the Boston Activation Project, a program to provide programming, activities, and spaces that encourage community connection. Drop-in arts and interpretive experiences enhance the experience in the pedestrian campus. These services all bring visitors to the Boston area.

The Boston Mills Historic District includes an existing community, and actions taken or not taken in the district may affect local residents. Concerns in the Boston area include crowding and congestion that can lead to visitor safety and community resident concerns. Current Boston area parking includes a 105-space lot that serves the Boston Mill Visitor Center and an oversized-vehicle lot across the street that can accommodate fifteen vehicles in designated spaces and another 15–18 vehicles around the lot's perimeter. The Boston Trailhead (also referred to as the Boston overflow lot) lot could accommodate an additional 61 vehicles as of 2019 (NPS Planning, Environment and Public Comment 87609). A new Stanford Trailhead parking lot is planned, with 58 car spaces and seven horse trailer stalls. (NPS Planning, Environment and Public Comment 59739; Project Management Information System 212744)

The Boston Mill Visitor Center main lot and oversized-vehicle lot are used by visitors accessing the visitor center, the Towpath Trail, river access, and the Buckeye Trail to Blue Hen Falls. Park staff also use the lots for the visitor center and associated office buildings. The Boston Trailhead lot is used as overflow for the visitor center and for other Boston area amenities and for Towpath Trail access. Employees and volunteers also use this parking lot to access Boston area offices.

The parking situation has evolved, especially with completion of the Boston Mill Visitor Center in 2019. In an informal survey of Boston area parking lots conducted in 2017, the Boston Trailhead parking area was in its original configuration, which included eight spaces for passenger vehicles and five spaces for horse trailers. The survey showed vehicles parking outside the gravel lot, on the grass, and eventually on Boston Mills Road. The main lot to access the Boston Store Visitor Center (which was replaced by the Boston Mill Visitor Center and an associated 105-space lot) accommodated 45 vehicles. The survey found that lots were full by 10 a.m. on Saturdays and remained full until 5 p.m. Sundays were busiest, with lots full by 10 a.m. and overflowing most of the day.

Overflow parking and full lots contribute to many challenges in the Boston area. Boston Mills Road has poor sight lines in that area and on-road parking creates a potential safety hazard. Visitors also frequently walk along Boston Mills Road from the Boston Trailhead lot to access the other facilities in the Boston Mills Historic District. There are no pathways along the road on the south side of the road, which is accessible from the parking lots. A short pathway on the north side of the road connects to the Towpath Trail and facilities on the north side of the road. Visitors often park in this area and access trails or other locations outside of the analysis area, adding to parking complexity and congestion challenges. Even with the addition of the 105-space parking lot for the Boston Mill Visitor Center (albeit with a Boston Store lot size reduction), staff have reported frequently filled parking lots. In addition, horse-trailer parking has been all but eliminated from the Boston area because of passenger vehicles using oversized vehicle spaces when lots are full.

The average use level at the old Boston Store parking area in 2014-2019 was just over 950 people per day during the peak season of May through September. The Boston Trailhead parking area's estimated use during these peak seasons in 2014-2019 averaged just over 2,300 people per day. The highest use levels in the two parking lots were on weekends.

In October 2019, the park opened the Boston Mill Visitor Center. The Boston Trailhead Lot was maintained as a 61-vehicle gravel lot but the Boston Store parking area was reduced to eight spaces, primarily used for limited mobility parking, emergency access, and boater drop-off and pickup. Average use for the Boston Mill Visitor Center main parking lot from February 2020 to March 2022 was 1,300-1,600 PIOD, with peak visitation near 1,800 PIOD on holiday weekends. Average PIOD for the oversized-vehicle lot that serves the Boston Mill Visitor Center and the surrounding area was 200-430 during peak season (May–September). In both locations, visitation was highest on weekends, with nearly 50 percent of visitation on Saturdays and Sundays.

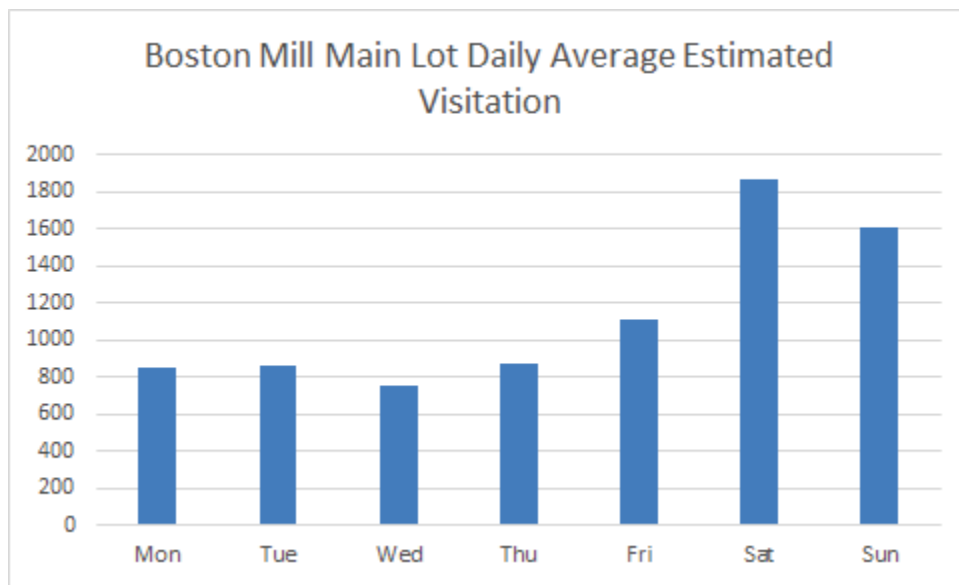


Figure 5 Daily Average Visitation to Boston Mill Main Parking Lot in 2019

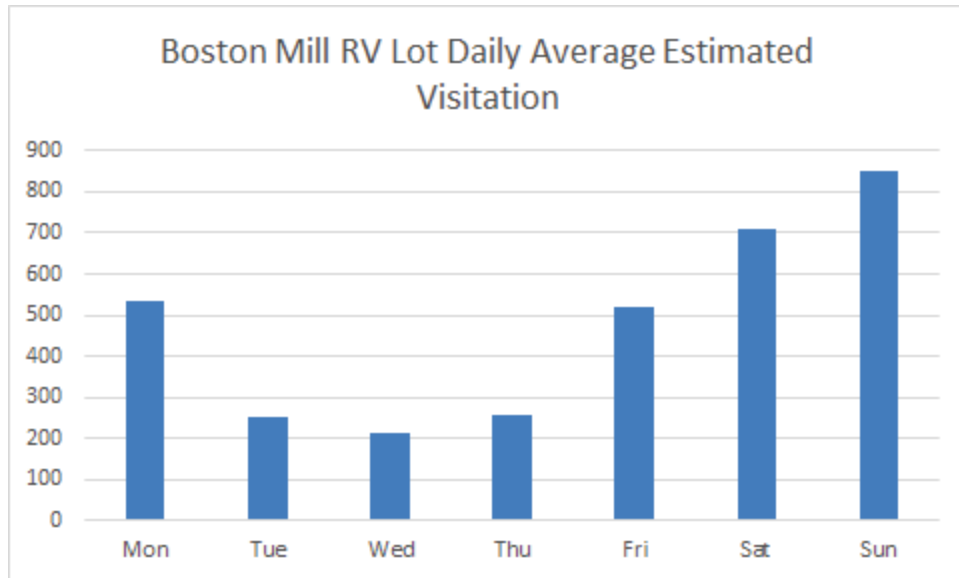


Figure 6 Daily Average Visitation to Boston Mill RV Parking Lot in 2019

Limiting Attributes and Relevant Indicators

The primary attributes that constrain this area's ability to accommodate use are congestion and concentrated use hindering visitor experience and expectations. Desired conditions for this area include opportunities to connect to fundamental resources and values and directly view and engage with intact natural resources, historic resources, and landscapes. Fundamental resources and values in this area include the Cuyahoga River ecosystem; the Ohio & Erie Canal; The Cuyahoga Valley Scenic Railroad; the trail, river, and rail networks; and community engagement. Visitors may experience crowding near core visitor-use areas such as near the Boston Mill Visitor Center, other visitor facilities, and river-access points. As amounts and types of use increase, visitors may have fewer opportunities to directly engage with resources due to crowding and congestion. The park will monitor two relevant indicators in the Boston area: Monitoring PPV at Lock 32 will provide information on crowding and congestion on the Towpath Trail, while monitoring lot fill times at Boston Mill Visitor Center will allow park staff to determine whether visitors are able to access basic visitor information and services in the Boston area.

Visitor Capacity and Implementation Strategies

Current use levels in this area are achieving and maintaining desired resource conditions and visitor experiences. Opportunities to engage with historic properties, visitor information, orientation, and experience-based facilities, and the river inform the types and amounts of use that this area can accommodate. Park management has assessed existing conditions relative to desired conditions and has identified the need to maintain use levels but redistribute use by increasing short-term use (one hour or less); the assessment also revealed a need to decrease long-term use. Maintaining current use levels indicates a capacity of 4,400 PIOD for the Boston area. As described in chapter 4, the Boston river access site would not be expanded, which aligns with the visitor capacity of maintained use.

Management strategies to implement visitor capacity include:

- Implement short-term parking options at Boston Mill Visitor Center and other visitor service facilities. These could include parking spaces with time limits.
- Create a seasonal agreement with Vail Resorts to use a portion of their Boston Mills Ski Area parking lot from spring to fall to provide visitor access to Blue Hen Falls.
- Provide additional long-term parking by completing Stanford Trailhead parking and communicating its use to trail visitors.
- Divert visitors not needing to specifically access the Boston Mill Visitor Center or other facilities in the Boston area to other Towpath Trail or river-access points.
- Distribute visitors using the train by marketing the Boston Mill train-boarding station as a shuttle stop rather than as a starting point for park excursions. Work with the Cuyahoga Valley Scenic Railroad to monitor use levels and adjust messaging as needed.
- Formalize signage and parking for Blue Hen Falls access in the Boston area.
- Consult with Boston Mills Township officials to identify and address visitor use conflicts in a timely manner

COLUMBIA

Review of Existing Direction and Knowledge

This analysis area is west of the Cuyahoga River and bound by Columbia Road to the north, Boston Mills Road to the south, the park boundary to the west, and the Boston Mills Ski Area and the Blue Hen Falls area to the east. While this area does not include Blue Hen Falls, it can be influenced by falls visitation. It is in the sensitive resource zone, which focuses on maintaining and restoring natural resources to their highest ecological integrity and maintaining the integrity and condition of sensitive cultural resources. Visitors can experience a primitive area with natural soundscapes and dark skies, with minimal congestion and crowding. Visitation to this area is somewhat concentrated on the Buckeye Trail. NPS staff estimate current use of 25 PPH during peak times in this analysis area.

Columbia contains the Buckeye Trail and the Coonrad historic building, which is closed to the public. The Buckeye Trail connects visitors from Columbia Road to a short connector trail leading to Blue Hen. This area includes a picnic area that serves as a visitor destination. Because the Buckeye Trail connects to the popular Blue Hen area, the biggest management concern in this area is visitor use conflicts. Visitation in this area is normally low but there are periods with higher visitation, mostly associated with formal and informal hiking and trail-running events and meetups. The section of the Buckeye Trail in this analysis is maintained by a volunteer group. There is no formal parking in this area. There is limited informal parking along Columbia Road; most visitors access this segment of the Buckeye Trail as part of a longer trail experience.

Limiting Attributes and Relevant Indicators

This area is managed for visitor use via the Buckeye Trail and the Columbia Run picnic area. In addition to visitor use conflicts, the trail conditions in this area are somewhat technical, limiting recreation here. Therefore, monitoring trail width and the condition of visitor-created trails is important to achieve and maintain desired conditions of high ecological integrity and minimal congestion and crowding.

Visitor Capacity and Implementation Strategies

Current use levels at Columbia are not achieving or maintaining desired conditions. Visitor use in this area leads to visitor-created trails and other sensitive resource disturbances and impacts. Use levels are constrained by these resource impacts. Park management has assessed conditions relative to desired conditions and has identified the need to decrease use levels to 15 PPH during peak times to achieve and maintain desired conditions of high ecological integrity and minimal congestion and crowding.

Management strategies to implement visitor capacity include:

- Relocate the Columbia Run picnic area to a natural or high-value experience zone location.
- Install educational signs explaining the sensitive nature of resources and the ecological reasons for restoring visitor-created trails to natural conditions, especially the visitor-created trail from Columbia Picnic area to the Buckeye Trail.
- Remove the Columbia Run picnic area.
- Increase education on proper trail etiquette on primitive trails.
- Continue to use volunteers to help maintain the Buckeye Trail.
- Maintain the primitive nature of the Buckeye Trail.
- Conduct active restoration of visitor-created trails.

BLUE HEN FALLS

Review of Existing Direction and Knowledge

This area is west of the Cuyahoga River and extends from Blue Hen Falls to Buttermilk Falls. Under this plan, this area would be rezoned as a natural zone, providing for a primitive atmosphere with minimal facilities and ample opportunities for visitors to connect to nature via low-impact recreation such as hiking, bird walks, and interpretive walks. Trail-counter data at Blue Hen Falls estimated 600–700 PIOD on Saturdays and Sundays in fall 2019 (NPS, 2020). The use here is likely lower now because the parking lot has been removed, making this area accessible via hike-in travel only. The Blue Hen Falls trail is busiest at 2–3 p.m. on weekends.

This area has two of the park's most popular waterfalls: Blue Hen Falls and Buttermilk Falls. Blue Hen Falls is accessed by traveling 1.5 miles one way on the Buckeye Trail from Boston Mills Visitor Center. Blue Hen falls has a viewing area with a bench and a fence above the falls and a visitor-created trail to the creek for visitors to view the falls from below. Buttermilk Falls is accessed by continuing north from Blue Hen Falls downstream on a visitor-created trail or by traveling south from the Boston Mills Ski area, which involves crossing private property. The trails to both destinations have moderate terrain, making them appropriate for a wide range of visitor skills.

The biggest management concerns in this analysis area are related to parking and impacts on natural resources. Parking concerns include conflicting parking uses (between RV users and cars) and parking lot congestion. Visitors are often ticketed by Peninsula police for violating the parking closure. Natural resource concerns include loss of sensitive plant species, soil erosion along slopes, proliferation of invasive plants, off-trail use in creek beds, and impacts on geological features (i.e., graffiti). Impacts to natural resources extend beyond Blue Hen falls, where visitors continue along a clear visitor-created trail after the formal trail ends to reach Buttermilk Falls.

Limiting Attributes and Relevant Indicators

As noted in guideline 2, there are significant natural resources and high visitation in this area. These resources limit the ability to accommodate more use in this area. This area is geographically restricted by the roadway and private property ownership at the bottom of the drainage. Visitor experience is limited by high visitation in key viewsheds such as the falls and the creek bed. Impacts to natural resources most limit this area's ability to accommodate use. Therefore, monitoring trail width, condition of visitor-created trails, and PPV are important to achieve and maintain desired conditions of protected natural resources in this analysis area.

Visitor Capacity and Implementation Strategies

Current use levels in this area are not achieving or maintaining desired conditions. Visitor use in this area, particularly accessing Blue Hen Falls, have led to visitor-created trails and other sensitive resource disturbances and impacts. Use levels are constrained by these resource impacts. Park management has assessed existing conditions relative to desired conditions and has identified a need to decrease use levels to 140 PAOT to achieve and maintain desired conditions of a primitive atmosphere and opportunities to engage with nature.

Management strategies to implement visitor capacity include:

- Educate visitors on the importance of sensitive resources and of hiking on-trail.
- Install signs to support wayfinding and show where off-trail use is prohibited while being mindful of sensitive resources and landscape.
- Evaluate the effectiveness of enforcement efforts pertaining to existing closures and allocate appropriate resources based on evaluation and needs.
- Restore visitor-created trails around the falls via active restoration.
- Consider formalizing a visitor-created trail to the creek and falls to allow creek access below the waterfall while protecting off-trail resources.
- Restrict the top parking lot to limited-mobility parking, with associated signage.
- Add access to Buttermilk Falls by formalizing the current visitor-created trail.
- Close areas with sensitive resources to off-trail travel.

Adaptive strategy:

- Implement a parking reservation system in the proposed limited-mobility parking area.

PENINSULA/LOCK 29

Review of Existing Direction and Knowledge

This analysis area is bounded by the Towpath Trail to the west, Mill Street to the east, and the Cuyahoga River to the north. The southern portion of the analysis area follows the Cuyahoga River approximately one mile south of Streetsboro Road (Route 303). It is in the high-value experience zone, which focuses on active management of areas with sensitive resources and high visitor use. In this zone, visitors can expect frequent opportunities to engage in interpretive programming and media, and informal contacts with park staff. Visitors have access to facilitated experiences,

providing the opportunity to connect to fundamental park resources via trails and interpretive materials. Visitors may experience higher encounters and crowding in the visitor experience portals in this zone.

This area contains the Ohio & Erie Canal, the Towpath Trail, the Cuyahoga River, the Cuyahoga Valley Scenic Railroad, a major railroad depot, and views of the historic canal-era village and cultural landscape and associated historic structures/locks. Rare plant and reptile species have been documented in this analysis area. A 43-space parking lot supports Towpath Trail access, Cuyahoga Valley Scenic Railroad boarding and disembarkation, and river access. An additional gravel lot that can accommodate approximately 85 vehicles is about 0.10 mile north of the main parking area.

To access the Towpath Trail, the boarding station, and the river from the overflow parking, visitors must cross the active rail line and walk along the railway siding or a roadway. Park facilities are in the Village of Peninsula, mostly outside the park boundary. Many park visitors frequent Peninsula's restaurants, shops, and other businesses. The Village of Peninsula has parking congestion issues and recently implemented a parking fee for on-street parking. Deep Lock Quarry Metro Park, managed by Summit Metro Parks, has a large trailhead just south of the Village of Peninsula that connects to the Towpath Trail and this analysis area.

Because of concentrated uses in the Peninsula/Lock 29 analysis area, there are user group conflicts and safety concerns such as bicyclist-boater conflicts on the Towpath Trail at the river access and safety concerns for pedestrians crossing the train tracks. Many bicyclists and boaters board and disembark the train at this location. A commercial-use authorization for bicycle rentals operates on private property in Peninsula; bicyclists often use the Towpath Trail. During peak summer months, there are 1,000-2,000 bicycle rentals per month. In the southern portion of the analysis area, the former Brandywine Country Club Golf Course, recently acquired by the Conservancy, is accessible from Peninsula on foot.

In 2017, the Lock 29 parking lot was busiest on Saturdays and Sundays, with the lot full from 9 a.m. to 4 p.m. (NPS, 2017b). Park staff have also observed high use levels after work and around dinner time in this area. In 2019, there were approximately 17,000-24,000 visitors per month and 1,400 PIOD on weekends at the Lock 29 parking areas. In 2017-2019, there were 800-900 PIOD on peak days on the Towpath Trail near Lock 29 (TRAFx 2017-2019). Weekends were the busiest days on the trail as well, with approximately 100 PPH. During peak times in the Peninsula/Lock 29 analysis area there are approximately 315 PAOT.

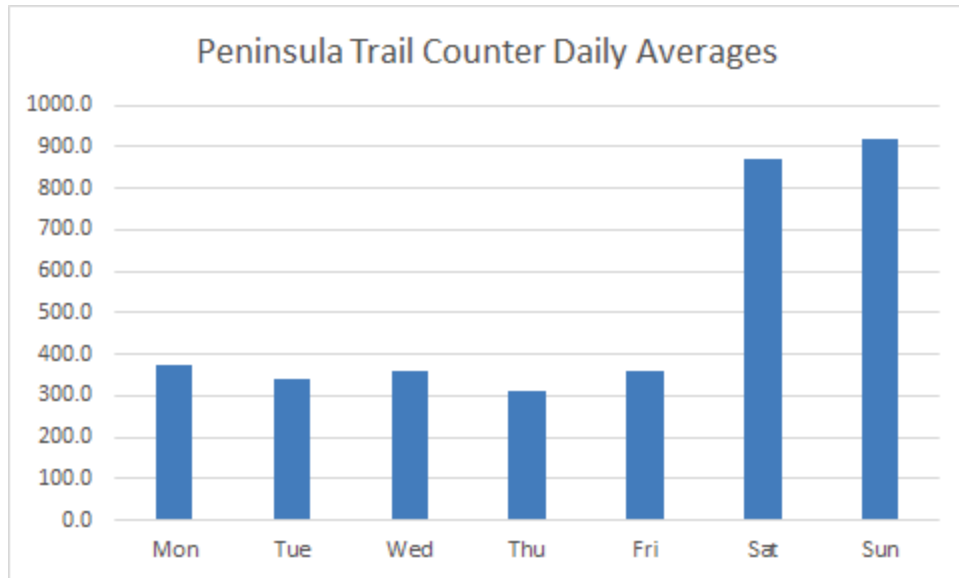


Figure 7 Daily Average Trail Counts for Towpath Trail at Peninsula/Lock 29 in 2017–2019

Limiting Attributes and Relevant Indicators

The primary limiting attribute that constrains this area’s ability to accommodate desired use is the visitor experience. Though this area is considered a visitor experience portal in the high-value experience zone, there should be opportunities for immersive experiences in which visitors can directly engage with resources and safe recreation. As amounts and types of use increase, visitors may have fewer opportunities to directly engage with resources and user group conflicts, and associated safety incidents are more likely. The most relevant indicator the park would monitor related to this limiting attribute is PPV at the train depot river overlook, the Lock 29 Towpath Trailhead, and the Lock 29 river access point.

Other limiting attributes include cultural resources and the adjacent private property. Key cultural resources include the Ohio & Erie Canal and associated structures and locks, a portion of the historic Cuyahoga Valley Scenic Railroad, and the cultural landscape of the Peninsula Village Historic District. Because of Peninsula’s proximity, any crowding and congestion in this area will impact this private village. The most relevant indicator the park may monitor related to this limiting attribute is the number of visitor-related incidents to cultural resources per month. Also, topography around the Lock 29 trailhead constrains this area’s ability to accommodate desired use levels, by way of precluding footprint expansion.

Visitor Capacity and Implementation Strategies

Current use levels in this area are not achieving or maintaining desired visitor experiences and resource conditions, particularly in the Lock 29 trailhead and train boarding area. Opportunities for immersive experiences with natural and cultural resources, safe recreation, protection of cultural resources, and the adjacent village inform the amounts and types of use that this area can accommodate. Park management has assessed existing conditions relative to desired conditions and has identified the need to decrease use levels across activity types by 20 percent from current use levels and to disperse use to less-concentrated areas. Park staff determined that a 20 percent decrease

to 250 PAOT combined with use dispersal would enable the park to achieve and maintain desired conditions. As described in chapter 4, the Lock 29 river access site would not be expanded, which aligns with the visitor capacity of overall decreased use.

Management strategies to achieve desired visitor capacity include:

- Work with the Village to promote and redirect use to the former Brandywine Golf Course and Deep Lock Quarry Metro Park as alternative parking to access the Towpath Trail.
- Promote use of the train and human-powered transportation such as walking, bicycling, or kayaking to reduce the number of private motorized vehicles. Promote travel to Peninsula via the train rather than departing from Peninsula by directing passengers to park at the Rockside Station, the Akron Northside Station, or other stations when possible.
- Improve wayfinding signage and infrastructure to increase visitor circulation, reducing congestion in pedestrian areas and parking lots. Ensure that these improvements coincide with treatment recommendations in the Ohio & Erie Canal CLR (NPS, 2021, in draft).
- Monitor dates and times of NPS parking fullness to observe effects of Peninsula parking fees.
- Work with the Cuyahoga Valley Scenic Railroad to synchronize train route and stops in Peninsula to avoid conflicts; coordinate a transportation campaign.
- Redirect large-scale special events permitted by the National Park Service to less-crowded locations. Coordinate with Peninsula-hosted events to reduce impacts to park visitors.
- Separate recreational uses such as by relocating river access to reduce conflicts.
- Refer to the CLR for strategies to improve visitor safety at water crossings.
- Improve railroad crossings per recommendations in the 2017 rail station area safety study.

Adaptive management strategies to be implemented only as thresholds are approached or exceeded include:

- Establish the Peninsula train operation in a new location, such as south of Route 303.
- Add parking on the former Brandywine Golf Course to broadly serve Peninsula amenities

VIRGINIA KENDALL NORTH AREA

Review of Existing Direction and Knowledge

This analysis area includes the Happy Days Lodge, the Octagon and Ledges Shelters, the Virginia Kendall Ledges and trail system, the Boston Run Trail, and Jyurovat Farm. The Boy Scouts of America Camp Manatoc Scout Reservation is in this area, although it is not included in the analysis area since it is on private property. This area contains large parking lots that provide access to an interconnected trail system. Visitors can access the same resources via several access points. This analysis area is in the high-value experience zone, which focuses on active management of areas with sensitive resources and high visitor use. In this zone, visitors can expect frequent opportunities to engage in interpretive programming and media and informal contacts with park staff. Visitors should have access to facilitated experiences providing the opportunity to connect to fundamental park resources via trails and interpretive materials. Visitors may experience higher encounters and crowding in the visitor experience portals in this zone, with less crowding outside of these portals.

The Happy Days Lodge is managed by the Conservancy via a lease. It is a former Civilian Conservation Corps youth camp that has been repurposed as a wedding and special-event venue and can accommodate up to 290 PAOT. For large events at Happy Days Lodge, visitors use the parking lot on the north side of the road that is also the parking lot for the Boston Run trailhead. During large events, most of the parking is used by Happy Days Lodge visitors, creating parking challenges for trail users. When there are no events, the lot is largely underused. The Haskell Run Trail behind Happy Days Lodge connects to the Ledges Trail, allowing the Happy Days north lot to serve as a secondary trailhead for the Ledges. The Ledges and Octagon Shelters are rustic shelters available for visitors to reserve via recreation.gov. The shelters were constructed by the Civilian Conservation Corps, and both shelters are fully accessible. The Ledges and Octagon Shelters can accommodate up to 75 and 50 people, respectively. Special-use permits are provided for events of up to 150 people to use the play fields next to the Ledges Shelter and hiking groups up to 40 people in the Virginia Kendall Ledges trail area. The Ledges trail area is a primary attraction for out-of-town visitors.

Important cultural resources include the Civilian Conservation Corps camp, the Virginia Kendall State Park Historic District, and multiple structures on the national register including the Ledges Shelter, the Octagon Shelter, and the Happy Days Lodge. Sensitive natural resources in this area include high-quality cold-water habitat streams with American brook lamprey, fens, ledges, rock outcroppings, bat hibernacula, extensive rare plants, and high-value wetland habitat.

In summer 2019, there were approximately 10,500 visitors to the Boston Run Trailhead/Happy Days Lodge parking area and approximately 650 PIOD on weekend days. There were approximately 3,000 visitors per month at the Happy Days South parking area and 180 PIOD on weekend days. The Octagon area had approximately 4,200 visitors per month in summer 2019, with approximately 260 PIOD on weekend days. The Ledges area had more than 16,000 people per month in summer 2019, with approximately 1,000 PIOD on weekend days. There were 45–65 PIOD at Virginia Kendall Ledges trails on weekends in fall 2019 and 10 people per hour (TRAFx, 2019). Though no trail counter data are available for the summer, it is likely that use levels are at least two to three times as high during the summer and fall than during the winter.

Limiting Attributes and Relevant Indicators

The primary attribute that constrains this area's ability to accommodate use is cultural resources such as historic structures and the cultural landscape. The natural resources in this area, including moss, rare plants, and geological formations, contribute to the cultural landscape. Desired conditions for cultural resources in the high-value experience zone include opportunities for immersive experiences with historic properties and cultural landscapes and that historic districts are accessible to visitors while protecting cultural resources. The most relevant indicators the park would monitor related to this limiting attribute are trail widening by visitors, condition of visitor-created trails, and PPV at the Ledges Overlook.

Visitor Capacity and Implementation Strategies

Current use levels in this area are achieving and maintaining desired resource conditions and visitor experiences. The cultural resources in this area—the historic district, historic structures, and cultural landscape—inform the amounts and types of use that this area can accommodate. Park management has assessed existing conditions relative to desired conditions and has identified the opportunity to maintain current use levels across activity types along with a redistribution of use to non-peak times.

To achieve and maintain desired conditions, the Boston Run Trail and Happy Days Lodge can accommodate up to 830 PIOD, which takes into account up to 290 people at one time utilizing the Happy Days Lodge. The Ledges Shelter, playfields, trails, and Octagon Shelter area combined can accommodate up to 1,260 PIOD while achieving and maintaining desired conditions. Special event capacities for the Ledges and Octagon Shelters will continue to be 75 and 50 people, respectively.

Management strategies to implement visitor capacity include:

- Communicate peak times and encourage off-peak visitation via the website, social media, and signage.
- Promote and provide programming at underused amenities in the area such as picnic tables and the playfields.
- Promote alternative trails to the Ledges, such as Pine Grove, Forest Point, and Boston Run trails.
- Direct visitors from the Ledges parking lot to the Octagon and Happy Days Lodge parking lots during peak times.
- Increase visibility of and visitor information about available dispersed picnic facilities.
- Improve restroom facilities at the North Happy Days lot to encourage use as a trailhead.

Adaptive management strategies to be implemented only as thresholds are approached or exceeded include:

- Expand Happy Days Lodge parking lots into the grass field adjacent to the pavement.
- Evaluate a bicycle trail from the Bike & Hike Trail to the Happy Days Lodge area to provide bicycle access to the Virginia Kendall area.
- Make the Ledges Trail unidirectional to reduce visitor encounters.

KENDALL HILLS AND KENDALL LAKE

Review of Existing Direction and Knowledge

This analysis area is east of the Cuyahoga River and is bounded by Quick Road to the south, Truxell Road to the north, Akron Peninsula Road to the west, and the park boundary to the east. It is in the high-value experience zone, which focuses on active management of areas with sensitive resources and high levels of visitor use. In this zone, visitors can expect frequent opportunities to engage in interpretive programming and media and informal contacts with park staff. In summer 2019, parking lot data at Kendall Lake parking area indicated about 10,000 visitors/month, accounting for approximately 650 PIOD on Saturday and Sunday each (NPS, 2020). West Pine Hollow, East Pine Hollow, Crowfoot Gully, and Little Meadows parking areas accounted for approximately 500, 300, 180, and 125 PIOD on Saturday and Sunday each, respectively (NPS, 2020). In 2021, Pine Hollow Trailhead was used as a secondary trailhead to the Wetmore trail system, with a goal of expanding opportunities for horse-trailer parking. Because of the high number of parking lots in this area, lots typically do not fill to capacity on busy summer days.

Kendall Hills and Kendall Lake are among the most-valued recreational destinations in the park, as visitors can fish, hike, picnic, cross-country ski, boat, ice skate, ice fish, sled, and trail run. This area includes a warming facility that is used in the winter. Special events and large permitted trail runs are also held in this area. These events, managed via special-use permits, occur on weekends in the

summer and fall, with up to 1,500 people per event. This area includes many cultural landscapes, historic structures, and mature forest. Duffy Farm is an NPS historic facility used for administrative purposes. The Virginia Kendall maintenance facility is in this area, housing CUVA trails, grounds, roads, and railroad maintenance staff and operations.

Management concerns in this analysis area are negative effects on the cultural landscape and unsustainable trails. Another challenge in this area is management of fields. Mowing is resource- and staff-intensive. Mowing is done every three years, and this area may be added to the prescribed burn areas.

Limiting Attributes and Relevant Indicators

As noted in guideline 2, there are significant cultural resources and high visitation in this area. Impacts to trails limit this area's ability to accommodate use, as trails widen during wet conditions and due to large group use. Therefore, monitoring trail width will be important to achieving desired conditions of protection of sensitive resources and high visitor use.

Visitor Capacity and Implementation Strategies

Current use levels at Kendall Hills and Kendall Lake are achieving and maintaining desired conditions. Park management has assessed existing conditions relative to desired conditions and has identified the opportunity to increase use levels to achieve and maintain desired conditions of protected sensitive resources and opportunities to connect with those resources. The Kendall Hills area can accommodate an increase up to 3,000 PIOD and the Kendall Lake can accommodate an increase up to 1,500 PIOD while achieving and maintaining desired conditions. Special event capacity can be increased up to 1,500 PIOD.

Management strategies to implement visitor capacity include:

- Promote this area for use during peak times.
- Improve wayfinding around the lake to encourage use on underused trails and disperse use on surrounding trails.
- Continue designating cross-country special-use permits and direct most cross-country and other large-scale trail-running events to the Virginia Kendall Hills trailheads.
- Assess feasibility of improving facilities (i.e., restrooms, trash receptacles) to support large groups and high use at trailheads along Quick Road, which is used for group special-use permit events.

PENINSULA TO BATH ROAD RIVER CORRIDOR

Review of Existing Direction and Knowledge

This analysis area is a section of the river bound by Akron Peninsula Road to the East and the Towpath Trail and the Ohio & Erie Canal to the west. This analysis area includes the Beaver Marsh . It is in the river corridor zone, which focuses on the protection of visual landscapes in the river corridor. Visitors access the Beaver Marsh area via a boardwalk section of the Towpath Trail. The area is a popular destination for first-time visitors. Most use takes place at Beaver Marsh, with some passthrough use on the Towpath Trail and train. Visitation to this area is generally highest on

Sundays, when the Ira Trailhead parking lot often overflows (NPS, 2017b). The Ira Trailhead parking area inductive loop counter recorded about 16,000 visitors per month in summer 2019 and 1,000 PIOD on Saturday and Sunday each (NPS, 2020). The Everett Trail counter data recorded 600-700 PIOD on Saturday and Sunday each (NPS, 2020). Approximately 300 people ride the Cuyahoga Valley Scenic Railroad on Saturdays, according to 2018 commercial-use authorization data. Visitors arrive and recreate in this area via hiking, biking, and the train.

This area contains Beaver Marsh, the railway, the Towpath Trail, sections of the Valley Trail, and the Ohio & Erie Canal. Beaver Marsh is a designated Watchable Wildlife Area (a state designation; see www.ohioanderiecanalway.com/plan/listings/beaver-marsh) and draws many photographers and birders and some fishermen. Other notable features include three heronries, river otter breeding locations, and important songbird, waterfowl, reptile, and amphibian habitats. High-quality streams such as Yellow Creek and Furnace Run flow into this section of the river. This section of the river is potentially eligible for designation under the Wild and Scenic Rivers program. Cultural resources in this area include Deep Lock Quarry (managed by Summit Metro Parks), and a vast section of floodplain wetlands.

South of Ira Road, the Towpath Trail does not follow the alignment of the historic towpath because the construction and alignment of Riverview Road infringed on the historic towpath. The CLR (anticipated completion in September 2022) identifies rehabilitation as the appropriate treatment for the cultural landscape. To support the overall rehabilitation treatment, recommendations for this segment of the Towpath Trail (from Botzum Trailhead to Ira Road) include installing a trail surface that is differentiated from the surface of the historic towpath route; preserving concrete and stone structures; interpreting the historic towpath and canal prism alignment; considering expanded interpretation of railroad features; prioritizing protection over additional interpretation for potential archeological features near Botzum; and managing wetlands and the floodplain forest for ecosystem health (Quinn Evans, 2021b).

Private inholdings include Summit Metro Parks, Szalay's Farm & Market on Riverview Road, and Indian Springs Trailer Park. Management challenges in this area include overflow parking from Szalay's Farm & Market into Hunt House parking and along NPS-managed roads causing safety concerns, amphibian mortality at key crossings on Riverview Road, and informal parking and visitor-created trails at Bath Road at the railroad tracks.

Limiting Attributes and Relevant Indicators

As noted in guideline 2, there are significant cultural and natural resources in this area. These resources limit the ability to widen the Towpath Trail north of Ira Road and to develop new infrastructure adjacent to the river in the floodplain. Conflicting user types most limit this area's ability to accommodate use. Visitor conflicts arise at Beaver Marsh because it is a primary visitor destination and is located along part of a recreational trail. In addition, the highly visited adjacent private amenity of Szalay's Farm & Market results in conflicts between different user groups. Informal parking and visitor-created trails also constrain this analysis area's ability to accommodate use. Therefore, monitoring PPV at the Beaver Marsh viewing platform and river-access points will be important to achieving the desired conditions of protection of visual landscapes in the river corridor.

Visitor Capacity and Implementation Strategies

Current use levels in this area are achieving and maintaining desired conditions. Visitor-use impacts are short-term and reversible in this dynamic analysis area. Park management has assessed existing conditions relative to desired conditions and has identified the opportunity to increase use levels to 1,500 PIOD while achieving and maintaining desired conditions. As described in chapter 4, the Grether river access site would be expanded, which aligns with the visitor capacity of increased use.

Management strategies to implement visitor capacity include:

- Manage amounts and types of use via special-use permits and commercial services.
- Improve multimodal uses and facilities to support multimodal use in this area.
- Expand pull-off locations on the Beaver Marsh boardwalk.
- Manage vegetation along the Towpath Trail corridor to direct use to appropriate locations.

Adaptive management strategy:

- Consider widening trail south of Ira Road, depending on CLR outcomes.

OTHER LOCATIONS

TABLE 9 ASSESSMENT OF APPROPRIATE AMOUNTS & TYPES OF USE FOR OTHER LOCATIONS IN THE PARK

Analysis Area	Review of Existing Direction and Knowledge	Limiting Attribute(s) and Indicators	Visitor Capacity and Strategies
Northern Natural A stretch of land on the west side of the Cuyahoga River from the northernmost boundary of the park to Route 82.	<p>There is just one formal trail in this area: a bicycle connector called the Hemlock Creek Trail from an adjacent community, managed by the City of Independence. The Canal Exploration Center is adjacent to this area and is a primary location for school programs about local history.</p> <p>The natural resources in some sections are degraded due to former mining and topsoil removal. The Haydite Mine recently closed in this area and has been acquired by West Creek Conservancy for future restoration. Restoration projects including at Rockside, Brookside, Pleasant Valley, Hillside, and Fawn Pond, have assisted with recovery. There are visitor-created trails from neighborhoods adjacent to this area. Important bird habitat in this area includes a bald eagle nest, a heronry, and a wetland (Fawn Pond). Several historic structures contain important archeological sites.</p> <p>NPS staff estimate current use levels of 50 PPH during peak times in this analysis area.</p>	<p>Limiting attribute: visitor experience for a sense of remoteness and natural sounds in the natural zone. Wildlife disturbance is a secondary limiting attribute in a small portion of this analysis area.</p>	<p>Visitor use levels could increase up to 200 percent in the northern natural area to 150 PPH.</p> <p>Strategies:</p> <ul style="list-style-type: none"> • Promote nature-viewing opportunities. • Improve facilities in this area to attract and support increased use. • Evaluate short nature trails to support increased use, such as via programs at the Canal Exploration Center.
Rockside to Station Road River Corridor An approximately eight-mile section of the Cuyahoga River corridor	<p>This area contains the Alexander Mill (leased for commercial use), Oxbow Orchard, Gleeson Farm, and most of the watered section of the Ohio & Erie Canal (part of which is a national historic landmark).</p> <p>A heronry and bald eagle nest have recently developed in the northern section of this area. This area also offers viewing opportunities across the river towards a bald eagle nest. Without a formal viewing area, visitors have created trails to the river's</p>	<p>Limiting attribute: visitor experience for natural sights and sounds and opportunities to linger and enjoy the scenery of the</p>	<p>Visitor use levels could increase up to 200 percent in this area or 200 PPH.</p> <p>Strategies: Evaluate locations on the Towpath Trail for viewpoints/platforms separated from trail for visitors to linger, enjoy the scenery, and view wildlife.</p>

Analysis Area	Review of Existing Direction and Knowledge	Limiting Attribute(s) and Indicators	Visitor Capacity and Strategies
between Station Road and Rockside Road.	<p>edge to view the nest. This area is popular for birdwatching during spring migration, especially near Station Road Bridge.</p> <p>The area also contains the Towpath Trail, the Cuyahoga River, the Cuyahoga Valley Scenic Railroad, and associated historic structures and locks. Rockside Boarding Station marks the northern terminus of the passenger train route. Sagamore Creek (a high-quality cold-water habitat stream), and Tinker's Creek (the largest tributary of the Cuyahoga River) enter the river in this section.</p> <p>According to traffic counter data and park staff knowledge, there are approximately 100 PPH in this area during peak times.</p>	<p>river, canal, and associated historic structures in the river corridor zone. Historic resources in this area are a secondary limiting attribute.</p> <p>Indicator: PPV</p>	
<p>Canal Cultural</p> <p>A stretch of land on the east side of the Cuyahoga River, including the canal and the Towpath Trail and from the northernmost boundary of the park to just south of Aurora Road at the canal feeder gates.</p>	<p>This area contains many historic structures, including Canal Road (a contributing element of the canal historic landscape) and a watered section of the Ohio & Erie Canal (a national historic landmark), the Towpath Trail, Canal Exploration Center, historic structures associated with the Ohio & Erie Canal, Edmond Gleeson Farm, Frazee House and Wilson's Mill, and two sustainable farms (Gleeson/Canal corners and Oxbow Orchard).</p> <p>Primary visitor use in this area includes visitors accessing the Canal Exploration Center, train boarding and disembarking at Rockside Station and Canal Exploration Center, River Access at Lock 39 trailhead, and recreational use of the Towpath Trail. Because of its proximity to businesses and neighborhoods, this section of the Towpath Trail serves many local users who tend to use this segment for fitness and general recreation.</p> <p>The Cuyahoga Valley Scenic Railroad has two boarding stations in this area: Rockside Station and Canal Exploration Center. Canal Exploration Center is considered by the National Park Service to be the most significant historic structure in the park. It is adjacent to a working lock and houses exhibits about the Ohio & Erie Canal. It is open seasonally to the public and is a major location for school history field trips, receiving more than 20,000 visitors per year.</p> <p>Noteworthy natural resources include the new heronry and Tinker Creek. Visitors can access the river from the Lock 39 Trailhead. Archeological resources include Pilgerruh (the refuge sought by a group of Lenape with Moravian missionaries fleeing the violence of the American Revolution) and South Park (Woodland).</p> <p>Neighboring communities and businesses use the Towpath Trail for weekday recreational use. Special-use permits are authorized in this area for groups of up to 40 people.</p> <p>According to traffic counter data and park staff, there are approximately 250 PPH in this area at peak times. The only congestion in this area is in front of Canal Exploration Center when the National Park Service offers programming at the working lock. The</p>	<p>Limiting attribute: cultural resources in this area, including the Ohio & Erie Canal and the Towpath Trail (cannot be widened in this section).</p>	<p>Visitor use levels could increase up to two times in this area, to 500 PPH. As described in chapter 4, the Rockside river access site would not be expanded. This aligns with the visitor capacity of increased use because the current parking lot is underutilized.</p> <p>Strategies:</p> <ul style="list-style-type: none"> • Implement the bicycle bypass around the west side of the Canal Exploration Center per the CLR to reduce congestion in front of the building. • Promote multimodal opportunities from Rockside Station. • Encourage park visitors to other areas to disperse to the Canal Cultural Zone. • Promote the proximity of this area to residents of Cleveland and its immediate suburbs. • Provide safe pedestrian/bicycle access to the farms from the Towpath Trail. • Increase public programs at Canal Exploration Center <p>Adaptive strategies:</p> <ul style="list-style-type: none"> • Formalize a viewing location for the new heronry if the viewing area becomes congested. • Monitor visitor-created trails from river-fishing and restore to natural conditions as needed.

Analysis Area	Review of Existing Direction and Knowledge	Limiting Attribute(s) and Indicators	Visitor Capacity and Strategies
	lock is on the Towpath Trail, so there are occasional user conflicts when the Towpath Trail is busy.		
Terra Vista East of the Cuyahoga River, this area is between Canal Road and Valley View Village Church.	The Terra Vista Natural Study Area historically contained a sand-and-gravel mining operation. The area has since been restored, with meadows and wetlands that are habitat for many plants and animals, including more than 20 types of butterflies. Visitors access Terra Vista from a parking area at Tinker Creek Road, between Canal Road and Valley View Village Church. The area is marked by a bulletin board. Visitors hike up a gravel service road to the entrance sign. There is a fishing pond, a historic cemetery, and an informal loop trail. Park staff estimate 20 PPH during peak times.	Limiting attribute: visitor experience for a sense of remoteness and natural sounds in the natural zone.	Visitor use levels could increase up to 25 percent in this area to 25 PPH. Strategies: <ul style="list-style-type: none"> • Create a formal trailhead and trail with additional signage and information. • Evaluate potential locations for bicyclist/hiker access from the Towpath Trail to Terra Vista and potentially Bedford Reservation. • Coordinate with Cleveland Metropark to create a bicycle trail connection.
Station Road Wetlands On the west side of the Cuyahoga River, this area is bordered by Aurora Road to the north, Riverview Road to the west, the river corridor to the east, and Snowville Woods to the south.	The Station Road Wetlands area contains high-quality wetlands that are home to sensitive and regionally rare species. The area includes property owned and managed by Cleveland Metroparks and the National Park Service. Neither entity has infrastructure to support visitation in these sensitive areas, and because of the nature of the environment (wetland soils) off-trail visitor use is prohibited by Cleveland Metroparks on the lands it owns within this zone. The Cuyahoga Valley Scenic Railroad borders these wetlands and has historically been used as a "trail" to access these wetlands to observe wildlife; however, the tracks are now closed to pedestrians. Due to lack of routes for access, this zone receives essentially no visitor use.	Limiting attributes: wetland soils, geology, and sensitive wildlife habitat preclude visitor use and infrastructure development.	Maintain use levels at no routine visitor use. Exceptions could be made for research or other approved needs. The National Park Service may consider programming visits to the wetlands that are of small group size, that minimize disturbance, and that combine citizen science research to produce valuable data. Additionally, the Cuyahoga Valley Scenic Railroad may consider slowing and allowing wetlands observation through train windows.
Snowville Woods On the west side of the Cuyahoga River, this area is bound by Route 82 to the north and Columbia Road to the south.	Snowville Woods contains the park's largest undissected forest tract. Much of this land is managed by Cleveland Metroparks as part of Brecksville Reservation. This area includes the historic company town associated with the Jaite paper mill, which is used for NPS park headquarters. One farm property is leased via the Countryside Initiative as Spice Acres. Though not on NPS land, Cleveland Metroparks has an extensive trail system in Brecksville Reservation, including hiking, bridle paths, and paved multipurpose trails. These trails connect with the NPS-managed trail system. The trails on NPS lands are used for longer trail experiences. They include a large section of the Buckeye and Valley Trails. Use levels on NPS lands are currently low and dispersed throughout the area. Visitor-created trails exist between the Brecksville neighborhood of Echo Hills and the Buckeye Trail. Informal parking along Riverview Road is used to access the stock pond in front of Coonrad for fishing. There are many ravines and cold-water streams, with some rare plant areas and high-quality headwater streams.	Limiting attribute: natural resources in this area, including high-quality plant communities, streams, and wetland.	Visitor use levels could increase 200 percent to 30 PPH. Strategies: <ul style="list-style-type: none"> • Direct visitors to this area for long, primitive hikes. • Improve wayfinding and connector trails from headquarters to the Buckeye Trail. • Monitor parking on the roadside to access trails. • Evaluate the need for purpose-designed parking. • Evaluate trailhead improvements. • Partner with local jurisdictions to address roadside parking. • Improve trail connectivity to the Towpath Trail for loop and long-distance hiking (i.e., maintain the connector trail from

Analysis Area	Review of Existing Direction and Knowledge	Limiting Attribute(s) and Indicators	Visitor Capacity and Strategies
	NPS staff estimate current use levels at 10 PPH during peak times in this analysis area.		<p>Riverview Road at Snowville to Vaughn Road).</p> <ul style="list-style-type: none"> Evaluate visitor-created trails connecting from adjacent communities that should be formalized.
Old Carriage On the east side of the Cuyahoga River, this area is bounded by Route 82 on the north, Highland Road to the south, and the Ohio & Erie Canal to the west.	<p>This area contains a high-quality forested tract with limited public access and no visitor facilities or buildings. Old Carriage Trail is the only designated trail in the area; it includes a pedestrian-only section and the Old Carriage Trail connector, and a bicycle connector from the Towpath Trail to Summit Metro Park's Bike & Hike Trail. Important natural resources include an important songbird area, waterfalls, deep ravines, streams, and diverse native plant communities, including spring ephemerals. Significant archeological sites exist, including an American Indian archeological site along the Old Carriage Trail connector.</p> <p>More than five miles of visitor-created trails exist in this area because of proximity to subdivisions and neighborhoods. Some are short neighborhood connectors to the Old Carriage Trail; others are trails south of Old Carriage Trail. Many of these trails predate the park and cross into private land. There is a strong sense of community ownership of the trails.</p> <p>NPS staff estimate current use levels at 50 PPH during peak times in this analysis area.</p>	<p>Limiting attributes: archeological sites and sensitive natural resources such as steep ravines with plant communities. The adjacent private property is a secondary limiting attribute.</p> <p>Indicator: condition of visitor-created trails.</p>	<p>Visitor use levels could increase by 100 percent to 100 PPH.</p> <p>Strategies:</p> <ul style="list-style-type: none"> Improve signage off the Towpath at the start of the Old Carriage Trail. Formalize select neighborhood connector visitor-created trails to reduce the number of visitor-created trails from neighborhoods. Maintain landscape in a way to make it noticeably less developed (more primitive) than the Towpath and maintain the historic landscape. Maintain buffer zones at the edge of CUVA to ensure quiet and sense of remoteness.
Stanford Run/Hines Hill Bound by Highland Road to the north, Metro Park's Bike & Hike Trail to the East, Boston Mills Road to the south and the Towpath Trail to the west.	<p>This analysis area includes a maintained section of the canal prism and other associated historic structures, cultural landscapes, and archeological sites. The area also contains sections of the Bike & Hike Trail, the Valley Trail, the Stanford Trail, the East Rim Trail System, and the Towpath Trail. Stanford House is part of a historic farm property leased by the Conservancy for overnight accommodations. The Hines Hill campus serves as the Conservancy headquarters and has a group rental facility. A short trail connects the two locations.</p> <p>Summit Metro Parks maintains a small trailhead on Boston Mills Road for the Bike & Hike Trail. This has become the primary parking for East Rim Trail System access and the National Park Service expanded parking by adding a gravel lot. This addition was a temporary solution to accommodate demand for access to the East Rim Trail System. There are no other supporting facilities at this location, including a restroom. The East Rim Trail system is the only trail system in the park that is currently opened and closed based on trail conditions.</p> <p>A small gravel trailhead for Stanford Trail is behind the Stanford Barn. The National Park Service plans to replace this lot with a larger trailhead at the terminus of Stanford Road that would provide</p>	<p>Limiting attribute: visitor experience for an immersive experience in which visitors can directly engage with resources in the high-value experience zone. A secondary limiting attribute is the geography of the area, which constrains the ability to expand visitor use facilities such as roads or parking.</p>	<p>Visitor use levels in this area are to be maintained at 250 PIOD for Stanford Area and 200 PIOD for East Rim.</p> <p>Strategies:</p> <ul style="list-style-type: none"> Use volunteers or staff to redirect visitors during busy days and times. Add signage to redirect visitors to other popular areas to visit, thereby dispersing use. Complete the East Rim Trailhead, including supporting facilities. <p>Adaptive strategy:</p> <ul style="list-style-type: none"> Monitor use of the planned Stanford Trailhead.

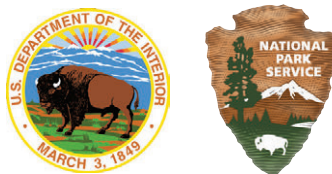
Analysis Area	Review of Existing Direction and Knowledge	Limiting Attribute(s) and Indicators	Visitor Capacity and Strategies
	<p>access to the Towpath and Valley Trails for hikers, cyclists, and equestrians.</p> <p>Stanford Road is closed to cars between Stanford House and Brandywine Falls. It receives informal use as a walking and bicycle trail. The area adjacent to Stanford Road has gained a reputation as "Helltown," attracting visitors who want to explore this mythical location. This visitation has created vandalism issues, especially with the Linley Barn, and parking challenges as visitors often park in front of closed gates or along the roadway.</p> <p>In 2019, 2,500-3,500 visitors per month went to the Bike & Hike trailhead parking area, with about 190 people per day on weekend days. During summer 2019, 3,000-4,500 people per month went to the Stanford House parking area, with approximately 250 PIOD on weekend days. From 2019 to 2021, a counter on the East Rim Trail (located on a section of the trail that only captures partial use) recorded 50–70 PIOD on weekend days, with 6-7 people per hour on weekends (10 a.m. to 1 p.m.).</p>		
<p>Boston to Peninsula River Corridor</p> <p>A 2.5-mile section of the river corridor from Lock 29 to Boston Mills Road.</p>	<p>This section of the Cuyahoga River is part of the eight-mile river segment in the park listed on the Nationwide Rivers Inventory with ORVs for scenery, recreation, and fish. Visitor use in this analysis area is primarily on the Towpath Trail. This is one of the most-used sections of the Towpath Trail; the Towpath Trail section south of the I-80 bridge travels through Stumpy Basin, one of the more sensitive areas in the park. Visitor use in the basin is largely contained to the trail via a boardwalk that traverses the floodplain in this area but the boardwalk poses occasional safety hazards when wet. The Village of Peninsula is at the southern end of this corridor. As a village with a retail district that includes bicycle rentals, it has become a primary starting point for many people bicycling on the Towpath Trail.</p> <p>River access in this analysis area is informal, mostly between high-level interstate bridges. Boaters use the Towpath Trail and rip-rap banks to access a popular "wave" feature on the Cuyahoga River. Because of high levels of bank stabilization below high-level bridges, resource impacts from this use are unlikely; however, there are visitor safety concerns with boaters using unstable rip rap to access the river, although this use type is low. River access and parking lots in this area can be congested at peak times. Wayfinding and visitor access is challenging.</p> <p>NPS staff estimate current use at 200 PAOT during peak times in this analysis area.</p>	<p>Limiting attribute: visitor experience for natural sights and sounds and opportunities to linger and enjoy the scenery of the river in the river corridor zone. A secondary limiting attribute is geographic constraints because of the roads (owned and managed by other entities), private property, and the river.</p> <p>Indicator: PPV</p>	<p>Decrease visitor use levels 20 percent in this area to 160 PAOT.</p> <p>Strategies:</p> <ul style="list-style-type: none"> • Improve wayfinding to enhance visitor experience. • Distribute visitor use to other park areas and during less busy times of the day by improving messaging about trail crowding and congestion. • Promote use of the train as a kayak shuttle and other actions that would allow river users to park in areas less congested than in Boston. • Work with commercial use authorization holders to offer bike rentals at other CUYA locations.
<p>Interstate</p> <p>Small section of forest south of Boston Mills Road, bound by</p>	<p>This area contains no trails or other visitor infrastructure or access and receives little to no visitor use. Water distribution and movement in the area is significantly impacted by I-80 and I-271.</p>	<p>Limiting attribute: geographically constrained by Boston Mills Road to the north, I -271,</p>	<p>Maintain use levels at 10 PIOD.</p> <p>Strategy: Continue to improve trail conditions of the Buckeye Trail between Boston and Blue Hen Falls to accommodate current use levels.</p>

Analysis Area	Review of Existing Direction and Knowledge	Limiting Attribute(s) and Indicators	Visitor Capacity and Strategies
I-271 and I-80 in sections.		and I-80 to the south, Riverview Road to the east, and private property on western side.	
Akron-Peninsula North Large tract of forested land bounded to the north by Interstate 80 and Boston Mills Road, to the east by the Bike & Hike Trail, to the west by the Towpath Trail and the park boundary in Peninsula, and to the south by Streetsboro Street.	This area contains superior quality cold-water habitat streams, high-quality forests, and rare and sensitive plant and animal species around Stumpy Basin and the Boston Borrow Pit. There are red and long-tailed salamander records for this area; the rock outcroppings and associated features provide important habitat for sensitive species such as salamanders. The Borrow Pit is included in the park's prescribed burn plan. Two countryside farms are in this area. The Buckeye and Valley Trails traverse this analysis area. Pine Lane Trailhead is the only formal trailhead in this area. People can enter this zone via trail connections. The Buckeye Trail provides access from Peninsula. The Buckeye and Valley Trails provide access from the Village of Boston. Akron-Peninsula Road formerly crossed the zone and portions of the closed road still have asphalt. Some visitors still bicycle this closed road section to connect between the Bike & Hike Trail and Peninsula. In summer 2019, there were about 1,500-1,900 visitors to the Pine Lane parking area, with about 110 PIOD on weekend days.	Limiting attribute: natural resources in this area, including superior quality cold-water habitat streams and rare and sensitive plant and animal species. Indicators: PPV; condition of visitor-created trails.	Could increase visitor use levels by 5 percent to 115 PIOD. Strategies: <ul style="list-style-type: none"> • Add signage for on-trail travel, encouraging visitors to stay on designated trails. • Enforce parking in designated spots to prevent roadside parking damage. • Monitor, restore to natural conditions, or formalize visitor-created trails that extend from park trails.
Coliseum Small area bounded by I-271 and I-80 west of I-271 and south of I-80.	This area contains the old Richfield Coliseum property. The former Richfield Coliseum was demolished and restored before the parcel was included in the park. The Coliseum area is managed as a grassland/open field habitat for ground-nesting birds. This parcel is part of the park's prescribed burn program. Some areas are highly disturbed. The area is important habitat for breeding songbirds. A sensitive and critically important amphibian breeding pool is in this tract. The area is primarily used by visitors for wildlife viewing, particularly of birds. Visitor accessibility is a challenge, as there is no formal trail network, no formal parking, and no trails connecting this area to neighboring areas. The site is bounded by two interstate highways and there is no signage, which makes it difficult to find and navigate. NPS staff estimate use at 10 PIOD during peak times in this analysis area.	Limiting attribute: natural resources in this area, including amphibian and songbird habitat.	Maintain current use levels at 10 PIOD. Strategy: Improve signage and wayfinding.
Furnace Run/Oak Hill West of Cuyahoga River, south of Route 303 to Everett Village.	South of the Furnace Run Metro Park, this area contains the Cuyahoga Valley Environmental Education Center (CVEEC) with 500 acres of trails, ponds, wetlands. CVEEC is a closed campus that is not open to the public. High-quality wildflowers, rare plants, amphibians, and migratory birds are present in this area. The smooth green snake, a state endangered species, has been documented here. The area also contains	Limiting attribute: private adjacent land ownership. Indicator: Condition of visitor-created trails.	Increase to 300 PIOD. Strategies: <ul style="list-style-type: none"> • Improve parking area at Oak Hill Trailhead (i.e., stripe spaces). • Expand Tree Farm Trail parking capacity by 20 percent per the trail

Analysis Area	Review of Existing Direction and Knowledge	Limiting Attribute(s) and Indicators	Visitor Capacity and Strategies
	<p>the historic Welton Farms (Countryside Conservancy - Greenfield Berry Farm).</p> <p>This analysis area includes two day-use areas with a trailhead, hiking trails, and fishing access. Oak Hill Trailhead provides access to the Oak Hill and Plateau Trails. Sylvan Pond is open to fishing along Oak Hill Trail. This trailhead is routinely used for school programs. Valley Picnic Area provides secondary trail access to this day-use area. Tree Farm Trailhead provides access to Tree Farm Trail. Horseshoe Pond is adjacent to the trailhead parking lot and has an accessible fishing pier and an underused, non-reservable picnic shelter. Both day-use areas are popular for cross-country skiing and snowshoeing. The Furnace Run Trail enters this area but its trailhead is accessed from the Everett Covered Bridge parking area.</p> <p>There are approximately 150 PIOD on Saturdays and Sundays (on average, year-round) each in this area.</p>		<p>plan. <i>Note: The trail plan did not specify the degree of expansion for the Tree Farm parking (page 79) .</i></p> <ul style="list-style-type: none"> • Direct visitation to these day-use areas via improved signage and online communication. • Assess installing a simple pole shelter with picnic tables at the south edge of Oak Hill Trailhead to serve educational groups.
<p>Blossom Woods</p> <p>East of Cuyahoga River; the largest forested tract at the south end of the park. Bounded by Quick Road to the north and Steels Corners Road to the south.</p>	<p>This area contains many rare plants, protects several important cold-water habitat streams and amphibian breeding pools, and is an important migratory songbird area. Cultural resources include privately owned Camp Mueller and the Stonibrook properties, which are historically affiliated with Cleveland's African American community. Two leased Countryside Initiative farms are along Akron-Peninsula Road, as well as the vacant Brown-Bender house and barn. The National Park Service protects two additional farm properties in this area; one is the Duffy Farm, currently used by nonprofit park partner Countryside. The other is vacant. Archeological sites are also present.</p> <p>This area contains the NPS-owned Wetmore Trailhead parking, which includes designated horse-trailer parking spots. The Wetmore Trail system is a network of bridle paths, including Lange's Run Trail. When the Wetmore Trailhead parking is full, formal access to the Wetmore Trail system is via the Pine Hollow parking area on Quick Road. Portions of the Valley Trail, which connects the park's southern bridle paths to those in Brecksville Reservation to the north, come through this area. Robinson Field, a facility that has been available via special-use permits and that provides an area for equestrian community events (closed to the general public) is in this area.</p> <p>There are approximately 50 PIOD on Saturdays and Sundays each (on average, year-round) in this area.</p>	<p>Limiting attribute: fragmentation of forest tracts.</p> <p>Indicator: condition of visitor-created trails.</p>	<p>Increase to 75 PIOD.</p> <p>Strategies:</p> <ul style="list-style-type: none"> • Maintain current trail system. • Increase communication about the trail system to redirect visitors to the area. • Communicate to public that Pine Hollow is an alternative parking area (including for horse trailers) when Wetmore is full.
<p>Everett Cultural</p> <p>West of Cuyahoga River; includes the Everett Historic District south to the borders of</p>	<p>The Everett Cultural analysis area has a high concentration of cultural resources, such as cultural landscapes, archeological sites, and historic structures. The reconstructed Everett Covered Bridge is the only covered bridge remaining in Summit County; visitors access it from an associated trail. The Everett Covered Bridge parking also serves as a trailhead for the Perkins, Riding Run, Furnace Run, and Valley trails. While initially intended for horse-trailer use, it is frequently too crowded to</p>	<p>Limiting attribute: integrity of the cultural landscape.</p> <p>Indicator: PPV.</p>	<p>Maintain visitor use levels at:</p> <ul style="list-style-type: none"> • Everett Bridge: 1,250 PIOD. • Indigo Lake: 150 PIOD. • 1,250 PIOD for the remaining area outside of Everett Bridge and Indigo Lake. <p>Strategies:</p>

Analysis Area	Review of Existing Direction and Knowledge	Limiting Attribute(s) and Indicators	Visitor Capacity and Strategies
O'Neil Woods (Summit Metro Parks) and the Countryside Initiative farm on Martin Road.	<p>accommodate them. The Summit County Roadway Vacation Project will result in changes to trails due to removal of major culverts in this area.</p> <p>Everett is a historic crossroads community used for administrative purposes. Key historic structures in this area include the Hammond-Cranz farm property, which has been identified for future use as a center for Countryside, and Botzum Farm, which is leased as an events space.</p> <p>Indigo Lake, a former quarry turned into a fishing pond, is also in this area and is supported by a small trailhead. A Cuyahoga Valley Scenic Railroad train boarding station is at Indigo Lake.</p> <p>Two other institutions own land in this area: Old Trail School is an independent day-school and Hale Farm & Village is a living history museum owned by Western Reserve Historical Society. A connector trail from Indigo Lake leads to Hale Farm & Village, which is used for a tram to provide shuttle service from the train station. The former Camp Freedom is also in this area and can be accessed via a trail connection off the Hale Farm Connector Trail.</p> <p>There are approximately 1,250 PIOD on Saturdays and Sundays during peak times at Everett Bridge, and 150 PIOD on peak Saturdays and Sundays.</p>		<ul style="list-style-type: none"> Expand Everett Covered Bridge parking to restore horse-trailer capacity. Provide a safe bicycle connector trail to the Towpath Trail. Evaluate improvements, including pedestrian access from the adjacent community to the Riding Run/Perkins trail system that take into account changes caused by the removal of Everett Road by Summit County.
Hunt Farm West of Cuyahoga River; bounded by Riverview Road to the west and the Valley Trail to the east. Includes areas just north and south of Bolanz Road.	<p>This area is influenced by visitation to NPS and privately owned facilities, which both can accommodate high visitation. The Towpath and Valley Trails pass through this area. Hunt House is managed by the National Park Service as a trailside activity center for families. Szalay's Farm & Market is a privately owned destination that includes a corn maze in the fall. Parking overflows onto Bolanz and Riverview Roads during peak times, presenting safety challenges. Parking overflows to Bolanz Road and Riverview Road during peak times, presenting safety challenges. Szalay's Farm & Market has recently added parking in its field on weekends to help mitigate congestion.</p> <p>There are approximately 125 PIOD on Saturdays and Sundays during peak times.</p>	Limiting attributes: the floodplain, cultural resources, and private property all constrain visitor use in this area.	<p>Maintain visitor use levels at 125 PIOD.</p> <p>Strategy: Separate vehicular traffic from pedestrian traffic via construction of a walkway.</p>
Howe Meadow West of Cuyahoga River.	<p>Howe Meadow is a large grassland that serves as the park's special-events site. The Countryside Farmers' Market is held here from April to October on Saturday mornings, accounting for approximately 800 PIOD. Prior to 2019, the farmers' market was operated via a commercial use authorization; in 2019, the market moved to a short-term lease. Concerts are regularly hosted by the Conservancy on weekends via special-use permits, accounting for up to 1,500 PIOD on concert dates. Running events such as cross-country team meets are also held here, accounting for 200-1,000 PIOD on event dates. Parking near the event space is typically provided for people with limited mobility.</p>	Limiting attributes: water quality at Beaver Marsh (i.e., runoff impacts invasive species, water temperature, and archeological resources); traffic congestion during events.	<p>Increase visitor use levels up to 1,500 PIOD.</p> <p>Strategies:</p> <ul style="list-style-type: none"> Improve sustainability and event support for large special events. Improve site ADA accessibility.
Adams Run	Visitor facilities in this area are all operated by NPS partners. Two performance venues are here:	Limiting attribute: visitor	Maintain visitor use levels at 150 PIOD.

Analysis Area	Review of Existing Direction and Knowledge	Limiting Attribute(s) and Indicators	Visitor Capacity and Strategies
East of Cuyahoga River. Bounded by Blossom Music Center to the north and the park boundary to the south.	<p>Blossom Music Center, owned by the Musical Arts Association, and Kent State University's Porthouse Theater. Adams Run Trail is part of Summit Metro Parks' Hampton Hill Metro Park. This park also has an archery range. Sarah's Vineyard is a farm in the NPS Countryside Initiative leasing program; it has open fields and parking and is the only location in the area with significant visitor use.</p> <p>This area contains cultural landscapes, rare plants, and the state endangered smooth green snake.</p> <p>NPS staff estimate use at 150 PIOD during peak times in this analysis area.</p>	experience for a sense of remoteness and natural sounds in the natural zone.	<p>Strategies:</p> <ul style="list-style-type: none"> • Educate visitors about Summit Metro Parks' opportunities. • Educate visitors about the connection between Sarah's Vineyard and the park, via signs and web presence. • Monitor off-trail use in collaboration with Summit Metro Parks.



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under US administration.



Cuyahoga Valley National Park Community Access Plan

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