



# Cuyahoga Valley National Park Circulation Environmental Assessment

May 2023





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**National Park Service  
U.S. Department of the Interior**

**Cuyahoga Valley National Park  
Ohio**

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**FINDING OF NO SIGNIFICANT IMPACT  
Circulation Environmental Assessment**

September 26, 2023

**Cuyahoga Valley National Park  
Ohio**

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## **BACKGROUND**

The National Park Service (NPS) has completed a comprehensive analysis of the proposed action at Cuyahoga Valley National Park. The potential impacts of the proposed action were evaluated in the Cuyahoga Valley National Park Circulation Environmental Assessment and General Management Plan Amendment. The circulation environmental assessment proposes to expand and improve parking, create accessible trails, add an equestrian trail bridge, rehabilitate the Towpath Trail surface, and implement time-limited parking opportunities at Cuyahoga Valley National Park (the park). The purpose of the circulation environmental assessment is to alleviate congestion at high-priority locations while preserving highly visited, key natural and cultural resources at Cuyahoga Valley National Park. The circulation environmental assessment pulls forward high priority and near-term actions for environmental analysis from the accompanying parkwide Cuyahoga Valley National Park Community Access Plan (CAP). The CAP informs future planning for specific areas and identifies ways to improve opportunities to address challenges related to visiting the park. The CAP includes guidance on resource preservation, types and general intensities of development, and identification and implementation commitments for visitor carrying capacities. While the CAP addresses a wider range of issues at the park, the circulation environmental assessment focuses on near-term actions.

## **SELECTED ALTERNATIVE**

The National Park Service analyzed a no-action alternative (alternative A) and an action alternative (alternative B) in detail in the circulation environmental assessment. Based on this analysis, the National Park Service selected alternative B for implementation because it best meets the purpose and need for action without causing significant impacts to park resources and the visitor experience. Parkwide actions for this alternative include updating zoning and desired conditions, supporting Cleveland Metroparks' and Summit Metro Parks' development of the multiuse Sagamore Connector Trail from Canal Road to the Bike & Hike Trail, and rehabilitating the entire length of the Towpath Trail surface in accordance with Ohio & Erie Canal Cultural Landscape Report treatment recommendations. Chapter 2 of the circulation environmental assessment describes actions by area; these were zoned as part of this community access plan and circulation environmental assessment. Zone-specific actions include expanding parking in certain areas including the East Rim Trail System, removing parking spaces or entire lots in other areas, modifying parking rules, and creating an accessible walking path. The selected alternative also includes two optional actions that would be implemented if the need arises; those actions include adding additional parking for the East Rim trail system and implementing parking reservations for the limited-mobility parking lot at Blue Hen Falls. The attached errata (attachment B) contains minor revisions to the circulation environmental assessment. These edits do not result in modifications to the selected action and do not change the environmental analysis. They are provided to correct typographical errors and clarify the material presented in the circulation environmental assessment.

## **RATIONALE FOR DECISION**

The selected alternative best meets the project purpose and need, which is to alleviate congestion at high-priority locations throughout the park while preserving key natural and cultural resources. Through updated zoning and desired conditions (details available in the community access plan), the circulation environmental assessment also amends the 1977 general management plan, which, considering increasing visitation and infrastructure changes since 1977, is now outdated and no longer provides meaningful management direction for the park. The decision is needed to improve visitor circulation by

addressing parking lot supply and demand, provide access to key visitor destinations through trail connectivity and other actions, address impacts to vegetation and soil from visitor use, and provide consistent Towpath Trail surfaces.

## **MITIGATION MEASURES**

The National Park Service places strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. Therefore, it recommends multiple mitigation measures and best management practices to protect the natural and cultural resources that this project could affect including visitor use and experience, soils, vegetation, water resources, wetlands, nonnative plants, birds, threatened and endangered species, and cultural resources. These stipulations and mitigations are described in chapter 2 of the circulation environmental assessment. The National Park Service has the authority to implement the mitigation measures presented in chapter 2 of the circulation environmental assessment under the Organic Act (16 U.S.C. 1, 2, 3, and 4), the National Historic Preservation Act, NPS *Management Policies 2006*, park-specific regulations, and other applicable federal and state requirements.

## **SIGNIFICANCE CRITERIA REVIEW**

### **Potentially Affected Environment**

This circulation environmental assessment will affect management direction for the entire park, which encompasses 33,000 acres along the Cuyahoga River between Cleveland and Akron, Ohio. It includes modifications to parking and trails. Natural resources, cultural resources, and the visitor experience will potentially be affected by the actions outlined in this plan.

Resources within the project area that may be beneficially or adversely impacted include archeological resources, cultural landscape, historic structures, soils, vegetation, and visitor use and experience.

### **Degree of Effects of the Action**

The National Park Service considered the following actual or potential project effects in evaluating the degree of the effects (40 CFR 1501.3[b][2]) for this proposed action.

### **Beneficial and adverse, and short- and long-term effects of the proposed action.**

The selected alternative will result in mostly long-term beneficial impacts and some adverse impacts, as described below.

#### *Archeological Resources*

As discussed in chapter 3 of the circulation environmental assessment, the selected alternative could have long-term adverse impacts to archeological resources from ground disturbance and could directly damage or destroy these resources. However, archeological survey would precede construction in areas where surveys have not been conducted or further data are required to inform implementation of actions. Avoiding archeological resources would occur through design and implementation to the greatest extent possible. Ground disturbance is associated with the installation of an overflow parking lot for Everett Covered Bridge, a new parking lot and a ditch relocation at the former site of the Lorenz property, the expansion of the East Rim Trail gravel parking lot, and expanded parking at Blue Hen Falls Trailhead. Previous archeological surveys have indicated the presence of significant archeological sites, which have not been delineated, near the proposed location for the overflow parking lot for Everett

Covered Bridge. Therefore, the potential for adverse effects to archeological resources in this area is high. Previous archeological surveys have been conducted at the East Rim and Lorenz area, and no artifacts were recovered during these investigations. Previous archeological survey at Blue Hen Falls has also occurred in a limited capacity. Because archeological surveys will be conducted prior to ground-disturbing activities and archeological monitoring will be conducted in locations where cultural resources may be present, the potential for adverse effects to archeological resources should be low.

Ground disturbance would also be associated with the removal of parking lots and associated drainage such as the Civilian Conservation Corps (CCC)–era Kendall Lake parking lot, Little Meadow parking lot, Crowfoot Gully parking lot, and Botzum parking lot. The regrading and revegetation of the CCC-era Kendall Lake parking lot would also involve ground disturbance that could have an adverse impact on archeological resources. The installation of these parking lots (Kendall Lake, Little Meadow, Crowfoot Gully, and Botzum) predates archeological survey of these areas, yet the installation of the lots likely included ground disturbance. If archeological resources had been present at the time of installation, it is likely they were disturbed. Thus, the removal of these parking lots may have potential adverse effects on archeological resources. The probability of adverse impacts is higher at the CCC-era Kendall Lake parking lot than at the Little Meadow or Crowfoot Gully parking lots due to regrading and revegetation potentially impacting undisturbed archeological context. Limited archeological surveys near the Botzum Trailhead and parking lot have identified features with some archeological components. Since archeological surveys will be conducted prior to ground-disturbing activities and archeological monitoring will be conducted in locations where cultural resources may be present, the potential for adverse effects to archeological resources should be low.

Further ground disturbance would be associated with improving 16 miles of the Towpath Trail and installing new trails including new trails at the Ledges. Installing vault toilets, boardwalks, bridges, gates, signs and bulletin boards, plant screenings, and new vegetation and removing trees would also require ground disturbance actions that could adversely impact archeological resources. Ground disturbance activities on partner-owned land may also damage or destroy archeological resources. In addition to these adverse impacts, beneficial impacts of the selected alternative include the potential to locate and document new archeological sites in previously unsurveyed areas (e.g., the Towpath Trail, the Ledges, the Riding Run Bridge area). A previous archeological survey is available for the area proposed for the connecting trail between the Hunt/Wilke farm and Szalay's farm. The survey suggests a potential for archeological resources in the area; however, the area may have been previously archeologically disturbed during the installation of Bolanz Road and the Szalay's farm parking lot. Because archeological surveys will be conducted prior to ground disturbing activities and archeological monitoring will be conducted in locations where cultural resources may be present, the potential for adverse effects to archeological resources should be low. Although the final design of the actions, archeological survey, and Section 106 compliance are still needed, adverse effects to archeological resources are not anticipated to rise to significant under NEPA, as survey results and Section 106 compliance will assist in determining final design and ways to avoid, minimize, or mitigate adverse impacts.

The National Park Service has determined that, overall, impacts to archeological resources are not likely to be significant under NEPA because archeological surveys will be conducted before any project design and ground-disturbance work begins, and archeological monitoring will be conducted in locations where cultural resources are determined to be likely present. If archeological resources are discovered during these surveys, then they will be recorded and evaluated, and their impacts will be mitigated by

avoidance if possible and data collection if avoidance is not possible. Additional avoidance, minimization, or mitigation measures may be developed in consultation with the Ohio History Connection and State Historic Preservation Office as consultation occurs during each individual project implementation. Archeological monitoring may also be necessary during ground disturbance actions, as determined during Section 106 consultation.

### *Cultural Landscape*

As discussed in chapter 3 of the circulation environmental assessment, the selected alternative will have long-term beneficial and adverse impacts on the cultural landscape. Implementing the recommendations for the surface treatment of 16 miles of the Towpath Trail and removing informal parking along Bolanz Road to remove vehicular visual intrusions and reestablish the rural character of the historic Hunt/Wilke farm would have long-lasting beneficial impacts on the cultural landscape by improving the views, setting, feeling, and overall resource protection.

Long-term adverse impacts to the cultural landscape under the selected alternative would occur primarily within the Virginia Kendall State Park Historic District. The actions causing these long-term adverse impacts include removing a portion (6,400 square feet) of the CCC-era parking lot at Kendall Lake, contributing to the historic district. Additionally, complete removal of the Crowfoot Gully (23,000 square feet) and Little Meadow (25,000 square feet) parking lots may adversely impact the historic district; however, more research is needed to determine if these parking lots were in use during the period of significance, as they are not mentioned in the National Register nomination. Installing new trails and removing other trails could adversely impact the foot trails network, which is part of the master design of the historic district and contributes to the district's significance; however, further design and consultation will occur during implementation. At the Ledges, installing new trails and modifying existing trails for universal accessibility may adversely impact the cultural landscape and these historic structures by adding nonhistoric features to the structures or removing elements of these historic structures. Installing new trails at the Ledges would require up to 0.51 acres of ground disturbance, including ground disturbance through the open playstead area, a site feature important to the historic district, which largely maintains its original historic form. New signage throughout the park will add nonhistoric features to the cultural landscape.

Although there are long-term adverse impacts to the cultural landscape within the park, especially within the Virginia Kendall State Park Historic District, the National Park Service has determined these impacts will not be significant because the actions would be consistent with recommendations in a cultural landscape report to be developed for the Virginia Kendall State Park Historic District. This report will provide guidance for these actions to avoid, minimize, or mitigate adverse impacts to the cultural landscape. Careful consideration and compatible design for modifying existing trails for universal accessibility and adding new trails would minimize impacts to the cultural landscape. New additions to the park's cultural landscape would be compatibly designed with the cultural landscape and historic district as appropriate and guided by treatment recommendations for each area of the park.

### *Historic Structures*

As discussed in chapter 3 of the circulation environmental assessment, the selected alternative will have long-term beneficial and adverse impacts on historic structures. Consistent surface treatment of 16 miles of the Towpath Trail will have a beneficial impact on the historic structure by retaining the



character of its historic appearance, resolving erosion issues, and clearly demarcating the original alignment of the towpath.

Removing a portion (6,400 square feet) of the CCC-era parking lot at Kendall Lakes would alter that historic structure and diminish the integrity of the cultural landscape. At the Ledges, installing new trails and modifying existing trails for universal accessibility would add nonhistoric features to the structures or remove elements of these historic structures. Additionally, the use of heavy machinery along 16 miles of the Towpath Trail to install the chip-sealed surface may result in inadvertent adverse impacts to the historic structure due to compression, slumping, or gouging. Given the mitigation measures for archeological resources and cultural landscapes above, adverse impacts to historic structures will not be significant.

### *Soils*

As discussed in chapter 3 of the circulation environmental assessment, the selected alternative will have long-term beneficial and minor adverse impacts on soils.

Constructing new trails would result in ground disturbance to about 1.6 acres of soils in the park. Recreational use of the trails would cause continued adverse soil impacts including loss of organic litter and soil compaction, rutting, and erosion. Developing and expanding parking lots would result in ground disturbance and loss of soil productivity to approximately 1.5 acres, a long-term adverse impact. About 1.9–2.8 acres of impervious surface would be restored to natural conditions via removing or reducing in size existing parking lots, a beneficial long-term impact. Overall, there would be a net decrease of about 0.02–1.0 acres of impervious surfaces in the park, a long-term beneficial impact to soils.

Overall impacts to soils are both adverse and beneficial and long-term (for the life of the trails and associated trail facilities). These impacts overall are minor and do not substantially change the viability of soils within the park.

### *Vegetation*

As discussed in chapter 3 of the circulation environmental assessment, pages 33 to 37, the selected alternative will have long-term beneficial and minor adverse impacts on vegetation.

Approximately 1.1 acres of native and nonnative vegetation (not including maintained lawn) would be permanently removed for developing trails, and approximately 1.9 acres of native and nonnative vegetation would be permanently removed for developing and expanding parking lots, a long-term adverse impact. About 1.9–2.8 acres of impervious surface would be restored to native vegetation via removing or reducing in size existing parking lots, a long-term beneficial impact. There would be a net decrease of about 0.02–1.0 acres of impervious surfaces in the park, a long-term beneficial impact to vegetation. Best management practices and mitigation measures as described in chapter 2 and the park's sustainable trail guidelines would be implemented to minimize adverse impacts to native vegetation, such as designing trail alignments to prevent the need to remove healthy trees and placing staging areas in previously developed areas or in the immediate project area.

Overall impacts to vegetation are both adverse and beneficial and long-term (for the life of the trails and associated trail facilities). These impacts overall are minor, as they would not substantially change the viability of vegetation within the park nor the impacts that are already occurring to park vegetation.

### *Visitor Use and Experience*

As discussed in chapter 3 of the circulation environmental assessment, pages 37 to 52, the selected alternative will result in primarily beneficial impacts to visitor use and experience, and any adverse impacts are short-term, are minor, or pertain to only a portion of overall park visitors.

Expanding and improving parking opportunities will create beneficial impacts to the visitor experience because doing so mitigates congestion, allows for additional recreation opportunities, and decreases the likelihood of visitors being displaced or denied a visitor experience due to limited parking and congestion. Implementing time-limited parking spaces at Brandywine Falls area and Boston Mills Historic District, as well as reservations for the limited-mobility parking lot at Blue Hen Falls, will benefit the visitor experience by managing expectations and increasing the predictability of parking availability. Though some visitors may be inconvenienced and/or displaced by timed parking spaces specific to use type, this change will lead to a minimal adverse impact on visitors because it will only modify the amount of time visitors can park in a particular spot, not the amount of time they spend at the site.

Removing parking spaces in the Kendall Hills/Kendall Lake area and reducing parking at Botzum in the Bath Road to Peninsula River Corridor would result in overall beneficial impacts to the quality of visitor experience by improving scenic landscapes and viewsheds. There would be minimal adverse impacts to visitors who prefer to park in these lots, given the lots typically do not fill on the busiest of summer days, except for special events, and other parking lots would still be available. Removing/reducing these lots would also mitigate the negative perception of the underused nature of the lots by visitors who report feeling uneasy at the sight of empty parking lots.

The range of trail modifications and connections will produce beneficial impacts to the visitor experience. The multiuse trail connections will improve the ability of visitors to circulate within the park and increase the range of visitor opportunities and access. Supporting the development of the multiuse Sagamore Connector Trail from Canal Road to the Bike & Hike Trail would designate a connection between these two trails in addition to connecting to the Bedford Reservation, enhancing multiuse access both within the park and to neighboring lands. Adding a trail bridge for pedestrians and horses near Wheatley Road benefits the visitor experience because it will increase trail connectivity and create multiuse loop experiences. Lastly, other actions such as rerouting the Buckeye Trail to separate the pedestrian trail from the vehicular parking lot and improving pedestrian and vehicular circulation and safety will benefit accessibility, connectivity, and circulation, creating beneficial impacts to the quality and range visitor experience opportunities.

Rehabilitating the Towpath Trail surface to chip-sealed asphalt would result in beneficial impacts to the quality and range of multiuse visitor experiences. This surface type would support maintenance and multiuse recreation while visually representing the historic character of the Towpath Trail, which would maintain the opportunity for visitors to connect with the historic character of the trail. Some visitors may be inconvenienced or displaced by the change in appearance and surface type of the Towpath Trail, and this change would lead to an adverse impact on a portion of visitors who use the Towpath Trail, such as runners, who prefer a soft surface.

General accessibility improvements; additional signage to improve wayfinding, orientation, and trip planning; and the addition of small-scale amenities to support diverse forms of recreation, like the ability to rent equipment, will create beneficial impacts to the quality of visitor experience by providing

recreational opportunities for a diverse visitor base while also providing additional services to meet visitor needs and facilitating a more welcoming park experience. These improvements would lead to minimal adverse impact on visitors who prefer a more rugged experience, considering there are other recreational opportunities that provide a less-developed experience.

Overall beneficial impacts and no significant adverse impacts to visitor use and experience are anticipated.

**Degree to which the proposed action affects public health and safety.**

The selected alternative will result in indirect, long-term beneficial impacts to human health and safety by reducing visitor congestion and enhancing circulation throughout the park. Actions in the selected alternative provide for trail connections and make clear parking infrastructure improvements and reductions that directly contribute to enhancing public health and safety through increased park access and connectivity. Having a consistent surface treatment for the Towpath Trail will reduce bicycle accidents on the trail. Data and park staff reports suggest the majority of accidents on the Towpath Trail occur at points where the surface treatment changes.

**Effects that would violate federal, state, tribal, or local law protecting the environment.**

The selected alternative does not threaten or violate applicable federal, state, tribal, or local environmental laws or requirements imposed for the protection of the environment.

**CONSULTATION AND COORDINATION**

**Public Involvement**

The National Park Service provided three phases of public review opportunities during the planning process. Phase 1 focused on the purpose and need for the project, phase 2 focused on the actions and strategies to address the project purpose and need, and phase 3 focused on refining strategies and developing the draft plan. During phase 1, the National Park Service collected public comments to understand the needs, experiences, and desires of partners, stakeholders, communities, and visitors and to contribute to the development of the CAP actions and strategies, desired conditions, and zones. This round of civic engagement was held from March 8 to April 9, 2021, during which 394 correspondences were received. During phase 2, the National Park Service solicited public comments on a draft CAP from July 18 to September 16, 2022, during which 158 correspondences were received. The park utilized a variety of methods to ensure that the early civic engagement (phases 1 and 2) was comprehensive and that public and stakeholders had ample opportunity to provide input.

During phase 3, the National Park Service provided a public comment period for the circulation environmental assessment from June 7 to July 11, 2023. A press release was issued on June 1, 2023, announcing that the circulation environmental assessment was available for public review and inviting comments online through the Planning, Environment, and Public Comment system at [https://parkplanning.nps.gov/cuva\\_ea](https://parkplanning.nps.gov/cuva_ea) or by US mail. As described in attachment A, the circulation environmental assessment received 19 correspondences, 7 of which were substantive, and did not result in changes to the selected alternative. Attachment A also includes responses to all substantive public comments.

### **US Fish and Wildlife Service, Section 7 Consultation**

Informal communication with US Fish and Wildlife Service was initiated in early 2023. The most recent list of federally protected species was obtained from the US Fish and Wildlife Service Information for Planning and Consultation website on September 20, 2023. On September 21, 2023, the National Park Service submitted a request to US Fish and Wildlife Service and requested concurrence on findings. On September 26, 2026, the US Fish and Wildlife Service concurred with the determination of “may affect but not likely to adversely affect” the Indiana bat and northern long-eared bat. , therefore, concluding Section 7 consultation on this project

### **Ohio History Connection, State Historic Preservation Office, Section 106 Consultation**

Due to the comprehensive nature of the circulation environmental assessment and the extended potential timeline for implementation, details related to the exact location, design, and necessary construction activities for all associated actions that may affect historic properties have not been determined. This requires that the park continue to identify and evaluate potential historic properties in areas of potential effect in accordance with Section 106 regulations (36 CFR 800). The park sent a consultation letter to the State Historic Preservation Office on June 15, 2023, and received a reply that there were no comments at this time. The National Park Service committed to consulting with the State Historic Preservation Office on individual projects from the CAP and environmental assessment. The park commits to continue consulting with the Ohio History Connection, the State Historic Preservation Office, and other relevant agencies as needed in order to comply with Section 106 for any undertakings of the park during implementation.

### **Tribal Consultation**

The park conducted multiple rounds of Tribal engagement in this planning process. In March 2021, the park invited early engagement with 29 Tribal Nations to help inform the analysis of the proposed action and alternatives. Representatives from the Delaware Nation, Forest County Ponowatah Community, and Seneca Nation attended this meeting. The park held a second meeting in August 2022 to understand the concerns of Tribal Nations with this plan. Representatives from the Delaware Nation, Forest County Ponowatah Community, and Pokagon Band of Potawatomi attended this second meeting. The park heard various concerns and took suggestions on how to handle specific park activities, including a suggestion that Tribal members be included during archeological surveys. The park will work with interested Tribes to establish a Tribal monitoring program for archeological surveys conducted on NPS property to help ensure that traditional cultural properties are considered as part of the survey. The park sent a consultation letter to the Tribal Nations on June 2, 2023, but received no response. The park invited Tribal Nations to meetings on site and commits to continue consulting with Tribal Nations as actions are further developed and implemented.

### **FINDING OF NO SIGNIFICANT IMPACT**

Based on the information contained in the circulation environmental assessment, I have determined that the proposed action does not constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement will not be required.

This finding is based on consideration of the Council on Environmental Quality criteria for significance (40 CFR 1501.3 [b]) (2020), regarding the potentially affected environment and degrees of effects of the



impacts described in the circulation environmental assessment (which is hereby incorporated by reference) and as summarized below.

Recommended:

**LISA PETIT** Digitally signed by LISA PETIT  
Date: 2023.09.29 16:53:05  
-04'00'

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Lisa Petit  
Superintendent  
Cuyahoga Valley National Park

Date

Approved:

 Digitally signed by HERBERT  
FROST  
Date: 2023.10.20 15:27:51  
-05'00'

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Herbert C. Frost, PhD  
Regional Director  
National Park Service DOI Regions 3, 4, and 5

Date

## ATTACHMENT A: PUBLIC COMMENT RESPONSE REPORT FOR THE CIRCULATION ENVIRONMENTAL ASSESSMENT

On June 7, 2023, Cuyahoga Valley National Park released the circulation environmental assessment for public review and comment. A press release was issued on June 1, 2023, announcing the document was available for public comment through July 11, 2023. The public was invited to provide comments online through the Planning, Environment, and Public Comment system at [https://parkplanning.nps.gov/cuva\\_ea](https://parkplanning.nps.gov/cuva_ea) or to mail comments to the park.

The National Park Service received 19 correspondences, which were documented on the NPS Planning, Environment and Public Comment website, from individuals, organizations, federal and state agencies, and gateway communities.

The following are NPS responses to substantive comments or concerns that were raised by commenters on the revised plan and/or circulation environmental assessment. Substantive comments are those that:

- question, with reasonable basis, the accuracy of the information in the NEPA document;
- question, with reasonable basis, the adequacy of the environmental analysis;
- present reasonable alternatives other than those presented in the NEPA document; or
- cause changes or revisions in the proposal.

In addition, responses to some non-substantive comments are included, as National Park Service identified them as being of high importance to the public or needing clarification. The page numbers referenced are from the June 2023 circulation environmental assessment. Minor typographical errors in the circulation environmental assessment are corrected through the errata in attachment B.

**Concern Statement:** A commenter expressed concerns about the environmental impact and climate change implications of the resurfacing, noting that asphalt can hold more heat and has a lower albedo than the current surface.

**NPS Response:** As stated on page 6 of the circulation environmental assessment, the chip-sealed asphalt would be an “earth-toned color” and would therefore not contribute to changes in albedo from the current surface.

**Concern Statement:** A commenter expressed concern that the Towpath Trail chip-sealed asphalt resurfacing would be uncomfortable to recreate on as a runner.

**NPS Response:** Park leadership will research a range of options within chip-seal to determine what might best meet the needs of diverse recreational use groups (runners, cyclists, etc.).

**Concern Statement:** Commenters provided input and feedback on specific proposed parking changes. Suggestions included:

- Leave some of the existing parking at Crow Foot Gulley or Little Meadow to provide access to the Cross Country Trail and the Wetmore Trails from Quick Road. The commenter also suggested converting the parking area to a permeable surface.

- Reconfigure Crow Foot Gulley and/or Little Meadow parking lots to accommodate horse trailer parking for the Wetmore Trail, and direct people to park in those lots instead of the Pine Hollow parking lot when the Wetmore Trail parking lot is full.

**NPS Response:** The Crowfoot Gully and Little Meadow lots have been underutilized since 1992 and do not typically fill, as noted on page 40 of the circulation environmental assessment. Access to the Cross Country Trail and Wetmore Trail will remain intact from the Pine Hollow parking lot, which has over 200 parking spaces and 9 Architectural Barriers Act Accessibility Standard–compliant parking spaces and will remain unchanged. Replanting native vegetation in the Crowfoot Gully and Little Meadow parking lots with native vegetation aligns with proposed desired conditions in the high-value experience zone because it will enhance the natural ecosystem, prioritize natural resources, and allow visitors to more closely connect with and appreciate natural resources within the park. Permeable pavement has proven to be operationally unsustainable for the park to maintain, leading the park to focusing on right-sizing the existing lots and converting existing unused pavement into natural materials to reduce the overall acreage of impermeable surfaces in the park.

The park considered multiple options to provide opportunities for equestrian parking. Given use levels and considering public comments, the selected alternative identifies additional equestrian parking to be constructed in a separate parking area in the Everett Covered Bridge area. This lot will provide additional horse trailer parking and separation of uses, with the existing lot at Everett Covered Bridge continuing to serve hikers and other non-equestrian trail users and the new parking lot focused on equestrian use.

**Concern Statement:** Commenters had several suggestions for different trail connections and improvements. Suggestions included the following:

- Create a trail along Riverview Road with a connector trail to Buckeye Trail between Jaite and Boston, creating two loops.
- Connect Peninsula to the Bike & Hike Trail by formalizing the old Akron–Peninsula Road right-of-way as a trail. The commenter noted that the right-of-way provides alternative access to Peninsula, the Buckeye Trail, and the North Rim mountain bike area.
- Reconnect the Covered Bridge to Oak Hill Road to provide hiking and biking access to Hale Farm & Village, the Hale Farm Connector Trail, and Indigo Lake and to relieve use pressure on the Towpath Trail.
- Revitalize the old Akron–Peninsula Road from Locust Street to Boston Mills by providing access from the Peninsula/Lock 29 area to Boston Mills Road. The commenter explained that an improved connection would provide biking and hiking access to Buckeye Trail, Bike & Hike Trail, Valley Bridle Trail, and the East Rim Mountain Bike Trail System.
- Reroute Valley Trail between Buckeye Trail and Riverview Road so it bypasses two seeps and takes a less steep route up the hill. The commenter observed that few horseback riders and hikers use the trail and instead use an informal side trail to Riverview Road to avoid the current muddy and steep trail.

**NPS Response:** The park completed a trail management plan / environmental impact statement in 2012 that analyzed up to 77.9 miles of new trails including neighborhood connector trails, trail reroutes and redesigns, and new trail uses. The preferred alternative adds 46.05 miles of trails that include several neighborhood connectors and mountain bike trails. The circulation environmental assessment analyzed additional options that were informed by public comment during the early stages of the planning process and analyzed the impacts of those trails and connections. The circulation environmental assessment focused on trails that provided improvements to circulation and connections that would address the primary planning issues. As the community access plan and associated circulation environmental assessment are not a comprehensive trail management plan, any additional trail considerations would be addressed through future amendments to the trail management plan / environmental impact statement or additional site-specific planning.

**Concern Statement:** A commenter expressed concern about the Sagamore Connector Trail, stating that connecting two popular routes, the Towpath Trail and the Bike & Hike Trail, would lead to more traffic and overcrowding.

**NPS Response:** Park staff have reported that use levels on the northern sections of the Towpath Trail (between Station Road and Rockside Road) are generally lower than on other sections of trail throughout the park. The Hemlock Creek Trail, another connector trail in the northern portion of the park connecting the city of Independence with the Towpath Trail, has not resulted in increased crowding and congestion on the Towpath Trail. Given the similarities between Hemlock Creek Trail and the proposed Sagamore Connector Trail, the park does not anticipate additional crowding that would affect desired conditions for the northern sections of the Towpath Trail. The Sagamore Connector Trail expands recreational opportunities for visitors and the community and is likely to have wide-reaching benefits. The trail is likely to improve overall circulation and provide access to the park from the Bike & Hike Trail, connecting Cuyahoga Valley to larger trail systems. According to the Cuyahoga Greenways plan, this trail connector would be the missing link that helps connect not only these two trails, but also public transportation, employment centers, the regional trail system, and the Bedford Reservation. Creating these opportunities and connections demonstrates commitment to making the park accessible to as many people as possible, and by connecting to such a large trail network, visitors will have the opportunity to use more miles of trails and spread out use so existing trails potentially become less crowded.

**Concern Statement:** Commenters expressed concerns about how boardwalks and viewing platforms would alter the natural features and beauty of the park. One commenter questioned how the trail around the base of the Ledges would be accessible without changing the natural experience of hiking on the trail. Some commenters acknowledged the importance of having accessible areas but were concerned that the benefits of accessibility would not outweigh changes to the natural environment. One commenter questioned the necessity of the viewing platform and suggested instead creating an accessible trail with a view of the Ledges Overlook farther back from the edge so the “natural opening and rock formations” would be preserved.

**NPS Response:** As per the NPS mission, the park is responsible for preserving resources for the enjoyment, education, and inspiration of this and future generations. Providing these opportunities for all includes those with mobility assistance needs. The park strives to create as many accessible opportunities as possible. By creating this platform, visitors with mobility assistance needs will be

able to experience scenic areas that visitors without mobility assistance needs are able to experience. Building an accessible viewing platform farther back from the edge would not provide the same experience or view and was determined infeasible due to geographic limitations from rock formations. Other natural rock features in the park would remain unchanged, thus keeping more rugged opportunities plentiful for visitors. Finally, a cultural landscape report for this area will be completed before the action is implemented to explore how to best design the improvement in a way that is sensitive to the cultural landscape.

**Concern Statement:** One commenter suggested expanding the Wetmore Trailhead parking lot eastward to increase capacity with minimal impacts to historic resources. Another commenter proposed creating an electric shuttle with 20- to 30-minute headways and using the parking lots that are going to be removed or reduced as terminals. The commenter noted that a shuttle could be useful for out-of-town visitors and to reduce congestion.

**NPS Response:** The park did evaluate primary uses at the Wetmore Trailhead and surrounding trailheads. Primary issues in the Wetmore area were less related to the need for additional parking and more related to the need to provide parking for equestrian users and reduce competition for parking spaces between passenger vehicles and those towing horse trailers. To address this concern in the short term, the park has seen success with better signage and marking of designated trailer parking. In addition, the circulation environmental assessment proposed action includes an equestrian-focused parking lot in the Everett Covered Bridge area to provide improved access for those users and reduce parking lot conflicts in both the Wetmore lot and the existing Everett Covered Bridge parking lot. Park-operated shuttles were evaluated and removed from further consideration in the community access plan. 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.

## **ATTACHMENT B: ERRATA INDICATING TEXT CHANGES TO THE CIRCULATION ENVIRONMENTAL ASSESSMENT**

### **INTRODUCTION**

This errata documents changes (corrections and minor revisions) to the text of the circulation environmental assessment as a result of comments received on the same during the public review process as well as other corrections.

Page numbers referenced pertain to the circulation environmental assessment released to the public for review in June 2023. Original text from the circulation environmental assessment is included to provide context and allow for comparison to the text change. Additions to text are underlined, and deleted text is shown by strikeout.

### **ERRATA FOR CIRCULATION ENVIRONMENTAL ASSESSMENT**

This errata contains minor revisions to the circulation environmental assessment. These edits do not result in modifications to the selected action and do not change the environmental analysis. They are provided to correct typographical errors and clarify the material presented in the circulation environmental assessment.

#### **Page 7.**

Create accessible walking path connections from the Ledges ~~Ledges~~ Shelter and parking area to the Ledges ~~Ledges~~ Overlook and Ledges connector trails.

#### **Page 40.**

Overall annual use of this parking lot has decreased since 1992, when the annual vehicle count totaled just over 19,000 vehicles, decreasing to just over 12,000 vehicles ~~My~~ in 2022.

## ATTACHMENT C: DETERMINATION OF NON-IMPAIRMENT

National Park Service  
U.S. Department of the Interior

Cuyahoga Valley National Park  
Ohio

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### DETERMINATION OF NON-IMPAIRMENT Circulation Environmental Assessment

September 26, 2023

Cuyahoga Valley National Park  
Ohio

## INTRODUCTION

National Park Service (NPS) *Management Policies 2006* (Section 1.4) requires analysis of potential effects to determine whether proposed actions will impair a national park's resources and values. NPS decision makers must always seek ways to avoid or minimize, to the greatest degree practicable, adverse impacts on park resources and values. The National Park Service has management discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of the park, although that discretion is limited by the statutory requirement that the National Park Service must leave resources and values unimpaired unless a particular law directly and specifically prescribes otherwise.

An impairment is an impact that, in the professional judgment of the responsible NPS decision maker, will harm the integrity of park resources or values, including opportunities that otherwise will be present for the enjoyment of those resources or values. An impact on any park resource or value may, but does not necessarily, constitute impairment. An impact will be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact may be less likely to constitute impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and cannot be further mitigated.

Impairment may result from visitor activities, NPS administrative activities, or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park. An impairment determination is not made for subject matters such as visitor experience, public health and safety, socioeconomics, environmental justice, land use, and park operations because impairment determinations only relate to resources and values that maintain the park's purpose and significance. Therefore, this consideration of impairment to resources of Cuyahoga Valley National Park does not include human health and safety. Additionally, this determination applies only to NPS lands.

## ARCHEOLOGICAL RESOURCES

Archeological resources contribute to the significance of Cuyahoga Valley National Park. The analysis of possible impacts on archeological resources was based on a review of previous archeological studies, consideration of the proposed design concepts and actions, and other information provided by the National Park Service. The selected alternative would install new parking lots as Everett Covered Bridge and Lorenz, expand parking at East Rim Trail and Blue Hen Falls, and remove parking lots at Kendall Lake, Little Meadow, Crowfoot Gully, and Botzum. A ditch would be relocated at Lorenz, and drainage associated with the Civilian Conservation Corps (CCC)–era Kendall Lake parking lot would be removed as part of these parking lot actions. The CCC-era Kendall Lake parking lot would also be regraded and revegetated. Additionally, the selected alternative would improve 16 miles of the Towpath Trail; install



new trails, vault toilets, boardwalks, bridges, gates, signs, bulletin boards, plant screenings, and new vegetation; and remove trees.

In many of the action areas, ground disturbance has previously occurred and there are no previous archeological surveys to consult. Other previous archeological surveys suggest the presence of archeological resources in the vicinity of the action area, though not directly within the action area. The actions in the selected alternative would have long-term adverse impacts on archeological resources if previously undiscovered archeological resources are uncovered and affected during ground disturbance activities. The potential for such adverse impacts will be reduced by thorough review of previous archeological surveys and the National Park Service undertaking additional archeological survey and site-specific design prior to ground disturbance. If new archeological resources are discovered during survey, they would be avoided to the extent feasible by changing or shifting project design and alignment. If archeological resources are uncovered during ground disturbance, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate management strategy developed in consultation with the Ohio History Connection, State Historic Preservation Office, and, if necessary, associated Native American Tribes. Therefore, the selected alternative will not result in impairment of the park's archeological resources.

## **CULTURAL LANDSCAPE**

The preservation of the rural landscape is central to the park, being captured in the 1974 enabling legislation mandating the "preservation of the historic, scenic, natural, and recreational values of the Cuyahoga Valley" (P.L. 93-555). Contributing to this landscape is the Virginia Kendall State Park Historic District, a cultural landscape; this historic district is considered a fundamental resource and value of Cuyahoga Valley National Park. The selected alternative would remove a portion of the CCC-era Kendall Lake parking lot, which contributes to the significance of the historic district, and modify the master design of the foot trails system by installing new trails and removing or modifying existing trails. The master design of the foot trails system also contributes to the significance of the historic district. The selected alternative completely removes the Crowfoot Gully and Little Meadow parking lots, which are not listed in the historic district's National Register nomination. The selected alternative includes the addition of new signage throughout the park and nonhistoric features to support the modification of trails for universal accessibility. Although these are adverse impacts to the cultural landscape, these adverse impacts will be reduced by implementing mitigation measures. Mitigation measures to lessen the impacts to the cultural landscape include the National Park Service undertaking a cultural landscape report for the Virginia Kendall State Park Historic District prior to implementing the actions of the selected alternative. The cultural landscape report would document the historic cultural landscape and current landscape features and conditions and provide treatment recommendations, guiding the final design, scope, and scale of the actions within the selected alternative. Documenting the historic cultural landscape and current features and conditions would be an appropriate mitigation for damage or loss of resources contributing to the cultural landscape. To mitigate impacts and minimize their effect on the cultural landscape, new additions to the cultural landscape will be compatibly designed to maintain the historic setting and feeling of the Virginia Kendall State Park Historic District and the park's rural landscape at large. Therefore, the National Park Service has determined that the selected alternative will not result in impairment of the park's cultural landscape.

## **HISTORIC STRUCTURES**

Historic structures are integral to the significance of the park, with the Virginia Kendall State Park Historic District and the Trail, Water, and Rail Network, anchored by the Towpath Trail, considered fundamental resources and values of Cuyahoga Valley National Park. The selected alternative removes a portion of the CCC-era parking lot at Kendall Lakes and revegetates the area of removal. The parking lot was originally designed to support visitor access, and removal of the historic structure and change in use will result in long-term adverse impact to the cultural use of the structure. The selected alternative installs new trails and modifies existing historic trails for universal accessibility at the Ledges, and these actions would adversely impact historic structures in this location by adding nonhistoric features to the structures or by removing elements of the historic structures. However, because the historic trails were designed to provide for visitor access and enjoyment, installing new trails and improving historic trails for universal accessibility would be a long-term beneficial impact in that it would expand visitor accessibility and use of these trails. The selected alternative installs a chip-sealed surface along 16 miles of the Towpath Trail, and the use of heavy machinery to install this surface may cause inadvertent compression, slumping, or gouging, thus causing an adverse impact to the historic structure of the Towpath. To lessen impacts to historic structures, the National Park Service will employ mitigation measures of surveying, monitoring, documenting, and compatibly designing additions and modifications to them. For these reasons, the National Park Service has determined the selected alternative will not result in impairment of historic structures.

## **SOILS**

Soils contribute to the significance of the park as natural values highlighted in the park's purpose statement, and soils contribute to the fundamental resource and value of the Trail, Water, and Rail Network, as identified in the park's foundation document. The selected alternative involves ground disturbance and loss of soil productivity to approximately 3.1 acres of soils in the park for the development of trails and development and expansion of parking lots, impacting less than 0.01% of the park's total area. Recreational use of the trails will cause continued adverse soil impacts including loss of organic litter and soil compaction, rutting, and erosion. About 1.9–2.8 acres of impervious surface would be restored to natural conditions via removal or reduction in size of existing parking lots, resulting in a net decrease of about 0.02–1.0 acres of impervious surfaces in the park, a beneficial impact. Because the area of permanent impacts on soils under the selected alternative will be small relative to the park area and will not impede the purpose of the park to protect the diversity of natural resources, no impairment of soils will occur.

## **VEGETATION**

Vegetation contributes to the significance of the park as natural values highlighted in the park's purpose statement and contributes to the fundamental resource and value of forest ecosystem, as identified in the park's foundation document. The selected alternative removes approximately 3 acres of native and nonnative vegetation for the development of trails and development and expansion of parking lots, impacting less than 0.01% of the park's total vegetation. About 1.9–2.8 acres of impervious surface will be restored to native vegetation via removal or reduction in size of existing parking lots, resulting in a net decrease of about 0.02–1.0 acres of impervious surfaces in the park, a beneficial impact. Best management practices and mitigation measures, as described in chapter 2, and the park's sustainable trail guidelines would be implemented to minimize adverse impacts to native vegetation, such as

designing trail alignments to prevent the need to remove healthy trees and placing staging areas in previously developed areas or in the immediate project area. Because the area of permanent impacts on vegetation under the selected alternative will be small relative to the park area and will not impede the purpose of the park to protect the diversity of natural resources, no impairment of vegetation will occur.

## **CONCLUSION**

The National Park Service has determined that the implementation of the selected alternative will not constitute impairment of the resources of the park. This conclusion is based on consideration of the park's purpose and significance, a thorough analysis of the environmental impacts described in the environmental assessment, comments provided by the public and others, and the professional judgement of the decision maker guided by the direction in *NPS Management Policies 2006*.

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# Chapter 1

## Purpose and Need





## **CHAPTER 1: PURPOSE AND NEED**

### **1.0 Park Background**

Cuyahoga Valley National Park (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 general management plan (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 and support to resource protection. 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, a national heritage area. The partnerships with the park districts and heritage area provide a continuity of experiences for visitors and the local community that transcend specific land ownership within park boundaries. Park staff also work closely with local 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 twelve 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, park staff have 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 Valley Railway, and the historic communities of Everett and portions of 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 Paleoindian, 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.

## **1.1 Community Access Plan**

The community access plan (CAP) is a comprehensive plan that informs future planning for specific areas and identifies ways to improve opportunities and address challenges related to visiting the park. The CAP includes guidance on resource preservation, the types and general intensities of development, and identification and implementation commitments for visitor carrying capacities. 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.

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 amendment 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 is a component of the park's planning portfolio which consists of the individual plans, studies, and inventories, which together guide park decision-making. The planning portfolio enables the use of targeted planning documents such as this one to meet a broad range of park planning needs and fulfills legal and policy requirements. The CAP supplements the 2012 trail management plan and environmental impact statement and amends the 1977 GMP.

This circulation environmental assessment (EA) analyzes the near-term and high-priority actions specific to circulation that require compliance from the CAP. More compliance will be conducted separately for additional actions in the CAP as needed.

The National Park Service is required by the National Park Service Organic Act and the National Environmental Policy Act (NEPA) to plan and make informed decisions that help preserve park resources and values. The following EA meets those requirements and those set forth in NPS Director's Order 12, which sets forth policies and procedures by which the National Park Service meets its NEPA requirements.

## **1.2 Purpose and Need for the EA**

### ***1.2.1 Purpose of the EA***

The purpose of this circulation EA is to alleviate congestion at high-priority locations throughout the park while preserving highly visited key natural and cultural resources at Cuyahoga Valley National Park.

### ***1.2.2 Need for the EA***

This EA is needed because:

- There is a mismatch of parking lot supply and demand resulting in congestion and underutilization of parking lots.
- Visitors are unable to access key destinations due to lack of trail connections and unable to obtain orientation information due to parking lot congestion.



- Vegetation and soil are trampled and compacted along social trails and informal parking areas.
- Vehicles parked informally on the road intrude on the historic viewshed.
- The current Towpath Trail surface types are inconsistent and difficult to maintain.

### **1.3 Impact Topics Retained for Further Analysis**

Impact topics represent resources that could be affected, either beneficially or adversely, by implementing any of the proposed alternatives of this plan. The National Park Service used an interdisciplinary review process, existing studies and data, and public comments to determine which resources would likely be affected by this project. The following topics are carried forward for further analysis in this plan:

- archeological resources
- cultural landscape
- historic structures
- soils
- vegetation
- visitor use and experience

Impact topics not carried forward for detailed analysis are described in Appendix B.

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## Chapter 2

# Actions and Alternatives







## **CHAPTER 2: ACTIONS AND ALTERNATIVES**

### **2.0 Introduction**

This section describes the current conditions and proposed management strategies for this EA. The current conditions provide a basis for which to compare and evaluate the proposed action alternative. This section identifies proposed changes by geographic area and presents an approach to address the purpose and need for the plan as described in the introduction. The alternatives in this section were derived from recommendations of an interdisciplinary planning team and feedback and input from the public and stakeholders during civic engagement processes. The action alternative was further reviewed by the public during additional civic engagement and then modified by the planning team.

### **2.1 Alternative A (No-action alternative)**

This section describes what a continuation of current management looks like and serves as a baseline for comparing and considering the proposed action. Under current management conditions, the park would continue to manage park resources under current policy and guidance. The current conditions are described parkwide and by zone. After the narrative, table 3 also provides a comparison of the parking provided by the two alternatives.

#### ***Parkwide Actions***

- There would continue to be no designated connection between the Towpath Trail and the Metro Bike and Hike Trail (known as the Sagamore Connector Trail).
- Towpath Trail surface would continue to be a mixture of hard-packed, crushed limestone and asphalt.

#### ***High-Value Experience Zone***

- Maintain the current parking infrastructure at Everett Covered Bridge, Kendall Lake, Little Meadow, and Crowfoot Gully parking lots, with no changes.
- Continue to not provide any accessible walking path to the Ledges Overlook in the Virginia Kendall North area.
- Continue to not provide any multi-use connector trail along the closed section of Stanford Road.
- Continue to not provide any time-limited parking spaces at Brandywine Falls nor the Boston Mill Visitor Center.

#### ***2.1.3 River Corridor Zone***

- Maintain the current parking infrastructure at the Botzum parking lot, with no changes.

#### ***2.1.4 Natural Zone***

- Continue to not provide any pedestrian and horse connection near Wheatley Road.
- Maintain the current parking infrastructure at Blue Hen Falls, with no changes.
- Continue to not provide an accessible walking path at Blue Hen Falls.
- Maintain the current sign infrastructure at Boston Mill Visitor Center.

## **2.2 Alternative B (Proposed Action and NPS Preferred Alternative)**

This section describes the proposed action the National Park Service intends to take. The proposed action is described parkwide and by zone. After the narrative, table 3 also provides a comparison of the parking provided by the two alternatives. The proposed action includes two “options,” which the park may implement if the need arises. This need would be identified by implementing the monitoring strategy that is described in the CAP, which evaluates the effectiveness of management actions in achieving and maintaining desired conditions.

### **2.2.1 Parkwide Actions**

- Support Cleveland Metroparks and Summit Metro Parks development of the multi-use Sagamore Connector Trail from Canal Road to the Bike & Hike Trail.
- Rehabilitate the entire length of the Towpath Trail surface in accordance with Ohio & Erie Canal CLR treatment recommendations by adopting chip-sealed asphalt as the surface treatment. Maintain trail width of approximately 10 feet, consistent with other portions of the trail. Trail width may vary up to 4 feet to accommodate interpretive features, benches, or widened trail shoulders. Bump-outs would only be used where the width of the existing berm can support the extra width of the space and should be gradual and taper out organically so that they do not appear to be distinct from the main portion of the trail. Minor widening would occur as needed to ensure that the chip-seal asphalt is installed properly. The surface type would be consistent and rustic, with irregular rather than crisply defined edges, a coarse rather than smooth texture, and an earth-toned color. This surface type would support maintenance and recreational use while visually representing the historic character of the towpath via the appearance of a crushed-stone surface and the durability of asphalt. An alternate color chip-seal surface would be used to identify portions of the trail that deviate from the historic route of the towpath. This surface would be routinely maintained with a stone surface layer that covers the base and does not allow loose gravel beyond the Architectural Barriers Act Accessibility Standard for accessible surfaces. All resurfacing work would occur within the original prism of the original Towpath Trail (the original width of disturbance).

### **2.2.2 High-Value Experience Zone**

#### **Everett Cultural Area**

- Expand parking in the Everett Covered Bridge area by providing an overflow lot along the closed portion of Everett Road near Wheatley Road and the Riding Run, Valley, and Perkins Trails for additional passenger vehicle parking and equestrian/oversized vehicle parking.

#### **Kendall Hills/Kendall Lake Area**

- Remove twenty parking spaces at Kendall Lake. This process would consist of removing the asphalt and base beneath it as well as surrounding drainage infrastructure. This area would then be regraded to match the adjacent wetland contour, and the wetlands would be restored to the extent possible (about 6,400 square feet).
- Fully remove the parking lot at Little Meadow trailhead. This process would consist of removing the asphalt and base beneath the existing parking lot as well as the surrounding drainage infrastructure. These areas would then be regraded and each site would be replanted with native vegetation (about 25,000 square feet).
- Fully remove the parking lot at Crowfoot Gully. This process would consist of removing the asphalt and base beneath the existing parking lot as well as the surrounding drainage

infrastructure. These areas would then be regraded and each site would be replanted with native vegetation (about 23,000 square feet).

#### **Virginia Kendall North Area**

- Create accessible walking path connections from the Ledgers Shelter and parking area to the Ledgers Overlook and Ledges connector trails (about 0.4 miles of trail), including a 100-foot boardwalk through rocky terrain. Create new wooden viewing platform at the Ledges and above Ice Box Cave.

#### **Brandywine Falls Area**

- Convert up to ten existing parking spaces to time-limited parking spaces in the Brandywine Falls parking lot to ensure parking availability for people coming specifically to view the falls.

#### **Boston Mill Historic District**

- Convert several existing parking spaces into time-limited parking spaces in the Boston Mill Visitor Center parking lot to ensure parking availability for people coming specifically to access the visitor center.

#### **Stanford/Hines Hill**

- Expand and improve parking for the East Rim trail system by formalizing the gravel parking area for a total of eighty parking spaces (remove 3,300 square feet and expand south by 14,700 square feet). Add a vault toilet to the parking lot.
- Option: Provide additional parking for fifty-four vehicles (about 17,700 square feet) at the East Rim Trail via construction of a second parking area near the former Lorenz property. This option would be implemented according to the parking lot and roadway congestion monitoring in appendix B of the CAP. This monitoring protocol outlines that additional parking would be built if the metrics specified (i.e., vehicles at one time, lot turnover rates, or length of stay) at the expanded parking area contributes to parking lot and roadway congestion.

### **2.2.3 River Corridor Zone**

#### **Peninsula – Bath River Corridor**

- Reduce the size of the current 127-parking-stall Botzum parking lot by about 43–67 spaces along the southwest side of the lot, reducing the lot by about 30,000–45,000 square feet and retaining the northern portion near the current trailhead and boarding station. This process would consist of removing the asphalt and base beneath a portion of the existing parking lot as well as the surrounding drainage infrastructure. These areas would then be regraded and each site would be replanted with native vegetation.

### **2.2.4 Natural Zone**

#### **Furnace Run/Oak Hill Natural Area**

Add an approximately 100-foot-long trail bridge for pedestrians and horses near Wheatley Road, to provide loop trail experiences that combine the Perkins and Riding Run Trails.

#### **Blue Hen Falls Natural Area**

- Create a fourteen-space limited-mobility and accessible parking lot at the former Blue Hen Falls Trailhead to provide closer access to Blue Hen Falls. Reroute the Buckeye Trail from the main driveway to the limited-mobility parking lot.

- Provide access to Blue Hen Falls from the Boston area with improved signage and additional formalized parking to serve the entire area.
- Create an accessible trail (about 0.25 miles) from a new Blue Hen Falls limited-mobility parking lot to the waterfall.
- Option: Implement managed access (such as parking reservations) for the limited-mobility parking lot at Blue Hen Falls. This option would be implemented according to wayfinding and accessibility monitoring and the parking lot and roadway congestion monitoring in appendix B of the CAP. The wayfinding and accessibility protocol outlines that barriers to accessibility would be addressed if visitors are unable to navigate the park. The parking lot monitoring protocol outlines that a reservation system for parking areas would be established if the metrics specified (i.e., vehicles at one time, parking lot turnover rates, or length of stay) at the existing lot, the limited-mobility lot, contributes to parking lot and roadway congestion.



**Table 1. Parking by Alternative Parking Infrastructure by Alternative**

<b>Location</b>	<b>Alternative A – No Action</b>	<b>Alternative B – Proposed Action (NPS Preferred Alternative)</b>
Everett Covered Bridge overflow parking lot	0 parking spaces	36 passenger vehicle parking spaces and 5 trailer/oversized vehicle parking spaces
Kendall Lake	189 parking spaces	169 parking spaces
Little Meadow parking lot	62 parking spaces, 4 accessible parking spaces	0 parking spaces
Crowfoot Gully parking lot	63 parking spaces, 4 accessible parking spaces	0 parking spaces
Brandywine Falls lot	All parking is first-come-first-served	10 time-limited parking spaces
Boston Mill Visitor Center	All parking is first-come-first-served	Several time-limited parking spaces
East Rim parking	About 40 gravel parking spaces in main parking area	80 parking spaces in main lot and 54 overflow parking spaces in additional lot.
Botzum parking lot	127 parking spaces	60-80 parking spaces
Blue Hen Falls parking at former Blue Hen Trailhead	3 gravel spaces + 1 emergency access space for park use only (not open to the public)	10-15 limited mobility and accessible parking spaces

### **2.2.5 Mitigation Measures**

Any action taken as part of the alternatives could affect park resources. Mitigation measures take those potential effects into account and describe best practices that would mitigate potential impacts. Congress has charged the National Park Service with managing the lands under its stewardship “in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (NPS Organic Act, 16 USC 1). As a result, the National Park Service routinely evaluates and implements mitigation measures whenever conditions occur that could adversely affect the sustainability of national park system resources.

To ensure that implementation of the circulation plan protects natural and cultural resources unimpaired for future generations and provides for a high-quality visitor experience, a consistent set of mitigation measures and best management practices that align with federal regulations and NPS management policies (2006) would be applied to all management actions associated with the proposed action. Mitigation language would be included in contracts and workplans for implementation of the management actions.

## General

The National Park Service would continue to apply the park's sustainable trail guidelines (NPS, 2012b). These guidelines serve as the primary standard operating procedure document for trails management in CUVA. The guidelines focus on the following topics to incorporate best planning, design, and management practices for trail sustainability among all trails in the park:

- *Site Planning and Design of Trail.* The guidelines outline the basic principles and practices to administer during the site assessment and design phases of trail development in the park. Guidance includes the trail development process for trails in CUVA, identifying trail classes and types and their design and management criteria, site assessment and site design best practices, and program guidance for the development of trail facilities, signage and accessibility and mobility that is suitable to each trail's individual site conditions.
- *Trail Construction.* The guidelines establish basic principles and best practices to administer during the physical construction and maintenance of a trail.
- *Management, Maintenance and Monitoring.* The guidelines recommend management policies that will sustain park trails for future generations. Guidance is provided on annual and long-term maintenance, trail closures, management of trails for special-use permit events, and trail monitoring.

## Visitor Use and Experience

- Implement measures to reduce adverse effects of construction on safety. Measures may include noise abatement, visual screening, and directional signs that aid visitors in avoiding construction activities.
- Implement timely and accurate communication with visitors regarding programs, services, sites, permitted activities via new releases visitor contacts, web and social media, and signage.
- Thoughtfully design signage and place to not detract from visitor experience and to protect natural and cultural resources.

## Natural Resources

### Soils

- Replant exposed soils where applicable with native vegetation immediately following completion of construction activities.
- Utilize erosion control materials and prepare erosion and sedimentation control plans as needed.
- Soil erosion would be minimized by limiting the time soil is left exposed and by applying other erosion control measures such as erosion matting, silt fencing, and sedimentation basins in construction areas to reduce erosion, surface scouring, and discharge to water bodies.
- To the extent practicable, save and reuse topsoil from construction activities on site.
- To minimize new ground disturbance, staging areas would be located in previously disturbed areas, away from visitor use areas to the extent possible. All staging areas would be returned to preconstruction conditions and/or revegetated following construction. Parking areas for construction vehicles would be limited to these staging areas, existing roads, and previously disturbed areas.
- A construction zone for installation of the proposed trail system, as well as staging areas and work zones, would be identified and demarcated with construction tape or some similar material prior to any construction activities. The tape would define the zone and confine the activity to the minimum area needed for implementing the project.

- To the greatest extent feasible, new facilities would be sited on soils suitable for development, such as those less readily prone to water inundation or erosion or that have been previously disturbed.

#### Vegetation

- Conduct plant field surveys in appropriate growing seasons by qualified biologists to determine if rare, threatened, and endangered state or federally listed plant species are present early in the planning process for projects and before any ground disturbance. The survey would be conducted by qualified park or contract professionals to identify conditions in a project planning area with a 100 percent visual survey of the proposed alignment. A buffer surrounding the plants would be imposed that prohibits physical damage to the identified population during construction activities. If avoidance is infeasible, adverse effects on rare, threatened, and endangered species would be minimized and compensated as appropriate and in consultation with the appropriate resource agencies.
- Acquire construction materials (such as gravel) from sources that are appropriate for the site and are inspected to be free of invasive species seeds or insects.
- Clean construction equipment before entering the park to prevent the spread of nonnative invasive species.
- Minimize the area of earth disturbance to the amount necessary to accomplish the project.
- Minimize the removal of native, mature, or historic vegetation.
- Avoid areas with rare plant communities, such as springs, seeps, and ephemeral pond sites.
- Avoid wetland soils.
- Identify and preserve historic trees and vegetation to the largest extent feasible and document should there be potential loss.
- Designate river access/crossing points and use barriers and closures to prevent trampling and loss of riparian vegetation.
- Revegetate disturbed areas with native plant species. Revegetation plans should specify seed/plant source, seed/plant mixes, and/or soil preparation. Salvage vegetation should be used to the extent possible.
- Per the sustainable trail guidelines, healthy trees of any size should not be removed except where they interfere with trail traffic and/or the trail cannot be relocated to eliminate the interference. All healthy trees of more than twelve inches diameter breast height should remain.

#### Water Resources

- To prevent water pollution during construction, use erosion-control measures, minimize discharge to water bodies, and regularly inspect construction equipment for leaks of petroleum and other chemicals. Minimize use of heavy equipment in waterways.
- Consider the riparian buffer zones or setbacks during site planning and design for trails adjacent to or crossing rivers and streams.
- Establish trail location outside of the established riparian function buffer zone whenever feasible.
- Minimize the number of stream crossings along a segment and avoid whenever possible to minimize impact to the stream. Where the trail needs to cross a stream, stream quality should be evaluated to plan the stream crossing accordingly with the stream's resource sensitivity.

#### Wetlands

Mitigation measures would be applied to protect wetland resources prior to and during the installation of trail or other site-development projects. Wetlands or wetland edges would be

delineated by qualified NPS staff or certified wetland specialists and marked to inform the site-specific placement of the new trail or other facilities. Except where public access to a wetland provides a visitor experience to appreciate these habitats and ecosystem functions, all facilities would be sited to avoid wetlands. For any actions that may have adverse impacts on wetlands, the National Park Service would implement best management practices and conditions described in appendix B of *NPS Procedural Manual #77-1: Wetland Protection* (NPS, 2016), including:

- Appropriate erosion and siltation controls must be maintained during construction, and all exposed soil or fill material must be permanently stabilized at the earliest practicable date.
- Heavy equipment use in wetlands must be avoided if possible. Heavy equipment used in wetlands must be placed on mats, or other measures must be taken to minimize soil and plant root disturbance and to preserve preconstruction elevations.
- Whenever possible, excavated material must be placed on an upland site. However, when this is not feasible, temporary stockpiling of excavated material in wetlands must be placed on filter cloth, mats, or some other semipermeable surface, or comparable measures must be taken to ensure that underlying wetland habitat is protected. Runoff from stockpiled material must be controlled with silt fencing, filter cloth, coir wattles, or other appropriate means to prevent reentry into the waterway or wetland.

Additional mitigation measures would include the following, as appropriate:

- Employ standard avoidance, minimization, and mitigation strategies.
- Exercise increased caution to protect wetland resources from damage caused by construction equipment, erosion, siltation, and other activities with the potential to affect wetlands.
- Avoid heavy equipment use in wetlands to the greatest extent possible. Heavy equipment used in wetlands must be placed on mats, or other measures must be taken to minimize soil and plant root disturbance and to preserve preconstruction elevations.
- Take measures to keep construction materials from escaping work areas, especially near streams or natural drainages.
- Design bridges to span the channel and the associated wetland habitat (no pilings, fill, or other support structures in the wetland/stream habitat). If bridges cannot be designed to avoid wetlands, then complete additional compliance (such as a wetland statement of findings) to assess impacts on wetlands and ensure no net loss of wetland area.

#### Nonnative Plant Species

- The National Park Service would continue to work with adjacent landowners to implement a noxious weed control program for which standard measures could include the following elements: ensuring that construction-related equipment arrives on-site free of mud or seed-bearing material; certifying all seeds and straw material as weed-free; identifying areas of noxious weeds before construction; treating noxious weeds or noxious weed topsoil before construction (such as topsoil segregation, storage, or herbicide treatment); and revegetating with appropriate native species.

#### Birds

- Per the sustainable trail guidelines, a review of site conditions where sensitive habitats may exist within the trail planning area would be conducted with the park biologist and if necessary with US Fish and Wildlife Service. If sensitive habitats exist, establishment of buffers based on habitat sensitivity would be developed where temporary seasonal closures would be required, or limitations on seasonal construction.

- Care would be taken not to disturb any sensitive bird species such as raptors and migratory birds that are found nesting, hibernating, foraging, or otherwise living in or immediately nearby the worksites. To reduce noise disturbance and limit impacts on breeding avian species, all vegetation clearing and trail construction would be conducted from mid-July to January 1, as feasible. If vegetation-removal activities cannot occur outside the bird nesting season, surveys would be conducted by a qualified biologist prior to scheduled activity for nesting or roosting use. If active nests or breeding behavior such as courtship, nest-building, and territorial defense are detected during these surveys, no vegetation-removal activities should be conducted until nestlings have fledged or the nest fails or breeding behaviors are no longer observed.
- Tree clearing should not occur within 660 feet of any active bald eagle nests or in the woodlot supporting the nest tree. If any tree removal is required in the buffer area, the National Park Service would consult with the US Fish and Wildlife Service to identify appropriate avoidance and minimization measures to take to protect bald eagles.
- Work within 660 feet of any bald eagle nest or within the direct line of site of the nest would be restricted from mid-January through July to prevent disturbance of the eagles from the egg-laying period until the young fledge.
- If construction projects would be occurring within one quarter-mile of an active bald eagle nest, the National Park Service would consult with the US Fish and Wildlife Service to identify appropriate avoidance and minimization measures to avoid take of bald eagles.

#### Threatened and Endangered Species

Protective actions would occur during normal agency operations as well as before, during, and after construction to minimize immediate and long-term impacts on rare, threatened, or endangered animal species. These actions would vary by specific project, but protective actions specific to rare, threatened, or endangered animal species could include:

- Locate and design facilities/actions to avoid adverse effects on rare, threatened, and endangered species. If avoidance is infeasible, minimize and compensate for adverse effects on rare, threatened, and endangered species as appropriate and in consultation with the appropriate resource agencies. Conduct work outside of critical periods for the specific species.
- Per the sustainable trail guidelines:
  - For protection against erosion and to maintain resource integrity, native vegetation should be retained as much as possible.
  - Clearing vegetation for any new trail will be coordinated with park staff consisting of disciplines in or equivalent to planning and design, plant ecology, biology, and trail construction and maintenance during field verification.
  - The National Park Service would conduct surveys for rare, threatened, and endangered species as warranted by the project location, timing, and type of activity.
  - Consult with US Fish and Wildlife Service for each trail project site during implementation for evaluation of impacts to the Indiana bat and its habitat.
  - All healthy trees of more than twelve inches diameter breast height should remain, unless removal is necessary for safety or identified with prior approval through construction design and consultation. Any tree removal will be in accordance with US Fish and Wildlife Service guidance for protection of bat species.
- Locate campsites, trails, and other facilities so that tree removal is minimized (unless hazard trees are present or no other option exists).
- Tree removal should not be scheduled between April 1 and October 31. If the trees must be cut during that time frame, further coordination with US Fish and Wildlife Service would

occur to determine if surveys are warranted. Any survey would be designed and conducted in coordination with the US Fish and Wildlife Service and would be consistent with the determination key for the northern long-eared bat as well as other listed species.

- Trees exhibiting any of the following characteristics should be saved to the greatest extent possible:
  - Dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities that may be used as maternity roost areas.
  - Live trees (such as shagbark hickory) that have exfoliating bark.
- Final design for any new artificial lighting in parking lots would consider impacts to bats and incorporate best practices to minimize impacts to threatened and endangered bat species.
- No vegetation clearing in prairie or meadow areas with milkweed and/or blooming nectar plants would be scheduled during peak monarch butterfly migration periods (September and October) or during breeding season (June through August). If vegetation clearing in areas with monarch butterfly habitat must occur during those times, further coordination with US Fish and Wildlife Service would occur to determine if surveys are warranted. Any survey would be designed and conducted in coordination with the US Fish and Wildlife Service.
- In areas where asphalt is removed, to the greatest extent possible complete seeding or planting projects that promote preferred native floral resources for monarch butterfly breeding and/or foraging.

### **Cultural Resources**

The National Park Service would preserve and protect, to the greatest extent possible, resources that indicate past human occupation of CUVA. Specific protective measures include the following:

- Continue to develop inventories for and oversee research about archeological, historic, and ethnographic resources to better understand and manage resources, including cultural landscapes; conduct any needed archeological or other resource-specific surveys and National Register of Historic Places evaluations and identify recommended treatments; incorporate the results of these efforts into site-specific planning and environmental analysis documents; and continue to manage cultural resources in accordance with federal regulations and agency guidelines.
- Continue ongoing consultations with traditionally associated American Indian tribes to develop protective measures, which could include identification of ethnographic resources and traditional use areas.
- Encourage visitors via park interpretive programs to respect and leave undisturbed any inadvertently encountered archeological resources. These measures would help to ensure that the archeological, historic, and ethnographic resources remain protected and in good condition.

### **Archeological resources**

Potential impacts on the park's archeological resources will be addressed under the provisions for assessing effects outlined in 36 CFR Part 800 regulations issued by the Advisory Council on Historic Preservation implementing Section 106 of the National Historic Preservation Act 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, or use of cultural resources or the qualities that qualify a property for listing in the National Register of Historic Places (RNHP). Compliance with these laws and associated policies will be accomplished through specific project consultation with the state historic preservation officer of Ohio (SHPO), tribal historic preservation officers (THPOs), and other consulting parties. Best management practices for protection of archeological resources will include:

- Early in the planning process for any project and before any ground-disturbing action by the National Park Service, the park's archeologist with assistance from the Midwest Archeological Center (MWAC) will determine the need for archeological testing. Any such studies will be carried out and evaluated for effect before construction, in consultation with the state historic preservation officers, tribal historic preservation officers, and the Advisory Council on Historic Preservation (as needed).
- Archeological resources will be avoided to the extent feasible by changing or shifting activities or facilities, or by sensitively designing those facilities.
- Archeological surveys would precede any ground-disturbing construction. Known archeological resources would be avoided during all construction activities. If, during construction, previously undiscovered archeological resources were uncovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate management strategy developed in consultation with the state historic preservation office and, if necessary, associated American Indian tribes.
- In instances where archeological resources cannot feasibly be avoided, archeological resource excavation and collection will be considered on a case-by-case basis. Because archeological excavation and collection is in itself a destructive process representing an irreversible and irretrievable commitment of the resource, excavation will be avoided, and nondestructive investigation techniques will be used as much as possible. Until the described research program of inventory and evaluation has been completed, the interim goal would be to protect archeological sites in place. The recovery of data from sites that would be unavoidably lost is a distinct mitigation activity and the SHPO and THPOs would be contacted if this action is needed for archeological resources.
- For parking lot modification actions archeological investigation would occur prior to any action taken. Archeological survey would also be needed prior to the removal of the Civilian Conservation Corps (CCC) parking lot at Kendall Lakes, which contributes to the National Register of Historic Places-listed Virginia Kendall State Park Historic District and prior to the removal of the Crowfoot Gully and Little Meadow parking lots, which are part of the historic district but not identified as contributing features. Updates to National Register nominations should also be completed.
- Proper testing and planning should discover if any significant resources are in an area of planned activity. However, in the event that human remains, funerary objects, or objects of cultural patrimony are discovered during construction activities, work will stop immediately, and the park's NAGPRA plan of action, prepared prior to any ground-disturbance activities as required under forthcoming updates to NAGPRA and its implementing regulations, will be followed.
- Management actions will be taken to prevent illegal collecting through the Midwest Region Park Ranger Archeological Site Monitoring Program. Park law enforcement rangers will follow the protocols for documenting new disturbance at a site as contained within the revised archeological site monitoring program guidance document (NPS, 2011). Once the actions outlined in the guidance document are completed, including informational updates in the NPS Cultural Resource Inventory System (CRIS), necessary and appropriate actions for the protection and preservation of the site may then be undertaken in consultation with the MWAC, the SHPO, and THPOs. Protection may include stabilization of the site in the field, the recovery, preparation, and placement of cultural material in museum collections, or other actions as deemed appropriate through consultation. The localities and geologic settings of such sites will be adequately documented when artifacts are recovered.

## Historic Properties

Because this plan involves phased implementation of actions not yet designed to allow for impact analysis in this plan, the National Park Service will follow best management practices and laws including:

- Potential impacts on the park's historic structures, historic districts, and cultural landscapes will be addressed under the provisions for assessing effects outlined in 36 CFR Part 800, regulations issued by the Advisory Council on Historic Preservation implementing Section 106 of the National Historic Preservation Act 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.
- To minimize impacts to historic properties, the Secretary of the Interior's Standards for the Treatment of Historic Properties will be followed as codified (36 CFR Part 68). The updated guidelines for preserving, rehabilitation, restoring, and reconstructing historic buildings will assist in applying the standards to all types of historic buildings (NPS, 2017). Construction will be compatible with the historic character of historic structures in terms of architectural elements, scale, massing, materials, and other character-defining features. The National Park Service will use screening or other sensitive design measures that will be compatible with historic properties. If adverse impacts cannot be avoided, impacts will be mitigated through consultation with all interested parties.
- Before any preservation or rehabilitation activities are taken that involve more than maintenance and emergency stabilization, a historic structure report will be completed for that particular structure. Upon completion of the preservation/rehabilitation action, a historic structure preservation guide would be prepared to provide information for inspection and routine and cyclic maintenance for each structure. A historic structure report or preservation guide would also be required for any historic structure being leased under 36 CFR 18.
- To minimize impacts to cultural landscapes, the Secretary of the Interior's Standards for the Treatment of Historic Properties will be followed as codified (36 CFR Part 68). The updated guidelines for the treatment of cultural landscapes will assist in applying the standards to all types of historic buildings (NPS, 1996). Significant landscape patterns and features of cultural landscapes (such as spatial organization, land use patterns, circulation systems, topography, vegetation, buildings and structures, cluster arrangements, small-scale features, and views and vistas) will be protected and maintained. Proposed treatment levels for related structures will depend on their physical condition and the potential need of a structure for agricultural purposes or adaptive uses. Based on the contribution of all features, individual structures could either be kept or recorded and removed, with their component pieces used for salvage materials to restore other historic properties.
- A cultural landscape inventory and an update to the National Register nomination for the Hunt/Wilke Farm may be developed to identify and expand the understanding of the historic property beyond the historic structures.
- Mitigation for the removal of the historic CCC parking lot at Kendall Lakes may include the development of a cultural landscape report (CLR) for the area prior to removal. A project statement was submitted for funding in FY25, but the project remains unfunded. The CLR could guide removal or alteration of the parking lot within a rehabilitation treatment that balances cultural landscape protection with natural resource concerns. Furthermore, Interpreting the importance of the CCC parking lot at Kendall Lakes would support visitor



understanding and appreciation of the 1939 master plan design and may support mitigation of the proposed removal of the parking lot.

## 2.3 Actions Considered but Dismissed

Certain alternatives can sometimes be considered but eliminated from further study for a variety of reasons listed in *NPS Director's Order 12 DO-12 Handbook*. The following action was considered but dismissed from further consideration.

- **Expand parking at Everett Covered Bridge.** This CAP action, via a partnership with Summit Metro Parks, to expand the parking at Everett Covered Bridge by about eighteen parking spaces (about 26,000 square feet) for additional passenger vehicle parking and equestrian/oversized vehicle parking would have an adverse effect under Section 106 on the archeological resources and the research potential of the Everett Knoll Complex, (33SU14), a relatively unique archeological site in the park.
- While the National Register boundary for the site is described and documented as being farther to the east of the parking lot expansion (Brush, 1974), subsequent archeological investigations suggest that the site boundary is much larger and may extend to the proposed expansion area (Richner and Bauermeister, 2011). Even if no ground-disturbance activities were needed for installation of the parking lot expansion, the action would have an adverse effect on the archeological resources by making a portion of the archeological site inaccessible for research. Although the action still appears in the CAP, the park is no longer considering the parking expansion at the Everett Covered Bridge area at this time due to the potential to have an adverse effect on the archeological resources; therefore the action has been considered but dismissed for analysis.

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## Chapter 3

# Affected Environment and Impact Analysis



Photo Credit: Jeffrey Gibson



## **CHAPTER 3: AFFECTED ENVIRONMENT AND IMPACT ANALYSIS**

### **3.0 Introduction**

This chapter summarizes the natural and cultural resources and visitor experiences that could be affected by the alternatives and analyzes the impacts (or “environmental consequences”) of each alternative. The affected environment description is followed by the environmental consequences analysis for each impact topic. The impact topics analyzed in this chapter correspond to the impact topics retained for analysis in Chapter 1. Additional NEPA analysis may be needed before implementation of individual elements of the plan, once more design details are known.

### **3.1 Affected Environment**

The affected environment describes existing conditions for those elements of the natural and cultural environment (including human health and safety and the visitor experience) that could be affected by the actions proposed in the alternatives. These descriptions serve as a baseline for understanding the resources that could be impacted by implementation of the proposed action.

### **3.2 Impacts**

According to the 2022 Council on Environmental Quality (CEQ) revised regulations, “effects or impacts” are changes to the human environment that include reasonably foreseeable 1) direct effects, 2) indirect effects, and 3) cumulative effects [40 CFR §1508.1(g)].

Agencies consider the potentially affected environment and degree of effects in order to determine the significance of an action’s impacts. The degree of effects is assessed in the context of the park’s purpose and significance and any resource-specific context that may be applicable. When assessing the degree of effects, agencies consider:

- both short- and long-term effects
  - both beneficial and adverse effects
  - effects on public health and safety
  - effects that would violate federal, state, tribal, or local laws protecting the environment.
- [40 CFR § 1501.3(b)]

None of the alternatives analyzed in this EA would violate any federal, state, tribal, or local laws that protect the environment.

The methods used to assess impacts vary depending on the resource considered, but generally are based on a review of pertinent literature and park studies, the information provided by on-site experts and other agencies, professional judgment, and park staff knowledge and insight.

### **3.3 Cumulative Impacts Methodology**

In accordance with the CEQ revised regulations, this EA also considers cumulative impacts, “which are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (§1508.1(g)(3)). Cumulative impacts have been addressed in this EA by resource and are considered for each alternative.



### **3.4 Trends and Reasonably Foreseeable Planned Actions**

In assessing potential impacts of each alternative, the following trends and reasonably foreseeable future actions have also been considered:

#### ***Climate Trends***

- Models indicate that temperatures at the park will rise significantly under climate change. Minimum and maximum temperature are expected to increase by about 1.5–2.0 °C by 2050 and by about 2.0–6.5 °C by 2100, depending on the scenario (Jones, 2021).
- Modeled climate through the year 2100 shows an increase in mean monthly precipitation under moderate and high-emission scenarios. Both scenarios indicate higher mean monthly precipitation compared to the baseline period, with increases of about 5–6 mm per month or about 60–72 mm per year by the 2040s (Jones, 2021).
- Models indicate that severe storms will increase in frequency and intensity. Under the highest emissions scenario, models project that the five-year storm of today (a two-day period with more precipitation than any other two-day period in five years) could occur every two years by 2100 for the Midwestern United States as a whole (Easterling et al., 2017 in Jones et al., 2021). Extreme storms can cause landslides in the park and flooding in the region.

#### ***Visitor Use Trends***

- Visitation has grown significantly since the park’s GMP was completed in 1977. Crowding and conflicts between visitor uses have resulted from increased use, and visitor needs and expectations have also changed.
- Most of the visitors are drawn to three key resources: Brandywine Falls, the 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 (riparian corridors, wetland areas, microclimates, etc.) resulting in adverse damage to natural and cultural resources due to high use levels (2013 foundation document).
- About 65 percent of visitors use the Towpath Trail during their visit to the park (2015 visitor survey), and the trail is an important part of the cultural landscape. High levels of visitor use (foot, bike, and horse traffic) create trail rutting that is exacerbated in wet weather.
- The Cuyahoga Scenic Railroad is also a contributor to visitation and increasing in popularity, averaging 15 percent of recreational visits.
- Emerging trends include increased interest and use of the Cuyahoga River for paddling, mountain biking on new trails, continued upticks in railroad passengers, farmer’s market attendance, and organized and unorganized trail running events.

#### ***Future Planned Actions***

- The National Park Service will construct and formalize new trails from the 2012 trail plan and environmental impact statement that were prioritized as part of the CAP.
- The National Park Service will implement campsite recommendations along the Buckeye Trail from the 2012 trail plan and develop group camping opportunities at Howe Meadow.
- The National Park Service will restore visitor-created trails and a segment of the existing Perkins Trail to natural conditions, per the 2012 trail plan.
- The National Park Service will expand parking or develop at Grether, the former Brandywine Golf Course, the Coliseum site, Happy Days North Lot, and Terra Vista to provide river and/or trailhead access, per the CAP.

- The National Park Service and the Conservancy for Cuyahoga Valley National Park will redevelop the gated end of the now-abandoned Stanford Road to create a cul-de-sac and parking spaces and connections to the Towpath Trail Connector and Stanford Trail per the park's 2012 Boston Mills Area conceptual development plan and environmental assessment.
- Mussel bed restoration and freshwater mussel reintroduction will occur in 2023-2025, with proposed projects for future years.
- Park staff are completing a fire management plan that will include expansion of prescribed fire for vegetation management, fuel load control, and structural safety. The plan will be completed within the next two years.
- The park will 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. This includes the park's welcoming trailhead project to pilot new information and amenities at select trailheads to create a more welcoming and inclusive experience.
- The park will provide equipment rental and other support services for recreational activities in the park such as cycling, fishing and paddling.
- The park will implement general accessibility improvements, including adding grade/slope/trail condition information on signs and web-based platforms.
- The park will pursue a development concept plan to redesign Howe Meadow to better accommodate special events and public use.
- The park will improve parking in existing lots such as Brandywine Falls through restriping and providing bus parking/drop off options.
- The park will implement the canal CLR to provide a range of improvements to visitor experiences, including circulation improvements to key locations such as Peninsula and Boston, and Canal Exploration Center.
- The park will seek a seasonal agreement with Boston Mills Ski Area that improve formal parking in the Boston area and provide additional parking options for Blue Hen Falls.
- The park is seeking to remove a number of historic and non-historic dilapidated structures.

## 3.5 Archeological Resources

### 3.5.1 Affected Environment

CUVA contains a rich variety of archeological sites which range in date from the terminal Pleistocene (around 9,500 BCE) to the early 20<sup>th</sup> century (Nieves Zedeño et al., 2007; NPS, 2003). The archeological resources indicate the presence and use of the area by Native Americans, Europeans, Euro-Americans, and African Americans and help tell the story of the area's long history of settlement, transportation, agriculture, industry, and recreation.

Written records of archeological sites in the park began near the end of the 18<sup>th</sup> century as part of the antiquarian era of exploration. Accidental site discoveries occurred during construction of canal locks, roads, buildings, etc. and the publication of research on burial mounds and earthworks carried antiquarian and early professional interest in archeological resources for decades to come (Finney, 2002). Beginning in the 1960s, archeological investigation of the park area began in earnest by public and private organizations, including university research programs that focused on Ohio archeology. Many of the sites in the park have been damaged by looting and agriculture, and urban expansion has also destroyed archeological sites (Nieves Zedeño et al., 2007; Finney, 2002).

Much of the park and partner-owned lands have not been systematically surveyed for archeological resources. Some of the park has been archeologically surveyed, but most of this survey work has

been associated with projects that require ground disturbance. Ground disturbance includes activities such as digging, clearing, trenching, grading, etc., and has the potential to damage or destroy archeological resources that may be present on or below the ground surface, resulting in the loss of archeological material, the alteration of artifact distribution, and a loss of contextual evidence. Threats to archeological resources in the park include development in the park, flooding, erosion, and public use of the land. The public has undertaken illegal surface collection of artifacts on plowed fields and illegal digging activities (NPS, 2003; Finney, 2002). Park staff are aware of specific areas of the park and partner properties where there are concentrations of archeological sites and a potential for impacts on these sites from actions in this plan.

Archeological surveys are needed for the many areas of the park being considered in this plan. Archeological sites are known for the Hunt House (33SU135) which is part of the Hunt/Wilke Farm, listed in the National Register in 1993. Though the archeological resources at the Hunt House were not included in the National Register listing, MWAC archeological investigations in the 1980s and 1990s indicate the presence of precontact and historic deposits that are well-preserved, significant, and possess research potential in the area proposed for the connecting trail between the Hunt/Wilke Farm and Szalay's farm (Finney, 2002; Winstel et al., 1992; Richner, 1993). The proposed area for the connecting trail should be archeologically tested prior to installation to this trail.

There are no previous archeological surveys available for the Crowfoot Gully and Little Meadow parking lots, the CCC Kendall Lake parking lot, the Virginia Kendall Ledges area and Riding Run Bridge. An archeological survey was done around the Everett Covered Bridge overflow parking lot area. North of the proposed overflow location is the Hazlett House site (33SU444), a small assemblage of prehistoric and historic materials recovered at a historic residential property (Hazlett House); it was surveyed in 2005 prior to its removal. Prehistoric artifacts could be attributed to the nearby Everett Knoll site (33SU14) (Brose 1974) or the nearby prehistoric site, 33SU121 (Bauermeister 2010). While the Hazlett House site's boundaries were delineated, the site itself is not considered significant or eligible for inclusion in the National Register of Historic Places. The 2005 survey noted that, there may be additional archeological resources in the area, as there were two significant prehistoric sites in close proximity (Dempsey 2006, Bauermeister 2005). Another archeological survey took place in 2016, prior to installation of the seventy-five-vehicle overflow lot for the East Rim mountain bike system and prior to the demolition and removal of the house and associated buildings and features at the Lorenz property. No artifacts were recovered during these investigations, and the finding of effect in relation to Section 106 of the National Register of Historic Places was "no historic properties affected" for removal of the home and installation of the parking lot (Bauermeister 2018).

Archeological surveys are also needed for areas related to the Riding Run connector, and multimodal trail actions as there are known archeological sites in the area but none yet identified within the trail alignments. Archeological testing was conducted by Jeffrey Richner from the Midwest Archeological Center in the early to mid-1990s around the Blue Hen Falls study area. This testing was limited, as it was undertaken as part of a structural demolition program. The areas tested in the Blue Hen Falls project area included land tract 109-17 (the Trainer property), and negative testing results were reported (Richner, 1995). No other archeological sites have yet been identified within the Blue Hen Fall's project area, although a thorough review of archeological data and testing should proceed any action taken at Blue Hen Falls. Features with some archeological components were identified near the Botzum Trailhead and parking lot in the 1960s and 1970s and some have been subjected to illegal digging (Finney, 2002). Archeological survey work is needed to determine the presence of other features or archeological sites in the project area.

Future planned actions that may affect archeological resources include the park and the Conservancy for Cuyahoga Valley National Park redeveloping the gated end of the now abandoned Stanford Road to create parking spaces, a trailhead kiosk, vault toilet comfort station and



connections to the Towpath Trail Connector and Stanford Trail. Archeological surveys and monitoring for this project were completed by the Midwest Archeological Center in 2022 associated with a project to develop the Stanford parking area. The park initiated Section 106 consultation on this project in 2023 and determined that the proposed work associated with the Stanford trailhead would have no adverse effect on historic or archeological resources. The SHPO concurred with this finding on January 30, 2023.

### **3.5.2 Environmental Consequences**

#### **Alternative A: No Action (Continue Current Management)**

Under the no-action alternative, unknown impacts would continue to occur to archeological resources resulting from a lack of baseline information on archeological sites in unsurveyed areas of the park and partner-owned lands. This lack of information hinders park managers' ability to protect archeological resources and advocate for their protection on partner-owned lands. Beneficial impacts under the no-action alternative are primarily allowing any archeological resources to remain undisturbed and *in situ*, which NPS Management Policies (2006, section 5.3.5.1) states is the mandated management action, unless the removal of artifacts or physical disturbance is justified by research, consultation, preservation, protection, or interpretive requirements. By not damaging or destroying the archeological resources with ground-disturbance activities, the resources are protected and retain their potential to yield new information in the future.

#### *Cumulative Impacts*

The lack of information about archeological resources in the park presents an ongoing issue for park managers to make decisions. In areas of the park that were developed prior to systemic archeological survey as well as on newly acquired land, this lack of information prevents challenges for resource protection and management decisions.

#### **Alternative B: NPS Preferred Alternative**

Under the preferred alternative, a variety of ground-disturbance activities could damage or destroy known and as-yet unknown archeological resources and their archeological context. As noted above, many areas of the park and partner-owned lands have not been systematically surveyed for archeological resources. Ground-disturbing construction activities associated with the preferred alternative such as clearing, trenching, and grading have the potential to damage or destroy archeological resources and contextual evidence. In areas where surveys for archeological resources have not been conducted, archeological surveys would precede any construction activity. During construction activities, known archeological resources would be avoided to the greatest extent possible and few if any adverse effects would be anticipated. If, however, National Register-eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy (e.g., the excavation, recordation, and mapping of cultural remains prior to disturbance, to ensure that important archeological data that otherwise would be lost is recovered and documented) would be developed in consultation with the state historic preservation officer and, as necessary, with associated Tribal Nations.

Under the preferred alternative there is ground disturbance associated with the installation of new trails, boardwalk, new signs, and new parking lots. Ground disturbance for the Everett Covered Bridge area overflow parking lot would require approximately 40,000 square feet of ground disturbance. Ground disturbance is also associated with the new Lorenz parking lot (17,700 square feet) and a ditch relocation at the same site. Ground disturbance is also associated with improvement of current trails, including sixteen miles of the Towpath Trail, bridges, parking lots (including expansion of the East Rim Trail gravel lot requiring 0.4 acres of ground disturbance and parking expansion at Blue Hen, requiring about 7,600 square feet of ground disturbance), and signs; and

removal of parking lots and associated drainage and regrading parking lots at various locations throughout the park.

The removal of a portion of the CCC-era Kendall Lake parking lot, a contributing historic structure to the Virginia Kendall State Park Historic District, listed in the National Register, at the Kendall Lake area would involve the ground disturbance of about 6,400 square feet of soil and include removal of asphalt, base, and surrounding drainage features. The parking lot would also be regraded to match the adjacent wetland contour and replanted with vegetation. This ground disturbance (regrading and replanting) may have an adverse effect on archeological resources. The removal of other parking lots would consist of ground disturbance covering about 25,000 square feet at the Little Meadow parking lot; 23,000 square feet at the Crowfoot Gully parking lot; and about 30,000-45,000 square feet for the Botzum parking lot. The ground disturbance activities may have an adverse effect on archeological resources potentially present at these locations under Section 106, as the installation of these parking lots (Kendall Lake, Little Meadow, Crowfoot Gully, Botzum) predate archeological survey of these areas. Also in the Virginia Kendall State Park Historic District, new trails at the Ledges would require up to 0.51 acres of ground disturbance. As this area was also designed during the CCC area, ground disturbance here may also have an adverse effect on as-yet unknown archeological resources under Section 106 as there are no previous archeological surveys of the area.

Furthermore, ground disturbance with tree-removal actions, installation of vault toilets, entrance sign work, gate installation, bulletin board relocation, plant screenings, new vegetation at removed parking lots, and signage for the East Rim parking area would also impact archeological resources. The use of heavy machinery along sixteen miles of the Towpath Trail for actions related to the new surface treatment may also adversely impact archeological resources via inadvertent ground disturbance such as gouging or scraping. Finally, ground-disturbance activities on partner-owned lands may also damage or destroy archeological resources.

Under the preferred alternative, beneficial impacts include the potential to locate and document new archeological sites in previously unsurveyed areas. The documentation of these sites would improve understanding of these resources and help park managers make decisions for preservation and protection.

### *Cumulative Impacts*

The infrastructural changes and future potential changes in visitor circulation and use may present new challenges to protection of archeological resources. There may continue to be demands for new or relocated infrastructure to meet increased visitation levels, and the new dispersal of visitors may add visitors near sensitive sites, which could result in inadvertent adverse impacts. Archeological resources adjacent to or accessible from visitor areas could be vulnerable to surface disturbance, inadvertent damage, vandalism, and looting. Visitors could compact soils, altering the horizontal and vertical distribution of buried archeological remains and their contextual environments, remove surface artifacts, and illegally dig on known sensitive resource sites. However, ranger patrol and emphasis on visitor education would discourage vandalism and inadvertent and intentional destruction of cultural remains, minimizing adverse impacts. Park law enforcement rangers will follow the protocols established by the Midwest region park ranger archeological site monitoring program to document archeological site disturbance, update information in CRIS, and take necessary and appropriate action for the protection and preservation of the site in consultation with MWAC, the SHPO, and THPOs.

## 3.6 Cultural Landscapes

### 3.6.1 Affected Environment

CUVA contains multiple cultural landscapes related to Native American, European, Euro-American, and African American settlement, transportation, agriculture, industry, and recreation. Of the cultural landscapes and features in the park, the Ohio & Erie Canal is among the most nationally significant and largely defines the park. A section of the canal was listed as a National Historic Landmark in 1966; this listing was updated in 1983. The National Historic Landmark consists of a four-mile portion of the watered section of the canal from Rockside Road to fifty feet south of Lock No. 37 (Heberling Associates. 2018; NPS, 2013, 2003; Mendinghall, 1975). The rural landscape is also central to CUVA, being captured in the 1974 enabling legislation mandating the “preservation of the historic, scenic, natural, and recreational values of the Cuyahoga Valley” (P.L. 93-555).

However, as the National Park Service acquired land for the park, the focus was on protecting the land from development, leading to historic farms and the rural landscape deteriorating, scattered adaptive reuse, and sporadic efforts for preservation prior to the implementation of the *Rural Landscape Management Report*, which led to the initiation of the Countryside Initiative. Through this program, the National Park Service manages the rural landscape via long-term leases to private individuals to conduct sustainable agricultural activities and revitalize a “sense of place” (specifically the rural landscape) in the park (NPS, 2003). A park partner, Countryside, supports this program. The park’s cultural landscapes also include the Valley Railway Historic District, the historic communities of Everett, Peninsula, Boston, and Jaite, historic farms, structures, roads, industry remnants and historic districts, all of which contribute to the character of the landscape (Winstel, 2001; Johannesen, 1984).

From the variety of contributing features to the cultural landscapes of the park, the affected environment for this EA includes National Register-listed historic properties such as the Ohio & Erie Canal Thematic Resources/Ohio and Erie Canal District in the Cuyahoga Valley National Recreation Area, listed in the National Register in 1979, and the Virginia Kendall State Park Historic District, listed in the National Register in 1997 (Quinn Evans Architects, 2022; Poh Miller, 1978; Winstel, 1995). While the National Register nomination for the Hunt/Wilke Farm is limited to the historic structures (Winstel et al., 1992; Finney, 2002), the farm supports the themes associated with the park’s cultural landscapes at large (Winstel, 2001). A cultural landscape inventory, nevertheless, is needed for the Hunt/Wilke farm, and the 1987 CLR for the park was primarily a management tool rather than a research report or plan (Winstel, 2001).

The Ohio & Erie Canal District is significant for the areas of architecture, commerce, engineering, exploration/settlement, and transportation for the period of 1800-1899 with specific significant years of 1825-1854. The district includes all extant physical features of the canal as well as structures and sites historically related to the canal beginning near Lock No. 39 at Rockside Road and extending south to Ira Road near Lock No. 26. The canal district allows for a forty-foot right of way on the Towpath side of the canal (the east side of the canal north of Peninsula and the west side south of Peninsula) and a thirty-foot right of way is allowed on the opposite side of the bank (Poh Miller, 1978). Historically, the canal’s towpath was usually ten feet wide and the opposite “berm” bank not less than six feet. The Towpath Trail, installed in the 1990s, largely follows the original towpath route and features mixed-surface treatments of asphalt and crushed limestone (Quinn Evans Architects, 2022; Heberling Associates, 2018). Concurrent to this plan, a CLR was completed for the Ohio & Erie Canal in 2022 to provide treatment recommendations and character guidance to support future planning decisions made in this CAP (Quinn Evans Architects, 2022). The 2022 CLR recommended a single consistent surface for the Towpath where it follows the original towpath route and differentiation in color, but not surface type, for when the Towpath Trail deviates from the historic

alignment (Quinn Evans Architects, 2022). The report suggested two appropriate materials for the surface: chip-sealed asphalt or crushed limestone.

The Virginia Kendall State Park Historic District is significant for its architecture, landscape architecture, entertainment/recreation, politics/government, and social history. Although the then-423 acres became a state park in 1926, the period of significance is 1933-1945 with specific significant years of 1933, 1936, and 1938. During 1932 to 1939, the CCC developed this state park unit and others by building roads, trails, bridges, picnic shelters, lakes, and utility systems in a rustic style. The historic district boundaries are roughly consistent with the park boundaries for the state park as drawn on the 1939 master plan. The sledding hills off Quick Road were not part of the 1939 design but were used for recreational purposes associated with the state park during the period of significance. The Crowfoot Gully and Little Meadow parking lots, which support the sledding hills, are within the boundary of the Virginia Kendall State Park Historic District, but it is not known if they were present during the period of significance (Winstel, 1995; NPS, 1987). Additional research is necessary prior to removal of these parking lots.

Since NPS acquisition of Virginia Kendall State Park Historic District in 1978, there have been only minor alterations to the structures and the landscape. The extent to which the cultural landscape defines important spaces, creates views, and frames visual elements envisioned in the early master plans remains readily apparent. The district consists of about 530 acres of designed and highly manipulated landscape. There are four major areas of the district: the Ledges, Octagon, Lake Shelters, and Happy Days Day Camp (Lodge). The master plan depicts a foot-trail network designed to flow from one development area to another. The curvilinear quality of the trail network helps mimic the shape of the ledge outcropping and provides a strong sense of design cohesion to the landscape (Winstel, 1995; NPS, 1987).

To better understand the history of development in the historic district, the park has submitted a funding request (PMIS 313445) for fiscal year 2025 for a CLR of the Virginia Kendall State Park Historic District. The CLR will improve understanding of CCC development of the district and provide an overall vision for realizing a desired resource condition of the historic district, set out specific guidance and an appropriate treatment approach, and prioritize work orders to rectify deferred maintenance and recurring maintenance needs. The CLR should be completed prior to undertaking actions in the CAP and EA. Specific areas within the district will be impacted by proposed actions in this plan, as described below.

Within Virginia Kendall State Park Historic District is the Kendall Lake Area. CCC improvements located south of Kendall Park Road, the parking area, foot trails, several plantings of cultivars and the layout of park improvements are all site elements of this area. Sandstone-block guardrails and planted trees and shrubs line the parking area and entrance drive. The top planted dividers of the parking area are historic and clearly evident on the 1939 master plan. The four square box plantings are later additions (Winstel, 1995). The proposed partial removal of the CCC parking area is a reasonably foreseeable action associated with the CAP, though park managers anticipate the completion of the Virginia Kendall CLR prior to taking action for the removal.

The Ledges area is also located in the historic district and is defined by the kidney-shaped sandstone outcropping and is located south of the Happy Days Lodge area and north of Kendall Park Road. The area is bounded by the northern edges of the ledges, the eastern edge of the octagon driveway and parking area, the northern edge of Kendall Park Road, and the eastern edge of the Ledges Shelter drive. Foot trails run along the bottom of the ledges. Noteworthy site elements in this area include the foot-trails network, the open playstead area, a designated picnic area, and several cultivars. The foot trails in this area, as indicated on the master plans, outline the meadow area, run along the bottom of the Ledges and southeast to northwest, thereby connecting the Ledges to the Octagon area. The playstead area still maintains its original form, except for the island of Sassafras trees in the center and a small stand of new growth that juts out from the northern edge (Winstel,

1995). The park is in the early stages of consideration for additional actions at the Ledges such as moving some picnic areas, installing new trails and a viewing platform to provide wheelchair-accessible experiences, improving trailheads and restrooms, restoring woodland habitat, adaptively reusing historic structures, and improving wayfinding at trail intersections. Prior to the design of these actions, the park will complete the Virginia Kendall CLR to guide treatment actions.

Finally, the Hunt/Wilke Farm (called the Martha Hunt House elsewhere in the document) located on Bolanz Road among cottonwood trees and beside an unwatered portion of the Ohio & Erie Canal, is listed on the National Register as locally significant under Criterion A for agriculture and under Criterion C for architecture. The period of significance is 1880-1910 with specific dates of 1800 and 1905. There are three contributing buildings to the property's National Register nomination: the house, garage, and privy. The barn (the former Botzum School, which has been reconstructed and moved), is not contributing. The portion of the canal next to the farm is a contributing resource included in the Ohio & Erie Canal Thematic Resources listing entered into the National Register in 1979 (Winstel et al.; 1992, Poh Miller, 1978). Most of the farm fields associated with this property have reverted to woodland. The surrounding rural setting gives the farm integrity in feeling and association. (Winstel et al., 1992)

Reasonably foreseeable planned actions that may affect cultural landscapes include the park and the Conservancy for Cuyahoga Valley National Park redeveloping the gated end of the now abandoned Stanford Road to create parking spaces, a trailhead kiosk, a vault toilet comfort station, and connections to the Towpath Trail Connector and Stanford Trail. This project was previously reviewed in 2023 under planning, environment & public comment project 59739, "Develop the Stanford Parking Area, Boston Township, Summit County, Ohio." As the proposed project is located about 0.10 miles northwest of the George Stanford farm, listed in the National Register in 1982 (Poh Miller, 1981), park management concluded that the project would introduce new elements to the setting outside of the historic property boundary but would not alter the property's characteristics in a manner than would detract from the ability of the resource to convey its significance. Park staff found that there would be no adverse effects to the historic property and SHPO concurrence was received on this finding on January 30, 2023. The George Stanford Farm has been recommended for inclusion in the park's cultural landscape inventory but the inventory status is incomplete. There are reasonably foreseeable and additional actions in early stages of consideration for the Ledges, including installing new trails, improving trailheads and restrooms, and adaptively reusing the northern historic toilets to support a nature discovery area; however, details of design or additional specifics of potential impacts to cultural landscapes cannot be determined at this time.

### **3.6.2 Environmental Consequences**

#### **Alternative A: No Action (Continue Current Management)**

Under the no-action alternative, sixteen miles of the Towpath surface treatment would remain crushed limestone. Informal parking along Bolanz Road at the Hunt/Wilke Farm would continue, resulting in vehicular intrusions into the viewshed and further erosion of ground cover used to retain the rural setting. Under the no-action alternative, the master planning and design of the Virginia Kendall State Park Historic District cultural landscape would be retained. No site features contributing to this historic district would be removed, allowing for the historic district's integrity of design to remain unchanged from current conditions. Throughout the park, without formalization of parking and trailhead areas, installation of new parking areas on park or partner lands, and installation of new signs, the rural nature of the cultural landscape and viewshed would be retained.

#### *Cumulative Impacts*

None identified.

## **Alternative B: NPS Preferred Alternative**

The removal of a portion (6,400 square feet/twenty parking spaces) of the CCC parking lot, a contributing feature at the Kendall Lake Area, a part of the Virginia Kendall State Park Historic District would adversely impact the cultural landscape of this historic district by removing an element of the 1939 master plan. As part of the Virginia Kendall State Park Historic District, the complete removal of the Crowfoot Gully (23,000 square feet/sixty-seven parking spaces) and Little Meadow (25,000 square feet/sixty-six parking spaces) parking lots may adversely impact the cultural landscape; however, more research is needed to determine if these parking lots were in use during the period of significance, as they are not mentioned in the nomination. New signage throughout the park may have an adverse impact by adding nonhistoric features to the cultural landscape. The foot trails network of the historic district are also part of the master design and contribute to the significance of the district, and the installation of new trails and removal of other trails would adversely impact this site feature and the cultural landscape. At the Ledges, the installation of new trails and modification of existing trails for universal accessibility may adversely impact these historic structures by adding nonhistoric features to the structures or removing elements of these historic structures. The installation of new trails at the Ledges would require up to 0.51 acres of ground disturbance, including ground disturbance through the open playstead area, an important site feature to the historic district which largely maintains its original historic form as noted above. Careful design would ensure that the modification of existing trails for universal accessibility, and the addition of new trails would minimally affect the topography, vegetation, circulation features, land use patterns of the landscape, and the scale and visual relationships among landscape features. The preceding proposed actions should follow the completion of the CLR for the Virginia Kendall State Park Historic District, which will provide guidance for these actions.

Implementing the recommendations for the surface treatment of sixteen miles of the Towpath Trail will improve the cultural landscape by providing a consistent, historically appropriate treatment throughout the entire length of the towpath trail. Removal of informal parking along Bolanz Road would remove vehicular visual intrusions and help reestablish the rural character of the historic Hunt/Wilke Farm and also result in beneficial impacts.

**Cumulative Impacts:** Additional actions in early stages of consideration for the Ledges, including installing new trails, improving trailheads and restrooms, and adaptively reusing the northern historic toilets to support a nature discovery area; however, due to lack of site-specific design, the NPS cannot yet fully assess the potential affects, either adverse or beneficial, of such actions on the cultural landscape. More compliance evaluation will be needed. Future development of the CLR for the Virginia Kendall State Park Historic District will help guide proposed actions within this area, and the report should be completed prior to actions in this plan being undertaken.

## **3.7 Historic Structures**

### ***3.7.1 Affected Environment***

CUVA protects more than 250 historic structures. Historic structures are defined as “a constructed work...consciously created to serve some human activity” (NPS, 2002). There are no precontact (“prehistoric”) structures that are considered separately outside of archeological resources. The historic structures in the park contribute to the larger cultural landscapes that illustrate settlement, transportation, agriculture, industry, and recreation in the region (NPS, 2013). In the NPS CRIS, about half of these structures are listed as being in good condition. In 2021, a project scoping assessment was completed for the park to remove sixty-seven vacant structures on thirty-seven properties in order to restore the natural landscape. These properties included historic and nonhistoric structures (Facility Engineering Associates, 2021). Many historic structures in the park have been repurposed for visitor and administrative use. Opportunities to view historic structures

are common along roads, trails, and the Cuyahoga Valley Scenic Railroad. Some historic structures are in isolated locations and have been targets for vandalism.

As mentioned, the Virginia Kendall State Park Historic District was listed in the National Register in 1997 with significance under National Register Criteria A and C for architecture, landscape architecture, entertainment/recreation, politics/government, and social history. While much of the Kendall Lake Area has been considered as a cultural landscape due to the layout and significance of the master planning (Winstel, 1995), the CCC parking area and sandstone block guard rails are also considered historic structures and are managed as such in the NPS CRIS. Their treatment is recommended as preservation and their condition is listed as fair as of fiscal year 2020.

At the Ledges area in the Virginia Kendall State Park Historic District, the Ledges' women and men's north and south toilets, the Ledges Shelter, and the Ledges trail system and steps are managed as historic structures in the NPS CRIS. The toilets are in fair to good condition, though the northern toilets are permanently closed to visitor use. The Shelter and the trail system and steps are in good condition. The treatment for historic structures in this area is preservation.

Finally, while not listed as a resource in the NPS CRIS, the original route and design of the canal towpath may also be considered a historic structure. While the Towpath Trail was installed in the 1990s, the trail largely follows the original canal towpath. Park managers have sought to maintain and preserve the towpath, which is easily discernable for most of the distance along the canal (Heberling Associates, 2018).

There are future planned actions in early stages of consideration for the Ledges; these include installing new trails, improving trailheads and restrooms, and adaptively reusing the northern historic toilets to support a nature discovery area.

### **3.7.2 Environmental Consequences**

#### **Alternative A: No Action (Continue Current Management)**

Under the no-action alternative adverse impacts are limited to sixteen miles of the Towpath surface remaining incompatible with its historic appearance. Under the no-action alternative, beneficial impacts include maintaining historic structures under current management treatment guidance (preservation) resulting in no destruction of historic parking lots and bollards. There would also be no change to historic structures such as the Towpath, trails, shelters, and toilets, such as present at the Ledges area in the Virginia Kendall State Park Historic District, or roadbeds.

#### *Cumulative Impacts*

Increased visitation and use of the Towpath Trail may result in exacerbated erosion of the trail surface and the park's ability to preserve the historic structure. Increased visitation at the Ledges area may put pressure on the historic structures there which could result in the structures' conditions being downgraded.

#### **Alternative B: NPS Preferred Alternative**

As noted in Cultural Landscapes, adverse impacts under the preferred alternative include removal of a portion of the historic CCC parking lot at Kendall Lakes, which would alter part of the that historic structure and diminish the integrity of the 1939 cultural landscape master plan. At the Ledges, the installation of new trails and modification of existing trails for universal accessibility may adversely impact these historic structures by adding nonhistoric features to the structures or removing elements of these historic structures. Additionally, the use of heavy machinery along sixteen miles of the Towpath Trail to install the chip-sealed surface may result in inadvertent adverse impacts to the historic structure due to compression, slumping, or gouging. The beneficial impact of the preferred

alternative is that sixteen miles of the Towpath's surface would be consistent and retain the character of its historic appearance.

### *Cumulative Impacts*

While the trails at the Ledges are described above, there are reasonably foreseeable and additional actions at the Ledges, which may be considered to support increased visitation in the area. However, due to the lack of park consensus on these actions and a lack of site-specific designs at this time, the National Park Service cannot fully assess the potential effects of such actions on historic structures. A forthcoming CLR for the Virginia Kendall State Park Historic District may provide guidance for these potential future actions and their impacts on historic structures within the district. Additional research and treatment recommendations for the historic structures themselves may be necessary as well.

## **3.8 Soils**

### **3.8.1 Affected Environment**

The park harbors sixty-five soil types as defined by the Natural Resource Conservation Service. Seven of these soil types cover approximately 45 percent of the park (Thornberry-Ehrlich, 2009). Generally, most of the Cuyahoga River Valley and the river's larger tributaries contain soils that are a mixture of sands, gravels, clays, and silts. Occasional floodplain terraces along the Cuyahoga represent narrow zones of deep, well-drained, sandy silt loams (Brose, 1998). Soils are mainly derived from glacial till and lacustrine deposits and tend to be light-colored, acidic, and moderately to highly erodible. The soil types that are predominantly present in the park include:

- rough broken land, clay, and silt
- Ellsworth silt loam
- Geesburg-Mentor silt loam
- Mahoning silt loam
- Chagrin silt loam

Trails in the park undergo varying degrees of erosion severity and muddiness, caused by compaction, level of use, type of use, location in the landscape, slope, trail design, and other localized trail conditions. Erosion and wetness are most prevalent in trail areas on the floodplain, on fall-line trails that follow direct drainage paths, and where heavier-load trail users such as horses occur. These include the Towpath Trail, the Wetmore Trail, the Perkins Trail, and the Buckeye Trail (TMP, 2013).

Since the establishment of the park, soils have been impacted by construction of roads and facilities to accommodate park visitors and operations. Most of these projects have occurred within or adjacent to existing developed areas as well as along the 125 miles of existing trails in the park (NPS, 2023f). Soils have been damaged by trail construction and high concentrations of people, causing compaction and erosion in visitor use areas. These impacts affect soil resources in many ways, including damaging soil ecosystems; altering the soil profile and removing soil organic matter; affecting soil structure; and affecting nutrient cycling processes. Ongoing and planned future trail maintenance will reduce adverse impacts from trails by addressing drainage issues and minimizing conditions (such as puddles or muddy areas) that cause users to utilize the side of the tread and widen the exposed soil of the tread.

Past and ongoing restoration efforts have mitigated some of the adverse effects of previous ground-disturbing activities via revegetation with native plants, particularly in wetland and riparian areas. Between 1959 and 2002, the vast majority of cropland and pasture in what is now the park was mostly converted to forest types or wetlands in some locations (Jones, 2021b).



There is a high potential for future adverse impacts to park soils from climate change. Increasing temperatures will increase evaporation, particularly during the summer, potentially leading to decreased soil moisture and loss of productivity. The projected increase in heavy rain events may contribute to increased soil erosion rates, particularly when the trails become muddy or have puddles. Extreme storm events can cause landslides in the park.

Reasonably foreseeable planned actions that may affect vegetation include development and expansion of parking lots, development of campsites, construction and formalization of trails, restoration of constructed and visitor-created trails, and fire management activities including prescribed burns and mechanical fuel reduction.

### **3.8.2 Environmental Consequences**

#### **Alternative A: No Action (Continue Current Management)**

Under Alternative A, no new actions would occur, and thus there would be no new impacts on soils. There would continue to be an overall downward trend in soil condition as described in the affected environment, although some beneficial impacts to soils would occur from restoration projects.

##### *Cumulative Impacts*

As previously described, no new impacts would occur under Alternative A, and thus no cumulative impacts on soils would occur. There would continue to be an overall downward trend in soil condition as described in the affected environment, although some beneficial impacts to soils would occur from restoration projects.

#### **Alternative B: NPS Preferred Alternative**

Alternative B calls for construction of new trails that would involve vegetation clearing and ground disturbance. Initial trail construction would cause soil compaction and loss via erosion. In some areas, up to 6-8 inches of topsoil would be removed to create trail benches. Estimated areas of impact are presented below; these numbers are approximate because the trail alignments are not yet in the design state of development and could change. Estimates account for the trail widths, potential soil disturbance outside of the trail surface, and the distance of vegetation thinning and trimming beyond the trail.

- Construction of new trails at Virginia Kendall North Area would require approximately 0.5 acres of ground disturbance.
- Construction of two small boardwalks at Virginia Kendall North Area would require approximately forty square feet of ground disturbance via installation of pilings for the boardwalk plus approximately 0.2 acres (about 800 square feet) of temporary ground disturbance during construction of the boardwalks.
- Construction of the Sagamore Hill Connector Trail would require approximately 0.65 acres (about 28,500 square feet) of ground disturbance along approximately 0.45 miles of trail that would not follow an existing roadbed. Vegetation types along this section include successional central dry-mesic herbaceous field and successional mixed hardwood forest, both of which indicate that the site has been previously disturbed.
- Construction of an accessible trail from the new Blue Hen Falls parking lot to the waterfall would require approximately 0.4 acres (about 17,400 square feet) of ground disturbance.
- Rerouting of the Buckeye Trail near the Blue Hen parking lot would require ground disturbance along approximately 350 linear feet of trail but would also result in the restoration of approximately 450 existing linear feet of trail.

In total, construction of new trails would result in ground disturbance to about 1.6 acres of soils in the park. Recreational use of the trails would cause continued adverse soil impacts including loss of

organic litter and soil compaction, rutting, and erosion. In addition, trail widening or braiding may result in soil compaction and erosion on either side of new trails. Horses, hikers, and mountain bikers would create separate and unique types of damage to trails, although soil texture and slope have a higher influence on soil erosion than trail user type (Wilson and Seney, 1994). Adverse impacts to soils would also vary between trails depending on overall use levels. Implementation of the park's sustainable trail guidelines (NPS, 2012b) as well as mitigation measures listed in chapter 2, such as limiting the amount of time soil is left exposed and applying other erosion control measures, would reduce adverse impacts from trail construction, maintenance, and use.

Alternative B also calls for development and expansion of parking lots that would cause soil compaction and permanently reduce soil productivity. Estimated areas of impact are presented below; these numbers are approximate because the projects are not yet in the design state of development and could change.

- Expansion of the current East Rim Trail gravel parking lot would require approximately 0.4 acres of ground disturbance.
- Construction of a new parking area near the former Lorenz property would require approximately 0.4 acres (about 17,700 square feet) of ground disturbance.
- Expanding parking in the Everett Covered Bridge area for the overflow parking lot would require approximately 0.9 acres (about 40,000 square feet) of ground disturbance.
- Expanding parking at Blue Hen would require approximately 0.2 acres (about 7,600 square feet) of ground disturbance.

In total, the development and expansion of parking lots would result in ground disturbance to up to about 1.9 acres. Pavement overlays would cause permanent compaction and loss of soil productivity. Construction activities and fill associated with curves would temporarily impact soils within a five-foot-wide perimeter around the final parking lot footprint. Implementation of the park's sustainable trail guidelines (NPS, 2012b) as well as mitigation measures listed in chapter 2, such as limiting the amount of time soil is left exposed and applying other erosion control measures, would reduce adverse impacts to soils from parking lot construction.

Alternative B also calls for removal or reduction in size of parking lots. These areas would be regraded to the natural contour and replanted with native vegetation and/or allowed to revegetation naturally, resulting in beneficial impacts to soils.

- Removal of the Crowfoot Gully parking lot would result in a decrease of approximately 0.5 acres (about 23,000 square feet) of impervious surface.
- Removal of the Little Meadow parking lot would result in a decrease of approximately 0.6 acres (about 25,000 square feet) of impervious surface.
- Removal of twenty parking spaces at the Kendall parking lot would result in a decrease of approximately 0.15 acres (about 6,400 square feet) of impervious surface.
- Removal of forty-three spaces in the southwestern area of the Botzum parking lot would result a decrease of approximately 0.7 acres (about 30,000 square feet) of impervious surface. Conversely, removal of sixty-seven spaces on the western side of the Botzum parking lot would result in a decrease of approximately 1.0 acres (about 45,000 square feet) of impervious surface.

In total, approximately 1.9-2.8 acres of impervious surface would be restored to natural conditions via removal or reduction in size of existing parking lots, resulting in beneficial impacts to soils. Under Alternative B there would be a net decrease of approximately 0.02-1.0 acres of impervious surfaces in the park.

In summary, construction of new trails would result in ground disturbance to about 1.6 acres of soils in the park. Recreational use of the trails would cause continued adverse soil impacts including loss

of organic litter and soil compaction, rutting, and erosion. Development and expansion of parking lots would result in ground disturbance and loss of soil productivity to approximately 1.5 acres. About 1.9-2.8 acres of impervious surface would be restored to natural conditions via removal or reduction in size of existing parking lots, resulting in beneficial impacts to soils. Overall, there would be a net decrease of about 0.02-1.0 acres of impervious surfaces in the park.

### *Cumulative Impacts*

The impacts of past and ongoing actions are described in the Affected Environment section. Some beneficial impacts to soils will occur from future planned projects to restore trails, which will reduce soil compaction and erosion. Future planned trail maintenance will reduce adverse impacts from trails by addressing drainage issues and minimizing conditions (such as puddles or muddy areas) that cause users to utilize the side of the tread and widen the exposed soil of the tread. However, planned development projects, including parking lot development, trail construction, and campsite development, will cause ground disturbance at various locations across the park that will result in soil compaction, erosion, and decrease in soil productivity. Mitigation measures will be implemented to minimize adverse impacts to soil from these future planned actions; however, these projects will contribute long-term adverse effects to the overall adverse trend in soils at the park.

Implementation of Alternative B would result in soil compaction, erosion, and/or loss of productivity across approximately 3.1 acres as well as restoration of about 1.9-2.8 acres of pavement to natural conditions. These impacts, when combined with past, present, and reasonably foreseeable future actions and trends, would be both adverse and beneficial and long-term (for the life of the trails and associated trail facilities). Over the long term, cumulative impacts to soils would be adverse. The incremental impacts of the alternatives would contribute slightly to, but would not substantially change the impacts that are already occurring to park soils.

## **3.9 Vegetation**

### **3.9.1 Affected Environment**

Vegetation in CUVA is diverse, supporting a variety of habitats and some of the largest remaining stands of deciduous and mixed forests in the northeastern Ohio region (Jones et al., 2021). Forest dominates the park's vegetation cover at about 27,000 acres (about 80 percent) of the park, most of which is oak-hickory forest (Jones et al., 2021). Other common forest types include maple-oak, oak-beech-maple, maple-sycamore, pine-spruce, and hemlock-beech (Jones et al., 2021). Interspersed among forests are grasslands (about 2,000 acres or 6 percent of the park), wetlands (about 1,900 acres or 6 percent of the park), and agricultural land (about 1,300 acres or 4 percent of the park) (Jones et al., 2021). The park's existing vegetation was recently classified, described, and mapped by the NPS Vegetation Inventory Program (NPS, 2013c).

The forests of CUVA can be broadly categorized as upland or bottomland, based on landscape position. In upland forests, the dominant vegetation is a mix of hardwood trees, mainly oaks (*Quercus* spp.), hickories (*Carya* spp.), maples (*Acer* spp.), and American beech (*Fagus grandifolia*). Groundcover in upland forests can be sparse, consisting of mayapple (*Podophyllum peltatum*), trout lily (*Erythronium americanum*), spring beauty (*Claytonia virginica*), violets (*Viola* spp.), Jack-in-the-pulpit (*Arisaema triphyllum*), and other herbaceous species. Shrub cover in upland forests also is typically sparse but when present often is dominated by maple-leaved viburnum (*Viburnum acerifolium*), spicebush (*Lindera benzoin*), and witchhazel (*Hamamelis virginiana*).

The largest and oldest bottomland forests are located in floodplains of the Cuyahoga River and its tributaries, and typically support an overstory of eastern cottonwood (*Populus deltoides*), sycamore (*Platanus occidentalis*), box elder (*Acer negundo*), Ohio buckeye (*Aesculus glabra*), silver maple (*Acer saccharinum*), and red maple (*Acer rubrum*). Herbaceous groundcover is more abundant in

bottomlands than uplands, with common species including enchanter's nightshade (*Circaea lutetiana*), bluegrass species (*Poa* spp.), sedges (*Carex* spp.), violets (*Viola* spp.), moneywort (*Lysimachia nummularia*), wingstem (*Verbesina alternifolia*), smartweed (*Polygonum* spp.), jewelweed (*Impatiens* spp.), wild leeks (*Allium tricoccum*), and garlic mustard (*Alliaria aterfall*). Shrub cover is sparse or more frequently absent in these areas. When present, bottomland shrubs consist mainly of viburnums (*Viburnum* spp.), non-native honeysuckles (*Lonicera* spp.), common privet (*Ligustrum vulgare*), and multiflora rose (*Rosa multiflora*).

Open fields are dominated by grasses such as orchard grass (*Dactylis glomerata*), bluegrass, and switchgrass (*Panicum virgatum*), with many forbs present as well (including goldenrods (*Solidago* spp.), dogbane (*Apocynum* sp.), and asters (family *Asteraceae*). Many fields at the park are mowed and support few woody plants. Previously cultivated old fields support more woody growth, including extensive stands of common privet, multiflora rose, and autumn olive (*Elaeagnus aterfall*). Early successional trees such as eastern cottonwood and ash also may be present. Shrub-scrub habitats are dominated by dense stands of shrubs and saplings with a few taller trees scattered throughout. Common species in shrub habitats include hawthorn (*Crateagus* sp.), dogwood (*Cornus* spp.), viburnums, common privet, multiflora rose, and autumn olive.

Invasive plant species are an ongoing threat to native vegetation. Nearly 20 percent of plant species in the park are non-native to the area. About fifty of those non-native species are considered to be locally invasive and are able to overrun native habitats, displace native species, and form large monocultures that provide limited habitat value to native wildlife (Djuren and Young, 2007).

Some invasive exotic plants have kept a relatively low cover based on surveys conducted in 2007 and 2016, while other species such as Japanese stilt grass rapidly spread during that period (Jones et al., 2021).

Past actions in the project area that occurred prior to and after park establishment have resulted in ground disturbance, removal of native vegetation, and subsequent establishment of invasive exotic plants. Many forested areas were heavily logged and some converted to agricultural fields (NPS, 2013c). Developed areas (including maintained lawns) cover about 1,400 acres in the park (NPS, 2013c). Construction, maintenance, and use of existing buildings, roads, and trails have created disturbed soil areas where invasive plant populations have become established. These plant populations continue to serve as sources of seed, causing persistent adverse impacts to native plants. Historic fire suppression and then later wildland fire management have also changed natural vegetation succession patterns across the park (Jones, 2021). However, large-scale restoration efforts have mitigated adverse effects of previous ground-disturbing activities via revegetation with native plants, particularly in wetland and riparian areas. From 1959 to 2002, the vast majority of cropland and pasture in what is now the park was mostly converted to forest types, as well as to wetlands in some specific locations (Jones, 2021b).

Ongoing implementation of deer management via lethal control will have long-term beneficial impacts on park vegetation by preventing deer browsing from suppressing forest regeneration (NPS, 2014). Ongoing implementation of invasive plant monitoring and control efforts will also have long-term beneficial impacts on park vegetation.

There is high potential for future impacts to park vegetation communities from climate change. For example, major increases or decreases in potential habitat range are being predicted for more than fifty individual tree species, with a number of species facing extirpation under climate change scenarios (Jones et al., 2021). Park forests will also continue to be adversely impacted by a variety of forest pests and pathogens, with new species likely moving into the area due to inadvertent introduction and range shifts under climate change. Based on the best available data, including modeled data from the 2013-2017 National Insect and Disease Risk Map, 5 percent of the tree biomass is modeled to be at risk in 2013-2027 (Jones et al., 2021).

Reasonably foreseeable planned actions that may affect vegetation include development and expansion of parking lots, developing campsites, construction and formalization of trails, and fire management including prescribed burns and mechanical fuel reduction.

### **3.9.2 Environmental Consequences**

#### **Alternative A: No Action (Continue Current Management)**

Under Alternative A, no new actions would occur, and thus there would be no new impacts on vegetation. There would continue to be an overall upward trend in vegetation condition as described in the Affected Environment section, although some adverse impacts to vegetation would occur from future development and environmental trends.

#### *Cumulative Impacts*

As previously described, no new impacts would occur under Alternative A, and thus no cumulative impacts on vegetation would occur. There would continue to be an overall improved trend in vegetation condition as described in the Affected Environment section, although some adverse impacts to vegetation would occur from future development and environmental trends.

#### **Alternative B: NPS Preferred Alternative**

Alternative B calls for construction of new trails that would involve vegetation clearing and ground disturbance. Estimated areas of impact are presented below; these numbers are approximate because the trail alignments are not yet in the design state of development and could change. Estimates account for the trail widths, potential soil disturbance outside of the trail surface, and the distance of vegetation thinning and trimming beyond the trail.

- Construction of a boardwalk and viewing platform at Virginia Kendall North Area would occur in hemlock/oak mixed hardwood forest. The total footprint of the boardwalk and viewing platform would be approximately 1,150 square feet. A trail already exists to the Ledges Overlook, so tree removal for the boardwalk would only be required where the existing trail corridor needs to be widened to accommodate an eight-foot-wide boardwalk. The accessible walking path would be constructed in an area of maintained lawn.
- Construction of the Sagamore Hill Connector Trail would require removal of approximately 0.65 acres (about 28,500 square feet) of vegetation along approximately 0.45 miles of trail that would not follow an existing roadbed. Vegetation types along this section include successional central dry-mesic herbaceous field and successional mixed hardwood forest, both of which indicate that the site has been previously disturbed.
- Construction of an accessible trail from the new Blue Hen Falls parking lot to the waterfall would require the removal of approximately 0.4 acres (about 17,400 square feet) of oak/hardwood forest vegetation. Rerouting of the Buckeye Trail near the Blue Hen parking lot would require vegetation removal along approximately 350 linear feet of trail but would also result in the restoration of approximately 450 existing feet of trail, resulting in effectively no net loss of acres of vegetation.

In total, approximately 1.1 acres of native and nonnative vegetation (not including maintained lawn) would be permanently removed for development of trails. Trail design and route placement would minimize vegetation removal, and in forests and woodlands best management practices and mitigation measures as described in chapter 2 and the park's sustainable trail guidelines would be implemented, such as designing trail alignments to prevent the need to remove healthy trees.

Alternative B also calls for development and expansion of parking lots that would involve vegetation clearing and ground disturbance. Estimated areas of impact are presented below; these numbers are approximate because the projects are not yet in the design state of development and could change.

- Expansion of the current East Rim Trail gravel parking lot would require the removal of up to 0.41 acres (about 18,000 square feet) of mostly non-native shrub vegetation.
- At Stanford/Hines Hill, about 0.4 acres (about 18,000 square feet) of mostly non-native shrub vegetation would be permanently removed to expand the parking lot.
- Construction of a new parking area near the former Lorenz property would require permanently removing approximately 0.4 acres (about 17,700 square feet) of mixed native and non-native grassland vegetation.
- Providing an overflow parking lot in the Everett Covered Bridge area would require permanently removing approximately 0.9 acres (about 40,000 square feet) of successional hardwood forest.
- Expanding parking at Blue Hen by approximately eleven stalls would require permanently removing approximately 0.2 acres (about 7,600 square feet) of dry-mesic oak forest.

In total, approximately 1.9 acres of native and nonnative vegetation would be permanently removed for development and expansion of parking lots. To minimize impacts to vegetation, mitigation measures and best management practices would be implemented as described in chapter 2 and the park's sustainable trail guidelines. For example, staging areas would occur in previously developed areas or in the immediate project area.

Alternative B also calls for removal or reduction in size of parking lots. These areas would be regraded to the natural contour and replanted with native vegetation and/or allowed to revegetation naturally, resulting in beneficial impacts to native vegetation.

- Removal of the Crowfoot Gully parking lot would result in a decrease of 0.5 acres (about 23,000 square feet) of impervious surface.
- Removal of the Little Meadow parking lot would result in a decrease of 0.6 acres (about 25,000 square feet) of impervious surface.
- Removal of twenty parking spaces at the Kendall parking lot would result in a decrease of 0.15 acres (about 6,400 square feet) of impervious surface.
- Removal of forty-three spaces in the southwestern area of the Botzum parking lot would result in a decrease of approximately 0.7 acres (about 30,000 square feet) of impervious surface. Conversely, removal of sixty-seven spaces on the western side of the Botzum parking lot would result in a decrease of approximately 1.0 acres (about 45,000 square feet) of impervious surface. The latter action would also result in beneficial impacts to wetland vegetation on the northwestern side of the parking lot by reducing runoff.

In total, about 1.9-2.8 acres of impervious surface would be restored to native vegetation via removal or reduction in size of existing parking lots. There would be a net decrease of about 0.02-1.0 acres of impervious surfaces in the park.

In summary, approximately 1.1 acres of native and nonnative vegetation (not including maintained lawn) would be permanently removed for development of trails, and approximately 1.9 acres of native and nonnative vegetation would be permanently removed for development and expansion of parking lots. About 1.9-2.8 acres of impervious surface would be restored to native vegetation via removal or reduction in size of existing parking lots. Best management practices and mitigation measures as described in chapter 2 and the park's sustainable trail guidelines would be implemented to minimize adverse impacts to native vegetation, such as designing trail alignments to prevent the need to remove healthy trees and placing staging areas in previously developed areas or in the immediate project area.

### *Cumulative Impacts*

The impacts of past and ongoing actions are described in the Affected Environment section. Future planned development projects, including parking lot development, trail construction, and campsite development, will cause vegetation clearing and ground disturbance that will result in loss of native vegetation and potential for establishment and spread of invasive plants. Mitigation measures will be implemented to minimize adverse impacts to vegetation from these future planned actions. Implementation of fire management activities will have long-term beneficial impacts on park vegetation by reducing non-native plant species, enhancing the diversity, structure, composition, and integrity of fire-dependent vegetation communities, and reducing the potential for larger intense wildfires.

Implementation of Alternative B would result in ground disturbance and vegetation clearing across about 2.6 acres of native and nonnative vegetation as well as restoration of about 1.9-2.8 acres. These impacts, when combined with past, present, and reasonably foreseeable future actions and trends, would be long-term (for the life of the trails and associated trail facilities) and both adverse and beneficial. Over the long term, cumulative impacts to vegetation would be beneficial. The incremental impacts of the alternatives would contribute slightly to but would not substantially change the impacts that are already occurring to park vegetation.

## **3.10 Visitor Use and Experience**

### ***3.10.1 Affected Environment***

This section describes the affected environment of visitor use and experience at CUVA. The description of these elements is based on the best professional judgement of National Park Service staff, and both past and recent research and scoping efforts.

The following visitor use and experience elements will be discussed:

- access and opportunities
- quality of visitor experience

Cuyahoga Valley National Park is a refuge for native plants and wildlife and provides routes of discovery for visitors. A greenspace between Cleveland and Akron, the 33,000-acre park provides miles of trails for hiking, biking, horseback riding, paddling, and cross-country skiing. Within the 156-mile CUVA legislative boundary are 33,000 acres of woodlands, wetlands, 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, which connect to local and regional trail systems. The park is within the Ohio & Erie Canalway National Heritage Area, which includes 110 miles of the canal corridor. Visitors can experience the heritage area by 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.

Though a short distance from the Cleveland and Akron urban areas, Cuyahoga Valley National Park seems worlds away. Less than a one-hour drive for more than 4.3 million people (per the 2010 census), the park protects 25 miles of the winding Cuyahoga River, which gives way to deep forests, rolling hills, and open farmlands, with seemingly endless scenery and wildlife for observation and photography.

The river, canal towpath, scenic railroad, and automobile byway extend north and south, linking the valley to Cleveland and Akron. Visitation has grown significantly since the park's GMP was completed in 1977. In 1978, the park recorded just under 500,000 visits, and in 2022, the park recorded 2.9 million visits with increased regional, national, and international visitation. The park consistently ranks among the top-ten National Park units for visitation, now averaging close to 2 million visitors per year. Visitors participate in recreation opportunities year-round at the park, including 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. Crowding and conflicts between visitor uses have resulted from increased use, and visitor needs and expectations have also changed.

Most of the visitors are drawn to three key resources: Brandywine Falls, the 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) resulting in significant damage to natural and cultural resources due to high use levels (NPS, 2013).

About 65 percent of visitors use the Towpath Trail during their visit to the park (per the 2015 visitor survey), and the trail is an important part of the cultural landscape. High levels of visitor use (foot, bike, and horse traffic) create trail rutting that gets exacerbated in wet weather. Visitors circumventing muddy trail sections cause trail widening and soil compaction outside of the original trail footprint, resulting in riparian vegetation damage, and compromises the quality of visitor experience in safely navigating the trail and ability to enjoy the resources. There have been increases in user conflicts such as accidents between cyclists and pedestrians, conflicts between visitors and dogs, and conflicts between emerging uses such as e-bikes and special-use permit-holders such as for running races (PMIS 245967). Biking and hiking are roughly equally popular activities on the trail. Trail users find the towpath visually appealing, well-maintained, and primarily use it for physical fitness. The trail is perceived as being generally safe (NPS, 2008).

The Cuyahoga Scenic Railroad is also a growing contributor of visitation, currently averaging 15 percent of recreational visits. More than 115 special-use permits are granted annually for a wide range of activities including weddings, equestrian competitive rides, residential use, agriculture use, cultural events, and sporting events. In 2017, seventy-eight commercial-use authorizations were provided in the park, from guided hiking or walking to photography instruction to farmers' markets. In 2018, about 53,000 visitors participated in activities via special-use permits, and in 2019, about 24,000 visitors participated in activities via special-use permits.

Emerging trends include increased interest and use of the Cuyahoga River for paddling, mountain biking on new trails, continued upticks in railroad passengers, farmer's market attendance, and organized and unorganized trail-running events. While most of these user groups are proportionally small compared to overall visitation, their impacts are sometimes disproportionately large (parking conflicts, trail conflicts, resource degradation and emergency response) (2015 LENA).

The park is located within fifteen municipalities. Its boundary is porous, with more than twenty-five entrances and many trail connections with neighboring trails managed by county or park districts. The 2015 visitor study showed increased nonlocal park 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. Park staff have documented increased visitor congestion over a longer span of time during the year, resulting in more days where



visitor overflow parking occurs on roadways outside of park jurisdiction and increases in calls for park law enforcement to manage congestion-related issues (NPS, 2017c).

With improvements in water quality and the designation of the Cuyahoga River Water Trail in 2019, the Cuyahoga River is undergoing and will continue to undergo increased use in the river corridor and on the river, straining parking areas and visitor facilities that may already be undergoing use levels at or beyond what they can accommodate, as well as increasing user group conflicts in the corridor.

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.

## **High Value Experience Zone**

### **Everett Cultural Area**

Nestled deep within the valley, Everett Cultural Area has a rich history of residential villages and self-sufficient communities. Today, the cultural landscape (Everett Cultural Area) is located around the intersection of Riverview Road and Everett Road. The area contains historic structures including Hunt House, a public information center that is open seasonally, and Szalay's Sweet Corn Farm & Market located on privately owned lands. Both Hunt House and Szalay's Sweet Corn Farm & Market are conveniently located on the Towpath Trail.

The Hunt Farm Area, encompassing Hunt House and Szalay's Sweet Corn Farm & Market, is the primary visitor area in the Everett Cultural Area. The parking lots at Hunt House and Szalay Farm Stand fill regularly during the peak season and on weekends and fill up in conjunction with special events such as the farmer's market. The NPS-owned parking lot at Hunt House is popular for visitors whose destination is the Szalay Farm & Market. This parking area was identified as a parking area of highest concern related to congestion (NPS, 2017b). When parking lots fill, visitors often park along Riverview Road, a safety concern as this road has high volumes of vehicle traffic with no authorized parking.

Everett Covered Bridge, which crosses Furnace Run, is a popular location for creek access in Everett Cultural Area. In 2006 the National Park Foundation included Everett Covered Bridge on its list of top-ten places for photography on public lands, and it remains a popular attraction. A wayside interpretive exhibit adjacent to the parking lot tells the story of once common covered bridges and a trailhead provides access to the bridge and nearby trails. The 4.0-mile Riding Run and 2.75-mile Perkins trails are open to pedestrians and horses. The 2.1-mile Furnace Run Trail is a walking trail popular for viewing spring wildflowers. The Everett Covered Bridge parking lot, containing forty parking spaces, regularly fills and was identified as a parking area of moderate concern related to congestion in the 2016 parking assessment. This report also noted that the absence of a pull-through for horse trailers presents circulation challenges, exacerbating congestion as horse trailers struggle to navigate through the parking lot.

### **Kendall Hills/Kendall Lake Area**

The Kendall Hills and Kendall Lake Area is a historic area created by the CCC in 1937 for recreation. Kendall Lake is the largest lake in the park, spanning more than twelve acres. The Kendall Lake Pier,

built by the CCC, is a popular fishing pier and photography point, with restrooms, a picnic area, the Kendall Lake Trailhead, and Kendall Lake Parking lot adjacent. In the spring and summer, Kendall Lake is a popular destination for anglers and is a year-round attraction for photographers.

Visitors use the 190-space Kendall Lake parking lot to access the fishing pier, picnic area, and trails. From the Kendall Lake Trailhead, a one-mile trail loops around Kendall Lake, and the Cross Country Trail and Salt Run Trail can also be accessed from the trailhead. With an abundance of recreational opportunities available from the Kendall Lake parking lot, annual traffic counts for vehicle use have remained consistently high, recording just over 47,000 vehicles in 1992 and just over 44,000 vehicles in 2022. Use is highest in June thru August, averaging around 5,000 vehicles per month in 2022, with use decreasing in December and January to around 2,000 vehicles per month. Despite high use levels, this large parking lot rarely fills, and a 2016 study identified the opportunity to reduce the size of the parking lot based on use levels and parking availability (NPS, 2016).

The Pine Hollow Trailhead, with its plentiful parking, sits at the top of the Kendall Hills. With 203 parking spots, the Pine Hollow parking lot typically does not fill or undergo crowding outside of special events, during which the lot can fill. This location offers scenic views, is a popular winter sledding destination, and provides year-round trail access to the Cross Country, Salt Run, and Wetmore trails, as well as trail connectors leading to Kendall Lake. The network of trails through Kendall Hills are used for cross-country running events. 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. This trail network also leads to the Crowfoot Gully and Little Meadow trailheads; each trailhead has an associated parking lot, both of which are significantly smaller than the Pine Hollow parking lot. The Pine Hollow, Crow Foot Gully, and Little Meadow parking lots are regularly used in the winter for visitors accessing Kendall Hills for sledding.

Still, despite being popular starting points for winter activities, the Little Meadow parking lot monthly traffic count peaked in July for 2022, with 1,453 vehicles counted, compared to just 435 in December and 225 in January. This use pattern has remained relatively consistent since 1992, when the traffic count showed 624 vehicles in July, compared to 216 and 316 in December and January 1992, respectively. Overall annual use of this parking lot has increased since 1992, when the annual vehicle count totaled just under 5,000 vehicles, more than doubling to just under 11,000 vehicles in 2022. A 2016 study showed that the Little Meadow parking lot typically does not fill or undergo crowding outside of special events, during which the lot can fill (NPS, 2016).

A similar use pattern is evident in traffic count data for Crowfoot Gully parking lot, where traffic counts recorded 1,315 vehicles in July 2022 compared to just 724 and 603 in December and January 2022, respectively. Overall annual use of this parking lot has decreased since 1992, when the annual vehicle count totaled just over 19,000 vehicles, decreasing to just over 12,000 vehicles in 2022. A 2016 study showed that the Crowfoot Gully parking lot typically does not fill or undergo crowding outside of special events, during which the lot can fill (NPS, 2016).

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, sled, and trail-run. Because of the high number of parking lots in this area, lots typically do not fill on busy summer days. Given the underused nature of these parking lots, which often only have a few cars parked in the lots at a time, park staff have report anecdotally that visitors report a negative perception of the underused nature of these lots, as seeing only a few cars in a mostly empty lot can creates an uneasy feeling and suggest that the area is unsafe.

## **Virginia Kendall North Area**

The Virginia Kendall North Area has a rich history of land and recreation management, evolving from a privately owned countryside retreat in the 1800s into a developed recreation area with parking lots, trails, shelters, and large grassy playfields. The Virginia Kendall area became part of CUVA in 1975.

Today, visitors can walk the trails and enjoy many wooded picnic sites in the Virginia Kendall North area, and the grassy playfield invites running, kite-flying, and other activities. The Ledges Trailhead, Ledges picnic area, and restrooms are adjacent to the Ledges parking lot and used to access recreation opportunities in the Virginia Kendall North Area. A 2016 study showed the Ledges parking lot, with 233 spaces, typically does not fill or undergo crowding outside of special events, during which the lot can fill (NPS, 2016). The Ledges Shelter and Octagon Shelter are available to rent for special events; however, increased special uses at the historic shelters are causing damage to the facilities (PMIS 245967).

Visitors are also drawn to the sixty-foot-high cliffs known as the Ledges. The Ledges Overlook is a stop on the Ledge Trail, a 1.8-mile loop around the outcropping of Sharon sandstone and conglomerate. The Ledges Overlook is one of the more photographed locations in CUVA and is in the Virginia Kendall State Park Historic District. Looking west over the expansive view of the Cuyahoga Valley, the bare rock known as the Ledges Overlook serves as a natural viewing platform and offers stunning scenery year-round.

Social trailing in the area has resulted in erosion and soil compaction near sensitive resources. Vandalism to historic structures and the sandstone cliffs (in the form of rock carvings) also occurs.

## **Brandywine Falls Area**

Located in the central part of park proximal to the primary visitor center and park headquarters, the Brandywine Falls Area includes a medium-sized, ninety-space parking lot that is shared with Summit Metro Parks Bike and Hike Trail, a boardwalk and falls viewing area, and a trail into Brandywine Gorge. A survey found that 28 percent of visitors (about 650,000 visitors per year) go to Brandywine Falls during their visit to the park, mostly confined to a six-month period (NPS, 2015). There are documented impacts to riparian habitat including increased erosion from social trails, soil compaction, and trail widening outside the boardwalk area, that are directly related to visitor use (PMIS 245967).

Brandywine Falls Trailhead, picnic area, and restrooms are adjacent to the Brandywine Falls parking lot. From the trailhead, visitors can hike the Brandywine Gorge Loop, which circles a deep ravine carved by Brandywine Creek and provides views of Brandywine Falls along the way; the Stanford Trail, which connects to the Boston Mill historic district; and Summit Metro Parks Bike & Hike Trail.

Congestion, concentrated use, and visitor conflicts are concerns at Brandywine Falls, an iconic spot where many users, including large groups, visit and stay for long intervals which limits parking availability for use of multiple trailheads. The Brandywine Falls parking lot is full or near full 77 percent of the time during peak visitation times (10 a.m. to 4 p.m.) (NPS, 2017B).

A 2017 study collected 556 reports regarding the condition of the Brandywine Falls parking lot during the 2017 summer season (NPS, 2017d). Data from these reports show Saturdays and Sundays undergoing the most crowding, with ninety-three Saturday entries and fifty-eight Sunday entries that

detailed the parking lot being full, overflowing, or having fewer than five available parking spaces. Of the 155 reports submitted for Saturdays and Sundays, the average time the parking lot filled was 12:30 p.m. In addition to parking capacity information, visitor interactions were recorded and showed the following: through the whole summer season, 427 entries were submitted stating that visitors were at Brandywine Falls to see the waterfall, 149 entries stated that visitors were there to hike, 31 entries stated that visitors were there to bike, and 18 entries stated that visitors were there to walk their dog(s). This visitor use information is indicative of the mixed-use nature of this parking lot, as it is conveniently located and serves as a nexus for a variety of recreational opportunities for visitors.

On days when the lot was full, visitors parked on nearby roadways, decreasing visibility and causing safety concerns and frustration for community residents. The area had a reported eighty-six incidents of visitors crowding in the roadways, and 117 entries of cars circling the parking lot while seeking a spot. Recently, “no parking” signs have been added to reduce on-road parking. Additionally, many visitors complained of cars driving too fast in the parking lot or against the designated traffic flow (NPS, 2017d).

### **Boston Mill Historic District**

The Boston Mill Visitor Center, centrally located in the park, has exhibits and a store, and park staff and volunteers are available to assist with trip planning and other park-related information. This historic building was once the 1905 general store for the Cleveland-Akron Bag Company. After a decade of planning in collaboration with the Conservancy for Cuyahoga Valley National Park, Boston Mill Visitor Center opened to the public in fall 2019, replacing services that had been provided by the nearby Boston Store Visitor Center.

A 2017 report showed that visitors came to the Boston Store Visitor Center, for a variety of reasons, though the majority came seeking information on how best to travel around the park (NPS, 2017d). There were twenty-three reports of visitors seeking general information at the visitor center, such as directions or park history. Following information seeking, visitors were at this location to hike (seventeen reports), followed by nine reports of biking. In addition to detailing types of use, information was recorded regarding length of stay at this location. The most entries (eighteen) showed visitors staying in the area for thirty minutes or less on average, with nine entries for 30–60-minute stays and nine entries for 1–2-hour stays.

The visitor use information collected in a 2017 report indicates the mixed-use nature of parking in Boston Mill Historic District, as this district is conveniently located and serves as a nexus for a variety of recreational opportunities for visitors (NPS, 2017d).

Congestion, concentrated use, and visitor safety were concerns at the former Boston Store Visitor Center parking area, as reflected in the data from the 2017 report. This report showed occurrences of the parking lot filling and overflowing increasing as the summer progressed, with the highest number of occurrences in July and August. (NPS, 2017d). Though the Boston Mill Visitor Center has more parking than the former Boston Store Visitor Center, with around 100 parking spaces, the parking lot still regularly fills and park staff report that current trends are similar to those captured in the 2017 report for the former Boston Store Visitor Center parking lot (NPS, 2017d). The current visitor center parking lot is highly visible from the road and is often used by visitors who hike to Brandywine Falls.

## **Stanford/Hines Hill**

The Stanford/Hines Hill area includes the East Rim Trail System, Cuyahoga Valley's first mountain-bike trail. With its stunning views, varied terrain, and exciting obstacles, this trail is considered a premier mountain bike location in northeastern Ohio. Though designed for mountain bikers, hikers and runners can challenge themselves on the varied trails in the system.

To access this trail system, visitors can park at a ten-car parking lot at the Bike & Hike Trailhead (managed by Summit Metro Parks) or at a gravel overflow lot at the intersection of Boston Mills Road and Akron Peninsula Road (managed by the National Park Service). These parking areas are adjacent to the Summit Metro Parks' Bike & Hike Trail, which leads to the East Rim trail system. In relation to the trailhead, the gravel parking area requires visitors to cross Boston Mills Road. The existing parking is considered by park staff to be overused, and there are opportunities to expand the gravel overflow lot (NPS, 2016).

Just under a half-mile south of the gravel overflow lot along Akron Peninsula Road is the Lorenz property. The land on this former residential property is previously disturbed. This area is conveniently located, as it is adjacent to the Bike & Hike Trail, making it a desirable option for additional parking to access the Bike & Hike Trail and the East Rim Trail System.

The area of Stanford Road just north of the Stanford House, overnight accommodations operated by the Conservancy for Cuyahoga Valley National Park, is closed to vehicles, and not formalized for pedestrian use. A project to create an additional parking lot near the current gate north of the Stanford house will contribute to providing increased access and connectivity of between the Boston and Brandywine Falls area as well as to the Bike & Hike Trail. A project to vacate and remove the footprint of the closed section of Stanford Road is also planned for this area; however, hiking access from the Boston area to Brandywine Falls will be maintained via the Stanford Trail.

## **River Corridor Zone**

### **Peninsula – Bath River Corridor**

The Peninsula to Bath Road River Corridor spans the area adjacent to the Cuyahoga River just south of the former Brandywine Golf Course in Peninsula, to the southernmost area of the park. Here, in the southeast corner of the park, lies the Botzum Trailhead, the southernmost trailhead in the park and a starting point for Cuyahoga Valley Scenic Railroad's shuttle service for bicyclists, runners, and hikers. The trailhead, train-boarding area, and associated visitor amenities are adjacent to the Ohio & Erie Canal Towpath Trail. From here, visitors can venture north on the Towpath Trail to explore the park. Just 2.5 miles north is the Beaver Marsh, a large wetland area with outstanding wildlife viewing opportunities. Venturing south, the Towpath Trail and train service continue into Akron as part of the Ohio & Erie Canalway and provide connections to other regional trail systems and greenspaces.

A nexus of recreational opportunities is available to visitors starting at the Botzum Trailhead parking lot and as such the parking lot is a multi-use parking lot. Even with the abundance of recreational experiences available to visitors from this location, the Botzum parking lot, with 127 spaces, is underused and rarely fills (NPS, 2016). Visitors have reported negative perceptions of the lot, as seeing a mostly empty lot creates an uneasy feeling and suggests that the area may be unsafe.

## **Natural Zone**

### **Furnace Run/Oak Hill Natural Area**

Like other areas in the park, the Oak Hill area was once farmland. Today it is one of the largest roadless tracts in the park. Visitor experiences in this area include the Everett Covered Bridge, hiking trails, and horse trails.

To access hiking and horse trails in this area, visitors can park at the Everett Covered Bridge parking lot. Visitor services adjacent to the parking lot include restrooms, picnic tables, and a wayside informational exhibit. The Riding Run, Perkins, Furnace Run, and Valley trails can all be accessed from the Everett Covered Bridge Trailhead and parking lot.

The Riding Run, Perkins, and Valley trails are mixed-use trails for hiking and horseback riding, and are 4.6 miles, 2.7 miles, and 19 miles long, respectively. Furnace Run Trail, a two-mile loop, is for hiking only. A current project to remove Everett Road is causing challenges for the circulation of Riding Run Trail, making it only accessible from Perkins Trail. As with the Perkins and Riding Run trails, the Furnace Run Trail is in the Furnace Run and Oak Hill natural area, while the Valley Trail connects with other horse trails to the east and north.

### **Blue Hen Falls Natural Area**

Blue Hen Falls is a popular hike-in destination in the Boston area/Blue Hen Falls Natural Area. Hikers can reach the waterfall via the Buckeye Trail from Boston Mill Visitor Center, a three-mile round trip hike with a 580-foot elevation change, a moderately challenging hike for most. Prior to their closure in 2020, visitors could also access the falls by hiking a short distance from two small gravel parking lots on either side of Boston Mills Road. These lots presented several challenges, including excessive parking outside of the designated parking areas and the need for visitors to cross the road on a blind curve to access the trailhead. Safety concerns were exacerbated by visitors parking vehicles on both sides of the road on the blind curve. After closing the parking near Blue Hen Falls, park staff introduced temporary signage to help with visitor orientation and understanding of how to navigate to Blue Hen Falls from the Boston Mill Visitor Center parking lot. These short-term actions do not provide for accessible opportunities, and there is a need to provide inclusive access to experience Blue Hen Falls.

A 2017 report gives more detail about the gravel lots closed in 2020. The main gravel lot, on the north side of Boston Mills Road and adjacent to the Blue Hen Falls trailhead, had three parking spaces and one additional space for emergency access (ranger parking). The overflow gravel parking lot on the south side of Boston Mills Road, was rather small in comparison to others found within the park. A lack of defined parking spaces compounded the issues with the lot (NPS, 2017d). On average, both lots filled by noon on Saturdays and Sundays, although they could fill earlier due to a lack of marked parking spaces and vehicles taking more than one vehicle width for parking. This 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. The 2017 study also showed that visitors parked in non-designated areas at Blue Hen Falls 46 percent of the times surveyed (daily during summer months from 10 a.m. to 4 p.m.), and caused damage to vegetation or were forced into the roadway, creating unsafe conditions. (NPS, 2017d).

### **3.10.2 Environmental Consequences**

#### **Parkwide Actions**

##### *Alternative A: No Action*

Maintaining current infrastructure and design of the Towpath Trail and Bike & Hike Trail would continue to not provide a designated connection between the two trails, adversely impacting the quality of visitor experience as multimodal trail opportunities would remain limited to the Towpath Trail and small connectors.

The surface of the Towpath Trail would continue to be a mixture of hard-packed, level, and crushed limestone and asphalt, which over time can become uneven, rutted, muddy, or dusty; the lack of continuity and mixed nature of the surface of the Towpath Trail adversely impacts visitor experience for runners who prefer a soft surface. Areas of the Towpath Trail that routinely flood are more susceptible to soft spots and rutting, adversely impacting the visitor experience by increasing risk of accidents, particularly for bicyclists whose tires slip or get displaced in the ruts that form due to the soft surface. In addition to safety concerns due to ruts, park staff report anecdotally that visitors routinely complain about the dust created from the crushed limestone surface, both while on-trail and after use, as the dust builds up on bicycle equipment.

##### *Alternative B: Preferred Alternative*

Supporting Cleveland Metroparks and Summit Metro Parks development of the multi-use Sagamore Connector Trail from Canal Road to the Bike & Hike Trail would designate a connection between these two trails and improve the ability to circulate within the park by bicycle via multi-use connector trails, benefiting the quality and range of visitor experience and access in the park. In addition, this connection would occur in the north end of the park, helping to create a bike connection to the Bedford Reservation, benefiting the visitor experience by enhancing connections and access to different recreation areas within the park.

Rehabilitating the Towpath Trail surface by adopting as chip-sealed asphalt surface type would support maintenance and recreational use while visually representing the historic character of the Towpath Trail with the appearance of a crushed stone surface and the durability of asphalt, benefiting the visitor experience by maintaining the opportunity for visitors to connect with the historic character of the trail while providing a durable trail surface for multi-use recreational opportunities.

Given the change in appearance and nature of the Towpath Trail, the change would detract from the visitor experience for visitors who are inconvenienced and/or displaced by the change in surface type of the trail. Specifically, a soft surface is preferred by runners, who have anecdotally shared with park staff that they would prefer the Towpath Trail be rehabilitated to a soft surface throughout; users who prefer a soft surface, including local high school and college cross-country teams, would be disproportionally impacted by this action, adversely impacting the visitor experience for these users due to aversion or displacement.

#### **High-value Experience Zone**

##### **Everett Cultural Area**

##### *Alternative A: No Action*

Maintaining the current parking infrastructure at Everett Cultural Area, specifically in the Everett Covered Bridge area, benefits the visitor experience by continuing to provide parking in this area,

which offers a range of recreational opportunities. Maintaining the current infrastructure at the Everett Covered Bridge parking lot with no associated changes would cause adverse impacts to the quality of visitor experience by not providing designated areas for equestrian and oversized vehicle parking, limiting opportunities for those who recreate on horseback to access the horse trails in this area. Parking in this area would remain limited to forty paved, chip-sealed spaces with no pull-through opportunities for equestrian and oversized vehicles, adversely impacting the quality of visitor experience due to lack of parking, navigation challenges for oversized vehicles, and congestion.

#### *Alternative B: Preferred Alternative*

Expanding the parking in the Everett Covered Bridge area by creating an overflow lot utilizing part of the closed portion of Everett Road to provide additional equestrian and oversized vehicle parking, as well as additional passenger vehicle parking, would benefit the visitor experience by expanding parking opportunities for passengers and oversized vehicles, including equestrian trailers, and therefore would provide additional recreation opportunities. The new parking lot would provide an additional thirty-six passenger vehicle spaces and five trailer/oversized vehicle spaces. The addition of an overflow parking lot would mitigate congestion in the main parking lot for oversized and passenger vehicles, as the overflow lot would provide parking for oversized and equestrian trailers, benefiting the quality of visitor experience.

### **Kendall Hills/Kendal Lake Area**

#### *Alternative A: No Action*

Maintaining the current parking infrastructure at Kendall Lake, Little Meadow, and Crowfoot Gully parking lots benefits the visitor experience by continuing to provide multiple parking locations in the Kendall Hills and Kendall Lake Area, which offers a wide range of recreational opportunities. Continuing to provide multiple parking lots in this area benefits the quality of visitor experience since these lots typically do not fill, as a result of abundant parking opportunities in this area. Given the underused nature of these parking lots, which often only have a few cars at a time, park staff have said that visitors report a negative perception of the underused nature of these lots, as seeing only a few cars in a mostly empty lot creates an uneasy feeling and suggests the area is unsafe due to a lack of use, adversely impacting the quality of visitor experience due to visitor aversion or displacement.

#### *Alternative B: Preferred Alternative*

Fully removing the parking lots at Little Meadow and Crowfoot Gully and removing twenty parking spaces at Kendall Lake would involve removing the asphalt and base beneath, removing the surrounding drainage structure, and replanting the areas with native vegetation. These actions would benefit the quality of visitor experience by enhancing the landscapes and viewshed in these areas and contribute to the desired condition that visitors have opportunities to view and connect with high-quality natural resources. Removal of twenty parking spaces at Kendall Lake and removal of Little Meadow and Crowfoot Gully parking lots adversely impacts the visitor experience by reducing overall parking availability and opportunities in this area. Since these parking lots typically do not fill or undergo crowding outside of special events under current conditions, visitors seeking to park in this area for a special event may be disproportionately adversely impacted by the limited parking availability and may be displaced. The change in parking availability in the Kendall Hills and Kendall Lake Area would change visitor circulation patterns and could cause confusion for visitors who are unfamiliar with these changes or deter visitors from visiting this area altogether, adversely impacting the quality of visitor experience.



## **Virginia Kendall North**

### *Alternative A: No Action*

Maintaining the current infrastructure and design of the trails from the shelter and parking area to the overlook and ledges connector trails would adversely impact the visitor experience by continuing to not provide any accessible walking trails in this area, limiting the range of available recreational opportunities for visitors who use accessible trails. As the Ledges Overlook is one of the most-visited and photographed areas in the park, the lack of universally accessible access trails adversely impacts the quality and range of visitor experiences.

### *Alternative B: Preferred Alternative*

Creating accessible walking path connections from the shelter and parking area to the Ledges Overlook and Ledges connector trails, including a 100-foot boardwalk through rocky terrain, in combination with creating a new wooden viewing platform at the Ledges and above Ice Box Cave, will benefit the quality of the visitor experience by providing improved access and viewing opportunities for visitors, including those with mobility impairments and will provide a range of accessible recreational experiences for a highly desirable visitor location in the park. In addition to benefiting the quality and range of accessible visitor experiences, these actions will contribute to the desired condition that visitors have opportunities to view and connect with high-quality natural and cultural resources such as Brandywine Falls and the Ledges. Creating accessible walking paths could have adverse impacts to the quality of visitor experience for visitors who prefer recreating in a more rugged, natural setting with fewer signs of human development.

## **Brandywine Falls Area**

### *Alternative A: No Action*

Maintaining current operations and continuing to not provide any time-limited parking spaces in the Brandywine Falls parking lot would have adverse impacts to the quality of visitor experience by limiting the opportunity for visitors coming specifically to view the falls to find parking designated for short lengths of time (compared to long term users). Visitors who do not find a space due to the parking lot remaining full for long periods of time would be denied the experience altogether, resulting in adverse impacts to the visitor experience.

### *Alternative B: Preferred Alternative*

Providing approximately ten time-limited parking spaces in the Brandywine Falls parking lot to ensure parking availability for visitors coming specifically to view the falls would benefit the visitor experience by managing expectations and organizing parking availability by designating spaces for specific use and experiences, thereby enhancing the visitor experience. Providing designated, time-limited spaces benefits the visitor experience by managing the multiple-use parking lot to accommodate parking availability for the range of recreational opportunities offered at this location. While this action specifically benefits visitors seeking to park in this lot for a short period of time, visitors who do not find a space would be denied the experience altogether, resulting in adverse impacts to the visitor experience. Visitors may also be inconvenienced and/or displaced by timed parking spaces reducing parking availability for long-term users, resulting in an adverse impact to the experience for these users.

## **Boston Mill Historic District**

### *Alternative A: No Action*

Maintaining current operations and continuing to not provide any time-limited parking spaces in the Boston Mill Visitor Center parking lot would have adverse impacts to the quality of visitor experience by limiting the opportunity for visitors coming specifically for the visitor center to find parking designated for short lengths of time (compared to long term users). Visitors who do not find a space due to the parking lot remaining full for long periods of time would be denied the experience altogether, resulting in adverse impacts to the visitor experience.

### *Alternative B: Preferred Alternative*

Providing several time-limited parking spaces in the Boston Mill Visitor Center parking lot to ensure parking availability for visitors coming specifically for the visitor center would benefit the visitor experience by managing expectations and organizing parking availability by designating spaces for specific use and experiences, thereby enhancing the visitor experience. Providing designated, time-limited spaces benefits the visitor experience by managing the multiple-use parking lot to accommodate parking availability for the range of recreational opportunities offered at this location. While this action specifically benefits visitors seeking to park in this lot for a short time period, visitors who do not find a space would be denied the experience altogether, resulting in adverse impacts to the visitor experience. Visitors may also be inconvenienced and/or displaced by timed parking spaces reducing parking availability for long term users, resulting in an adverse impact to the experience for these visitors.

## **Stanford/Hines Hill**

### *Alternative A: No Action*

Maintaining current infrastructure and design of the East Rim Trailhead parking lot and the gravel overflow lot would benefit the visitor experience by continuing to provide parking to access the trail systems in this area. Maintaining current infrastructure and design of these lots will not mitigate congestion and these lots will continue to be overused and fill, adversely impacting the visitor experience as some visitors will be displaced or would be denied the experience altogether due to lack of parking availability. Maintaining the current infrastructure would continue to not provide restrooms in this parking and trailhead area, requiring visitors to travel out of the area to find restrooms, which increases the likelihood of human waste on the landscape, which adversely impacts the quality of visitor experience.

### *Alternative B: Preferred Action*

Expanding and improving parking for the East Rim Mountain biking/hiker trail system by formalizing the gravel parking area to provide eighty parking spaces would benefit the visitor experience by providing additional parking and helping to mitigate congestion. Creating a trail from the formalized parking area to the Bike & Hike Trail will improve bicycle and pedestrian access, benefiting the visitor experience by creating access and connectivity. Adding a vault toilet to the parking lot would benefit the visitor experience by providing a permanent solution to human waste disposal in the area. Currently, the area is being served by a portable toilet. Providing additional parking for the East Rim Trail via construction of a second parking area near the former Lorenz property would have beneficial impacts to the visitor experience by providing additional parking opportunities and reducing the likelihood that a visitor would be displaced or denied the experience.

altogether due to a lack of parking. Providing additional parking would also reduce the likelihood of on-road parking, mitigating visitor safety concerns arising from congestion and lack of visibility with on-road parking, benefiting the visitor experience.

## **River Corridor Zone**

### **Peninsula – Bath River Corridor**

#### *Alternative A: No Action*

Maintaining current infrastructure of the 127-space parking lot at Botzum will benefit the visitor experience by continuing to provide plentiful parking for visitors starting from the Botzum Station area to access a range of recreational opportunities. Given the underused nature of this parking lot, which often has large areas vacant of parked vehicles, park staff have reported anecdotally that visitors report a negative perception of the underused nature of this lot as seeing only a mostly empty lot creates an uneasy feeling and suggests the area is unsafe due to a lack of use, adversely impacting the visitor experience due to visitor aversion or displacement.

#### *Alternative B: Preferred Alternative*

Reducing the size of the current 127-space parking lot at Botzum by approximately 43-67 spaces along the southwest side of the lot, which includes removing surround drainage structures and the asphalt and base beneath as well as replanting the area with native vegetation, would contribute to the desired condition that 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.

## **Natural Zone**

### **Furnace Run/Oak Hill Natural Area**

#### *Alternative A: No Action*

Maintaining current infrastructure of the Riding Run horse trail will continue to not provide any pedestrian or horse connections near Wheatley Road, therefore continuing to not provide trail loop opportunities on Riding Run independent of Perkins Trails, and adversely impacting the visitor experience by limiting recreational opportunities in this area. Access to the Riding Run Trail would be limited, as the only access would be via the Perkins Trail, limiting opportunities to access and experience the Riding Run Trail as a loop experience.

#### *Alternative B: Preferred Alternative*

Adding a trail bridge for pedestrians and horses near Wheatley Road to provide trail loop experiences on Riding Run trails will benefit the visitor experience by increasing trail loop opportunities and providing additional range of trail experiences. This bridge provides opportunities to experience the Riding Run Trail as an independent loop experience compared to the larger loop that combines Riding Run with Perkins Trail, contributing to the range and length of recreational trail experiences. This action contributes to the desired condition that visitors access this zone via trails.

## **Blue Hen Falls Natural Area**

### *Alternative A: No Action*

Maintaining current infrastructure and design of the Blue Hen Falls trailhead area, the Buckeye Trail route, and the Boston Mill Visitor Center parking lot area will continue to not provide accessible parking at Blue Hen Falls and will continue to provide inadequate parking, resulting in adverse impacts to the quality and range of visitor experiences.

### *Alternative B: Preferred Alternative*

Creating a lot of fourteen parking spaces for limited mobility and accessible parking to provide closer access to Blue Hen Falls at the former Blue Hen Falls trailhead would benefit the visitor experience by managing expectations and organizing parking availability by designating spaces for specific use and experiences, thereby enhancing the visitor experience. This action will improve the availability and quality of recreational opportunities at Blue Hen Falls for visitors who require mobility assistance, benefiting the quality of visitor experience. Similarly, creating an accessible trail from the Blue Hen Falls limited-mobility lot to the waterfall will benefit the visitor experience and create opportunities for visitors who require mobility assistance to access experience a waterfall in a natural zone, contributing to the desired conditions that visitors experience natural sounds and connection to nature and visitors have opportunities to engage in low-impact recreation such as hiking, birdwatching, and interpretive walking.

Rerouting the Buckeye Trail from the main driveway to the limited-mobility parking will benefit the visitor experience by separating the pedestrian trail from the vehicular parking lot, improving pedestrian and vehicular circulation and mitigating safety concerns, and will mitigate congestion by removing the trail from the parking lot driveway. Providing access to Blue Hen Falls from the Boston area with improved signage and additional formalized parking to serve the entire area will benefit the visitor experience in the Blue Hen Falls and Boston areas by improving wayfinding and parking circulation information via signage and will help mitigate congestion and safety concerns by formalizing parking areas. This action will enhance access between the Boston and Blue Hen Falls area, benefiting the visitor experience by providing access to a range of recreational opportunities in these two areas. Implementing managed access such as parking reservations for parking at the Boston Mill Visitor Center would benefit the visitor experience by managing expectations and organizing parking availability by designating spaces for specific use and experiences for visitors hiking to the Blue Hens Falls area, thereby enhancing the quality of visitor experience. Providing accessible parking opportunities at the Blue Hen Falls lot benefits the visitor experience by managing the accessible parking lot to accommodate parking availability for the range of visitor accommodations and recreational opportunities offered at this location.

## **Cumulative Impacts**

In assessing potential impacts for the No Action and Preferred Alternative, the following trends and reasonably foreseeable future actions have also been considered. These cumulative impacts are applicable to both the No Action and Preferred Alternative.

### *Parkwide*

Within the Ohio and Erie Canalway National Heritage Area in which the footprint of the Towpath Trail lies, other management entities and partners including Cleveland Metroparks to the north and Summit Metro Parks to the south use both asphalt without chipseal and crushed limestone for the Towpath Trail, respectively. Other multi-use areas in northeast Ohio have paved surfaces. Changing

the surface of the Towpath Trail within the park would have beneficial impacts beyond the boundaries of the park for visitors who prefer paved trails by adding additional paved trail mileage to the regional trail system. It would have adverse impacts to visitors who prefer soft surface trails by reducing the soft surface mileage in the regional trail system.

The National Park Service will implement actions, primarily trail construction, from the 2012 trail management plan that were prioritized as part of the CAP. These actions would benefit the visitor experience by improving accessibility and connectivity in the park.

The park will implement general accessibility improvements, including adding grade, slope, and trail condition information on signs and on web-based information platforms, benefiting the visitor experience by providing additional trip planning and on-site information related to accessibility, helping visitor preparedness and orientation.

The National Park Service and the Conservancy for Cuyahoga Valley National Park will redevelop the gated end of the now abandoned Stanford Road to create a cul-de-sac, parking spaces, and connections to the Towpath Trail Connector and Stanford Trail, benefiting the visitor experience by improving connectivity and accessibility in the park.

The park will add small-scale amenities that support diverse forms of recreation and create a welcoming environment, such as bicycle maintenance stations, e-bike charging stations, gender-inclusive restroom signage, and clusters of picnic tables for group use. These actions will result in beneficial impacts to the quality of visitor experience by providing convenient visitor services for a variety of recreation opportunities and visitor needs. Small-scale amenities include the park's Welcoming Trailhead project that will pilot new information and amenities at select trailheads, benefiting the quality of visitor experience by creating a more welcoming and inclusive experience.

The park will provide equipment rental and other support services for recreational activities such as cycling, fishing, and paddling, benefiting the visitor experience by providing opportunities to engage in recreation experiences for visitors who do not have their own equipment to participate in such activities. Supporting Cleveland Metroparks and Summit Metro Parks development of the multi-use Sagamore Connector Trail from Canal Road to the Bike & Hike Trail will have a wide-reaching impact on regional trail connectivity, as detailed in the Cuyahoga Greenways Plan, which notes, "The Cuyahoga Greenways Plan envisions an interconnected system of on-road bicycle facilities and off-road, all-purpose trails. Integrating the Greenways with public transportation, employment centers and parks provide recreational opportunities and mobility options throughout Cuyahoga County. Active use of this network can enhance the health and fitness of the community and the individuals who call it home." This benefits the visitor experience not only within park boundaries but beyond in the broader community. The Sagamore Connector Trail that would link Canal Road to the Bike & Hike Trail is considered a missing link in fulfilling the purpose of the Greenways Plan and would enhance transportation options in Cuyahoga County and therefore the opportunity of movement for people within it.

The park will improve parking in existing lots via restriping and providing bus parking and drop-off options, benefiting the quality of visitor experience via parking lot improvements that mitigate congestion, circulation, and navigation challenges for oversized vehicles such as buses.

### *High Value Experience Zone*

#### *Everett Cultural Area*

The park will pursue a development concept plan to redesign Howe Meadow to better accommodate special events and public use, benefiting the visitor experience by increasing parking

for special events, reducing congestion associated with increased use from special events, and alleviating visitor conflicts from competing visitor use across multiple analysis areas

#### **Boston Mill Historic District**

The park will implement actions in the CLR for the Canal Cultural Area to provide a range of circulation improvements at key locations such including the Boston area, benefiting the visitor experience by enhancing wayfinding and access via circulation improvements, particularly in high-visitation areas.

A potential seasonal agreement between the park and Boston Mills Ski Area would make improvements to formalized parking in the Boston area and provide additional parking options for Blue Hen Falls, benefiting the visitor experience by mitigating congestion and circulation challenges and increasing parking for a variety of recreation opportunities in this area.

#### *River Corridor Zone*

##### *Peninsula – Bath River Corridor*

The Botzum Trailhead is a shared trailhead with Summit Metro Parks and the area is seen as a gateway to the park by the City of Akron. This concept is captured in the City of Akron's master plan for a district south adjacent to the park boundary. Actions in this plan include strategies to increase use of this area as a gateway to the park. If successful, this area could anticipate higher use levels and therefore higher demand for parking. With reducing the size of the current parking lot at Botzum, and considering long-term regional actions, there could be increased instances of the parking lot being full, which would adversely impact the visitor experience due to displacement from lack of parking opportunities.

The park will implement actions in the CLR for the Canal Cultural Area to provide a range of circulation improvements at key locations including the Peninsula area, benefiting the visitor experience by enhancing wayfinding and access via circulation improvements, particularly in high-visitation areas.



## Chapter 4

# Consultation and Coordination







## **CHAPTER 4: CONSULTATION AND COORDINATION**

### **Introduction**

The National Park Service conducted civic engagement during the planning process to provide an opportunity for the public to learn about and contribute to the CAP and NEPA planning process throughout the project. Consultation and coordination with federal and state agencies, tribal nations, and other interested parties were also conducted to identify issues and/or concerns related to natural and cultural resources. This section provides a summary of the public involvement and agency consultation and coordination that occurred during planning.

### **Public Involvement**

To ensure that a variety of stakeholders and the public could participate in the planning process, multiple phases of civic engagement were provided beginning in 2020. Phase 1 of civic engagement focused on the purpose and need for the project; Phase 2 focused on the actions and strategies to address the project purpose and need; and Phase 3 focused on refinement of the strategies and development of the draft plan. A variety of methods were used to engage the public including public meetings (virtual and in person), stakeholder meetings, open house discussions, newsletters available in Spanish and English, an interactive StoryMap, and the project website. Civic engagement resulted in 340 attendees at public and stakeholder meetings and more than 1,600 comments. Public input during the CAP civic engagement was used to identify potential management strategies and to inform the range of alternatives carried forward for full analysis in the EA. Additional information about civic engagement can be found under the Document List header at <https://parkplanning.nps.gov/cuvavisitorusemanagement>.

### **Agency Consultation**

Agency consultation and coordination began early in the planning process and is ongoing to ensure that all relevant agencies are informed of any NPS planning actions.

#### ***US Fish and Wildlife Service, Section 7 Consultation***

Section 7(a)(2) of the Endangered Species Act requires each federal agency, in consultation with the Secretary of the Interior, to ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. The most recent list of federally listed species was obtained from the USFWS IPaC website on December 14, 2022. Using this list, park staff determined which of those species and their critical habitats had a potential to occur within the plan study area. Informal communication with USFWS was initiated in early 2023 to ensure agency concurrence with the determination. Additional Section 7 consultation will be completed as needed prior to implementation of each element of the plan.

#### ***Section 106 Consultation: State Historic Preservation Office-Ohio History Connection and Affiliated Tribes***

Section 106 of the National Historic Preservation Act (54 USC § 306108) and its implementing regulations, [36 CFR Part 800](#), requires federal agencies to consider the effects of their undertakings on historic properties (i.e., listed, or eligible for listing, in National Register of Historic Places), and provide other consulting parties (SHPO, American Indian Tribes traditionally associated with park lands, other federal and state agencies, and the public) an opportunity to comment on undertakings prior to the expenditure of any federal funds.

Because of the comprehensive nature of this CAP and the extended potential timeline for implementation, details related to the exact location, design, and necessary construction activities for all associated actions that may affect historic properties have not been determined. Since any future actions stemming from the CAP are unfunded and no site-specific planning has been done, the National Park Service cannot yet assess the potential effects of such actions on historic properties. CUVA commits to continuing to consult with the Ohio State Historic Preservation Office, affiliated Tribes, and other consulting parties as necessary and completing Section 106 compliance for individual actions as they are pursued. This requires that the park continue to identify and evaluate potential historic properties in areas of potential effect in accordance with Section 106 regulations (36 CFR 800). Undertakings will be evaluated for their effects and every effort will be made to avoid, minimize, or mitigate any activity that is found to have an adverse effect on a historic property.

### **Tribal Consultation**

In March 2021, the park invited early engagement with Tribal Nations to help inform analysis of the proposed action and the alternatives. The following Tribal Nations attended an informational meeting:

- Delaware Nation
- Forest County Ponowatah Community
- Seneca Nation

In August 2022, the park held another meeting with Tribal Nations to understand their concerns with actions within the plan. The following Tribal Nations attended this meeting:

- Delaware Nation
- Forest County Ponowatah Community
- Pokagon Band of Potawatomi

During this meeting, park staff heard concerns about preserving potable water, river access, expanding and eliminating parking, and impacts to archeological resources including in areas that had been previously disturbed. There were suggestions to further investigate areas where children could climb, as there may be historic activity in these areas and to ensure that tribal members are included during archeological surveys to ensure that traditional cultural properties are included in those surveys.

The National Park Service recognizes the past and present existence of American Indians in the region and the traces of their use as a significant part of the cultural environment. The National Park Service will consult to develop and accomplish the programs of the park in a way that respects the beliefs, traditions, and other cultural values of the American Indian tribes who have ancestral ties to the park lands.

### **Partnerships**

The National Park Service is legally unable to commit to actions on lands outside of the NPS boundary and on lands within the park boundary that are not owned by the National Park Service. As such, actions outside of the NPS boundary are not analyzed in this plan. However, some actions proposed within this plan cannot be executed without action taken by partner organizations.

Partnership strategies the National Park Service would continue to explore include:

- Conservancy for Cuyahoga Valley National Park
- Countryside
- Cuyahoga Valley Scenic Railroad
- Cleveland Metroparks

- Summit Metro Parks
- Ohio & Erie Canalway
- Ohio Archaeological Council

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# Appendixes





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## **APPENDIX B: IMPACT TOPICS NOT CARRIED FORWARD FOR DETAILED ANALYSIS**

The following impact topics are not analyzed because:

- They do not exist in the project area.
- They would not be affected by the proposal or the likelihood of impacts is not reasonably expected or through the application of mitigations measures there would be no potential for significant effects.
- They were not a subject of contention among the public and other agencies.

### ***Ethnographic Resources***

There are no known ethnographic resources that would be impacted by actions in this plan. Human occupation in CUVA dates to about 9,500 BCE, and there is strong continuity in land use by later Native American groups in the region. Ancestral groups include Algonquian ancestors of Kickapoo people located close to the park and groups from the Ohio Valley, with possible presence of Adena people, Hopewell people, and Fort Ancient people. The presence of Iroquois people is debatable but has been found elsewhere in the Lake Erie Basin. The Huron-Petun refugees (Wyandot), Odawa refugees, eastern Ojibwa people (historically known as Mississauga and who now reside in Ontario, Canada), Iroquois dissenters collectively known as “Mingo,” a group of Seneca people, and the Delaware people also historically utilized the park area. The Wyandot and Delaware people were in possession of the general area when the territory became part of the United States as part of the land cession treaty (The Treaty of Fort Mackintosh) in 1785. The treaty identified the Wyandot and Delaware people as the aboriginal inhabitants with the Odawa people having hunting rights in the area. (Nieves Zedeño, et al., 2007). Early consultation with affiliated Tribes suggested the presence of traditional cultural properties in the park; however, early consultation did not identify ethnographic resources as being impacted by actions contained in this plan.

Park staff are currently exploring Black history and African American cultural heritage in the park. Park staff have identified a connection between the Ohio & Erie Canal and the Underground Railroad in the autobiography of Lewis Clarke (1845) and evidence for Black business ownership and labor in the autobiography of John Malvin, a canal boat captain (1879). Other connections include Jane Edna Hunter and providing recreational open space for Cleveland’s African American community via the Phillis Wheatly Association (1911) and Camp Mueller (1941) (NPS, 2021). Park staff have also begun exploring 20th century Black-owned entertainment businesses such as the Drift Inn/Cabin Club and Stonibrook in Peninsula (Schnack 2023a, 2023b). In 2022, an ethnographic overview and assessment was completed for Camp Muller (Mowatt et al., 2022), and no actions contained in this CAP appear to impact the resources identified in the ethnographic overview and assessment. However, the assessment notes that African Americans have experienced barriers to recreation and leisure in the park. Finally, the leadership and advocacy of Carl B. Stokes during the 1969 Cuyahoga River fire to address river pollution and expand the national conversation about environmental protection is also known at the park (NPS, 2021). While this research is ongoing, thus far there are no impacts related to these important stories or ethnographic resources.

### ***Geological Resources***

Only one action has a potential nexus with geologic resources: Viewing platforms constructed at the Ledges would need engineered structural supports anchored into the outcropping of Sharon Conglomerate. Permanent impacts to geologic features would be restricted to the footprints of the structural supports anchored into the rock. There are no geologic type sections in the project area that could be affected by the proposed action. Soils has been carried forward as a separate impact topic due to the potential for soil compaction, erosion, and loss of productivity due to actions

proposed under alternative B. Therefore, the impact topic of geologic resources was not carried forward for further analysis.

### ***Nesting Migratory Songbirds***

CUVA provides habitat for about 250 species of birds, including migratory songbirds such as warblers, thrushes, finches, sparrows, vireos, orioles, flycatchers, tanagers, and grosbeaks (NPS, 2023a-birdlist). Beginning in late winter and extending into June, many songbirds migrate north into northeast Ohio; some stay in the Cuyahoga Valley for the summer and breed (NPS, 2023b). Some of these species nest in shrubs or saplings while others nest in the upper parts of the understory or canopy of woodlands.

Under the action alternative, native and nonnative vegetation would be permanently removed for trail construction and development/expansion of parking lots, resulting in direct loss of habitat. Noise from construction activities would temporarily affect all bird species in the project area. In addition, project roads, trails, parking lots, and trailheads would fragment habitat and create edges that may cause changes in the bird community by dissecting habitats into smaller patches. Increased sunlight, temperature extremes, wind exposure, and reduced humidity could alter forest habitats, which would influence vegetation structure and food availability for birds. Such changes may create edge habitats that are unsuitable for some “forest interior” bird species. Furthermore, predation risk and brood parasitism for birds nesting near edges could increase. Following trail construction, use of trails by visitors could have long-term impacts on individual birds by temporarily disturbing and displacing individuals from their territories. Miller et al. (1998) found that trails of 1-3 meters in width exerted a “zone of influence” of about 75 meters; within this distance, some bird species did not occur or occurred in lower densities near trails than at greater distances from trails, whereas some species, mainly generalists, were more abundant near trails. Therefore, construction of one linear mile of trail in the park may affect sensitive (i.e., disturbance-intolerant) bird species across thirty-forty acres on either side of that trail. Birds vulnerable to forest fragmentation would be most susceptible to such impacts, while bird species that prefer to nest along forest edges would benefit.

The Blue Hen accessible trail (up to 0.33 miles) and reroute of the Buckeye Trail near the Blue Hen parking lot (up to 0.05 miles) would be constructed in forests and have the potential to create openings in tree canopy, particularly the Blue Hen accessible trail, which would be eight feet wide. This trail would overlap with the existing Buckeye trail and therefore would occur in an area where sensitive bird species are already being disturbed; however, the area of disturbance for sensitive species would be widened from existing conditions due to the need to build switchbacks to maintain an accessible grade. Expanding parking at Blue Hen would further open the canopy of the dry-mesic oak forest, attracting potential nest predators (crows, jays, and squirrels) and parasitic cowbirds.

Other trails proposed under the action alternative would follow existing roadbeds/trails or be placed through already disturbed sites. The two trails constructed in forest areas represent up to 0.4 linear miles of new trail construction and therefore have the potential to cause adverse effects to sensitive bird species across approximately 32 acres. This would amount to less than 0.01 percent of forested habitat in the park. Other trails proposed under the action alternative would follow existing roadbeds/trails or be placed through already disturbed sites, therefore minimizing habitat fragmentation and the creation of edge habitats. In total, approximately 3.0 acres of native and non-native vegetation would be permanently removed for trail construction and development/expansion of parking lots, resulting in direct loss of habitat. However, this area represents less than one-hundredth of a percent of the park’s existing forest, grassland, and wetlands habitat. In addition, approximately 1.9-2.8 acres of impervious surface would be restored to native vegetation via removal or reduction in size of existing parking lots, creating new habitat for birds. Mitigation measures and best management practices would be implemented to reduce impacts to breeding avian species from construction and maintenance activities, such as precluding vegetation removal or trail construction

unless it is conducted outside of nesting season or surveys have been conducted first to confirm that there are no active nests nearby. Some nesting migratory songbirds may temporarily or permanently relocate to areas outside of the project area due to disturbance or habitat loss; however, because there is other similar habitat nearby, the long-term viability of these species is unlikely to be affected. The two trails constructed in forest areas represent up to 0.4 linear miles of new trail construction and therefore have the potential to cause adverse effects to sensitive bird species across 24-32 acres in addition to the 3.0 acres of vegetation removed. This would amount to less than 0.01 percent of forested habitat in the park. Mitigation measures and best management practices described in chapter 2 would be implemented to reduce loss of native vegetation, particularly healthy trees, and therefore reduce adverse impacts on nesting migratory songbirds. Therefore, the impact topic of nesting migratory songbirds was not carried forward for further analysis.

### ***Paleontological Resources***

Only one action has a potential nexus with paleontological resources: Viewing platforms constructed at the Ledges would need engineered structural supports anchored into the outcropping of Sharon Conglomerate. Paleontological resources have not been found in this formation within park boundaries; the only paleontological resources observed to the date at the park are associated with shale exposed in riverine systems (NPS, 2020). Therefore, the impact topic of paleontological resources was not carried forward for further analysis.

### ***Raptors***

About 250 species of birds (105 of which breed in the park), including raptors (birds of prey), songbirds, and waterfowl, have been documented in the various habitats in the park (NPS, 2012a). Ten raptors are either summer or year-round residents of the Cuyahoga Valley (NPS, 2023b). Common raptors in the park include turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), and broad-winged hawk (*Buteo platypterus*) (NPS, 2023a-birdlist). A pair of peregrine falcons, which are state threatened, have been known to nest beneath the high-level I-80 turnpike bridge over the Cuyahoga River in Boston Township, starting in 2008 (NPS, 2023c). In March 2017, a new pair of peregrine falcons began showing interest in nesting beneath the Route 82 bridge at Station Road (NPS, 2023c). Though delisted in 2007, bald eagles remain a federal species of concern and are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Bald eagles have nested in the Pinery Narrows area of the park since 2007. The park currently has an established policy for recreation and maintenance activity in the area of the bald eagle in the Pinery Narrows region of the park during nesting and fledgling season in accordance with US Fish and Wildlife recommendations (2012b).

Raptors are susceptible to disturbance from human-caused activity, especially during critical periods in the breeding season. All of the trail and other construction projects proposed have the potential to increase noise above ambient levels. Actions that result in elevated sound levels can result in harassment-level disturbance of bald eagles and other raptors. However, adverse impacts to raptors from facility development would be minimized by implementation of mitigation measures described in chapter 2 as well as the park's sustainable trail guidelines. For example, from mid-January through July, work within 660 feet of a bald eagle nest or within direct line-of-sight of the nest should be restricted. In addition, no tree clearing would occur within 660 feet of the nest or in the woodlot supporting the nest tree. For example, to reduce noise disturbance and limit impacts on breeding avian species, all vegetation clearing and trail construction would be conducted from mid-July to January 1, as feasible. If clearing/construction needed to occur outside of this time frame (during nesting season), the project area would be surveyed by a qualified biologist for nesting or roosting use. If nesting or roosting is found, resource management personnel would be consulted and measures would be identified to avoid impacts. Timing of construction activities outside of nesting season, for example, could mitigate impacts and may eliminate the need for nesting bird surveys.

Presence of trails can cause direct disturbance of raptors due to the level of noise and motion from trail users, depending on a species' tolerance to increased human activity. Bald eagles (*Haliaeetus leucocephalus*) seem to be particularly sensitive to people on foot in the vicinity of their nests. Human disturbance can result in nest failure by causing eagles to get off of eggs during incubation, causing eggs to die from cold. The National Park Service would continue to implement seasonal closures of trails to protect sensitive nesting birds, including maintaining a 330-foot buffer from an active eagle nest for non-motorized recreational activities (USFWS, 2007a).

Under the action alternative, approximately 3.0 acres of native and nonnative vegetation would be permanently removed for trail construction and development/expansion of parking lots, resulting in direct loss of habitat. However, this area represents less than 0.01 percent of forested, shrub, and grassland areas in the park, and mitigation measures would be implemented to reduce loss of native vegetation, particularly healthy trees, and therefore reduce adverse impacts on raptors. Therefore, this impact topic was not carried forward for further analysis.

### ***Rare Plant Species***

No federally listed plant species have been found in the park. Thirty-three plant species in the park are listed as state endangered (six species), threatened (nine species), or potentially threatened (eighteen species); these species inhabit forests, grasslands, and wetlands (NRCA, 2021).

No rare plants would be adversely affected by any proposed construction or restoration activities. The National Park Service would implement mitigation measures described in chapter 2, including examining potential rare plant habitat in and near all construction areas that have not been recently surveyed for the presence of rare plants. Known occurrences of rare plants in the vicinity of the proposed trails, parking lot additions and expansions, and viewing platforms would be delineated and protected during construction. If any rare plants were encountered on a proposed trail alignment, the plants would be marked so that individual plants can be avoided by routing the trail away from the plants. Therefore, this impact topic was not carried forward for further analysis.

### ***Species of Special Concern***

The National Park Service accessed the most recent USFWS list of species that are listed and protected under the federal Endangered Species Act that may occur in the park (USFWS, 2023). The species considered in this document are noted in table 1. There is no critical habitat located in the park.



**Table 2. Federally Endangered, Threatened, Candidate, and Proposed Species That May Occur in CUVA**

Common Name	Scientific Name	Federal Status	Species or Habitat in Planning Area	Proposed or Designated Critical Habitat Present in Planning Area
Indiana bat	<i>Myotis sodalis</i>	E, CH	Y	N
Northern long-eared bat	<i>Myotis septentrionalis</i>	E	Y	N
Tricolored bat	<i>Perimyotis subflavus</i>	PE	Y	N
Piping plover	<i>Charadrius melodus</i>	E	N	N
Red knot	<i>Calidris canutus rufa</i>	T	N	N
Monarch butterfly	<i>Danaus plexippus</i>	C	Y	N
Northern wild monkshood	<i>Aconitum noveboracense</i>	T	N	N

*T = threatened, CH = critical habitat, E = endangered, PE = proposed endangered, C = candidate*

The Indiana bat, northern long-eared bat, tricolored bat, and monarch butterfly are known to be present in the park currently or in recent years and are discussed separately.

### **Piping plover**

The project is within the range of the piping plover (*Charadrius melodus*), a federally listed endangered bird species. However, the species has not been detected in the park. Due to the project type, location, and onsite habitat, this species would not be expected within the project area, and no impacts to this species are expected.

### **Red Knot**

The project lies within the range of the red knot (*Calidris canutus rufa*), a federally listed threatened bird species. However, the species has not been detected in the park. Due to the project type, location, and onsite habitat, this species would not be expected within the project area, and no impacts to this species are expected.

### **Northern Wild Monkshood**

The proposed project lies within the range of northern monkshood (*Aconitum noveboracense*), a federally listed threatened species. The plant is found on cool, moist, talus slopes or shaded cliff faces in wooded ravines. However, the species has not been documented within the park, and no appropriate habitats for the species have been found in the park. Due to the project type, location, and onsite habitat, this species would not be expected within the project area, and no impacts to this species are expected.

### **Bat Species of Special Concern**

#### **Indiana bat**

The proposed project lies within the range of the Indiana bat (*Myotis sodalis*), a federally listed endangered species. The recovery plan for the Indiana bat describes the population distribution and

abundance, life history/ecology, habitat, and threats (USFWS, 2007). Several factors have contributed to the decline of the Indiana bat, including the loss and degradation of suitable hibernacula, human disturbance during hibernation, pesticides, and the loss and degradation of forested habitat, particularly stands of large, mature trees (NPS, 2012 TMP). Fragmentation of forest habitat may also contribute to declines. Summer habitat requirements for the species include (USFWS, 2012):

- dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas
- live trees (such as shagbark hickory and oaks) that have exfoliating bark
- stream corridors, riparian areas, and upland woodlots which provide forage sites.

With the significant amount of forested habitat and the multitude of streams and wetlands, the park provides a significant amount of potential habitat for this species (USFWS, 2012). The species was detected during a parkwide inventory of bat species in 2002 and 2003 (NPS 2012, TMP). As of 2012, no hibernacula or maternity roosts of Indiana bats have been detected in the park (NPS, 2012 TMP). The species was also detected during bat surveys in 2015 (Brown, 2016). However, the species was not identified in the 2021 and 2022 bat surveys (NPS, 2023d). No hibernacula or maternity roosts of Indiana bats have been detected in the park to date.

### **Northern long-eared bat**

The proposed project lies within the range of the northern long-eared bat (*Myotis septentrionalis*), a federally listed endangered species. The species status assessment report for the northern long-eared bat provides a thorough analysis of the species ecology and needs, historical condition, primary influences on viability, current condition, and projected future condition (USFWS, 2022). The primary factor influencing the viability of the species is white-nose syndrome; other primary factors include wind energy mortality, effects from climate change, and habitat loss (USFWS, 2022). During summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of live and dead trees; males and non-reproductive females may also roost in cooler places such as caves and mines (USFWS, 2022). Most females in a maternity colony give birth around the same time, which may occur from late May or early June to late July (USFWS, 2022). Northern long-eared bats spend winter hibernating in caves and mines. They typically use large caves or mines with large passages and entrances; constant temperatures; and high humidity with no air currents (USFWS, 2022).

The northern long-eared bat was the most common species detected during the 2022-2003 field surveys using mist-nets to capture bats (NPS 2022). A 2015 re-survey showed significant decline, with northern long-eared bats present at only three of the thirteen monitoring sites (NPS 2022). In the 2021-2022 bat surveys using ultrasonic acoustic monitoring, northern long-eared bats were present at four out of thirty-six monitoring sites, all of which could generically be classified as interior forest habitats (NPS 2022). This suggests a significant decline in overall abundance at the park.

### **Tricolored bat**

The proposed project is within the range of the tricolored bat (*Perimyotis subflavus*), a species proposed for listing as endangered under the Endangered Species Act. The species status assessment report for the tricolored bat provides a thorough analysis of the species ecology and needs, historical condition, primary influences on viability, current condition, and projected future condition (USFWS, 2021). Several factors have contributed to the decline of the tricolored bat, including white-nose syndrome; wind energy projects; loss of roosting, foraging, and commuting habitat; and changing climatic variables (USFWS, 2021). During spring, summer, and fall, tricolored bats primarily roost among live and dead leaf clusters or live or recently dead deciduous trees (USFWS,

2021). In addition, tricolored bats have been observed roosting during summer among pine needles, within artificial roosts such as barns, beneath porch roofs, bridges, concrete bunkers, and rarely within caves (USFWS, 2021). During the winter, tricolored bats primarily hibernate in caves and mines (USFWS, 2021).

During the initial 2002 bat survey at the park using mist-netting, three individuals were detected; during the 2015 bat survey two individuals were detected (NPS, 2021b). In the 2021-2022 bat surveys using ultrasonic acoustic monitoring, tricolored bats were detected at four out of twenty monitoring sites in 2021 and seventeen out of twenty-seven monitoring sites in 2022 (NPS 2022). During the 2021-2022 surveys, the tricolored bat was detected in both southern and northern ends of the park. Within the park, tricolored bats can be found along the river corridor and use a diversity of spots for habitat, including trees and culverts.

### **Effects of the proposed action on bat species**

Under the NPS proposed action, development and expansion of park facilities and rehabilitation of the Towpath Trail may affect the Indiana bat, northern long-eared bat, and tricolored bat via disturbance from human activity (particularly to active hibernacula or maternity roosts) and loss of or reduced quality of habitat conditions. Under the action alternative, up to 1.1 acres of native and nonnative vegetation would be permanently removed for development of trails. In addition, up to 1.9 acres of native and nonnative vegetation would be permanently removed for development and expansion of parking lots. Additional information on the types of vegetation that would be removed can be found in the Vegetation section below. Finally, during rehabilitation of the Towpath Trail, the trail would be widened in some areas to accommodate benches or interpretive features where the width of the existing berm can support the extra width of the space. Some beneficial impacts to bats would occur via removal of asphalt and restoration to native vegetation at three different parking lots, as 1.9-2.8 acres of impervious surface would be restored to native vegetation. These would provide additional habitat for bat prey species. The permanent removal of approximately 3.0 acres of vegetation would not measurably affect bat populations because parkwide there are more than 1,600 acres of bottomland hardwood forests, 1,100 acres of shrub and grassland, 21,700 acres of upland forests, and 1,000 acres of wetlands (NPS, 2012a).

To minimize adverse impacts to bats from the proposed action, mitigation measures described in chapter 2 and the park's sustainable trail guidelines would be implemented. For example, tree removal would be scheduled to occur outside of the period between April 1 and October 31. If tree removal must occur during that time, further coordination with US Fish and Wildlife Service would occur to determine if surveys are warranted. Any survey would be designed and conducted in coordination with the US Fish and Wildlife Service. In addition, trail alignments would be designed such that native vegetation would be retained as much as possible.

For the reasons cited above, the actions proposed under the NPS preferred alternative would not be of any new measurable consequence to bat species in the park. Under the no-action alternative, there would be no new impacts to bat species in the park. Therefore, this impact topic was not carried forward for further analysis.

Under the US Fish and Wildlife Service guidance for implementing section 7 consultation under the Endangered Species Act, the NPS preferred alternative *may affect but is not likely to adversely affect* the Indiana bat, northern long-eared bat, and tricolored bat.

### **Monarch butterfly**

The project is within the range of the Monarch butterfly (*Danaus plexippus*), a candidate species for listing under the Endangered Species Act. A species status assessment report provides a thorough analysis of the species' ecology and needs, historical condition, primary influences on viability, current condition, and projected future conditions (USFWS, 2021).

Monarch butterflies are present in the park during the summer and fall (NPS, 2023e). Summer breeding monarchs are attracted to the Cuyahoga Valley because of abundant milkweed, the only host plant that young monarch butterflies can eat (NPS, 2023e). Monarch butterflies also rely on milkweed in their larval stage. During peak migration in the fall, monarch butterflies seek old fields in the afternoon where they can feed on nectar-rich flowers such as goldenrod and New England aster before retreating to nearby forests in the early evening (NPS, 2023e). Terra Vista Natural Study Area and the large meadows along the Cross Country Trail near Pine Hollow are examples of excellent monarch habitats in the park (NPS, 2023e). The National Park Service has planted milkweed in the park, including along parking lots and along the Towpath Trail.

Under the NPS proposed action, development and expansion of park facilities and rehabilitation of the Towpath Trail may affect the monarch butterfly via reduction in availability, spatial distribution, and quality of milkweed and nectar resources and direct mortality via clearing of milkweed where caterpillars are present. Under the action alternative, up to 1.1 acres of native and nonnative vegetation would be permanently removed for development of trails. In addition, up to 1.9 acres of native and nonnative vegetation would be permanently removed for development and expansion of parking lots. Additional information on the types of vegetation that would be removed can be found in the vegetation section in chapter 3. Finally, during rehabilitation of the Towpath Trail, the trail would be widened in some areas to accommodate benches or interpretive features where the width of the existing berm can support the extra width of the space. Some beneficial impacts to monarch butterflies would occur via removal of asphalt and restoration to native vegetation at three different parking lots; 1.9-2.8 acres of impervious surface would be restored to native vegetation. At these locations, where feasible (where potential habitat exists), the National Park Service would complete seeding or planting projects that promote preferred native floral resources for monarch breeding and/or foraging. Therefore, the permanent removal of up to three acres of vegetation would not measurably affect monarch butterfly populations because parkwide there are more than 1,600 acres of bottomland hardwood forests, 1,100 acres of shrub and grassland, 21,700 acres of upland forests, and 1,000 acres of wetlands (NPS, 2012a).

To minimize adverse impacts to monarch butterflies from the proposed action, mitigation measures described in chapter 2 and the park's sustainable trail guidelines would be implemented. For example, no vegetation clearing in prairie or meadow areas with milkweed and/or blooming nectar plants would be scheduled during peak monarch breeding (June-August) and migration (September-October) periods. If vegetation clearing must occur during that time, coordination with US Fish and Wildlife Service would determine if surveys are warranted. Any survey would be designed and conducted in coordination with the US Fish and Wildlife Service. Trail alignments would be designed such that native vegetation would be retained as much as possible.

For the reasons cited above (no vegetation clearing or ground disturbance while monarch butterflies are present; minimal area of habitat affected by trail construction; a net decrease in impervious surfaces in the park; compensation via seeding or planting projects), the actions proposed under the NPS preferred alternative would not be of any new measurable consequence to monarch butterflies. Under the no-action alternative, there would be no new impacts to monarch butterflies. Therefore, this impact topic was not carried forward for further analysis.

Under the US Fish and Wildlife Service guidance for implementing section 7 consultation under the Endangered Species Act, the no-action alternative and NPS preferred alternative each may affect but is not likely to adversely affect the monarch butterfly.

### ***Water Quality***

All of the park is in the Cuyahoga River watershed. The park protects a complex of fluvial landforms, including a 25-mile corridor of the Cuyahoga River, its floodplain, and adjacent ravines that contain nearly 200 miles of perennial tributaries. Water quality in the Cuyahoga River has been historically

poor but is gradually improving, although segments of the river are still on the Clean Water Act's 303(d) list of impaired waters. The majority of the tributaries in the Park meet the water quality standards set by the state for either warm water or cold-water habitat designation (NPS, 2012a).

Ground disturbance during construction would displace soils, potentially resulting in erosion and discharge of sediment into creeks and drainages. Use of heavy equipment to construct parking areas, bridges, and other trail facilities may result in discharge of hydrocarbons into surface waters. These adverse impacts would be mitigated by applying standard mitigation measures and best management practices discussed in chapter 2 as well as the park's sustainable trail guidelines, including delineation of project boundaries, establishment of appropriate staging areas, application of intensive erosion control measures, stabilization of loose soils and stockpiles, consistent maintenance of equipment, and adherence to spill prevention and contingency plans. Under alternative B, up to 1.9 acres of impervious surface would be constructed, while 1.9-2.8 acres of impervious surface would be restored by removal or reduction in size of existing parking lots. Therefore, there would be a net decrease of 0.02-1.1 acres of impervious surfaces in the park.

Visitor use of trails that are near water bodies, such as the proposed Blue Hen accessible trail, could adversely affect riparian water quality from trail and bank erosion and subsequent sedimentation. However, adverse impacts would be minimized with the implementation of mitigation measures listed in chapter 2 as well as the park's sustainable trail guidelines, including establishing trail locations outside of the established riparian function buffer zone whenever feasible and minimizing the number of stream crossings along a segment. Therefore, this impact topic was not carried forward for detailed analysis.

## **Wetlands**

To comply with Executive Order 11990, "Protection of Wetlands," any facilities or construction would be designed to avoid adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

Wetlands are located to the east of the current East Rim Trail gravel parking area that would be expanded south by approximately 0.4 acres (about 18,000 feet). The National Park Service would maintain a 25-foot buffer between the area of disturbance and the wetlands. In addition, the natural drainage off the parking lot is away from wetlands towards the road on the west side. Wetlands are also located across the road from the former Lorenz property where the National Park Service proposes to construct a 54-stall parking area. Parking lot construction would follow best management practices and conditions as outlined in *NPS Procedural Manual #77-1: Wetland Protection* (NPS, 2016a), such as properly maintaining appropriate erosion and siltation controls during ground-disturbing activities. Therefore, no adverse impacts to wetlands would occur from these actions.

Wetlands are located near the western edge of the current Botzum parking lot, where the National Park Service proposes to reduce the size of the lot by about 43-67 spaces. In addition, there are wetlands on the northern side of the Kendall Lake parking lot, where the National Park Service proposes to remove 20 parking spaces. At both of these parking lots, asphalt would be removed. To the greatest extent possible, the National Park Service would regrade the restored areas to bring them down to the existing wetland contour and restore wetland function. Restoration activities would follow best management practices and conditions as outlined in *NPS Procedural Manual #77-1: Wetland Protection* (NPS, 2016), such as properly maintaining appropriate erosion and siltation controls. Therefore, no adverse impacts to wetlands would occur from these actions. Reduction of impervious surface at these two parking areas would provide beneficial impacts to wetlands via reduction of runoff. Additionally, some wetlands function might be restored over time in the areas where asphalt is removed.

Wetlands are located in the area where the National Park Service proposes to create an accessible trail from the Blue Hen Falls parking lot to the waterfall. A wetland delineation would be performed to identify the types and specific locations of wetlands along the proposed trail route and to quantify the anticipated impacts upon further design development of the trail. It is likely that impacts to wetlands would be less than 0.1 acres given the limited areas of wetlands in the area of the proposed trail. However, if it is determined that impacts on wetlands would exceed 0.1 acres, then the National Park Service would conduct wetlands compensation and a wetlands statement of findings in accordance with Executive Order 11990 (NPS, 2016).

Under alternative B, the National Park Service proposes adding a trail bridge for pedestrians and horses for the Riding Run Trail near Wheatley Road. The National Park Service would design the bridge to span the channel and the associated wetland habitat (i.e., no pilings, fill, or other support structures in the wetland/stream habitat). After further site planning, if the trail bridge could not be designed to avoid wetlands, then the National Park Service would complete additional compliance (e.g., a wetland statement of findings) to assess impacts on wetlands and ensure no net loss of wetland area.

Under alternative B, the National Park Service proposes rehabilitating the Towpath Trail surface in accordance with Ohio & Erie Canal CLR treatment recommendations by adopting chip-sealed asphalt as the Towpath Trail surface treatment. This activity would be excepted from the wetland statement of findings and compensation requirements under Section 4.2.1.7 of *NPS Procedural Manual #77-1: Wetland Protection*: maintenance, repair or renovation of currently serviceable facilities or structures as the structure was completed prior to May 28, 1980, and its retention is justified according to section 5.6. “Bump-outs” may be developed along the portions of the Towpath Trail that follow its historic width to accommodate benches or interpretive features. However, per the CLR treatment recommendations, bump-outs would only be used where the width of the berm can support the extra width of the space. Impacts to wetlands from deviation in the structure’s configuration or fill footprint would be limited to 0.1 acres or less.

In summary, the potential for adverse impacts to wetlands is very limited with the implementation of mitigation measures and best management practices, and some actions would result in beneficial impacts to wetlands. Therefore, this impact topic was not carried forward for detailed analysis.

**APPENDIX C: NATIONWIDE RIVERS INVENTORY WSRA SECTION 5(D) COMPLIANCE FORM**



## National Park Service

Interior Region 3 (Great Lakes); Region 4 (Mississippi Basin); Region 5 (Missouri Basin)  
601 Riverfront Drive, Omaha, NE 68102

### Nationwide Rivers Inventory WSRA Section 5(d) Compliance Form

The purpose of this form is to help NPS Parks with rivers listed on the Nationwide Rivers Inventory (NRI) to meet regulatory responsibilities in partial fulfillment of Section 5(d) of the National Wild and Scenic Rivers Act (16 USC 1271-1287), which states:

*In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas... the Secretary of the Interior shall make specific studies and investigations to determine which additional wild, scenic and recreational river areas... shall be evaluated in planning reports by all Federal agencies as potential alternative uses of water and related land resources involved.*

The NRI is a register of rivers that may be eligible for inclusion in the National Wild and Scenic River System (System). The intent of the NRI is to provide information to assist Agencies in making balanced decisions regarding the use of the nation's river resources and to prevent potential impacts to the values for which a river has been listed. The NPS, as part of normal planning and environmental review processes, should take care to avoid or mitigate adverse effects on rivers identified in the NRI. The NRI can be found at the following link: <https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm>

PROJECT NAME:	CUVA CAP Circulation EA	FORM DATE:	May 2023
PMIS ID#:	PEPC ID#:	PROJECT TARGET START DATE:	
245967	92300		

#### general information (check all that apply)

River Segment:		Cuyahoga River, Peninsula Aqueduct Pedestrian Bridge to Canal Diversion Dam					
NPS Unit:	CUVA	State:	OH	County:	Cuyahoga, Summit	Potential Classification:	Recreation
ORV	<input checked="" type="checkbox"/> Scenic		<input checked="" type="checkbox"/> Cultural		<input checked="" type="checkbox"/> Recreation		<input checked="" type="checkbox"/> Historic
	<input type="checkbox"/> Fish		<input type="checkbox"/> Geologic		<input type="checkbox"/> Wildlife	<input type="checkbox"/> Other	



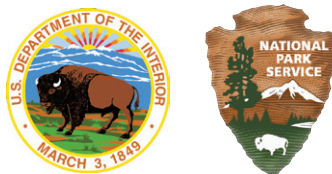


## National Park Service

Interior Region 3 (Great Lakes); Region 4 (Mississippi Basin); Region 5 (Missouri Basin)  
601 Riverfront Drive, Omaha, NE 68102

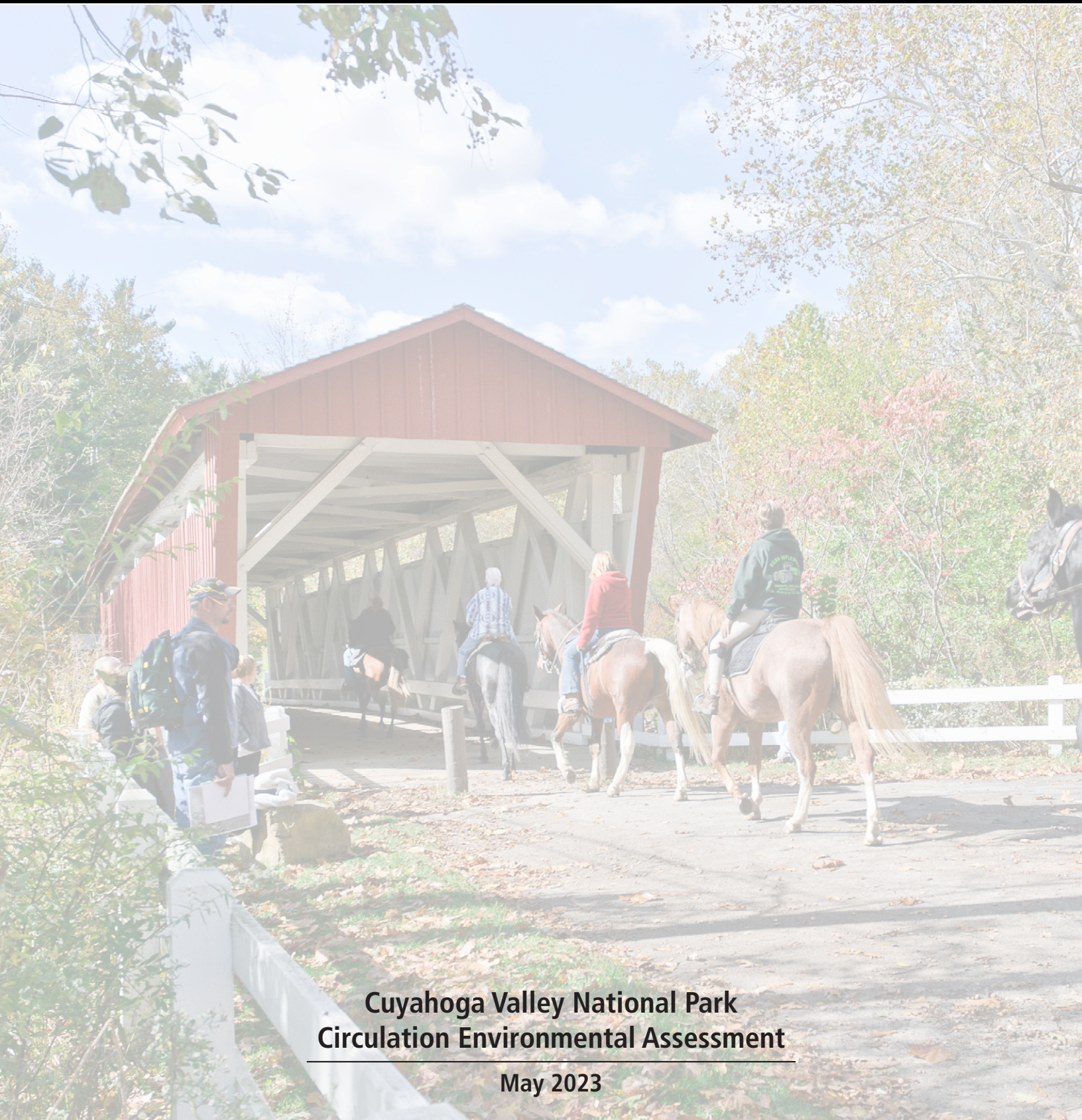
<b>Project Location:</b>	Parkwide	<b>Does the project occur within 1320 ft. (1/4 mile) of the River?</b>	<input checked="" type="checkbox"/> yes <input type="checkbox"/> No	
<b>Inclusions:</b>	<input type="checkbox"/> Location Map	<input type="checkbox"/> Plans/Drawings	<input type="checkbox"/> Pictures	<input type="checkbox"/> List of Recommendations
<b>project description</b>				
<p>The purpose of this circulation EA is to alleviate congestion at high-priority locations throughout the park while preserving highly visited key natural and cultural resources at Cuyahoga Valley National Park. The project will address parking lot supply and demand to alleviate congestion and underutilization of parking lots. The following actions within the river corridor are being proposed as part of the proposed action and preferred alternative:</p> <ul style="list-style-type: none"> <li>- Rehabilitation of the entire length of the Towpath Trail surface with chip sealed asphalt as the surface treatment.</li> <li>- Reduction in size of the Botzum parking lot by 30,000-45,000 square feet.</li> <li>- Identify several time limited parking spaces in the Boston Mill Visitor Center parking lot.</li> <li>- Support Cleveland Metroparks and Summit Metro Parks development of the multi-use Sagamore Connector Trail from Canal Road to the Bike &amp; Hike Trail.</li> </ul>				
<b>SECTION 5(d) EVALUATION:</b>				
<input checked="" type="checkbox"/> Project actions are unlikely to foreclose wild, scenic, or recreational status for the affected river.				
<input type="checkbox"/> Project actions may foreclose wild, scenic, or recreational status for the affected river.				

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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  
Circulation Environmental Assessment**

**May 2023**