

**National Park Service  
Cuyahoga Valley National Park**

**FINAL  
ENVIRONMENTAL ASSESSMENT  
FOR  
ROCKSIDE BOARDING AREA  
PARKING EXPANSION AND  
TRAIL BRIDGE OVER  
THE CUYAHOGA RIVER**

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CUYAHOGA VALLEY NATIONAL PARK  
Environmental Assessment for  
Rockside Boarding Area Parking Expansion

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**Table of Contents**

	<u>Page</u>
1.0 Introduction/Purpose and Need.....	1-1
1.1 About This Document.....	1-1
1.2 Background.....	1-3
1.2.1 Park History .....	1-3
1.2.2 Project History .....	1-5
1.3 Purpose and Need Statement .....	1-8
1.4 Laws (Statutes), Executive Orders, Regulations, Policies and Guidelines...	1-10
2.0 Issue Identification.....	2-1
2.1 Issues and Impact Topics Addressed in this EA.....	2-2
2.1.1 Wetlands .....	2-2
2.1.2 Floodplains.....	2-2
2.1.3 Water Resources .....	2-3
2.1.4 Threatened, Endangered, or Special Concern Species.....	2-3
2.1.5 Wildlife and Wildlife Habitat .....	2-3
2.1.6 Vegetation and Invasive Species .....	2-3
2.1.7 Cultural Resources.....	2-4
2.1.8 Nightscape.....	2-4
2.1.9 Health and Safety .....	2-4
2.1.10 Visitor Experience .....	2-4
2.2 Issues and Impact Topics Identified and Considered But Not Addressed in this EA.....	2-5
2.2.1 Nationwide Rivers Inventory Status .....	2-5
2.2.2 National Natural Landmarks.....	2-5
2.2.3 Sole or Principal Drinking Water Aquifers .....	2-5
2.2.4 Air Quality .....	2-5
2.2.5 Noise .....	2-5
2.2.6 Geologic Resources .....	2-6
2.2.7 Cultural Resources: Archaeological Resources .....	2-6
2.2.8 Prime Farmlands .....	2-7
2.2.9 Energy Resources.....	2-7
2.2.10 Affiliated Tribes.....	2-7
2.2.11 Environmental Justice.....	2-7

CUYAHOGA VALLEY NATIONAL PARK  
Environmental Assessment for  
Rockside Boarding Area Parking Expansion

---

**Table of Contents (Continued)**

	<u>Page</u>
2.0 Issue Identification (Continued)	
2.2 Issues and Impact Topics Identified and Considered But Not Addressed in this EA (Continued)	
2.2.12 Economic Factors.....	2-8
2.2.13 Social Factors.....	2-8
3.0 Alternatives .....	3-1
3.1 Alternative 1 – No Action.....	3-1
3.2 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River (Preferred).....	3-2
3.3 Alternatives Considered But Rejected .....	3-4
3.3.1 Use of Selected Green Techniques for Entire Parking Area.....	3-4
3.3.2 Manage Existing Lot to Increase Capacity .....	3-4
3.3.3 Use of Overflow Parking .....	3-5
3.3.4 Use of Shuttles .....	3-5
3.3.5 Use of Other Boarding Areas.....	3-5
3.3.6 Expansion of Parking Area(s) in Other Locations.....	3-5
3.4 Environmentally Preferred Alternative.....	3-6
4.0 Affected Environment.....	4-1
4.1 Existing Facilities.....	4-1
4.2 Wetlands .....	4-2
4.3 Floodplains.....	4-3
4.4 Water Resources .....	4-4
4.5 Threatened, Endangered, or Special Concern Species.....	4-5
4.6 Wildlife and Wildlife Habitat .....	4-9
4.7 Vegetation and Invasive Species .....	4-11
4.8 Cultural Resources .....	4-14
4.8.1 Historic Structures .....	4-14
4.8.2 Cultural Landscape .....	4-15
4.9 Nightscape.....	4-16
4.10 Health and Safety.....	4-17
4.11 Visitor Experience .....	4-17

**CUYAHOGA VALLEY NATIONAL PARK**  
Environmental Assessment for  
Rockside Boarding Area Parking Expansion

---

**Table of Contents (Continued)**

	<u>Page</u>
5.0 Impacts.....	5-1
5.0.1 Cumulative Impact.....	5-3
5.0.2 Impairment Analysis.....	5-4
5.1 Impact on Wetlands .....	5-5
5.1.1 Regulations and Policies.....	5-5
5.1.2 Methodology.....	5-5
5.1.3 Alternative 1 – No Action.....	5-8
5.1.4 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River.....	5-8
5.2 Impact on Floodplains.....	5-11
5.2.1 Regulations and Policies.....	5-11
5.2.2 Methodology.....	5-11
5.2.3 Alternative 1 -No Action .....	5-13
5.2.4 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River.....	5-13
5.3 Impacts on Water Resources.....	5-14
5.3.1 Regulations and Policies.....	5-14
5.3.2 Methodology.....	5-15
5.3.3 Alternative 1 -No Action .....	5-19
5.3.4 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River.....	5-20
5.4 Impacts on Threatened, Endangered or Special Concern Species.....	5-20
5.4.1 Regulations and Policies.....	5-20
5.4.2 Methodology.....	5-21
5.4.3 Alternative 1 -No Action .....	5-22
5.4.4 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River.....	5-22
5.5 Impacts on Wildlife and Wildlife Habitat.....	5-23
5.5.1 Regulations and Policies.....	5-23
5.5.2 Methodology.....	5-23
5.5.3 Alternative 1 -No Action .....	5-25
5.5.4 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River.....	5-25

**CUYAHOGA VALLEY NATIONAL PARK**  
Environmental Assessment for  
Rockside Boarding Area Parking Expansion

---

**Table of Contents (Continued)**

	<u>Page</u>
5.0 Impacts (Continued)	
5.6 Impacts on Vegetation and Invasive Species.....	5-26
5.6.1 Regulations and Policies .....	5-26
5.6.2 Methodology .....	5-27
5.6.3 Alternative 1 -No Action .....	5-29
5.6.4 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River.....	5-29
5.7 Impacts on Cultural Resources .....	5-30
5.7.1 Regulations and Policies .....	5-30
5.7.2 Methodology .....	5-31
5.7.2.1 Historic Structures .....	5-31
5.7.2.2 Cultural Landscapes.....	5-32
5.7.3 Alternative 1 -No Action .....	5-33
5.7.3.1 Historic Structures .....	5-33
5.7.3.2 Cultural Landscapes.....	5-33
5.7.4 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River.....	5-33
5.7.4.1 Historic Structures .....	5-33
5.7.4.2 Cultural Landscapes.....	5-34
5.8 Impacts on Nightscape.....	5-34
5.8.1 Regulations and Policies .....	5-34
5.8.2 Methodology .....	5-35
5.8.3 Alternative 1 -No Action .....	5-36
5.8.4 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River.....	5-37
5.9 Impacts on Health and Safety .....	5-37
5.9.1 Regulations and Policies .....	5-37
5.9.2 Methodology .....	5-38
5.9.3 Alternative 1 -No Action .....	5-39
5.9.4 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River.....	5-40
5.10 Impacts on Visitor Experience.....	5-41
5.10.1 Regulations and Policies .....	5-41
5.10.2 Methodology .....	5-41
5.10.3 Alternative 1 -No Action .....	5-42
5.10.4 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River.....	5-43

**CUYAHOGA VALLEY NATIONAL PARK**  
Environmental Assessment for  
Rockside Boarding Area Parking Expansion

---

**Table of Contents (Continued)**

	<u>Page</u>
6.0 Consultation and Coordination .....	6-1
6.1 Public Involvement .....	6-1
6.2 Agencies and Organizations that Received the Environmental Assessment .....	6-1
6.3 Prepares and Contributors .....	6-4
7.0 References .....	7-1
Appendix A - Laws (Statutes), Executive Orders, Regulations, Policies and Guidelines	
Appendix B - Public Involvement	
Appendix C - Drawings	
Appendix D - Wetlands Delineation Report	
Appendix E - Combined Statement of Findings for Executive Order 1988 "Floodplain Management and Executive Order 11990 "Protection of Wetlands"	
Appendix F - Additional Documentation	
Appendix G - Cuyahoga Valley Scenic Railroad, "Progress & Promise: Developing Excursion Passenger Rail Service in the Ohio & Erie Canalway," May 2004.	

**List of Tables**

Table 1-1.	Ticket Sales at Rockside Station .....	1-5
Table 1-2.	Annual Visits to Lock 39 Trailhead .....	1-8
Table 4-1.	Wetlands Delineated on the Site. ....	4-3
Table 4-2.	State-listed Rare Plants Occurring in Cuyahoga Valley National Park. ....	4-6
Table 4-3.	Federal and State-listed Wildlife Species Occurring in Cuyahoga Valley National Park .....	4-7
Table 4-4.	Bird Species of Conservation Concern Known to Breed in CVNP .....	4-9
Table 4-5.	Invasive Plant Species in CVNP .....	4-13
Table 5-1.	Direct Impacts on Wetlands (in Acres) .....	5-9
Table 5-2.	Summary of Wetlands Impact Intensities. ....	5-9
Table 5-3.	Pollutant Concentrations from Source Areas .....	5-17
Table 5-4.	Summary of Average Daily Pollutants and Mass Balance Analysis. ....	5-18

# CUYAHOGA VALLEY NATIONAL PARK

## Environmental Assessment for Rockside Boarding Area Parking Expansion and Trail Bridge over the Cuyahoga River

### 1.0 INTRODUCTION/PURPOSE AND NEED

#### 1.1 About This Document

In 1969, the United States Congress passed the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) to establish a national policy,

*“...which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; ...”*

The Act also established the Council on Environmental Quality (CEQ) as an agency of the Executive Office of the President. In enacting NEPA, Congress recognized that nearly all federal activities affect the environment in some way. Section 102 of NEPA mandates that before federal agencies make decisions, they must consider the effects of their actions on the quality of the human environment. The act assigns CEQ the task of ensuring that federal agencies meet their obligations under NEPA.

The CEQ developed regulations (40 CFR 1500-1508) that describe the means for federal agencies to develop the Environmental Impact Statements (EISs) mandated by NEPA in Section 102. The CEQ regulations developed the Environmental Assessment (EA) to be used when there is not enough information to decide whether a proposed action may have significant impacts. If an EA concludes that a federal action will result in significant impacts, it becomes an EIS. Otherwise, it results in a Finding of No Significant Impact (FONSI).

Section 1508.09 of the CEQ regulations states that the purposes of an EA are to:

1. Briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or a FONSI.
2. Aid an agency's compliance with the Act when no environmental impact statement is necessary.
3. Facilitate preparation of a statement when one is necessary.

Preparation of an EA is also used to aid in an agency's compliance with Section 102(2)E of NEPA, which requires an agency to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.”

The Department of the Interior produced its NEPA regulations as Part 516 of its Departmental Manual (DM), and the National Park Service (NPS) produced several NEPA handbooks. The latest version of Director's Order 12 was issued in 2001 along with the Handbook for Environmental Impact Analysis (the DO-12 Handbook). The NPS has added some requirements that go beyond those imposed by CEQ to help facilitate the requirements of the law that established the NPS (the Organic Act) and other laws and policies that guide our actions. This document has been completed under the guidance of the DO-12 Handbook.<sup>1</sup>

One of the resources maintained at Cuyahoga Valley National Park (CVNP) is the Valley Railway through the Park, which is listed on the National Register of Historic Places and forms the Valley Railway Historic District. The Cuyahoga Valley Scenic Railroad (CVSR) is a not-for-profit organization that operates passenger excursion trains on the Valley Railway through a cooperative agreement. Along with its associated infrastructure (parking and trail linkages), the CVSR is also considered to be part of the CVNP Alternative Transportation System (ATS). Annual ridership has steadily increased since 1990 and is expected to continue to expand with the recent connection to Canton, Ohio and the planned connection to downtown Cleveland, Ohio.

Among other locations, CVSR has a boarding site at the northern park boundary off Old Rockside Road and along the west side of the Cuyahoga River, known as the Rockside Boarding Area (see location map in Appendix C). A gravel parking area that accommodates 149 vehicles currently serves this area. With the growth of the Valley Railway and in the services provided by CVSR, the parking area has experienced increased use resulting in increased demands on capacity, on operations, and on the quality of the user experience. The NPS also has a parking facility that accommodates 42 vehicles at the Lock 39 trailhead on the east side of the Cuyahoga River, across from the Rockside Boarding Area, which has also experienced increased use resulting in increased demands on capacity. The NPS, with ATS funding from the Federal Highway Administration/Federal Transit Administration, seeks to accommodate the demand for additional parking, update the facilities for current and projected operations as part of the CVNP ATS, and improve the visitor experience at these facilities. A build alternative has been developed through the planning process to construct asphalt parking at the Rockside Boarding Area outside of the Cuyahoga River floodway, which would connect to the Rockside Station. Additional parking would be provided to the south of this facility on stabilized turf. Lighting would be provided for the parking area. The loading platform at the Rockside Station would be extended 120 feet to the south. A Class I trail bridge would be constructed over the Cuyahoga River to connect the two parking facilities so that the Rockside Boarding Area facility could be better used as parking overflow for the Lock 39 Trailhead parking facility. This EA is being prepared to analyze the potential effects of this build alternative and the "no action" alternative. The area for the expansion is limited and resources that could be impacted include the Cuyahoga River and its associated floodplain, and a number of small wetland areas.

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<sup>1</sup> Available over the internet at <http://www.nps.gov/policy/DOrders/RM12.pdf>



## 1.2 Background

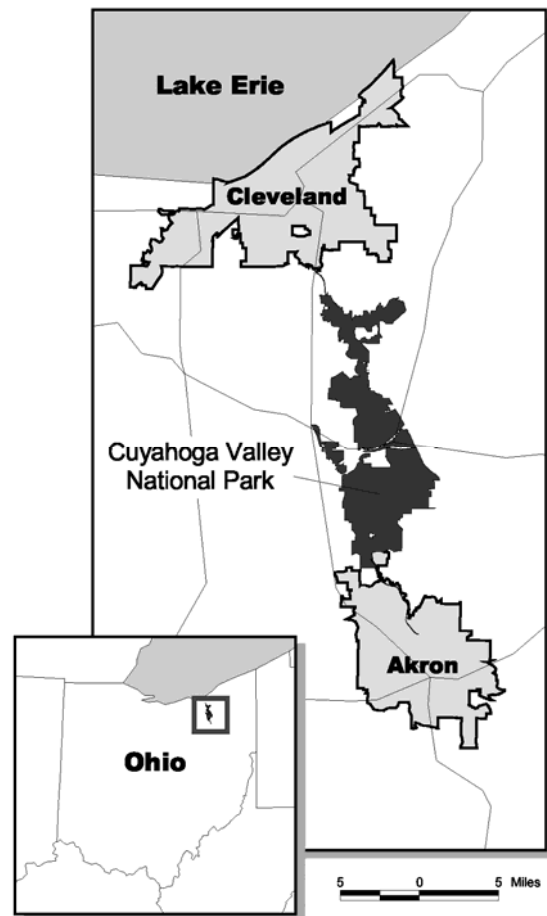
### 1.2.1 Park History

The National Park System preserves outstanding representatives of the best of America's natural, cultural, and recreational resources of national significance. These resources constitute a significant part of the American heritage, its character, and future. Along with similar resources of local, state, tribal, and national significance administered by other public and private organizations and supported by NPS technical assistance and grant funding, CVNP is a vital part of America's system of parks and other preserved resources. The NPS not only directly and indirectly preserves these irreplaceable national treasures, but it also makes them available annually to millions of visitors from throughout both this country and the world.

The Cuyahoga River Valley was formed as the last glaciers retreated from northeastern Ohio about 15,000 years ago. The name "Cuyahoga" is a blend of several native peoples' names for the river, and is usually translated to mean "crooked river." The river flows to the north into Lake Erie. The river allowed travel by canoe to an eight-mile portage trail leading to the south-flowing Tuscarawas River, which eventually feeds the Ohio River and was therefore it was deemed neutral territory for all passing tribes.

The Cuyahoga River was the western boundary of the United States from 1795 to 1803. While the early canoe routes were suitable for the Native Americans, early settlers and farmers found the unpredictably swift currents to be treacherous. The Ohio & Erie Canal was constructed along the Cuyahoga in the early 1800's to provide a much-needed safe and dependable way to ship products to market. The canal opened in 1827, resulting in a subsequent economic boom in the surrounding area.

Following a nationwide pattern, railroads replaced canals as important travel and trade routes in the latter half of the 19<sup>th</sup> century. In 1880, the first steam engine chugged down the new Valley Railway to transport coal from south of Canton to Cleveland. It also served farmers and



*Location of Cuyahoga Valley National Park, Ohio.*

merchants along the route, carrying goods and crops. Financial difficulties in 1894 led to the Valley Railway's acquisition by the Cleveland Terminal & Valley Railroad (CT&V). The Baltimore and Ohio Railroad bought the CT&V in 1915 and continued the freight and passenger service between Akron and Cleveland. As the automobile replaced the railroad in importance, passenger service ended on this line in 1963, and the last freight train ran in 1985.

In December 1974, President Gerald Ford signed legislation creating the Cuyahoga Valley National Recreation Area (CVNRA), located along 22 miles of the Cuyahoga River between Cleveland and Akron, Ohio. It covers an area of over 32,800 acres and features a wide variety of natural, cultural, and historic resources. The purposes for the CVNRA included:

*... preserving and protecting for public use and enjoyment the historic, scenic, natural, and recreational values of the Cuyahoga River and adjacent lands in the Cuyahoga Valley, and for the purpose of providing for the maintenance of needed recreational open space necessary to the urban environment . . .*

Historic resources in the CVNRA include the Ohio & Erie Canal (including the towpath), the Valley Railway, and numerous buildings and bridges. Many of these resources are on the National Register of Historic Places. The Ohio & Erie Canal National Heritage Corridor, which was established by Congress in 1996 under the Omnibus Parks Bill encompasses the primary resources associated with the Ohio & Erie Canal and its region and extends for 110 miles between Lake Erie and Dover/New Philadelphia. This corridor includes the area of the CVNRA. Natural resources include the river and a number of ecosystems with associated flora and fauna located in the river and in the river valley.

The CVNRA developed dramatically in the next 25 years following designation, offering many new facilities and programs to the public. "Cuyahoga Valley National Recreation Area" was renamed "Cuyahoga Valley National Park" on October 11, 2000<sup>2</sup>. It is now the third most-visited national park, with 3.5 million visitors a year. With a budget that surpasses \$9.5 million, CVNP is approaching the top ten in annual budget.

Three major recreational/educational features have been established in the park, including the 20-mile Towpath Trail, the Valley Railway, and the Cuyahoga Valley Environmental Education Center. These resources enhance opportunities for interpretation of the history of the valley and provide the visiting public with recreational opportunities. The Towpath Trail and the Valley Railway are both listed on the National Register of Historic Places and therefore require preservation and protection. A four-mile section of the Towpath Trail is also a designated National Historic Landmark.

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<sup>2</sup> All land designations in the park system have equal legal standing and differences do not extend far beyond nomenclature. See <http://www.nps.gov/legacy/nomenclature.html>. The park's name change did not change the purpose of the park. In fact, nothing changed with respect to the site other than the name designation from "National Recreation Area" to "National Park."

### 1.2.2 Project History

Cuyahoga Valley Scenic Railroad (CVSR) provides excursion passenger rail service along the 26-mile stretch from Independence to downtown Akron (and recently to Canton), extending



through the length of the CVNP. The NPS has a cooperative agreement with the Cuyahoga Valley Scenic Railway Corporation, a non-profit organization. The NPS owns and maintains the trackage and the right-of-way from the northern edge of CVNP to downtown Akron. The CVSR owns the railroad and operates the service. Twenty-two vintage rail cars, built between 1939 and 1940, provide a climate-

controlled atmosphere and carry up to 800 passengers. Train speeds vary between 10 to 25 mph to allow for scenic viewing (Cambridge Systematics, Inc. 2001).

Train service is provided on a regularly scheduled basis throughout most of the year. The current CVSR schedule at Rockside Station is included in Appendix F. The schedule varies over the course of a year, and includes such trains as the Inventure Express, Hale Farm & Village, Stan Hywet Hall & Garden, Hartville Connection, Bike & Hike, Peninsula Explorer, AM Scenic, PM Scenic and Educational Express. Nighttime excursions, charter service and special holiday trips are also available. The peak season occurs during the fall and early winter months. Vehicle counts have not been maintained at the Rockside Boarding Area. However, the CVSR has maintained records of ticket sales at Rockside Station. These are summarized in Table 1-1. More detailed information is included in Appendix F.



Table 1-1. Ticket Sales at Rockside Station.

Year	AM	PM	Pen Exp	Canal	Scenic	Other	Total Sales
1999	17,915	15,245					33,160
2000	16,088	11,950					28,038
2001	19,022	17,043					36,065
2002	15,013	16,519					31,532
2003*	4,664	5,424	2,855	2,317		3,306	18,566
2004			4,509	4,520	17,939	22,592	49,560

\*Note: Floods in 2003 limited train service and ticket sales.

Annual ridership for the entire CVSR has increased nearly five fold in ten years as shown on page 3 of Appendix G. Service to Canton, Ohio was inaugurated by the CVSR on July 2, 2003. Ridership is expected to continue to increase and approach 250,000 passengers with future connections planned in downtown Cleveland, Ohio (Appendix G, page 14). Promotion of the CVSR and its growth are also part of the Ohio & Erie Canal National Heritage Corridor Management Plan (Ohio & Erie Canal Association, 2000). Expansion of the route and services of the CVSR is also documented in the Federal Lands Alternative Transportation Systems Study (Cambridge Systematics, Inc., 2001).

There are currently seven boarding sites along the railway operated by CVSR within CVNP and two boarding stations located outside the park boundary. The northernmost boarding site is the Rockside Road Boarding Area in Independence, Ohio. On sold-out special event trains, up to 450 passengers leave from the Rockside Boarding Area. The existing gravel parking area currently accommodates 149 vehicles. To the north of this area is Rockside Road. To the east is the Cuyahoga River. To the west is the Valley Railway. There are a number of small, low-quality wetlands in the vicinity of the site.

Access to the site is by means of a 20-foot wide paved access road, located adjacent to the west bank of the river. The access roadway passes under the Rockside Road Bridge over the Cuyahoga River and intersects with Old Rockside Road, located approximately 450 feet north of the north end of the parking area (photograph to right). The existing boarding area site includes approximately 75,235 square feet (1.7 acres) of gravel parking area, an open air station/waiting area with canopy located adjacent to the tracks, and gravel walkways connecting the west edge of the parking lot, the station and



Looking north at access drive. Overpass is Rockside Rd.



Looking north along loading platform. A gas line marker is on the right

boarding platform. The east edge of the parking area is located between 10 and 40 feet from the top of bank of the Cuyahoga River. A portion of the existing parking area and access road is located within the floodway of the Cuyahoga River, and floods, on average, every 2.33 years (see Appendix E). There is one pole-mounted light provided for the parking area. Lights are also provided at the train station structure.

The Rockside Boarding Area serves the entire northern portion of the railway,

including the Cleveland metropolitan area. The parking area has experienced increased use with the growth of the Valley Railway and the services provided by CVSR. In response to this



growing need, the NPS seeks to improve and expand the parking facility serving the Rockside Boarding Area. With the extension of service to downtown Cleveland, event trains bound for Cleveland would also leave from the Rockside Boarding Area.

In addition to the increasing use of Rockside Boarding Area, longer trains are being used than those envisioned when the platform was originally conceived in the mid-1990's. An unintended consequence of the current location of the platform and the longer trains is that trains that are boarding passengers at Rockside Station occasionally block the existing vehicular crossing at Old Rockside Road (just north of the Rockside Station). Local access east and west on Old Rockside Road is thus impeded, causing a safety hazard and inconvenience for local businesses. This can be particularly troublesome, as access to the west side of the railroad can only occur from the east. On some occasions, local businesses have resorted to calling the City of Independence Police Department to report this situation.

Lock 39 is one of 44 locks along the Ohio & Erie Canal that lifted canal boats 395 feet in elevation between Cleveland and Akron. In operation from 1827 to 1913, this lock raised or



Looking south at the Lock 39 parking area.

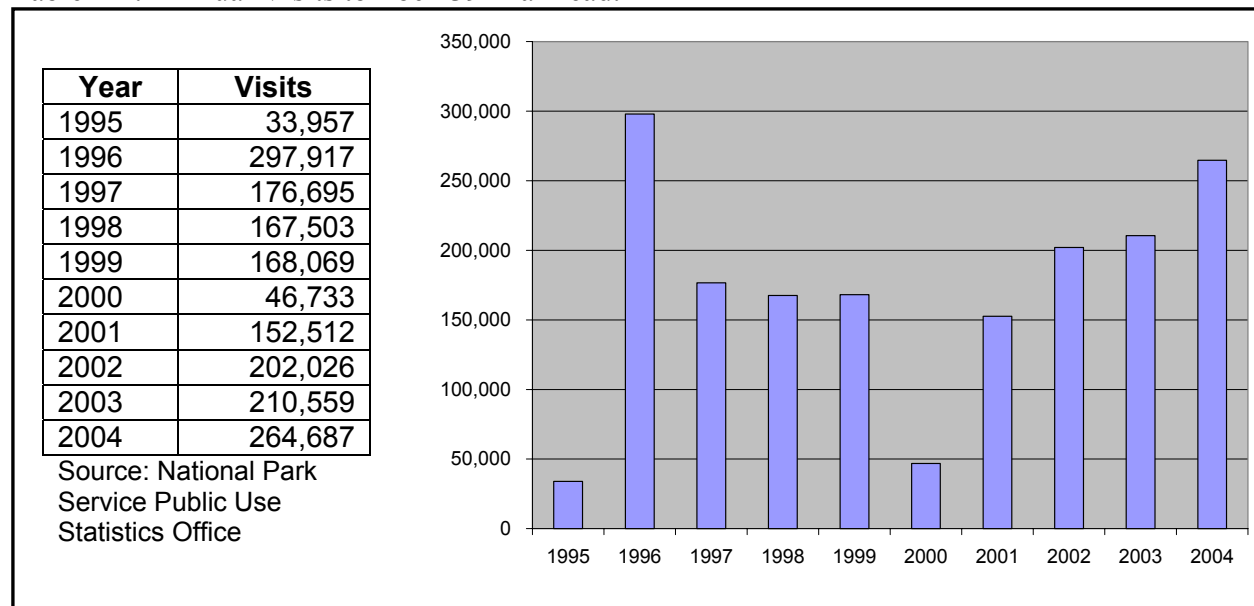
lowered a canal boat about 9 feet. It is now the site of a trailhead for the multi-purpose "Towpath Trail," which follows the historic route of the Ohio & Erie Canal for 20 miles through CVNP and serves as the major trail through CVNP. At the south end of CVNP, the trail extends to Akron and beyond. The segment through Akron is operated by Metro Parks Serving

Summit County. At Lock 39, the trail extends north and is operated by Cleveland Metroparks. The Lock 39 parking facility has a capacity for 42 cars, and when it is full, the Rockside Boarding Area may be used for overflow parking. However, in order to do so, users must then walk along the Rockside Boarding Area access road out to Old Rockside Road and follow Old Rockside Road east to the Cleveland Metroparks portion of the trail.

The CVSR corridor and the Towpath Trail are key resources in the Ohio & Erie Canal National Heritage Corridor (ICON architecture, inc., 2000, p. 6). Furthermore, the Rockside Road area is identified as a "Journey Gateway" in the Ohio & Erie Canal National Heritage Corridor Management Plan. Journey Gateways are "areas of important nodes where corridor users feel a sense of arrival to a special resource . . ." (Ohio & Erie Canal Association, 2000, p. 8). Journey Gateways will often be places where multiple Corridor linkages intersect. Besides the CVSR and the Towpath Trail, the Scenic Byway (which uses Canal Road in the northern part of CVNP), the canal, and the river are all in the Rockside Road area. This is also cited in the plan as an example of an area where "Interpretive Reaches" intersect, "... where to the north the canal corridor is highly developed with dense mixed commercial and industrial uses and to the south

starts to evolve into the rich natural landscape of [CVNP].” The characteristics of Journey Gateways typically include potential for multi-modal access and visitor services, which includes parking (Ohio & Erie Canal Association, 2000, p. 80). Another aspect to the multi-modal characteristics of this area is that the CVSR provides opportunities for multi-modal trips through CVNP, with its Bike & Hike train shuttles. An indication of the growth in the use of Lock 39 is also reflected in records of visits in recent years as shown in Table 1-2. It may be concluded, therefore, that the use of this Journey Gateway, which includes the Lock 39 Trailhead, will continue to grow and there is a need to accommodate this growth.

Table 1-2. Annual Visits to Lock 39 Trailhead.<sup>3</sup>



### 1.3 Purpose and Need Statement

The purpose and need statement is an important aspect of a NEPA document. The CEQ regulations simply require that the document “shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action” (Section 1502.17). However, a clear statement of purpose and need may limit the range of alternatives available. It will also be used as criteria in evaluating alternatives.

The following, from page 16 of the DO-12 Handbook, describes **need**:

*Need is a discussion of existing conditions that need to be changed, problems that need to be remedied, decisions that need to be made, and policies or mandates that need to be implemented. In other words, it explains why your park is proposing this action at this time. It may have elements you would otherwise include in a discussion of project “background.” There may be one or several needs that an action will resolve. Need is not a discussion of the need for NEPA*

<sup>3</sup> Counts in 1998 through 2000 were affected by construction on the trail, construction on Rockside Road, and a malfunctioning counter.

*or other regulatory compliance, but rather reasons why the park must take action at this time and in this place. Although CEQ describes it as “brief,” the discussion may require several pages.*

The Rockside Boarding Area exists to provide access for the public to the Valley Railway, which is one of the primary cultural resources and recreational opportunities provided by CVNP. The need for the project is to increase the parking capacity for the Rockside Boarding Area and for the Lock 39 Trailhead, and to improve the visitor experience at these facilities. The expansion of parking capacity at the Rockside Boarding Area is needed to serve present and future excursions, special events passenger trains and overflow parking for increasing use of the Lock 39 Trailhead parking area. Improvements of visitor experience at these facilities include lighting for use during night operations; a way to load longer trains without interfering with local traffic on Old Rockside Road; and safer pedestrian and bicycle access from the Rockside Boarding Area to the Towpath Trail for Lock 39 Trailhead overflow parkers.

The following, from page 16 of the DO-12 Handbook, describes **purpose**:

*Purpose is a statement of goals and objectives that NPS intends to fulfill by taking action. These goals can come from a park’s statement of purpose and significance (if the action proposed is a GMP, for instance), from management objectives or mission goals, from implementing or other legislation, from a GMP or other plan, from standards and guidelines for a particular management zone, from public or staff input, and from other sources. Because some of these objectives also may resolve needs, there may be overlap between purpose and need. The discussion should be limited to those goals and objectives that are critical to meet if NPS is to consider the proposal successful.*

The purpose of this project is to fulfill one of the purposes in Section 1 of PL 93-555, the 1974 enabling legislation for CVNP, for:

*. . . preserving and protecting for public use and enjoyment the historic, scenic, natural, and recreational values of the Cuyahoga River and adjacent lands in the Cuyahoga Valley. . .*

It also fulfills one of the purposes of the NPS Organic Act (see Section 1.4) where the overall mission for areas managed by the NPS is to:

*... promote and regulate the use of the Federal areas known as national parks , ... and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*

The purpose of the project is also to further develop the CVNP ATS (Appendix G, p. 1),

*The National Park Service (NPS) is committed to finding creative transportation solutions within America’s national parks. The service’s Alternative Transportation Systems (ATS) program provides financial resources to parks for*

*planning and implementing multimodal alternatives to the private vehicle. Alternative Transportation Systems include buses, trains, ferries, trams, and non-motorized modes of transportation to and within parks. The preferred modes of transportation are those that contribute to maximum visitor enjoyment while minimizing adverse impacts to park resources and values.*

*Cuyahoga Valley National Park (CVNP) has used ATS funds to enhance the park's railroad infrastructure and to plan and develop hiking and bike trails that provide alternative means to reach the Park. In 2003 there were 108 alternative transportation systems in the National Park Service; Cuyahoga Valley Scenic Railroad (CVSR) is one of six of those providing rail service.*

Increasing the parking capacity for the Rockside Boarding Area and for the Lock 39 Trailhead, and improving the visitor experience at these facilities will promote the public use and enjoyment of the Valley Railway, the Towpath Trail and other CVNP resources. There is also an opportunity to provide a multi-modal transportation link in bringing together transportation by train, automobile, bicycle and pedestrians.

#### **1.4 Laws (Statutes), Executive Orders, Regulations, Policies and Guidelines**

The resources of CVNP are protected under the authorities of the National Park Service Organic Act of 1916 (16 U.S.C. § 1), which established the National Park Service; the National Park System General Authorities Act (16 U.S.C. §§ 1a-1 et seq.), which includes all areas administered by the National Park Service in one National Park System and clarifies the authorities applicable to the system; Part 36 of the Code of Federal Regulations (CFR), which provides for the proper use, management, government, and protection of persons, property, and natural and cultural resources within areas under the jurisdiction of the NPS; and the park's enabling legislation (Public Law 93-555).

The Cuyahoga Valley National Recreation Area was established by Public Law 93-555 on December 27, 1974 and was renamed Cuyahoga Valley National Park on October 11, 2000. Section 1 of PL 93-555 states the purpose of the Park:

*For the purpose of preserving and protecting the historic, scenic, natural, and recreational values of the Cuyahoga River and the adjacent lands of the Cuyahoga Valley and for the purpose of providing for the maintenance of needed recreational open space necessary to the urban environment, the Cuyahoga Valley National Recreation Area.... In the management of the recreation area, the Secretary of the Interior shall utilize the recreation area resources in a manner which will preserve its scenic, natural, and historic setting while providing for the recreational and educational needs of the visiting public.*

Section 4 (d) of PL 93-555 addresses the duties of the Secretary of Interior:

*The Secretary...shall inventory and evaluate all sites and structures within the recreation area having present and potential historic, cultural, or architectural*



*significance and shall provide for appropriate programs for the preservation, restoration, interpretation and utilization of them.*

In addition to the language presented in PL 93-555 that created Cuyahoga Valley National Recreation Area, general preservation and management direction is provided by the National Park Service Organic Act of August 25, 1916. This act established the NPS and, by extension, states the overall mission for areas managed by the NPS:

*... promote and regulate the use of the Federal areas known as national parks, monuments, and reservations...by such means and measures as conform to the fundamental purpose of said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*

Additional laws, regulations and policies that could have bearing on this action are listed below. See Appendix A for a brief description of each.

- ❑ Antiquities Act of 1906
- ❑ Archaeological and Historic Preservation Act of 1974
- ❑ Archaeological Resources Protection Act (ARPA) of 1979
- ❑ Clean Water Act of 1977
- ❑ The Endangered Species Act of 1973
- ❑ Federal Farmland Protection Policy Act (FPPA) of 1987.
- ❑ Historic Sites Act of 1935
- ❑ The National Historic Preservation Act (NHPA) of 1966
- ❑ The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990
- ❑ Executive Order (EO) 11593 (Cultural Properties)
- ❑ EO 11988 (Floodplains)
- ❑ EO 11990 (Wetlands)
- ❑ EO 13112 (Invasive Species)
- ❑ 40 CFR 1500-1508 (CEQ NEPA regulations of 1978).
- ❑ 43 CFR 3 (Antiquities Act).
- ❑ 43 CFR 7, Subparts A and B (ARPA, as amended), "Protection of Archaeological Resources, Uniform Regulations" and "Department of the Interior Supplemental Regulations."

All of Part 36 of the CFR provides for the proper use, management, government, and protection of persons, property, and natural and cultural resources within areas under the jurisdiction of the NPS. However, some sections are specifically noted here. See Appendix A for a brief description of each.

- ❑ 36 CFR 18 (NHPA of 1966), "Leases and Exchanges of Historic Property."
- ❑ 36 CFR 60 (NHPA and EO 11593), "National Register of Historic Places."
- ❑ 36 CFR 63 (NHPA and EO 11593), "Determinations of Eligibility for inclusion in the National Register of Historic Places."
- ❑ 36 CFR 65 (Historic Sites Act of 1935), "National Historic Landmarks Program."

- ❑ 36 CFR 67 (Historic Preservation Certification Pursuant to the Tax Reform Act of 1976, the Revenue Act of 1978, the Tax Treatment Extension Act of 1980, and the Economic Recovery Tax Act of 1981).
- ❑ 36 CFR 68 (NHPA).
- ❑ 36 CFR 79 (NHPA and ARPA), “Curation of Federally-owned and Administered Archeological Collections.”
- ❑ 36 CFR 800 (NHPA and EO 11593), “Protection of Historic and Cultural Properties.”

The NPS Management Policies (NPS 2001a) provide general guidance for managing natural resources.

Section 4.6.6 of the NPS Management Policies (NPS 2001a) provides guidance on watershed and stream processes. This includes erosion, deposition, woody debris, stream migration and watershed management.

*The Service will manage watersheds as complete hydrologic systems...The Service will manage streams to protect stream processes that create habitat features such as floodplains, riparian systems, woody debris accumulations, terraces, gravel bars, riffles, and pools. Stream processes include flooding, stream migration, and associated erosion and deposition.*

*The Service will achieve the protection of watershed and stream features primarily by avoiding impacts to watershed and riparian vegetation, and by allowing natural fluvial processes to proceed unimpeded.*

The introduction to Section 9 of the NPS Management Policies describes the approach of NPS to park facilities:

*The National Park Service will provide visitor and administrative facilities that are necessary, appropriate, and consistent with the conservation of park resources and values. Facilities will be harmonious with park resources, compatible with natural processes, esthetically pleasing, functional, energy- and water-efficient, cost effective, universally designed, and as welcoming as possible to all segments of the population. Park facilities and operations will demonstrate environmental leadership by incorporating sustainable practices to the maximum extent practicable in planning, design, siting, construction, and maintenance.*

Section 9.2 of the NPS Management Policies provides guidance for Transportation Systems:

*The location, type, and design of transportation systems and their components (e.g., roads, bridges, trails, and parking areas), and the use of alternative transportation systems, all strongly influence the quality of the visitor experience. These systems also affect, to a great degree, how and where park resources will be impacted. For these reasons, management decisions regarding transportation facilities require a full, interdisciplinary consideration of alternatives, and a full understanding of their consequences. Traditional practices of building wider roads and larger parking areas to accommodate more motor vehicles are not*

*necessarily the answer. The Service must find better transportation solutions, which will preserve the natural and cultural resources in its care while providing a high-quality visitor experience.*

The NPS Management Policies also provide guidance for parking areas. Section 9.2.5 provides the following general guidance on parking areas:

*Parking areas and overlooks will be located so as not to unacceptably intrude, by sight, sound, or other impact, on park resources or values. When parking areas are deemed necessary, they will be limited to the smallest size appropriate, and be designed to harmoniously accommodate motor vehicles and other appropriate users. When large parking areas are needed, appropriate plantings and other design elements will be used to reduce negative visual and environmental impacts. When overflow parking is provided to meet peak visitation, it should be in areas that have been stabilized, or are otherwise capable of withstanding the temporary impacts of parking without harming park resources. Permanent parking areas will not normally be sized for the peak use day, but rather for the use anticipated on the average weekend day during the peak season of use.*

Cuyahoga Valley National Park's General Management Plan (NPS, 1977) provides the overall concept for management and resource preservation for compatible recreational use. Among the policies for cultural resource management, the General Management Plan (GMP) for the Cuyahoga Valley National Park states:

*The National Park Service will faithfully preserve all significant historic and archaeological resources and will provide for their interpretation, use, and/or protection through adequate research and programming.*

Among the policies for natural resource management, the General Management Plan (GMP) for the Cuyahoga Valley National Park states:

*During construction of any facilities or systems required to properly manage and protect the park, the National Park Service will employ technology that has the least effect on surrounding ecosystems. Planning and design of such structures will take into consideration energy requirements and will stress energy conservation and economy of construction.*

The aforementioned references provide the legislative and policy guidance against which the feasible alternatives will be evaluated. The consistent message of the guidance is the need to consider both the continuity of natural processes and the preservation of historic, cultural and recreational features.

# CUYAHOGA VALLEY NATIONAL PARK

## Environmental Assessment for Rockside Boarding Area Parking Expansion and Trail Bridge over the Cuyahoga River

### 2.0 ISSUE IDENTIFICATION

Issues discussed in NEPA describe the relationships between the action being proposed and the environmental (natural, cultural and socioeconomic) resources. Issues describe an association or a link between the action and the resource. Issues are not the same as impacts, which include the intensity or results of those relationships. Internal scoping was conducted to define the range of potential issues and identify what relationships exist between the proposed action and environmental resources. An Interdisciplinary Team (IDT) was formed for the project and an Environmental Screening Form was prepared on February 19, 2003 (see Appendix F).

Meeting the needs at the Lock 39 Trailhead Parking Area began as a separate action with preparation of an Environmental Screening Form on January 28, 2003. However, in the spring of 2004, CVNP staff realized that combining these actions would better meet the needs at both facilities with a bridge over the Cuyahoga River to connect the facilities. The Environmental Screening Form for the Lock 39 Trailhead action was updated on May 6, 2004 (see Appendix F).

Scoping was conducted for the Rockside Boarding Area in April and May 2003 with federal, state, and local agencies and organizations. Each of the agencies and organizations involved with scoping had direct and indirect jurisdiction, insight, knowledge, expertise or concern for CVNP resources. Copies of comments received from federal, state, and local agencies/organizations are included in Appendix B. Additional scoping was not conducted with the addition of the bridge to the Lock 39 Trailhead facility. Input from federal, state and local agencies/organizations will be sought through publication and distribution of this EA.

The following issues were identified through the scoping process for further consideration in this EA:

- The Rockside Boarding Area parking facility is entirely within the floodplain of the Cuyahoga River. A bridge to the Lock 39 Trailhead parking facility would be located within the floodplain and span the floodway. Additional fill material for the project could impact the floodplain. Continued occupation of and investment within the floodplain comes with some risk to humans, as well as to the existing and improved infrastructure.
- There are a number of small wetlands at the site which could be impacted by the parking area expansion and bridge.
- The project lies within the range of the Indiana bat (*Myotis sodalis*), a federally listed endangered species, and within the range of the eastern massasauga (*Sistrurus catenatus catenatus*), a rattlesnake that is currently a Federal Candidate species and is listed as endangered by the State of Ohio.

- The existing area already impinges upon the riparian buffer zone of the Cuyahoga River. A healthy riparian buffer provides habitat, filters pollutants and protects the riverbank against the erosional forces of the river.
- The addition of paved impervious surface area will increase runoff for the site. Also water from the parking area runoff could carry contaminants from automobiles to the nearby Cuyahoga River.
- There may be historic and archaeological resources in the area that could be impacted
- The addition of lighting could impact the nightscape in the area.

## **2.1 Issues and Impact Topics Addressed in this EA**

The issues identified above were translated and focused into impact topics, or a more specific description of resources that may be impacted by the action. These impact topics are then carried through the analysis in the EA. The affected environment under each of the impact topics identified is presented in Chapter 4. An analysis of the impacts on these resources from each alternative is evaluated in Chapter 5.

### **2.1.1 Wetlands**

Executive Order (EO) 11990, Protection of Wetlands, requires federal agencies to take into account the effects of their actions on surface waters and wetlands. Director's Order #77-1: Wetland Protection, establishes NPS policies, requirements and standards for implementing EO 11990. In addition, compliance is required with Sections 401 and 404 of the Clean Water Act. There are a number of small wetlands located in the vicinity of the existing parking facilities that could be impacted.

### **2.1.2 Floodplains**

Executive Order 11988, Floodplain Management, requires each federal agency, in carrying out its activities, to take action to reduce the risk of flood loss, minimize the impacts of floods, restore and preserve the natural and beneficial values served by floodplains, and evaluate the potential effects of any actions it may take in the floodplain so as to ensure its planning programs reflect considerations of flood hazards and floodplain management. The NPS has implemented the requirements of EO 11988 in its Director's Order #77-2 (DO #77-2), which applies to all NPS proposed actions that could adversely affect the natural resources and functions of floodplains, or increase flood risks. Furthermore, the cities of Independence, Ohio and Valley View, Ohio are enrolled in the National Flood Insurance Program (NFIP); thus actions taken in the floodplain must comply with zoning ordinances that are based on the NFIP regulations. These requirements generally apply to the 100-year floodplain<sup>1</sup> where encroachments are limited

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<sup>1</sup> In general, a floodplain is any land susceptible to being inundated by flood waters. The 100-year flood plain includes any land susceptible to being inundated by the 100-year flood

to those that would cause no greater than a one-foot rise in water surface elevation, and to the floodway<sup>2</sup>, where no encroachments are allowed. The Rockside Boarding Area parking facility is entirely within the 100-year floodplain of the Cuyahoga River and a small portion of the existing parking area is located within the floodway. A bridge over the Cuyahoga River would be located in the 100-year floodplain and span the floodway. It will therefore be necessary to examine this issue.

### 2.1.3 Water Resources

Effects on water resources are important indicators of whether an action has the potential to impair the existing aquatic, water supply or recreational use designations established by the Ohio Environmental Protection Agency (Ohio EPA) for the water resource. In response to its responsibilities under Section 303(d) of the CWA the Ohio EPA identified the Lower Cuyahoga River watershed as a priority impaired water on the 1998 303(d) list. To address this, the Ohio EPA published a draft report for the Total Maximum Daily Loads for the Lower Cuyahoga River with a final report accepted by the U.S. Environmental Protection Agency on September 26, 2003 (Ohio EPA, 2003). An improved and expanded parking facility has the potential to release additional contaminants in its runoff than the existing facility.

### 2.1.4 Threatened, Endangered, or Special Concern Species

The Endangered Species Act of 1973, as amended, requires federal land managers to consider the effects their planned activities may have on species listed as endangered or threatened. A response to the Scoping Letter from the U.S. Fish and Wildlife Service indicated concern for the federally endangered Indiana bat (*Myotis sodalis*) and the Ohio endangered species eastern massasauga (*Sistrurus catenatus catenatus*).

### 2.1.5 Wildlife and Wildlife Habitat

There is wildlife and wildlife habitat in the vicinity of the site, particularly toward the Cuyahoga River. The construction and paving of additional area and a bridge could have an effect on how these species utilize this area. Such interactions will be examined in light of the Management Policies (NPS, 2001a) that include goals to maintain components of naturally evolving park ecosystems, including natural abundance, diversity and the ecological integrity of plants and animals.

### 2.1.6 Vegetation and Invasive Species

The build alternative will permanently remove vegetation. Interactions will be examined in light of the Management Policies (NPS, 2001a) that include goals to maintain components of naturally evolving park ecosystems, including natural abundance, diversity and the ecological integrity of plants and animals.

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<sup>2</sup> A floodway is the channel of a river or other watercourse and the adjacent land areas that must be reserved (kept free of encroachments or development) in order to discharge the base (100-year) flood without cumulatively increasing the water surface elevation more than a designated height (usually one foot).

Executive Order 13112 requires that federal agencies act to prevent the introduction of invasive species and provide for their control, and that they minimize the economic, ecological, and human health impacts caused by invasive species. Fourteen plant species known to be in CVNP are considered invasive. This EA will examine the relationship of the build alternative to the control of these species.

#### 2.1.7 Cultural Resources

The National Historic Preservation Act (NHPA), as amended in 1992 (16 USC 470 et seq.) and the NPS Cultural Resource Management Guidelines and Policies (Director's Order 28) require the consideration of impacts to cultural resources listed on or eligible for listing on the National Register of Historic Places. National Park Service Management Policies categorize cultural resources as archaeological resources, historic and prehistoric structures, cultural landscapes, museum collections, and ethnographic resources (NPS, 2001a). The main types of cultural resources present that could be affected by the build alternative are historic structures and cultural landscapes. Archaeological resources are discussed in Section 2.2.7. This EA will examine the relationship of the build alternative to cultural resources in the vicinity.

#### 2.1.8 Nightscape

The NPS Management Policies (NPS, 2001a) state that NPS will “preserve, to the greatest extent possible, the natural lightscapes of parks, which are natural resources and values that exist in the absence of human-caused light. Darkness is an important habitat component, and light pollution, defined as “stray unwanted light outside the range and timing of natural variation,” also adversely affects the natural scenery of the night (NPS, 2003b).

#### 2.1.9 Health and Safety

The NPS Management Policies (NPS, 2001a) state that the NPS is committed to providing appropriate, high-quality opportunities for visitors to enjoy the parks. The policies also state, “While recognizing that there are limitations on its capability to totally eliminate all hazards, the Service and its concessionaires, contractors, and cooperators will seek to provide a safe and healthful environment for visitors and employees” (Section 8.2.5.1). Further, the National Park Service will strive to protect human life and provide for injury-free visits (Section 8.2.5). The alternative will be investigated for the potential for threats to health and safety. This includes a review of US Environmental Protection Agency (US EPA) databases for any records that might indicate the potential for hazardous waste or contaminated materials that could be a threat to the health of workers during construction and/or to visitors utilizing the site.

#### 2.1.10 Visitor Experience

The NPS Management Policies (NPS 2001a) state that the enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks and that NPS is committed to providing appropriate, high-quality opportunities for visitors to enjoy the parks. The build alternative was developed to maintain and enhance visitor experience of the Valley Railway and the Towpath Trail, making visitor experience part of the purpose and need for the action as discussed in Section 1.3.

## **2.2 Issues and Impact Topics Identified and Considered But Not Addressed in this EA**

Some issues and impact topics were brought up in the scoping process because they were thought to be problematic, but after further consideration, were determined not to be. The following issues and impact topics are therefore not considered further in this document.

### **2.2.1 Nationwide Rivers Inventory Status**

A reach of the Cuyahoga River from the vicinity of Chippewa Creek upstream to Peninsula is included in the Nationwide Rivers Inventory (NWI) with “Outstandingly Remarkable Values (ORVs)” for Scenery, Recreation and Fish. An impact to the free-flowing nature of this segment or to one or more of the ORV’s in this segment could affect the ability for the reach to be designated as a Wild or Scenic River in the future. However, the Rockside Boarding Area is not located within this reach and has no potential to adversely impact the NWI reach.

### **2.2.2 National Natural Landmarks**

Tinkers Creek Gorge is the only National Natural Landmark located in CVNP. Tinkers Creek is a tributary of the Cuyahoga River and Tinkers Creek Gorge is located the Bedford Reservation in a portion of CVNP owned by Cleveland Metroparks. The Rockside Boarding Area is not located near this area and there is therefore no potential to affect the National Natural Landmark.

### **2.2.3 Sole or Principal Drinking Water Aquifers**

Cuyahoga Valley National Park is not located within the limits of a designated U. S. Environmental Protection Agency Sole Source Aquifer. Therefore, no further processing is required under the Safe Drinking Water Act of 1974.

### **2.2.4 Air Quality**

The 1963 Clean Air Act (42 USC 7401 et seq., as amended) requires federal land managers to have an affirmative responsibility to protect a park’s air quality from adverse air pollution impacts. The build alternative would involve the use of construction equipment that would result in emissions. Additional emissions would also be realized as the additional vehicles enter and leave the expanded parking facility. However, any such emissions would be localized, temporary and insignificant to the park’s air quality.

### **2.2.5 Noise**

The NPS Management Policies (NPS 2001a) state that the parks will strive to preserve the natural quiet and the natural sounds associated with the physical and biological resources for the parks. Activities which cause excessive or unnecessary unnatural sounds in and adjacent to parks should be minimized so as not to adversely affect park resources, values, or visitor’s enjoyment of them. The build alternative would involve the use of construction equipment that will result in unnatural sounds. Additional unnatural sounds would also be produced as the



additional vehicles enter and leave the expanded parking facility. However, any such sounds would be localized, temporary and insignificant to the park's natural sounds. Due to the presence of nearby high-volume roadways (Rockside Road and Canal Road) that generate significant noise, the noise impacts associated with the parking lot expansion are insignificant.

#### 2.2.6 Geologic Resources

National Park Service regulations and NPS Management Policies provide guidance on geologic resources and processes. There are no geologic resources or processes involved with the action. There is a concern for the geologic process of fluvial geomorphology in the nearby Cuyahoga River. These concerns are addressed in the CVNP Programmatic Environmental Assessment for Riverbank Management of the Cuyahoga River (NPS, 2003). The alternative considered in this EA will not affect this natural geologic process, because they will not disturb the banks of the Cuyahoga River.

#### 2.2.7 Cultural Resources: Archaeological Resources

As discussed in Section 2.1.7, the National Historic Preservation Act (NHPA), as amended in 1992 (16 USC 470 et seq.) and the NPS Cultural Resource Management Guidelines and Policies (Director's Order 28) require the consideration of impacts to cultural resources listed on or eligible for listing on the National Register of Historic Places. National Park Service Management Policies categorize cultural resources as archaeological resources, historic and prehistoric structures, cultural landscapes, museum collections, and ethnographic resources (NPS, 2001a).

Most archeological survey work at CVNP occurs in conjunction with projects that require ground disturbance. The planning process in relation to these projects typically provides for archeological inventory work to be completed prior to the actual ground disturbing activity. In anticipation of this action, this planning work was accomplished by an archaeologist from the NPS Midwest Archaeological Center during a trip to CVNP from June 10, to August 7, 2002 (see Memorandum in Appendix F). The report concerning the site stated:

*Plans to expand the existing parking lot would include an area roughly 5000 m<sup>2</sup> south of the current lot. A shovel test inventory was completed at 10m intervals across the area; all of the tests were negative for cultural materials. In fact the area had previously been stripped of its topsoil and the remaining profile consists of very compacted clays. The proposed parking lot expansion would not impact any archeological resources.*

The archaeologist returned to CVNP on June 8, to July 27, 2004 (see Memorandum in Appendix F). This trip included a study of the area of potential effect proposed for the east side of the Cuyahoga River. The report concerning the site stated, "No significant materials were encountered and no additional archeological work is recommended at this location."

### 2.2.8 Prime Farmlands

The Federal Farmland Protection Policy Act (FPPA) of 1987 requires federal agencies to consider the adverse effects their programs may have on the preservation of farmland, review alternatives that could lessen adverse effects, and ensure that their programs are compatible with private, local and state programs and policies to protect farmland. The purpose of the FPPA is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. Federal farmlands are classified as prime, unique, of statewide importance or of local importance based on soil types.

The Soil Survey for Cuyahoga County (Musgrave and Holloran, 1980) shows the soil type for the project area on the west side of the river as Ua, Udorthents, loamy. These soils are in areas of cut and fill. The project area on the east side of the river is shown as Ch, Chagrin silt loam, occasionally flooded. A telephone conversation with the Cuyahoga County office of the U.S. Natural Resource Conservation Service confirmed that the Udorthents soils have no agricultural value, and the Chagrin silt loams are not considered prime farmland for Cuyahoga County. Furthermore, the entire project area is within the limits of the City of Independence, which means it is not considered Federal farmland. Since the entire site is not located on agricultural land, there will be no further discussion of this subject in this EA.

### 2.2.9 Energy Resources

There will be temporary use of energy from the construction of the build alternative. However, these impacts are considered negligible and will not be discussed further.

### 2.2.10 Affiliated Tribes

The National Environmental Policy Act requires the consideration of possible conflicts between the proposal and land use plans, policies or controls for entities including Indian Tribes. The National Historic Preservation Act, as amended in 1992 (16 USC 470 et seq.) requires consultation with Indian Tribes. Letters were sent to tribes as part of the external scoping process. A response was received from the Wyandotte Nation stating that “Examination of historic files find no properties documented within project area that meet criteria of traditional value.” Another response was received from the Delaware Nation Native American Graves Protection and Repatriation Act (NAGPRA) Office. The letter requested consultation with the State Office of Historic Preservation and the State’s Archaeological Survey, and requested to be notified regarding any results. Section 2.2.7 provides a discussion regarding these resources.

### 2.2.11 Environmental Justice

Executive Order 12898, Environmental Justice in Minority and Low-Income Populations, directs federal agencies to assess whether their actions have disproportionately high and adverse human health or environmental effects on minority and low-income populations. There are no identifiable minority or low-income populations within CVNP or influenced by CVNP. It is therefore concluded that the actions of CVNP will have no disproportionately high and adverse human health or environmental effects on minority and low-income populations.

#### 2.2.12 Economic Factors

It is required by NEPA that not only cultural and natural factors be analyzed but also the “human environment” which includes economics. This may also include land use (occupancy, income, values, ownership and type of use) and socioeconomics (employment, occupation, income changes, tax base, infrastructures, etc.). There could be temporary contributions to employment and business in the surrounding area from the construction of the build alternative. However, these impacts are considered negligible and will not be discussed further.

#### 2.2.13 Social Factors

Another aspect of the “human environment” is the social impact related to the proposed actions. The proposed action is not anticipated to have any effect on social factors in or around CVNP.

# CUYAHOGA VALLEY NATIONAL PARK

## Environmental Assessment for Rockside Boarding Area Parking Expansion and Trail Bridge over the Cuyahoga River

### 3.0 ALTERNATIVES

The CEQ has provided guidance on the development and analysis of alternatives under NEPA. A full range of alternatives, framed by the purpose and need, must be developed for analysis for any federal action. They should meet the project objectives, at least to a large degree. They should also be developed to minimize impacts to environmental resources. Alternatives should also be “reasonable,” which CEQ has defined as those that are economically and technically feasible, and show evidence of common sense. Alternatives that could not be implemented if they were chosen (for economic or technical reasons), or that do not resolve the need for action and fulfill the stated purpose in taking action to a large degree, are therefore not considered reasonable.

#### 3.1 Alternative 1 - No Action

The CEQ has specified that one of the alternatives must be the “no action” alternative, which is defined as the continuation of present management actions, for two reasons. One is that it is almost always a viable choice in the range of alternatives, and the other is that it sets a baseline of existing impact that may be projected into the future against which to compare impacts of action alternatives.

Under the No Action Alternative, the existing 1.7 acre gravel parking area would be maintained and utilized as it is presently (see Drawing 2 in Appendix C). It currently accommodates 149 vehicles, an open air station/waiting area with canopy located adjacent to the tracks, and gravel walkways connecting the west edge of the parking lot, the station and boarding platform. The east edge of the parking area is located between 10 and 40 feet from the top of bank of the Cuyahoga River. Approximately 5,300 square feet of the parking area is within the floodway of the river.

Trains and events scheduled at night would continue to be supported by the single pole-mounted light in the parking area and by lights in the train station along the canopy. The lights in the train station would continue to operate on a timer for regular use for security reason. Night visitors would continue to have difficulty in navigating the gravel walkways connecting the parking area with the station due to the limited lighting.



Existing Gravel Parking Area, Looking Northeast

With the growth in use of the Valley Railway and increased use of the Towpath Trail, use of the parking area would increase to the point where it is filled to capacity or beyond capacity more often than just during special events. This may result in grassed areas adjacent to the parking area being used for overflow (whether planned or not). Consequences of using grassed areas for overflow are examined in Chapter 5. Additional maintenance would be required to maintain the grassed areas after such use. Filling the parking area beyond capacity may also result in an increase at other boarding areas. Some passengers may be unwilling to drive the extra distance to an overflow lot. Also, those who find the parking facility full would be the last to arrive, and may determine that they do not then have time to reach the next boarding area. The ridership numbers from this location during these events would therefore be limited by the parking area.

With an increase in use of the Rockside Boarding Area, trains that are boarding passengers at Rockside Station would more frequently block the existing vehicular crossing at Old Rockside Road (just north of the Rockside Station). Local access east and west on Old Rockside Road would be impeded more frequently by trains that block the crossing causing a safety hazard as discussed in Section 5.9.3, and would be an inconvenience for local businesses.

The Rockside Boarding Area parking facility would continue to be used as overflow parking for the Lock 39 Trailhead parking area. However, in order to do so, users must then walk along the Rockside Boarding Area access road out to Old Rockside Road, and follow Old Rockside Road east to the Cleveland Metroparks portion of the trail.

### **3.2 Alternative 2 – Expansion & Improvement with Trail Bridge Over the Cuyahoga River (Preferred)<sup>1</sup>**

Alternative 2 would replace the existing gravel parking facility with a facility paved with asphalt to the north and covered with stabilized turf to the south (see Drawing 2 in Appendix C). The asphalt portion would cover 58,520 square feet (1.3 acres) and have a capacity of 99 nine foot wide parking spaces and four 16 foot wide handicap parking spaces for a total of 103 parking spaces. The stabilized turf portion would cover 45,177 square feet (1.0 acres) and have a capacity of 116 nine foot wide parking spaces. The total number of parking spaces on both the paved and stabilized turf areas would be 219 parking spaces. This is an increase of 30,956 square feet (0.7 acres) and 70 spaces. The concept behind the stabilized turf area is that this would be an overflow area to be used during events and times of higher rail and trail use.

The paved area section would be designed with a deepened crushed stone base and underlain with a geotextile bedding material to isolate the pavement structure from the underlying fine-grained soils. The stabilized turf area would be a mixture of 60 percent topsoil and 40 percent aggregate. Objectives in this design concept include the removal of parking area from the Cuyahoga River floodway (see Section 4.2) and maximizing the riparian buffer area between the parking area and the river.

The improvement for the parking area in Alternative 2 would include lighting from 14 pole lights, with seven covering the asphalt area and seven covering the stabilized turf. The lights

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<sup>1</sup> This alternative is not the same as the Alternative 2 considered in previous working drafts of the EA.

would only be used when needed through controls to be determined during final design. The lights would utilize the best available technology for energy efficiency and include cutoff fixtures to minimize fugitive light spill. The existing lights in the train station along the canopy would remain and would operate on a daily timer for security reasons.

The parking area would be located in the floodplain of the Cuyahoga River. All of the facilities would therefore be designed to withstand inundation. This alternative also includes provision of willow and/or cottonwood posts below the top of the left bank of the Cuyahoga River, and deeply rooting trees between the top of bank and edge of the parking area to improve bank stability and improve the riparian corridor.

A stormwater drainage scheme would be provided that incorporates permanent runoff controls with water quality enhancements. The design concept includes drainage islands to collect impervious sheet flows into concentrated grass-lined swales. Next, drainage culverts of sufficient slope and diameter would be used to convey flow from the drainage islands to the perimeter of the parking area. Outlet protection in the form of a rock or rip rap apron would be provided for the culverts. From each parking lot culvert outflow location, and where sheet flow is allowed to directly run off from the parking lot, flow conveyance would continue in grass-lined channels. The channels would converge at the south end of the parking area and continue at a gradual slope along the existing topography to the south and east. The runoff control method would terminate by the use of an elevated grass level spreader that diffuses any concentrated flow into sheet flow. Any sheet flow that has not infiltrated would follow the existing topography to the Cuyahoga River.

Alternative 2 also includes a Class 1 trail and trail bridge that would connect the east edge of the proposed parking area at the Rockside Boarding Area directly to the Lock 39 Trailhead by spanning the Cuyahoga River. Beginning at the edge of the proposed parking area expansion of the Rockside Boarding Area, a new trail, constructed of earthen embankment, would rise approximately 8 feet (to elevation 611.0 or approximately 2 ft above the 100-year flood water surface elevation) over a distance of 180 feet, at a grade not exceeding 5%, to the west abutment of the proposed trail bridge. The trail approach would be 8 feet wide with 2-foot wide grassed shoulders, and 2H:1V grassed side slopes. The trail surface would be composed of stone dust except where the slope is greater than 4%. In these areas, the surface would be composed of asphalt in order to avoid the potential for erosion. The trail bridge would have a clear span of 240 feet, spanning the floodway, a level deck (elevation 611.0) with clear inside width of 10 feet, and a structure depth of approximately 3 feet. From the east abutment, the trail (with typical section similar to the west approach) would continue east and rise another 2 feet over 165 feet to elevation 613.0 at the junction of the existing trails that connect the Lock 39 Trailhead parking area to the Towpath Trail. Hydraulic design for the bridge and approaches are presented in Appendix F. Other technical considerations, including materials, lighting and signage will be developed during final design.

As described in Section 1.2.2, longer trains are being used than those envisioned when the existing timber platform was originally conceived and constructed in the mid-1990's. An unintended consequence of the current location of the platform and the longer trains is that when boarding passengers at Rockside Station, trains occasionally block the existing vehicular

crossing at Old Rockside Road (just north of the Rockside Station). This alternative therefore includes installation of another 120 feet of timber platform to eliminate the need for trains to block the crossing when they are boarding.

To the south of the parking area is a forested wetland with some vernal pools that should not be affected by the project (see Section 4.2). There is a number of debris piles located in this area as well. Alternative 2 includes the removal of debris piles along with expansion and enhancement of at least 1.1 acres in this area as compensation for the removal of wetland areas under this alternative (see Section 5.1). The area for expansion would be along the north side of the vernal pool area. Design would include consideration for protection of the existing wetland area during construction of the mitigation. This would be more than twice the area of the wetlands to be impacted by the project. Expansion of the vernal pools would add the function of wildlife habitat to those of sediment /toxicant retention and flood storage. Vernal pools are necessary for some species of amphibians and reptiles. Besides developing additional wetland area, this would also involve restoring native plant communities, planting native woody plants, and the control of harmful non-native exotics (see Section 5.6).

### **3.3 Alternatives Considered But Rejected**

Alternatives should be “reasonable.” Unreasonable alternatives should be eliminated before impact analysis begins. Unreasonable alternatives may include those that are unreasonably expensive; that cannot be implemented for technical or logistical reasons; that do not meet NPS mandates; that are inconsistent with carefully considered, up-to-date NPS statements of purpose and significance or management objectives; or that have severe environmental impacts (DO-12 Handbook). The following alternatives were considered but rejected as unreasonable.

**3.3.1 Use of Selected Green Techniques for Entire Parking Area.** While some green techniques, such as stabilized turf, are included as part of Alternative 2, other green techniques and applications of green techniques to the entire parking area were considered but rejected. Using grass-pavers or open grass fields for parking was considered for the entire parking area. The special events occur into the early winter months and would require snow removal and use during inclement times of the year. Grass-pavers would be damaged by snowplows and the use of open grass fields would create muddy conditions during inclement weather. Semi-permeable pavement was also considered. The soils on the site are clay with poor permeability. A semi-permeable pavement would therefore require excavation of several feet of the clay base soil and replacement with a permeable subbase. Such excavation was considered an undue expense and disruption to the site.

**3.3.2 Manage Existing Lot to Increase Capacity.** Rather than adding parking capacity, the existing parking facility would be managed during higher usage to provide additional capacity. A “church parking lot” or “ferry approach” could be utilized for this purpose. It would require that individuals be present to help people park cars at the existing facility in lines, bumper-to-bumper, leaving lanes open for access and emergency vehicles. In this way, more cars could be packed into the same space. Although, this would provide more capacity for the existing parking area, it would also be confusing to the average visitor. Also, it would require that everyone arrive and leave at the same time since vehicles would be blocking each other in. Different train

programs leave on the same train but return at different times, so this type of arrangement would not be feasible (See Train Schedule in Appendix F). It would also be difficult to incorporate those who may use the area as Lock 39 Trailhead overflow parking at the same time. The approach would also place additional logistics and manpower burdens on the CVSR, which has a limited number of staff and volunteers. It should be noted however, that this approach could work for special events where no other trips are being scheduled. Such techniques could still be used for such events in conjunction with either alternative.

**3.3.3 Use of Overflow Parking.** The nearest parking areas to the Rockside Boarding Area are the Lock 39 Trailhead parking area which has 42 parking spaces (located .5 miles away), and the Canal Visitor's Center, which has 89 parking spaces (located 2.25 miles away). These lots are often filled to capacity for their own uses, and would offer little in the way of overflow parking for the Rockside Boarding Area. As stated earlier, the Rockside Boarding Area is currently being used as overflow parking for the Lock 39 Trailhead parking. Furthermore, those using the railway are prepared to ride and not walk, and the trains run on a schedule. Neither of these areas is within easy walking distance of the Rockside Boarding Area. Those arriving later are the ones who would need to use overflow parking. They would therefore not have the extra time to walk to the station to catch the train. If the spaces in potential overflow areas were available at the time needed for the Rockside Boarding Area, shuttles would therefore be necessary to utilize them (see Section 3.4.4).

**3.3.4 Use of Shuttles.** There are no large lots in CVNP that are adequate to stage shuttle service. Arrangements could be made with facilities in nearby Valley View or Independence for parking space, and busses could be used to shuttle people to the boarding area. This type of parking has been and would still be considered adequate for special events that exceed the capacity of the Rockside Boarding Area parking lot. However, it requires too much coordination and expense to be utilized on a regular, daily basis. Also, it does nothing to improve the surface, access, lighting, drainage or safety. It also does not address the overflow parking for the Lock 39 Trailhead.

**3.3.5 Use of Other Boarding Areas.** When the capacity of the parking lot is exceeded, visitors would use other boarding areas. This would not be feasible for many schedules and special events because everyone boards at one location and the program begins. For other events, the last ones arriving at the parking area would need an alternative boarding location and would likely not have enough time to travel to the next boarding area ahead of the train.

**3.3.6 Expansion of Parking Area(s) in Other Locations.** The location of the Rockside Boarding area and Lock 39 Trailhead precludes the expansion of parking facilities in other locations. Any expansion needs to serve those facilities (see Drawing 1 in Appendix C). The Rockside Boarding Area is constrained to the north by Rockside Road and a drainage swale that serves it. It is constrained to the east by the Cuyahoga River and the river floodway. It is constrained to the west by the railroad and a gas line that runs parallel to it, along the east side of the tracks. The Lock 39 Trailhead parking is constrained to the west and south by the Cuyahoga River and the river's floodway, to the north by Rockside Road, and to the east by the Towpath Trail and the canal.



### **3.4 Environmentally Preferred Alternative**

The environmentally preferred alternative is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic, cultural, and natural resources. When identifying the environmentally preferred alternative, economic, recreational, and technical issues are not considered. The environmentally preferred alternative is the alternative that will promote the national environmental policy expressed in NEPA (Section 101(b)) as the alternative that will help the Nation:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;
5. Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative 2 best fulfills the responsibility of this generation as trustee of the environment for succeeding generations. This is based primarily on the design objective of Alternative 2 to move the facility away from the floodway of the Cuyahoga River and to maximize the buffer area adjacent to the river.

Alternative 2 fulfills the second objective by maximizing the assurance of safety, health, productivity and culturally pleasing surroundings. Alternative 2 has the potential to be more aesthetically pleasing since it promotes the restoration of buffer area between the parking area and the Cuyahoga River.

Alternative 2 fulfills the third objective by aspiring to the widest range of beneficial uses of the environment without degradation or risk to health and safety. The shifting of the impacted area away from the Cuyahoga River has less potential for adverse impacts on the environment.

Both of the alternatives are intended to meet the fourth objective, and the differences between them are indistinguishable in meeting the objective.

Alternative 2 balances population and resource use by providing a high quality experience for visitors to the Valley Railway and Towpath Trail without promoting degradation of the resource through over-use. This experience would be of higher quality than Alternative 1 because of the improvements of paving, striping, lighting and a pedestrian bridge.

Alternative 1 utilizes the fewest depletable resources of the two alternatives. Alternatives 2 would utilize depletable materials for paving, striping and electrical facilities.

Alternative 2 is considered the environmentally preferred alternative, as it meets five of the six NEPA objectives.

**CUYAHOGA VALLEY NATIONAL PARK**  
**Environmental Assessment for Rockside Boarding Area Parking Expansion and**  
**Trail Bridge over the Cuyahoga River**

**4.0     AFFECTED ENVIRONMENT**

**4.1     Existing Facilities**

The CVSR provides train service on a regularly scheduled basis throughout most of the year. The current CVSR schedule at Rockside Station is located in Appendix F. The schedule varies over the course of a year, and includes such trains as the Inventure Express, Hale Farm & Village, Stan Hywet Hall & Garden, Hartville Connection, Bike & Hike, Peninsula Explorer, AM Scenic, PM Scenic and Educational Express. Nighttime excursions, charter service and special holiday trips are also available. The peak season occurs during the fall and early winter months. Service to Canton, Ohio commenced on July 2, 2003. Annual ridership is currently over 100,000.

Within CVNP, there are currently seven boarding sites along the railway operated by CVSR: Rockside, the Canal Visitor Center, Brecksville, Boston Mill, Peninsula, Indigo Lake, and Botzum. There are two boarding stations located outside the park boundary: Akron-Northside and Canton.

The parking area at the Rockside Boarding Area accommodates 149 vehicles. To the north of this area is Rockside Road; to the east is the Cuyahoga River; to the west is the Valley Railway (see Drawing 1 in Appendix C). A gas pipeline is located adjacent to and on the east side of the tracks. There is access to the site by means of a 20-foot wide paved access road, located adjacent to the west bank of the river. The access roadway passes under the Rockside Road Bridge over the Cuyahoga River, and intersects with Old Rockside Road, located approximately 450 feet north of the north end of the parking area. The existing boarding area site includes approximately 75,235 square feet (1.7 acres) of gravel parking area, an open air station/waiting area with canopy located adjacent to the tracks, and gravel walkways connecting the west edge of the parking lot, the station and boarding platform. There is one pole-mounted light for the parking area. Lights are also located at the train station structure.

The Lock 39 Trailhead parking area is on the east side of the Cuyahoga River (see Drawing 1 in Appendix C). It serves the multi-purpose "Towpath Trail," which follows the historic route of the Ohio & Erie Canal for 20 miles and serves as the major trail through CVNP. The trail at Lock 39 also connects and extends north for 7.5 miles. This segment is operated by Cleveland Metroparks. The Lock 39 parking facility has a capacity for 24 cars. When it is full, the Rockside Boarding Area may be used for overflow parking. In order to get to the trail served by the Lock 39 parking facility, users must walk from the Rockside Boarding Area along the access road out to Old Rockside Road and follow Old Rockside Road east to the Cleveland Metroparks trail, which connects to the Towpath Trail.

## 4.2 Wetlands

Many wetland areas exist in CVNP. A park-wide wetland inventory indicates that more than 1,200 wetland areas, encompassing approximately 1,700 acres exist in CVNP (Davey Resource Group, 2001). Most CVNP wetlands are small; only 190 are greater than an acre in size and only 35 are greater than 10 acres in size. Additional small wetlands may exist undetected.

Wetland types found in the Park include marshes, wet meadows, scrub/shrub wetlands and forested wetlands. Small emergent wetlands occurring in isolated depressions fed by surface water are the most common. Small wetlands are also often found at the heads of intermittent drainageways, adjacent to ponds, or as hillside seeps. Many wetlands are partially or completely forested, or include a shrub component. The largest wetlands are located within the Cuyahoga River floodplain and include emergent, shrub, and forested areas. All ponds except one (Oxbow) are artificial; many were originally created to serve as small farm ponds. Long-abandoned ponds usually have reverted to a more natural state, and now display wetland characteristics. Such ponds are treated as natural wetlands, assigned protective buffers and managed for natural resource values.

The CVNP inventory described above may be considered an “enhanced inventory,” as described in Section 5.1 of Procedural Manual #77-1. The inventory does not show any wetlands in the study area. It does show a large wetland, Wetland Number 1140, just south of the site.

Wetlands on the 11.45-acre site were delineated and surveyed on June 20, 2005 by the Davey Resource Group (see Appendix D, Wetlands Delineation Report). The delineations were made utilizing the routine on-site determination method as published in the Corps of Engineers Wetlands Delineation Manual (United States Army Engineer Waterways Experiment Station Environmental Laboratory, 1987). In addition, the methodology incorporated the procedures used by the NPS, which is the U.S. Fish and Wildlife Service system, *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al, 1979).

Seven wetland areas were mapped on the site as shown on Appendix M of the Wetlands Delineation Report (Appendix D). The areas of each wetland are shown on Table 4-1. Wetlands B, C, D and E are located on top of fill within slight depressions and areas of tire rutting and soil compaction. Wetlands B and G are dominated by the common reed (*Phragmites australis*), a non-native, invasive species. Because of these characteristics, all of the wetlands identified on the site are rated by the Ohio Rapid Assessment Method (ORAM),<sup>1</sup> and placed in the Category 1 classification. Category 1 wetlands are the lowest quality wetlands. Wetlands A and F are palustrine forested wetlands. Wetland A is typical of small, roadside disturbed wetlands that are found along ditches and streams and represents a recovered ecological state from past disturbances. Since its soils are non-hydric, Wetland F is the only wetland not likely to be regulated by the U. S. Army Corps of Engineers (USACE). The USACE requires the presence of all three conditions (hydrology, soils and vegetation) for an area to be labeled as a wetland. Wetland F meets the NPS wetlands criteria based on vegetation and hydrology using the Cowardin Classification method, which requires the presence of two of the three conditions.

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<sup>1</sup> The ORAM is a wetlands evaluation method developed and used by the Ohio EPA.

**Table 4-1. Wetlands Delineated on the Site.**

<b>Wetlands</b>	<b>Cowardin Type</b>	<b>Wetland Type</b>	<b>ORAM Category</b>	<b>Area (Acres)</b>
A	Palustrine forested	USACE Jurisdictional	2	0.18
B	Palustrine emergent	USACE Jurisdictional	1	0.30
C	Palustrine emergent	USACE Jurisdictional	1	0.21
D	Palustrine emergent	USACE Jurisdictional	1	0.07
E	Palustrine emergent	USACE Jurisdictional	1	0.03
F	Palustrine forested	Cowardin only	Modified 2	0.35
G	Palustrine emergent	USACE Jurisdictional	1	0.01
Total				1.15

### **4.3 Floodplains**

Of the 32,864 acres in CVNP, approximately 3,574 acres, or 11 percent are, in the 100-year floodplain. Information concerning this floodplain is available from the National Flood Insurance Program (NFIP) Flood Insurance Studies (FIS) for the City of Independence (U.S. Department of Housing and Urban Development, 2001). Information is also available from hydrologic and hydraulic studies that have been conducted for CVNP as a part of the design of recent or current riverbank stabilization projects. This section of the Cuyahoga River has been studied in detail as part of the NFIP, meaning that a hydraulic model (HEC-RAS or HEC-2) has been developed to calculate water surface elevations, velocities and other hydraulic variables of interest. In addition, there is a USGS Gauging Station (04208000) with 72 years of record located 240 feet downstream of Old Rockside Road, and approximately 600 feet downstream of the site.

The entire Rockside Boarding Area site is located within the 100-year floodplain of the Cuyahoga River. The 100-year water surface elevation of 609.2 is equivalent to depths between 4.0 and 7.2 feet in the parking lot. The velocity for the 100-year flood in the floodplain at this location is 1.2 feet per second. A small portion of the lot and the access roadway are located within the floodway<sup>2</sup> (see Drawing 2 in Appendix C and Exhibit E-1, the FEMA Flood Insurance Rate Map in Appendix E). The river is approximately 100 feet wide at this location and has a sinuosity of 1.15. The steep banks are 10 feet high and non-vegetated, with the exception of willow and sycamore trees that are interspersed along the banks (see Photos 1 and 2 in Appendix E). Portions of the bank are naturally armored as a result of fluvial erosion and sorting (see Photos 1 and 2 in Appendix E). The floodplain is sloped between 1% and 4% towards the river. Other than the parking area, the floodplain consists of overgrown pasture, a drainage channel along the south side of Rockside Road, and seven wetlands totaling 1.14 acres (see Section 4.2). A forested wetland with some vernal pools, located further to the south, will not be disturbed by any of the alternatives being considered. In summary, the

<sup>2</sup> For purposes of the NFIP, a floodway is the channel of the stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights (U.S. Department of Housing and Urban Development, 2001).

floodplain provides off-channel storage for Cuyahoga River flooding; however, the site exhibits rather low quality habitat and low quality floodplain values, primarily due to its previous disturbance and existing use as a parking area.

The floodplain east of the river is significantly narrower due to high ground (above elevation 610) upon which the Lock 39 Trailhead parking lot is located. Most of this portion of the floodplain is covered with successional floodplain woods. Common species include cottonwood, box elder, Japanese knotweed and garlic mustard. The land between the floodplain and the Lock 39 Trailhead parking area is steeply sloped.

#### **4.4 Water Resources**

More than 22 miles of the Cuyahoga River pass through CVNP. The Cuyahoga River drains more than 800 square miles of Northeastern Ohio and only 6.5% of this drainage area is within CVNP. Cuyahoga Valley National Park has more than 200 miles of perennial and ephemeral streams, including the portion of the Cuyahoga River within its borders.

Water quality in the Park has been monitored by CVNP since 1984, and the streams generally comply with the State of Ohio water quality standards for warm water habitat. The water quality of the Cuyahoga River that runs through CVNP is a primary concern to Park officials, as the river receives discharges of stormwater and combined-sewer overflows from urban areas. The Park discourages any canoeing, swimming, or wading in the river, primarily due to pathogen-related concerns.

In response to its responsibilities under Section 303(d) of the CWA, the Ohio Environmental Protection Agency (EPA) identified the Lower Cuyahoga River watershed as a priority impaired water on the 1998 303(d) list. The primary causes of this impairment on the mainstem Cuyahoga River include organic enrichment/dissolved oxygen and siltation. Other causes include nutrients, bacteria, flow alteration, toxicity and degraded habitats. Major sources include “municipal and industrial point sources, combined sewer and sanitary sewer overflows, and, to a lesser extent, natural conditions” (Ohio EPA, 2003).

The Cuyahoga River continues to be monitored for several water quality parameters once a month, from May through October, at Ira and Station Roads (approximate river miles 33 and 20, respectively). The NPS collaborated with the U.S. Geological Survey (USGS) from 2000 to 2004 to complete a study of microbiological indicator organisms to address concerns about fecal contamination (U. S. Geological Survey, 2004). These monitoring efforts have revealed that, in general, water quality deteriorates during precipitation events. Results of the USGS/NPS study show that concentrations of E. Coli bacteria were significantly correlated with streamflow. Metals exhibited a similar relationship to runoff (concentrations often increasing by an order of magnitude), but nutrient loadings appear to be influenced by more than just runoff.

Stormwater management and, more specifically, stormwater discharges associated with construction must comply with the rules and regulations of the Ohio EPA’s recent issuance of the National Pollutant Discharge Elimination System (NPDES) General Permit. Stormwater associated with construction activity is covered under the Ohio EPA NPDES Permit No.

OHC000002. This permit authorizes discharges from disturbances of 1 to 5 acres, as required by the U.S. EPA's Phase II stormwater rules. The permit requires the development of a Stormwater Pollution Prevention Plan (SWPPP) prior to construction.

The alternative will be analyzed for potential impacts to water quality considerations associated with stormwater runoff. Runoff from roadway and parking areas includes many vehicular and parking lot related by-products. Typical constituents of these by-products include Total suspended solids (TSS), Total phosphorus (TP), Total Nitrogen (TN), F Coli bacteria, Copper (Cu), Lead (Pb), and Zinc (Zn). The Simple Method (Schueler, 1987) can be applied to estimate annual stormwater runoff pollutant loading for planning purposes, based on a collection of concentration data for the above mentioned pollutants. Road salt is used on the parking facility whenever there is more than two inches of snow on the parking area. Potassium chloride is used when temperatures are below 20 degrees F. These treatments are not required often, so a separate analysis of road salts was not performed for this EA.<sup>3</sup>

Also, proximity to the riverbank could necessitate riverbank management practices in order to protect NPS investment in the parking area from the erosional forces of the Cuyahoga River.

#### **4.5 Threatened, Endangered, or Special Concern Species**

No federally-listed plant species are known to occur in the Park. The U. S. Fish and Wildlife Service indicates that the Park is within the range of the federally-threatened northern monkshood (*Aconitum noveboracense*). This plant is found on cool, moist talus slopes or shaded cliff faces in wooded ravines, and is not likely to be found near the Rockside Boarding Area.

Twenty-four state-listed rare plant species are known to occur in CVNP (Table 4-2). These plants occur in various habitats in CVNP. Several of the species occur only in forests, while others are adapted to field habitats. None of the State listed plants have been reported to be on the site; however, no surveys specifically targeting these species have been performed.

Wildlife species known to occur in CVNP that are on state and federal lists are shown on Table 4-3. No state- or federal-listed amphibians, fishes, mollusks or arthropods are known to occur in CVNP. There are no federally-designated critical habitats or wilderness areas within the vicinity of the Park.

For several years, the federally threatened bald eagle (*Haliaeetus leucocephalus*) has been seen along the Cuyahoga River within CVNP. In 2006, a bald eagle nest was discovered in the blue heron colony (heronry) in Piney Narrow, more than 5.5 miles upstream of the Rockside Boarding area. However, no eggs were laid in the nest, and the nest is now abandoned.

In a letter dated March 17, 2003, the U.S. Fish and Wildlife Service stated that CVNP is known to support summer populations of the federally-endangered Indiana bat (*Myotis sodalis*). This species was recently found in the Park. The Park contains an abundance of suitable habitat. Suitable breeding and roosting habitat for Indiana bats can vary widely, but typically consists of large (>10" diameter) trees with peeling bark, located near a permanent water source and good

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<sup>3</sup> The CVSR does operate excursions in December and does not operate again until Spring.

foraging areas. Indiana bat foraging habitat is typically in floodplain forests and riparian areas. Thus, expansion of the Rockside Boarding Area parking facility has the potential to influence habitat availability for this species. The U.S. Fish and Wildlife Service letter recommends that if characteristic trees need to be cut, they should not be cut between April 15 and September 15. It also provides recommendations regarding surveys and coordination in the event that this time restriction is not acceptable.

**Table 4-2. State-listed Rare Plants Occurring in Cuyahoga Valley National Park.**

<b>Common Name</b>	<b>(Scientific Name)</b>	<b>Status</b>
Variegated scouring-rush	<i>Equisetum variegatum</i>	State Endangered
Common juniper	<i>Juniperus communis</i>	State Endangered
Leafy goldenrod	<i>Solidago squarrosa</i>	State Threatened
Drooping wood sedge	<i>Carex arctata</i>	State Endangered
Thin-leaved sedge	<i>Carex cephaloidea</i>	State Endangered
Greene's rush	<i>Juncus greenei</i>	State Endangered
Large-leaved Mountain rice	<i>Oryzopsis asperifolia</i>	State Endangered
Philadelphia panic grass	<i>Panicum philadelphicum</i>	State Endangered
Great Rhododendron	<i>Rhododendron maximum</i>	State Threatened
Pipsissewa	<i>Chimaphila umbellata</i>	State Threatened
Deer's-tongue arrowhead	<i>Sagittaria rigida</i>	State Threatened
Seaside arrow-grass	<i>Triglochin maritimum</i>	State Threatened
Satin brome	<i>Bromus nottowayanus</i>	State Threatened
Bearded wheat grass	<i>Elymus trachycaulus</i>	State Threatened
Round fruited pinweed	<i>Lechea intermedia</i>	Potentially Threatened
Round-leaved dogwood	<i>Cornus rugosa</i>	Potentially Threatened
Canada buffalo-berry	<i>Shepherdia canadensis</i>	Potentially Threatened
American chestnut (fruiting)	<i>Castanea dentata</i>	Potentially Threatened
Rock harlequin	<i>Corydalis sempervirens</i>	Potentially Threatened
Butternut	<i>Juglans cinerea</i>	Potentially Threatened
Silvery sedge	<i>Carex argyrantha</i>	Potentially Threatened
Golden-fruited sedge	<i>Carex aurea</i>	Potentially Threatened
Bebb's sedge	<i>Carex bebbii</i>	Potentially Threatened
Spotted coral root	<i>Corallorhiza maculata</i>	Potentially Threatened
Shining Ladies'-tresses	<i>Spiranthes lucida</i>	Potentially Threatened
Great Plains Ladies' tresses	<i>Spiranthes magnicamporum</i>	Potentially Threatened
Lesser Ladies' tresses	<i>Spiranthes ovalis</i>	Potentially Threatened
Weak spear grass	<i>Poa languida</i>	Potentially Threatened
Swamp oats	<i>Sphenopholis pensylvanica</i>	Potentially Threatened
Source: Ohio Department of Natural Resources, Status List for 2004-2005.		



**Table 4-3. Federal and State-listed Wildlife Species Occurring in Cuyahoga Valley National Park.**

<b>Order</b>	<b>Common Name</b>	<b>(Scientific Name)</b>	<b>Status</b>
<b>Birds</b>	American bittern	<i>Botaurus lentiginosus</i>	State Endangered
	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Federal & State Endangered
	Northern harrier	<i>Circus cyaneus</i>	State Endangered
	King Rail	<i>Rallus elegans</i>	State Endangered
	Black tern	<i>Chlidonias niger</i>	State Endangered
	Yellow-bellied sapsucker	<i>Sphyrapicus varius</i>	State Endangered
	Golden-winged warbler	<i>Vermivora chrysoptera</i>	State Endangered
	Osprey	<i>Pandion haliaetus</i>	State Endangered
	Upland sandpiper	<i>Bartramia longicauda</i>	State Threatened
	Black-crowned night heron	<i>Nycticorax nycticorax</i>	State Threatened
	Dark-eyed junco	<i>Junco hyemalis</i>	State Threatened
	Hermit thrush	<i>Catharus guttatus</i>	State Threatened
	Least bittern	<i>Ixobrychus exilis</i>	State Threatened
	Sharp-shinned hawk	<i>Accipiter striatus</i>	Species of concern
	Sedge wren	<i>Cistothorus platensis</i>	Species of concern
	Marsh wren	<i>Cistothorus palustris</i>	Species of concern
	Henslow's sparrow	<i>Ammodramus henslowii</i>	Species of concern
	Cerulean warbler	<i>Dendroica cerulea</i>	Species of concern
	Prothonotary warbler	<i>Protonotaria citrea</i>	Species of concern
	Bobolink	<i>Dolichonyx oryzivorus</i>	Species of concern
	Northern Bobwhite	<i>Colinus virginianus</i>	Species of concern
	Common moorhen	<i>Gallinula chloropus</i>	Species of concern
	Great egret	<i>Casmerodius albus</i>	Species of concern
	Sora rail	<i>Porzana carolina</i>	Species of concern
	Virginia rail	<i>Rallus limicola</i>	Species of concern
	Canada warbler	<i>Wilsonia canadensis</i>	Special interest
	Magnolia warbler	<i>Dendroica magnolia</i>	Special interest
	Northern waterthrush	<i>Seiurus noveboracensis</i>	Special interest
	Winter wren	<i>Troglodytes troglodytes</i>	Special interest
	Black-throated blue warbler	<i>Dendroica caerulescens</i>	Special interest
	Northern saw whet owl	<i>Aegolius acadicus</i>	Special interest
	Pine siskin	<i>Carduelis pinus</i>	Special interest
	Purple finch	<i>Carpodacus purpureus</i>	Special interest
	Red-breasted nuthatch	<i>Sitta canadensis</i>	Special interest
	Blackburnian warbler	<i>Dendroica fusca</i>	Special interest
	Common snipe	<i>Gallinago gallinago</i>	Special interest
	Northern pintail	<i>Anas acuta</i>	Special interest
	Redhead duck	<i>Aythya americana</i>	Special interest
<b>Mammals</b>	Indiana bat	<i>Myotis sodalis</i>	Federal & State Endangered
	Star-nosed mole	<i>Condylura cristata</i>	Species of concern
<b>Reptiles</b>	Spotted Turtle	<i>Clemmys guttata</i>	State threatened
	Eastern box turtle	<i>Terrapene carolina</i>	Species of concern
	Blanding's turtle	<i>Emydoidea blandingii</i>	Species of concern

Source: Ohio Department of Natural Resources, 2002.

The Park is also within the range of the eastern massasauga (*Sistrurus catenatus catenatus*) rattlesnake, a candidate species for listing under the Endangered Species Act (ESA). The species has not been detected within the Park, but the type of wet habitat this snake prefers is found in CVNP. A letter received from the US Fish and Wildlife Service, dated March 17, 2003 (see Appendix B) stated that the massasauga is often found in or near wet areas, including wetlands, wet prairie, or nearby woodland or shrub edge habitat. This often includes dry goldenrod meadows with a mosaic of early successional woody species such as dogwood or multiflora rose. Wet habitat and nearby dry edges are utilized by the snakes, especially during the spring and fall. The conclusion of a site visit on June 16, 2003 was that the entire area around the existing parking lot seemed to be a reasonably good potential habitat for the eastern massasauga. A biologist experienced in eastern massasauga surveys conducted a survey of the project area on May 20, 2004. This survey concluded that the area does not represent suitable habitat for a viable population of eastern massasauga (Appendix F). Thus, expansion of the Rockside Boarding Area parking facility does not have the potential to influence habitat availability for this species.

The Piping plover (*Charadrius melodus*) is a federally listed endangered species that occurs in Cuyahoga County, but is not found within the Park. No suitable breeding habitat for piping plovers exists within Park boundaries.

At least 22 bird species that breed in the Park are of conservation concern in Ohio (ODNR, 2002), or at regional and national levels, as determined by the international conservation consortium, *Partners in Flight* (Hunter et al., 1993; PIF, 2002). Most of these species of concern have exhibited steep population declines throughout their range, or regionally due to habitat loss and degradation. In CVNP, 11 of these species of concern are associated with mature forests; four are dependent on early successional forests; two are specific to grasslands; and four are dependent upon wetland habitats (Table 4-4). Nearly all of these species require relatively large, unbroken tracts of habitat for breeding.

**Table 4-4. Bird Species of Conservation Concern Known to Breed in CVNP.**

<b>Common Name (Scientific Name)</b>	<b>Status*</b>	<b>Habitat</b>
Sora ( <i>Porzana carolina</i> )	SC	Wetland/Marsh
Virginia rail ( <i>Rallus limicola</i> )	SC	Wetland/Marsh
American woodcock ( <i>Scolopax minor</i> )	PIF	Early succession
Sharp-shinned hawk ( <i>Accipiter striatus</i> )	SC	Forest
Acadian flycatcher ( <i>Empidonax virescens</i> )	PIF	Forest
Least flycatcher ( <i>Empidonax minimus</i> )	ST	Early succession
Brown creeper ( <i>Certhia familiaris</i> )	SI	Forest
Marsh wren ( <i>Cistothorus palustris</i> )	SC	Wetland/Marsh
Winter wren ( <i>Troglodytes troglodytes</i> )	SI	Forest
Wood thrush ( <i>Hylocichla mustelina</i> )	PIF	Forest
Hermit thrush ( <i>Catharus guttatus</i> )	ST	Forest
Prothonotary Warbler ( <i>Protonotaria citrea</i> )	SC	Forest Wetland
Golden-winged warbler ( <i>Vermivora chrysoptera</i> )	SE, PIF	Early succession
Cerulean warbler ( <i>Dendroica cerulea</i> )	SC, PIF	Forest
Kentucky warbler ( <i>Oporornis formosus</i> )	PIF	Forest
Canada warbler ( <i>Wilsonia canadensis</i> )	SI, PIF	Forest
Louisiana waterthrush ( <i>Seiurus motacilla</i> )	PIF	Forest
Henslow's sparrow ( <i>Ammodramus henslowii</i> )	SC, PIF	Grassland
Field sparrow ( <i>Spizella pusilla</i> )	PIF	Early succession
Dark-eyed junco ( <i>Junco hyemalis</i> )	ST	Forest
Bobolink ( <i>Dolichonyx oryzivorus</i> )	SC	Grassland
Purple finch ( <i>Carpodacus purpureus</i> )	SI	Forest edge

\* SE = Endangered in Ohio, ST = Threatened in Ohio, SC = Species of Concern in Ohio, SI = Special Interest in Ohio (ODNR, 2002); PIF = Partners in Flight bird of conservation concern (Hunter et al., 1993 - current Ohio Hills and Allegheny Plateau physiographic region lists)

#### **4.6 Wildlife and Wildlife Habitat**

Faunal species that have been detected in the Park amount to 194 species of birds, 91 aquatic macroinvertebrates, 43 fish, 32 mammals, 22 amphibians, and 20 species of reptiles. In addition, 60 butterfly species have been documented in the Park.

Populations of numerous wildlife species have increased substantially in the last decade, both locally and regionally, to the extent that these species have recently reached nuisance levels within the Park. Most notably, raccoons (*Procyon lotor*), woodchucks (*Marmota monax*), Canada geese (*Branta canadensis*), and white-tailed deer (*Odocoileus virginianus*) are ubiquitous throughout the Park, and consistently generate the greatest number of conflicts with humans.

The CVNP Beaver Management Plan state that although very little historical record is available, it is agreed that prior to European settlement, beaver (*Castor canadensis*) were abundant throughout Ohio (King, Bissel, Frank, 1979). However, by 1830, after many years of heavy trapping, beaver had been eliminated from Ohio. It was not until more than 100 years after they were extirpated from the state that beaver reappeared in 1936 in the eastern counties of Ohio. Beaver probably moved into the Park area within the last ten years, and an initial inventory in

1991 found over 50 active or recently abandoned lodges. Through their dam-building and feeding activities, beaver act as a "Keystone" species, affecting ecosystem structure and dynamics far beyond their immediate requirements for food and cover. The wetlands which beaver construct and maintain for their own protection also provide a range of habitats suitable for many plant and animal species. Any increase in the beaver population contributes to the increase of habitat for those species dependent upon wetlands. Surveys in 2002 and January 2003 showed evidence of beaver in the area, but no lodges or other structures were found. Evidence of beaver was observed along the Cuyahoga River in a visit to the site on April 22, 2003.



Evidence of beaver activity.

Coyotes (*Canis latrans*) are the most dominant carnivore and predator in CVNP ecosystem and are, therefore, a prime contributor to diversity. It is a species that has recently returned to the valley after a long absence. Park residents and visitors frequently report coyote sightings. The Park provides good habitat for the coyote with its many open fields and agricultural landscape, and the public has expressed concerns regarding the impacts of coyotes in the system. Coyotes may frequent the vicinity of the proposed parking area expansion.

Whitetail deer (*Odocoileus virginianus*) populations in CVNP have been estimated to be as high as 130 deer per square mile. Deer begin affecting people and their environment (especially other wildlife and vegetation) at 10 deer per square mile. Impacts on vegetation and wildlife increase in quantity and severity as populations increase. Coyotes remain their only natural predator, primarily scavenging dead deer or preying upon the occasional weak fawn or adult. With few predators to cull their numbers, the deer population is rising. Deer are herbivores: animals which graze or browse depending on food availability. In the spring and summer, their diet is primarily grasses and leaves; they eat nuts, woody twigs, and bark in the fall and winter. If there are too many deer, they will over-browse the vegetation, influencing the number and diversity of plant species. This, in turn, can reduce the population of other wildlife such as small mammals and songbirds. It is likely that deer may be found in the vicinity of the proposed parking area expansion.

Ten raptor species are known to be either year-round or summer residents in the Cuyahoga Valley. These species include the great horned owl (*Bubo virginianus*), eastern screech owl (*Otus asio*), barred owl (*Strix varia*), turkey vulture (*Cathartes aura*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo brachyurus*), broad-winged hawk (*Buteo platypterus*), and American kestrel (*Falco sparverius*).

Although fish communities have recovered significantly in historically depleted segments of the Cuyahoga River, pollution-tolerant species continue to dominate the population composition.

The Ohio EPA uses a modification of the Index of Biotic Integrity (IBI) specific to Ohio rivers and streams as its principle biological criteria for assessing stream health (Ohio EPA 1996). The IBI is an ecologically based, multimetric index which utilizes fish community data and aggregates results across 12 ecological metrics that can be classified into four categories: species richness, species composition, trophic composition, and fish density and community condition. IBI, as well as ICI and MIwb scores (additional Ohio EPA measures of macroinvertebrate and fish population conditions) in CVNP range from fair to very poor and are generally below applicable Ohio warmwater habitat aquatic life use criteria. There is a potential for the project to affect fish habitat with its proximity to the Cuyahoga River.

Amphibians and, to a lesser extent, reptiles are relatively sedentary and spend much of their time in and around the aquatic and riparian zones within CVNP. Consequently, they are probably more prone to, and hence more representative of, localized point sources of contamination than other vertebrates. This also makes them more sensitive to the loss and degradation of habitat.

One habitat type required by certain species of amphibians and reptiles is known as a vernal pool. A vernal pool is a contained basin depression lacking a permanent above ground outlet. It fills with water with the rising water table of fall and winter and/or with the meltwater and runoff of winter and spring snow and rain. Many vernal pools in the Northeast are covered with ice in the winter months. They contain water for a few months in the spring and early summer. By late summer, a vernal pool is generally (but not always) dry. During a site visit on April 22, 2003, a forested area of vernal pools was identified just south of the project location.

#### **4.7 Vegetation and Invasive Species**

Cuyahoga Valley National Park encompasses a diverse mosaic of natural vegetation types interspersed among various human-developed land uses. Located in the glaciated Allegheny Plateau of northeastern Ohio, natural vegetation of the Park is currently composed of approximately 80% mixed-mesophytic forest (Braun, 1961), predominantly of oak-hickory associations but also including maple-oak, oak-beech-maple, maple-sycamore, pine-spruce, and hemlock-beech associations. The long history of intensive land uses has left the Park with forests possessing vast differences in community age and structure.

Interspersed among these forests are other natural habitats including older field habitats in various stages of succession (approximately 6%), wet meadows, and other wetland habitats (approximately 5%). Suburban lands comprise approximately 3% of the landscape, and include regularly mowed open areas such as lawns, golf courses, and cemeteries. Cultivated agricultural lands make up approximately 4% of the park.

Bottomland forests, those generally located in the floodplains of the Cuyahoga River and its tributaries, are predominantly vegetated with ash (*Fraxinus* spp.), cottonwood (*Populus deltoides*), sycamore (*Platanus occidentalis*), box elder (*Acer negundo*), Ohio buckeye (*Aesculus glabra*), silver maple (*Acer saccharinum*) and red maple (*Acer rubrum*). The herbaceous groundcover in these forests tends to be more abundant than in the upland forests. Typical herbaceous species in these areas include enchanter's nightshade (*Circaea lutetiana*), grasses (*Poa* spp.), sedges (*Carex* spp.), violets (*Viola* spp.), moneywort (*Lysimachia nummularia*), wingstem (*Verbesina alternifolia*), smartweed (*Polygonum* spp.), jewelweed (*Impatiens capensis*

and *Impatiens pallida*), wild onions, garlic and leeks (*allium* spp.), and garlic mustard (*Alliaria petiolata*). Shrub cover is sparse or more frequently absent in these areas, and when present, consists mainly of viburnums (*Viburnum* spp.), honeysuckles (*Lonicera* spp.), privet (*Ligustrum vulgare*), and Japanese multiflora rose (*Rosa multiflora*).

Most of the site surrounding the Rockside Boarding Area is an upland old field vegetative community with areas of successional woods, wet meadow and lowland woods. The upland old field area is periodically mowed and typically includes grasses (e.g., *Poa trivialis*, *Poa sylvestris*, *Panicum virgatum* and *Danthonia spicata*) with many forbs (e.g., *Solidago canadensis*, *Solidago graminifolia*, *Aster nova-borensis* and *Apocynum cannabinum*) present as well. Species identified during the April 22, 2003 site visit include teasel (*Dipsacus sylvestris*), moneywort (*Lysimachia nummularia*), and Queen Anne's lace (*Daucus carota*). Species identified in a June 20, 2005 site visit include oleaster (*Eleagnus umbellata*), oxeye daily (*Chrysanthemum leucanthemum*), path rush (*Juncus tenuis*), Canada goldenrod (*Solidago Canadensis*) and fescue (*Festuca* sp.). Areas of successional floodplain woods exist along the Cuyahoga River. Common species are cottonwood (*Populus deltoids*), box elder (*Acer negundo*), Tartarian honeysuckle (*Lonicera tatarica*), Japanese knotweed (*Polygonum cuspidatum*) and garlic mustard (*Alliaria petiolata*). Two areas of palustrine emergent wetlands (see Section 4.2), one on either side of the river, are dominated by common reed (*Phragmites australis*). Other palustrine emergent wetlands contain sedges (*Carex* spp.), soft rush (*Juncus effusus*), moneywort (*Lysimachia nummularia*), swamp milkweed (*Asclepias incarnata*) and path rush (*Juncus tenuis*). Two small areas of palustrine forested wetlands, one on either side of the river, contain cottonwood (*Populus deltoids*) box elder (*Acer negundo*) and reed canary grass (*Phalaris arundinacea*). A map showing "General Plant Communities on the Site from Field Data" is included as Appendix I to the Wetlands Delineation Report in Appendix D.

Over 940 plant species occur in the various habitats within CVNP. Approximately 186 of these species are exotic species not native to the area. Of these 186 species of exotic plants, only 14 plant species are currently considered invasive within the Park. These are listed in Table 4-5. These invasive species are found mainly in wetlands, floodplains, river and streambanks, road margins, rights of way, disturbed areas, and along developed trails.

The NPS *Management Policies* (NPS, 2001a) provide specific guidance for dealing with invasive species. The control of populations of exotic plant and animal species, "up to and including eradication, will be undertaken wherever such species threaten Park resources or public health and when control is prudent and feasible." Examples of threatening situations include: (1) posing a public health hazard or a hazard to public safety; (2) disrupting the accurate preservation of a historic scene; (3) damaging historic or archeological resources; (4) interfering with natural processes and the perpetuation of natural features or native species (especially those that are endangered, threatened, or otherwise unique; and (5) significantly hampering the management of park or adjacent lands.

Five of the 14 invasive plants found in CVNP are potential threats to the native vegetation in the riparian zone of the Cuyahoga River. Japanese honeysuckle occurs at many localities throughout the area. It is a pernicious weed that can overwhelm and strangle the native flora. Purple loosestrife does particularly well in wetlands and has the ability to move rapidly, become firmly

established and eliminate other species. Reed canary grass is a significant problem in the Park. This species occurs in more than 160 wetlands throughout the Park, and is beginning to form monocultures over large areas. It tends to move into wetlands after frequent, but temporary, inundation such as the abandonment of beaver dams. It crowds out other grasses and sedges which have more wildlife value. Giant reed grass forms extensive clones in wet areas such as sedge meadows, fens, wet fields, roadside ditches and floodplains. Japanese knotweed is one of the more pervasive invasives within the riparian corridor. It tends to colonize disturbed areas, and can form extensive populations rapidly - spreading by underground rhizomes. These plants, when present near a project site, can rapidly spread into an area that is disturbed, threatening the integrity of the Park's native plant communities by outcompeting the native plants, supplanting them and transforming diverse habitats into monocultures of invasive plants with minimal wildlife value.

**Table 4-5. Invasive Plant Species in CVNP.**

<u>Scientific Name</u>	<u>Common Name</u>
<i>Alliaria petiolata</i>	Garlic mustard
<i>Elaeagnus umbellata</i>	Autumn olive
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Lonicera maackii</i>	Amur honeysuckle
<i>Lonicera morrowii</i>	Morrow honeysuckle
<i>Lonicera tatarica</i>	Tartian honeysuckle
<i>Lythrum salicaria</i>	Purple loosestrife
<i>Phalaris arundinacea</i>	Reed canary grass
<i>Phragmites australis</i>	Common reed/reed grass
<i>Polygonum cuspidatum</i>	Japanese knotweed
<i>Rhamnus cathartica</i>	European buckthorn
<i>Rhamnus frangula</i>	Glossy buckthorn
<i>Rosa multiflora</i>	Multiflora rose
<i>Typha angustifolia</i>	Narrow-leaved cattail

The site including and surrounding the Rockside Boarding Area was previously disturbed, and some of the named invasive species are currently present (garlic mustard, Tartian honeysuckle, reed canary grass, common reed and Japanese knotweed). The area to the west of the railroad tracks appears to be dominated by the common reed. Expansion of the parking area will further disturb the area, and consideration should be given to the potential for these and others of the invasive species to spread as a result.



Looking west. Common Reed (*Phragmites australis*) is abundant on the other side of the railroad tracks.



## 4.8 Cultural Resources

As stated in the *NPS Cultural Resource Management Guideline* (NPS, 1997), cultural resources are “...the material evidence of past human activities. Finite and nonrenewable, these tangible resources begin to deteriorate almost from the moment of their creation. Once gone, they cannot be recovered. In keeping with the NPS organic act of 1916 and varied historic preservation laws, park management activities must reflect awareness of the irreplaceable nature of these material resources.” It also states that if these resources “are degraded or lost, so is the parks’ reason for being.” NPS Management Policies categorizes cultural resources as archaeological resources, historic and prehistoric structures, cultural landscapes, museum collections, and ethnographic resources (NPS, 2001a). To date, CVNP has focused its research and planning efforts on the stewardship all of the categories, except ethnographic resources. In 2004, the NPS Midwest Regional Office plans to begin the park’s ethnographic study.

Cultural resources at CVNP have been categorized into six primary cultural themes: prehistoric and indigenous cultures, agriculture, transportation, settlement, recreation, and industry (NPS, 1987). These cultural themes identify a resource by its primary historical significance; however, resources often exhibit overlapping cultural themes as their uses and associations have changed through time. Thus, the cultural resources of CVNP exhibit interwoven layers of cultural history.

As discussed in Section 2.2.7, an archaeological survey has concluded that there are no archaeological resources known to be present. Impacts on museum objects will not be analyzed in this EA, as they do not fall within the scope of the proposed project and no impacts are expected. Furthermore, impacts to ethnographic resources will not be analyzed, as they do not fall within the scope of the proposed project and no impacts are expected. Therefore, the cultural resources to be considered in this EA include historic structures and cultural landscapes primarily associated with the theme of transportation, i.e., the Valley Railway and Towpath Trail.

### 4.8.1 Historic Structures

In the *NPS Cultural Resource Management Guidelines*, a historic structure is defined as “a constructed work...consciously created to serve some human activity.” It also notes that “regardless of type, level of significance, or current function, every structure is to receive full consideration for its historical values whenever a decision is made that might affect its integrity. The preservation of historic structures involves two basic concerns: slowing the rate at which historic material is lost, and maintaining historic character” (NPS, 1997). Buildings, monuments, dams, canals, bridges, roads, fences, mounds, structural ruins, and outdoor sculpture are all examples of historic structures.

Cuyahoga Valley National Park has 424 structures included on the List of Classified Structures (LCS), including 34 entries on the Valley Railway. The LCS identifies structures that are either currently listed or eligible for listing on the National Register of Historic Places. Cuyahoga Valley National Park also has 67 listings on the National Register of Historic Places. National Register listings generally include multiple property listings, thematic studies, historic districts, historic properties, historic structures, and archeological sites. The Valley Railway is listed as a



historic district. It has a distinct boundary that includes historic resources within such as the rail line, several train depots, bridges, and culverts.

The proposed project being analyzed in this EA is located within the Valley Railway historic district boundary, and is immediately adjacent to the rail line to the east. According to the Draft Valley Railway Cultural Landscape Report, "...none of Thornburgh Station's, [aka Rockside Station's] buildings still exist, and the area is currently utilized as the main boarding site and parking area for the Cuyahoga Valley Scenic Railway" (NPS, 1999). In 2002, the existing boarding site and new depot in this area were constructed. Prior to construction, the environmental impacts were analyzed in an EA entitled "Environmental Assessment: Cuyahoga Valley Railway Scenic Railroad Boarding Stations (3 Locations)" (NPS, 2002d). In addition, cultural resource impacts were evaluated according to Section 106 historic preservation compliance procedures through an *Assessment of Actions Having an Effect on Cultural Resources* form. Both assessments included the existing gravel parking lot area.

Correspondence from the Ohio Historic Preservation Office identifies "the B&O Railroad building (CUY-477-19)" as being located near the parking area expansion. The reference, CUY-477-19, refers to the Ohio Historic Inventory form completed by CVNP for the railroad itself (see Appendix F). The location of the cited building was provided as the northern terminus for the railway, and is not a building; therefore, the historic structure in the vicinity of the proposed expansion is the rail line for the Valley Railway itself. This EA will discuss potential impacts to the Valley Railway and to the historic district associated with it.

The Ohio & Erie Canal is listed on the National Register as a thematic study. It has no distinct boundaries and focuses primarily on the canal locks, including Lock 39. Although other resources along the canal - such as the Towpath Trail, weirs and culverts - are not included in the nomination, they are included on the List of Classified Structures (LCS), and treated as cultural resources.

#### 4.8.2 Cultural Landscapes

As described in the CVNRA Cultural Landscape Report, "cultural landscapes can broadly be defined as places which have been settled, controlled, manipulated, or altered [by humans]. The most important cultural landscapes are those which include components, use patterns, and structures of historic significance and physical integrity" (NPS, 1987). "The cultural landscape is a tangible manifestation of human actions and beliefs which have been set against and within the natural landscape" (NPS, 1987).

According to NPS Management Policies (NPS, 2001a) and Cultural Resource Management Guidelines (NPS, 1997), all cultural landscapes are to be managed as cultural resources, regardless of the type or level of significance. Management actions are to focus on preserving the physical attributes, biotic systems, and uses of a landscape as they contribute to historic significance. Landscapes differ from other cultural resources due to inherent changes brought about by both natural processes and human activities. Because of this innate, dynamic quality, preservation treatments seek to protect and preserve the historic character of a landscape over

time through the continuity of distinctive characteristics. Thus, the emphasis is on maintaining the character and feeling rather than on preserving a specific appearance or time period.

As noted in the CVNRA Cultural Landscape Report (NPS, 1987), the Valley Railway and the Ohio & Erie Canal contribute to the park's cultural resource theme of transportation. Their location, setting, and pattern of use on the land has altered the natural landscape and imposed defining characteristics on the environs that are considered historically significant.

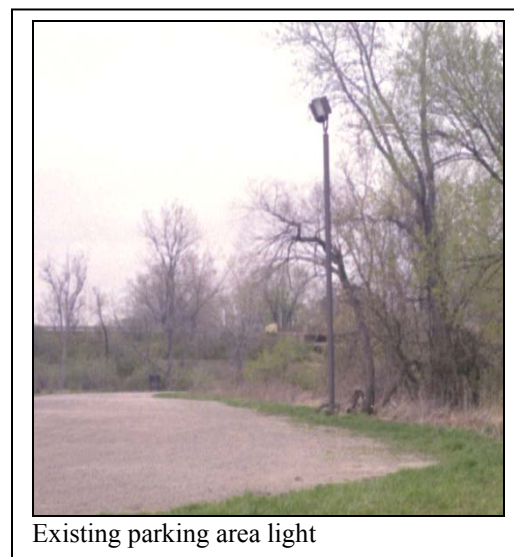
In 1999, a draft Valley Railway Cultural Landscape Report (CLR) was prepared at CVNP "to determine what impact the Valley Railway had on the landscape on the Cuyahoga Valley and to what extent its historic landscape exists today" (NPS, 1999). This document expanded upon the earlier National Register nomination that emphasized "the high degree to which the railroad retains its historical integrity for its period of significance (1871-1915)," [but did] "not discuss the views and vistas of the Valley Railway that enhance the railroad's integrity of location and setting" (NPS, 1999). The draft CLR utilized primary sources that described the landscape and compared this information to the existing conditions to identify buildings, structures, sites, objects, vistas, and viewsheds directly related to the Valley Railroad.

Rockside Station, the proposed project area, is referred to in the draft CLR by its historic name, "Thornburgh Station." This area is located within the Valley Railway historic district boundary, immediately adjacent to the historic rail line to the east. Since the draft CLR was written, a newly constructed depot and boarding site have been built to enhance the area's aesthetic and functional association with the Valley Railway. The views and vistas in and out, and through this area continue to conjure up distinct feelings and characteristics related to the Valley Railway resource, offering value to its site-specific as well as overall cultural landscape scene.

#### **4.9 Nightscape**

The project site occurs at the northernmost boundary for the park, adjacent to Rockside Road. Land use adjacent to the site consists of developed commercial properties immediately to the north and on top of the hills to the east and west. Cuyahoga Valley National Park is generally along the Cuyahoga River valley to the south (see Drawing 1 in Appendix C).

Associated with the development north of Rockside Road, nighttime lighting levels are consistent with typical suburban commercial development for parking lots, access driveways, and building lighting for security. South of Rockside Road, there is a sharp contrast, with little or no nighttime lighting within the park.



Existing parking area light

The existing parking facility includes one area parking light. Lights are also provided at the train station itself, remaining on every night for security reasons.

#### **4.10 Health and Safety**

Increasing the number of automobiles and people concentrated in one location increases the threats to the health and safety of the general public, Valley Railway volunteers and CVNP staff. Aspects of consideration for health and safety include the safety in parking areas used simultaneously by vehicles and pedestrians, access for emergency vehicles, and the potential to encounter hazardous wastes and/or contaminated materials. Unlike many NPS parking areas, the primary use for this parking area is for events where the users enter and leave the facility at the same time. There is only one access road to the site, leaving the area vulnerable under circumstances where something could happen to the access road, such as a flood (See Appendix E) or an accident on the roadway. Furthermore, those using the Rockside Boarding Area parking facility as overflow parking for the Lock 39 Trailhead parking facility must currently use this access road to walk or cycle north to Old Rockside Road, east to Canal Road, south to Rockside Road and west to the Lock 39 Trailhead parking facility. All along this route there is exposure to vehicular traffic. Also, there is potential to uncover hazardous waste or contaminated materials. During the construction of a parking area for Lock 39 in 1999, buried drums of PCB's were discovered. Therefore, decisions regarding the alternatives should consider their impact on human health and safety.

#### **4.12 Visitor Experience**

The build alternative has been developed to enhance the experience for visitors using the Valley Railway and Towpath Trail. The expansion increases the capacity for the number of visitors to have access to these facilities. Visitor experience is central to the purpose and need for the project. Impacts to visitor use/experience are therefore considered in this EA.

CUYAHOGA VALLEY NATIONAL PARK  
Environmental Assessment for Rockside Boarding Area Parking Expansion and  
Trail Bridge over the Cuyahoga River

## 5.0 IMPACTS

It is a requirement of NEPA that actions proposed by a federal agency that significantly affect the environment be identified. In implementing NEPA, CEQ regulations state that “significantly,” as used in NEPA, requires considerations of context and intensity (1508.27). CEQ further states that context,

*...means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.*

The regulations state that intensity “refers to the severity of impact.” The regulations further state that:

*The following should be considered in evaluating intensity:*

- 1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.*
- 2. The degree to which the proposed action affects public health or safety.*
- 3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*
- 4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.*
- 5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*
- 6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*
- 7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to*

*anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.*

- 8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.*
- 9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*
- 10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

For each impact topic identified in Section 2.1, a process for impact assessment was developed based on the directives of Section 4.5(g) of the DO-12 Handbook. National park system units are directed to assess the extent of impacts on park resources as defined by the context, duration, and intensity of the effect. While measurement by quantitative means is useful, it is even more crucial for the public and decision-makers to understand the implications of those impacts in the short and long term, cumulatively, and within context, based on an understanding and interpretation by resource professionals and specialists. With interpretation, one can ascertain whether a certain impact intensity to a park resource is “minor,” compared to “major,” and what criteria were used as a basis for that conclusion.

To determine impacts, methodologies were identified to measure the change in park resources that would occur with the implementation of each alternative. Thresholds were established for each impact topic to help understand the severity and magnitude of changes in resource conditions, both adverse and beneficial, of the various alternatives.

Potential impacts are described in terms of type (Are the effects beneficial or adverse?), context (Are the effects site-specific, local, or even regional?), duration (Are the effects short-term, or long-term?), and intensity (Are the effects negligible, minor, moderate, or major?). Because definitions of intensity (negligible, minor, moderate, or major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed in this document.

Each alternative is compared to a baseline to determine the context, duration, and intensity of resource impacts. For purposes of impact analysis, the baseline is the continuation of current management (Alternative 1, the No Action Alternative) projected over the next 10 years. In the absence of quantitative data, best professional judgment was used to determine impacts. The thresholds used come from existing literature, federal and state standards, and consultation with subject matter experts and appropriate agencies.

For the purposes of analysis, the following assumptions are used for all impact topics except where specifically noted:

- Short-term impacts:* Those impacts occurring in the immediate future (usually 1 to 6 months).
- Long-term impacts:* Those impacts occurring through the next 10 years.
- Direct impacts:* Those impacts occurring from the direct use or influence of the alternative.
- Indirect impacts:* Those impacts occurring from (activity) that indirectly alter a resource or condition. Such impacts occur later in time or farther in distance than the action.
- Study Area:* Each resource impact is assessed in direct relationship to those resources affected both inside and outside the park, to the extent that the impacts can be substantially traced, linked, or connected to the alternatives. Each impact topic, therefore, has a study area relative to the resource being assessed, and it is further defined in the impact methodology.

#### 5.0.1 Cumulative Impact

The CEQ regulations (40 CFR 1508.7) require the assessment of “cumulative impacts,” which are defined as:

*The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.*

In January 1997, the CEQ published a handbook entitled, Considering Cumulative Effects Under the National Environmental Policy Act.<sup>1</sup> The introduction to the handbook opens with, “Evidence is increasing that the most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions over time.”

Cumulative impacts are considered for all alternatives, including the no-action alternative. They were determined by combining the direct impacts of the alternatives being considered with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at CVNP and, where applicable, the surrounding region.

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<sup>1</sup> See <http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm>.

### 5.0.2 Impairment Analysis

The NPS Management Policies (NPS, 2001a) require an analysis of potential effects to determine whether or not actions impair park resources. The fundamental purpose of the National Park System, as established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values. However, the laws do give the NPS the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, so long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS the management discretion to allow certain impacts within a park system unit, that discretion is limited by the statutory requirement that the agency must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values.

An impact to any park resource or value may constitute impairment, but an impact would be more likely to constitute an impairment to the extent that it has a major or severely adverse effect upon a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park; or
- identified as a goal in the park's general management plan or other relevant NPS planning documents.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park.

The following process was used to determine whether the alternatives had the potential to impair park resources and values:

1. Cuyahoga Valley National Park's enabling legislation, the *General Management Plan* (NPS, 1977), and other relevant background were reviewed with regard to CVNP's purpose and significance, resource values, and resource management goals or desired future conditions.
2. Management objectives specific to resource protection goals at CVNP were identified.
3. Thresholds were established for each resource of concern to determine the context, intensity and duration of impacts, as defined above.
4. An analysis was conducted to determine if the magnitude of impact reached the level of "impairment," as defined by *NPS Management Policies* (NPS, 2001a).

The impact analysis includes any findings of impairment to park resources and values for each of the alternatives.

## 5.1 Impacts on Wetlands

### 5.1.1 Regulations and Policies

National Park Service Management Policies (NPS, 2001a, Section 4.6.5) direct NPS to manage wetlands in compliance with the Clean Water Act, the Rivers and Harbors Appropriation Act of 1899, and Executive Order (EO) 11990 “Protection of Wetlands.” Director’s Order #77-1: Wetland Protection, establishes NPS policies, requirements and standards for implementing EO 11990. Director’s Order #77-1 is included in Procedural Manual #77-1: Wetland Protection. These documents direct the NPS to minimize and mitigate the destruction, loss, or degradation of wetlands; preserve, enhance, and restore the natural and beneficial values of wetlands; and avoid direct and indirect support of new construction in wetlands unless there are no practicable alternatives and the proposed action includes all practicable measures to minimize harm to wetlands (see Appendix A).

### 5.1.2 Methodology

Cuyahoga Valley National Park has a wetland inventory in GIS format covering the park which includes wetland location, size, type, condition, species composition, and restoration/enhancement potential (Davey Resource Group, 2001). Data collection for this inventory was performed in-field using pen unit mapping and data entry devices. This inventory may be considered an “enhanced inventory,” as described in Section 5.1 of Procedural Manual #77-1. The inventory did not show any wetlands in the study area. It did show a large wetland, Wetland Number 1140, just south of the site.

In planning for specific site work, Procedural Manual #77-1 requires that onsite evaluations be conducted. Wetlands on the 11.45-acre site were delineated and surveyed on June 20, 2005 by Davey Resource Group (see Appendix D). Areas of potential impact were identified for each of the alternatives. The potential impact was then characterized by type (beneficial or adverse), context (site-specific, local or regional), duration (short term or long term) and intensity.

**Type** - Most wetland involvement results in adverse impacts to the wetlands. A beneficial effect would involve the enhancement of an existing wetland or the development of a new wetland area.

**Context** – Most wetland impacts would be site-specific. The wetlands are located in the floodplain of the Cuyahoga River. However, it is debatable whether these wetlands are connected by the river often enough to be considered related. This will be a key for the US Army Corps of Engineers (USACE) in determining jurisdictional status.

**Duration** – Many impacts to wetlands are short-term. They are impacts that may be caused, for example, by construction equipment. For short-term impacts, a wetland would recover by the end of the following growing season. Depending on the timing of construction, the duration of this type of impact would be between 6 and 12 months. Long-term impacts are such that more than one year would be required for wetland recovery, if recovery is even feasible.



**Intensity** – The intensity of an impact on wetland areas is based on two aspects: the area of the wetland(s) impacted and the quality of the wetland(s) impacted. The Ohio EPA has developed the Ohio Rapid Assessment Method (ORAM) for the purpose of regulating wetlands in Ohio under Sections 401 and 404 of the Clean Water Act (Ohio EPA, 2001). The ORAM estimates the ecological quality and the level of function of a particular wetland. This method is used to place wetlands into regulatory categories. The regulations specify three wetland categories: Category 1, Category 2, and Category 3 wetlands. These categories correspond to wetlands of low, medium and high "quality."

The Ohio Rapid Assessment Method for Wetlands v. 5.0 User's Manual and Scoring Forms (Ohio EPA, 2001) provides some discussion of these categories:

*Ohio Administrative Code (OAC Rule 3745-1-54(C)(1) defines Category 1 wetlands as wetlands which "...support minimal wildlife habitat, and minimal hydrological and recreational functions," and as wetlands which "...do not provide critical habitat for threatened or endangered species or contain rare, threatened or endangered species." In addition, Category 1 wetlands are often hydrologically isolated, and have some or all of the following characteristics: low species diversity, no significant habitat or wildlife use, limited potential to achieve beneficial wetland functions, and/or a predominance of non-native species. Category 1 wetlands are defined as "limited quality waters" in OAC Rule 3745-1-05(A). . . . They are considered to be a resource that has been so degraded or with such limited potential for restoration, or of such low functionality, that no social or economic justification and lower standards for avoidance, minimization, and mitigation are applied*

*Ohio Administrative Code Rule 3745-1-54(C)(2) defines Category 2 wetlands as wetlands which "...support moderate wildlife habitat, or hydrological or recreational functions," and as wetlands which are "...dominated by native species but generally without the presence of, or habitat for, rare, threatened or endangered species; and wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions."*

*Wetlands that are assigned to Category 3 have "...superior habitat, or superior hydrological or recreational functions." They are typified by high levels of diversity, a high proportion of native species, and/or high functional values. Category 3 wetlands include wetlands which contain or provide habitat for threatened or endangered species, are high quality mature forested wetlands, vernal pools, bogs, fens, or which are scarce regionally and/or statewide.*

The following rating system was developed to classifying the intensity of potential adverse wetland impacts.

Negligible: This is for areas where there is little potential for involvement with wetlands.

Minor: **Adverse** - Temporary (short-term) disturbance, such as from construction equipment on any quality of wetland. Such impacts would be minimized through the use of Best Management Practices (BMPs), such as the use of crushed stone pads underlain with geotextile, and reseeding disturbed wetlands with wetland seed mixes following completion of construction (Some BMPs are listed in Appendix 2 to Procedural Manual #77-1).

Permanent impacts to any Ohio EPA Category 1 wetland may also be considered a Minor Adverse Impact as well. This is because Category 1 wetlands are considered to be “limited quality waters” in OAC Rule 3745-1-05(A), and are considered to be a resource that has been so degraded or with such limited potential for restoration, or such low functionality, that no social or economic justification and lower standards for avoidance, minimization, and mitigation are applied (Ohio EPA, 2001).

**Beneficial** – Enhancement of an existing wetland. This could include, but is not limited by, the removal of an invasive wetland plant species.

Moderate: **Adverse** - This classification is for long-term adverse impacts that would disturb less than 0.1 acres of Ohio EPA Category 2 and 3 wetlands. The threshold of 0.1 acres was selected because this is the amount of adverse impact allowed where compensation may be waived if the loss of wetland functions is considered to be minimal (see Section 5.2.C of Procedural Manual #77-1).

**Beneficial** - Actions that cause the development of up to 0.1 acres of new wetland areas, or the expansion of existing wetland areas. These areas would need to be Ohio EPA Category 2 or 3.

Major: **Adverse** - This classification is for long-term adverse impacts that would disturb more than 0.1 acres of Ohio EPA Category 2 and 3 wetlands. As with the moderate classification, the threshold of 0.1 acres was selected because this is the amount of adverse impact allowed where compensation may be waived if the loss of wetland functions is considered to be minimal (see Section 5.2.C of Procedural Manual #77-1).

**Beneficial** - Actions that cause the development of more than 0.1 acres of new wetland areas, or the expansion of existing wetland areas. These areas would need to be Ohio EPA Category 2 or 3.

Impairment: This classification is for long-term adverse impacts to special, unique wetland areas with high educational value and/or potential. There are no such known wetland areas within the project area.

### 5.1.3 Alternative 1 - No Action

Direct Impacts - Under the No Action alternative, none of the identified wetlands are impacted as shown on Table 5-1. The impact intensity to the wetlands on the site would therefore be Negligible.

Indirect Impacts – There is a potential for indirect impacts under the No Action alternative. The situation could develop under this alternative where the capacity of the existing parking area is exceeded, and visitors begin to utilize the open areas in the vicinity, which could include some of the wetland areas. Such impacts would be considered Minor Adverse, because they would be sporadic, occurring only during larger events with some recovery available between such events.

Another consideration would be for stormwater runoff conveying pollutants collected on the existing gravel lot to the delineated wetland areas. This migration of pollutants would occur gradually during the seasons of use over a long period of time. With time, the invasive common reed (*Phragmites australis*) dominating Wetland B could more easily dominate the other wetland areas. If left unchecked, the eventual end result of this trend would be permanent impacts to the wetland areas, including Wetland A (0.18 acres), which is an Ohio EPA Category 2 wetland and Wetland F (0.35 acres), which is an Ohio EPA Category ‘Modified 2’ wetland. The culmination of such a process however, is estimated to require more time than the 10-year definition for long-term impacts on page 5-3. Within the time frame under consideration then, impacts to adjacent wetland areas would be considered Minor Adverse.

Cumulative Impacts - The *Riparian Buffer Plan for Proposed Agricultural Lands* (NPS, 2002a) and the *Wetland Protection Plan for Proposed Agricultural Lands* (NPS, 2002b) are documentation that there are no reasonably foreseeable future plans that would add impacts to the wetland resources of CVNP. Outside of CVNP, the USACE and Ohio EPA regulate impacts to wetland areas. For this analysis, it is assumed that there would be no net loss of related wetlands from outside of CVNP. The cumulative impact would therefore be limited to the sum of the direct and indirect impacts (Negligible and Major Adverse). These impacts would not be considered significantly adverse in the context of the site or the overall system.

Conclusion – It has been concluded above that there are Negligible anticipated direct impacts and Major Adverse indirect impacts to wetlands under this alternative; however, there are no potential effects that would impair wetland resources of CVNP.

### 5.1.4 Alternative 2 - Expansion & Improvement with Trail Bridge Over the Cuyahoga River

Direct Impacts - Under Alternative 2, there would be a total of 0.51 acres of impact to Wetlands B and C as shown on Drawing 3 in Appendix C and enumerated in Table 5-1. The area in Wetland B that is now shown to be covered by the proposed parking area would be removed in the construction process. The portion of Wetland C that is not shown under the stabilized turf would be disturbed during construction, and what may remain of it would receive the stormwater runoff from the parking area, causing permanent impact. These wetland areas fall into Ohio EPA Category 1. These impacts would be considered Minor Adverse Impacts under the criteria

used in this analysis, as shown on Table 5-2. The pedestrian bridge would cross over a small portion of Wetland F, but the bridge could be constructed without impacting Wetland F.

Indirect Impacts – There is no known potential for indirect impacts to wetlands under this alternative. Stormwater runoff from the parking area would be diffused into sheet flow (see Section 5.5.4). The scheme would be designed to avoid contact with any known wetland areas before infiltration.

**Table 5-1. Direct Impacts on Wetlands (in Acres).**

Wetland	Total Area (Acres)	ORAM Category	Alternative 1	Alternative 2
A	0.18	2	0	0
B	0.30	1	0	0.30
C	0.21	1	0	0.21
D	0.07	1	0	0
E	1.03	1	0	0
F	0.35	Modified 2	0	0
G	0.01	1	0	0
Total	1.15	--	0	0.51

Cumulative Impacts - As with Alternative 1, there are no reasonably foreseeable future plans that would add impacts to the wetland resources of CVNP or the surrounding area. The cumulative impact would therefore be limited to the sum of the direct and indirect impacts (Minor Adverse Impact and Negligible). These impacts would not be considered significantly adverse in the context of the site or the overall system.

**Table 5-2. Summary of Wetlands Impact Intensities.**

Impact	Alternative 1	Alternative 2
Direct	Negligible	Minor Adverse
Indirect	Major Adverse	Negligible
Cumulative	Major Adverse	Minor Adverse

Conclusion – It has been concluded above that there is a Minor Adverse Impact anticipated for direct impacts and Negligible indirect impacts to wetlands under this alternative. There are no potential effects that would impair wetland resources of CVNP. According to Procedural Manual #77-1, compensation would be required for the wetland impacts since the total impact area is more than 0.1 acres. The manual provides that wetland compensation should be in the



Looking Northeast. Wetland B is to the left.

form of restoring wetland functions in degraded or former wetland habitats on NPS lands. Because of its low quality and domination by the common reed, the impacted Wetland B provides limited beneficial wetland functions and values. It may be utilized as wildlife habitat occasionally for common wildlife species, but does not impound water long enough to provide habitat for aquatic insects or amphibians. The presence of invasive plants within this area makes it a threat to nearby, less disturbed wetlands. Sediment deposits indicate that this wetland may prevent small amounts of sediment runoff from entering adjacent streams. Wetland C also provides limited wetland functions and values. They are too shallow to impound significant amounts of water, or to provide any significant wetland habitat. The habitat provided is not significantly different from the surrounding upland old field and shrub thicket habitat.

To the south of the parking area is a forested wetland with some vernal pools that should not be affected by the project (see Section 4.2). This area includes debris piles covering an area of



Vernal Pool Area to South of Parking Facility

approximately 0.25 acres. It is proposed to restore this area by removing the debris piles as partial compensation for the removal of wetland areas under this alternative. Design would include consideration for protection of the existing wetland area during removal of the debris piles. This restoration of the vernal pools would add the function of wildlife habitat to those of sediment/toxicant retention and flood storage. Vernal pools are necessary for some species of amphibians and reptiles.

Additional compensation is proposed in the form of enhancement to a nearby Ohio Department of Transportation (ODOT) wetland mitigation site. The ODOT is restoring a wetland for a nearby bridge replacement project on Interstate 271. It is scheduled for completion by May 2007. Areas immediately adjacent to this site are composed of a monoculture of the aggressively invasive common reed (*Phragmites australis*). The CVNP enhancement would include treatment of this infestation on 3.0 acres located adjacent and south of the ODOT mitigation project and would involve restoring native plant communities, planting native woody plants, and the control of the harmful non-native exotics. The *Phragmites* monoculture would be restored to a wet sedge meadow habitat. Other areas of the *Phragmites* monoculture along the east side of the ODOT mitigation site would be treated as part of the ODOT mitigation.

The proposed compensation for the 0.51 acres of wetland impact would therefore include 0.25 acres of restoration in the vernal pool area. Compensation for the remaining 0.26 would be compensated with the enhancement of 3.0 acres of an area of a *Phragmites* monoculture for an



enhancement ratio of 12:1. Besides enhancing wetland areas, this would also involve restoring native plant communities, planting native woody plants, and the control of harmful non-native exotics (see Section 5.6).

## **5.2 Impacts on Floodplains**

### **5.2.1 Regulations and Policies**

Executive Order 11988 requires each Federal agency, in carrying out its activities, to take action to reduce the risk of flood loss, minimize the impacts of floods, restore and preserve the natural and beneficial values served by flood plains, and evaluate the potential effects of any actions it may take in the flood plain so as to ensure its planning programs reflect considerations of flood hazards and flood plain management. The EO instructs Federal agencies to design or modify its action(s) in order to minimize potential harm to or within the floodplain consistent with National Flood Insurance Program (NFIP) regulations. Cuyahoga County is enrolled in the NFIP, and is required, as a condition of their continuing participation, to develop and enforce zoning regulations that are based on NFIP regulations. The zoning regulations generally apply to the 100-year flood plain, where encroachments are limited to those that would cause no greater than a one-foot rise in water surface elevation, and to the floodway, where no encroachments are allowed.

The NPS has implemented the requirements of EO 11988 in its Director's Order #77-2 (DO #77-2), which applies to all NPS proposed actions that could adversely affect the natural resources and functions of floodplains, or increase flood risks. A Statement of Findings is required as a basis for management decision making, and is to be attached to the FONSI of an EA or to the Record of Decision of an EIS (a "Draft" Statement of Findings is included as Appendix E). However, the evaluation performed using the methodology described below will be applied to compare the magnitude and extent of any floodplain impacts.



### **5.2.2 Methodology**

The traditional measure of floodplain impact has been the maximum rise in the 100-year water surface elevation caused by a proposed action as compared to 100-year water surface elevation for the existing conditions. The potential to raise the 100-year water surface will be used to evaluate the floodplain impacts of the alternatives. Another criterion that will be used to evaluate the alternatives is whether encroachment into the floodway will occur, since this segment of the Cuyahoga River has a regulated floodway. The aspects of EO 11988 and DO #77-2 pertaining to the restoration and preservation of natural and beneficial values served by floodplains are covered as a part of other topics, including Wetlands (Section 5.1); Water

Resources (Section 5.3); Wildlife and Wildlife Habitat (Section 5.5); and Vegetation and Invasive Species (Section 5.6). These aspects are documented for the preferred alternative in the Draft Combined Statement of Findings, included as Appendix E.

Short term impacts are expected to occur during construction of Alternative 2. Most similar construction projects have been implemented within a one to six month period. The magnitude of the short term impacts during construction is expected to be equal to or less than the long term impacts of the proposed actions because actions under Alternative 2 do not obstruct a greater cross sectional area than the completed action.

The following impact thresholds are based on NFIP regulations, hydraulic modeling practice, and the results of hydraulic modeling performed in connection with the Riverbank Stabilization Program:

**Negligible:** The recommended action(s) cause a rise in 100-year flood water surface elevation of less than 0.1 feet, and do not encroach upon the floodway.

**Minor:** **Adverse** - The recommended action causes a rise in the 100-year flood water surface elevation exceeding 0.1 feet, but less than 0.5 feet. This increase diminishes to a negligible value within one half a meander wavelength upstream. The recommended action(s) do not encroach upon the floodway.

**Beneficial** - The recommended action causes a lowering in the 100-year flood water surface elevation between 0.1 feet but less than 0.5 feet. The recommended action(s) do not encroach upon the floodway.

**Moderate:** **Adverse** - The recommended action causes a rise in the 100-year flood water surface elevation exceeding 0.5 feet but less than 1.0 foot. This increase diminishes to a negligible value within one half a meander wavelength upstream. The recommended action(s) do not encroach upon the floodway.

**Beneficial** - The recommended action causes a lowering in the 100-year flood water surface elevation between 0.5 feet and 1.0 foot. The recommended action(s) do not encroach upon the floodway.

**Major:** **Adverse** - The recommended action causes a rise in the 100-year flood water surface elevation that exceeds 1.0 foot. Such actions represent very large scale activities that are a significant encroachment on the floodplain. The recommended action(s) do encroach upon the floodway. Either consequence requires preparation of a Conditional Letter of Map Revision (CLOMR).

**Beneficial** - The recommended action causes a lowering in the 100-year flood water surface elevation of more than 1.0 foot. The recommended action(s) do not encroach upon the floodway.

**Impairment:** The recommended action(s) cause a rise in 100-year flood water surface elevation that exceeds 1.0 feet, and increase(s) damages to agricultural lands, buildings, structures, bridges, roadways or any private or public feature. The recommended action(s) encroach upon the floodway and lost conveyance area cannot be compensated. Impairment represents a condition where the NFIP requirements are violated and cannot be mitigated.

### 5.2.3 Alternative 1 - No Action

Direct Impacts – Alternative 1 should cause no rise in the 100-year flood water surface elevation for a Negligible impact. However, a portion of the existing parking area is located in the floodway and would remain so.

Indirect Impacts – There is no known potential for indirect impacts to floodplain resources under this alternative.

Cumulative Impacts – The potential for adverse direct and indirect impacts is discussed above. The Riparian Buffer Plan for Proposed Agricultural Lands (NPS, 2002a) is documentation that there are no reasonably foreseeable future plans that would add impacts to the floodplain values and resources of CVNP. Outside of CVNP, Cuyahoga and Summit Counties are responsible to regulate floodplain development in accordance with the NFIP, as discussed in Section 5.2.1 above. It is therefore concluded that the potential for cumulative impacts would be restricted to the potential for direct impacts.

Conclusion - The potential adverse impact from this alternative would be limited to the direct impacts. The adverse impacts would be Negligible and very site-specific. There are no potential effects that would impair the beneficial floodplain resources of CVNP. However, a portion of the existing parking area would remain in the floodway.

### 5.2.4 Alternative 2 - Expansion & Improvement with Trail Bridge Over the Cuyahoga River

Direct Impacts – Alternative 2 has not been designed, but it is assumed that a minor amount of fill would be required in order to construct the improvements discussed in Section 3.3 and shown in Figure 3 in Appendix C. The amounts of fill in the floodplain (outside the floodway) would result in Negligible to Minor Adverse impacts due to the small increase in the 100-year flood water surface elevation. The primary factor in this judgment is that the parking area is located just upstream of the bridge approaches and substructure elements carrying Rockside Road over the Cuyahoga River. Thus, hydraulic characteristics (flow depth, velocity and direction) in the parking area site are more affected by contraction of flow and backwater from the bridge and approaches than by the site characteristics themselves.

Potential impacts from construction of the trail bridge were assessed as described in Appendix E. This analysis showed that the increase in the 100-year flood water surface elevation would be 0.1 ft (see Table E-3) for a Negligible to Minor Adverse impact.

There is a potential Minor Beneficial impact for this alternative in that the new parking facility will be relocated so that no part of it is located within the floodway. This potential beneficial



impact may partially offset the potential adverse impact from minor amounts of fill in the floodplain.

Indirect Impacts – There is no known potential for indirect impacts to floodplain resources under this alternative.

Cumulative Impacts – The potential for adverse direct and indirect impacts is discussed above. As discussed in Section 5.2.3, there are no reasonably foreseeable future plans that would add impacts to the floodplain values and resources, and it is therefore concluded that the potential for cumulative impacts would be restricted to the potential for direct impacts.

Conclusion - The potential adverse impact from this alternative would be limited to the direct impacts. The impacts would range from Negligible to Minor Adverse and be very site-specific. There are no potential effects that would impair the beneficial floodplain resources of CVNP.

### **5.3 Impacts on Water Resources**

#### **5.3.1 Regulations and Policies**

The U.S. Environmental Protection Agency (US EPA) has developed national recommended ambient water quality criteria for approximately 120 priority pollutants for the protection of both aquatic life and human health (through ingestion of fish/shellfish or water) (US EPA, 1999a). These criteria have been adopted as enforceable standards by most states. The NPS Management Policies state that the NPS will, “take all necessary actions to maintain or restore the quality of surface waters and ground waters within the parks consistent with the Clean Water Act and all other applicable federal, state, and local laws and regulations” (NPS, 2001a).

Water quality standards have been defined for the Cuyahoga River by the Ohio Environmental Protection Agency (Ohio EPA), and serve as criteria to protect the designated uses on the river by preventing degradation of water quality through antidegradation provisions. The antidegradation policy is only one portion of a water quality standard. Part of this policy (40 CFR 131.12(a)(2)) strives to maintain water quality at existing levels if it is already better than the minimum criteria.

Section 303(d) of the Clean Water Act focuses on identifying and restoring polluted rivers, streams, lakes and other surface waterbodies. It establishes the Total Maximum Daily Load (TMDL) program. The section of the Cuyahoga River adjacent to the project site has been designated by the Ohio EPA as a TMDL segment. Historical pollution to the River was a result of heavy industrial and urban centers located between the Cities of Akron and Cleveland. The primary causes of this impairment are cited as organic enrichment, nutrients, bacteria, flow alteration, toxicity and degraded habitats. Major sources include municipal and industrial point sources, combined sewer and sanitary sewer overflows and, to a lesser extent, natural conditions.

The Clean Water Act and USEPA regulations require that Total Maximum Daily Loads (TMDLs) be developed for all waters on the section 303(d) lists. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality

standards, and an allocation of that amount to the pollutant's sources. The process of formulating TMDLs for specific pollutants is therefore, a method by which impaired water body segments are identified and restoration solutions are developed. Ultimately, the goal of Ohio's TMDL process is full attainment of biological and chemical Water Quality Standards (WQS) and, subsequently, removal of water bodies from the 303(d) list.

The Lower Cuyahoga River TMDL report was approved by the US EPA on September 26, 2003 (Ohio EPA, 2003). This report serves to document the Lower Cuyahoga River TMDL process and provide for tangible actions to restore and maintain this water body. Reasonable assurances proposed for the Lower Cuyahoga River watershed include implementation of Long Term Control Plans for combined sewer overflows in the City of Akron and Northeast Ohio Regional Sewer District service areas. Phase II of the stormwater regulations will involve over 83% of the watershed area, and will be an essential part of water quality restoration.

The Phase II stormwater regulations refer to stormwater discharge associated with construction that must comply with the rules and regulations of the Ohio EPA's recent issuance of the National Pollutant Discharge Elimination System (NPDES) General Permit. Stormwater associated with construction activity is covered under the Ohio EPA NPDES Permit No. OHC000002. This permit authorizes discharges from disturbances of 1 to 5 acres as required by the U.S. EPA's Phase II stormwater rules. The permit requires the development of a Stormwater Pollution Prevention Plan (SWPPP) prior to construction. Some of the aspects required in a SWPPP pertain to permanent features that are to remain after construction.

The implementation of a SWPPP during construction activities and design measures for permanent stormwater practices contained in the SWPPP are requirements of the Ohio EPA NPDES Permit. A site description and controls needed for the project must also be included in the SWPPP. Examples of site descriptions include (but are not limited to) land use and increase in impervious area, hydrologic and hydraulic calculations, construction operations and schedules, receiving streams or surface waters, site maps, and location maps. Examples of controls include (but are not limited to) erosion control, stabilization, and sediment control practices during construction and as required for permanent stormwater measures.

### 5.3.2 Methodology

Impacts from the build alternative are expected to include short-term impacts associated with construction activities, and longer-term impacts associated with the increase in impervious area and with increased use of the parking facility.

Short-term impacts are expected to occur during the construction of proposed actions under Alternative 2. Most similar construction projects have been implemented within a one to six month period. The magnitude of the short-term impacts is expected to be minimal because CVNP requires, and will continue to require, the implementation of management practices during construction aimed at preventing accidental discharges of pollutants or the generation of excess turbidity.

Long-term impacts are generally associated with the increase in impervious area. Impacts to temperature are mainly derived from alterations to the riparian community and subsequent differences in shading regime.

Water quality parameters in the Cuyahoga River are expected to be unaffected by the alternatives. This is demonstrated when a mass balance methodology is applied to individual pollutant constituents that are found in parking lot runoff. The concentrations of these constituents are added to those actually found in the Cuyahoga River (USGS, 2003) or target TMDL values for the Cuyahoga River at Independence (Ohio EPA, 2003). The mass balance equation is:

$$M_1 + M_2 = M_T$$

Where:  $M_1$  = Parking Lot Loading;  
 $M_2$  = Cuyahoga River at Independence Loading  
 $M_T$  = Total Loading

The Simple Method (Schueler, 1987) can be applied to estimate annual stormwater runoff pollutant loading for planning purposes based on a collection of concentration data for pollutants found in parking lot stormwater runoff. These values can then be converted to an average daily amount. For chemical constituents the equation used is:

$$L = 0.226 * R * C * A$$

Where:  $L$  = Annual load (lbs)  
 $R$  = Annual Runoff (inches)  
 $C$  = Pollutant concentration (mg/l)  
 $A$  = Area (acres)  
0.226 = Unit conversion factor

For bacterial constituents the equation used is:

$$L = 103 * R * C * A$$

Where:  $L$  = Annual load (Billion Colonies)  
 $R$  = Annual Runoff (inches)  
 $C$  = Bacterial concentration (1,000/ml)  
 $A$  = Area (acres)  
103 = Unit conversion factor

The annual runoff ( $R$ ) is calculated as:

$$R = 0.9 * P(0.05 + 0.9 * I)$$

Where:  $P$  = Annual rainfall (in/year) = 38 in/year  
 $I$  = % impervious for the project area

Values for the alternatives are as follows:

	<b>Alternative 1</b>	<b>Alternative 2</b>
I (% Impervious)	0	90
A (Project Area in Acres)	1.75	2.66
R (Annual Runoff in inches)	1.7	29.4

The pollutant concentration (C) values are supplied from various national median data collected for parking source areas (see Table 5-3). Pollutants for this analysis did not include chlorides since winter operations are anticipated to be limited to the month of December, so salt application is not expected to be frequent or regular.

**Table 5-3. Pollutant Concentrations from Source Areas.**

<b>Constituent</b>	<b>TSS<sup>1</sup></b>	<b>TP<sup>2</sup></b>	<b>TN<sup>3</sup></b>	<b>F Coli<sup>1</sup></b>	<b>Cu<sup>1</sup></b>	<b>Pb<sup>1</sup></b>	<b>Zn<sup>1</sup></b>
	mg/l	mg/l	mg/l	1,000 col/ml	µg/l	µg/l	µg/l
Parking Area	27	0.15	1.9	1.8	51	28	139

<sup>1</sup>Claytor and Schueler, 1996.

<sup>2</sup>Average of Steuer et al., 1997, Bannerman, 1993, and Waschbusch, 2000.

<sup>3</sup>Steuer et al., 1997.

A mass balance for average daily amounts of the individual pollutant constituents has been evaluated for each alternative and the Cuyahoga River at Independence. Summary results are provided in Table 5-4.

The total loading ( $M_{T\#}$ ) from the new parking area, based on this analysis, for all examined pollutant constituents of the parking lot stormwater runoff essentially does not change the pollutant loadings of the Cuyahoga River. This is a conservative analysis because the parking lot stormwater runoff is not directly discharged into the Cuyahoga River. It is determined that the increase due to parking lot loadings for the alternatives is barely detectable, and the water quality parameters are unaffected by the alternatives.

Alternative 2 is classified as small construction activity area because it would disturb between one and five acres and is not part of a larger common plan of development that would disturb five or more acres, as defined in part III.G.2.e of the Ohio EPA NPDES Permit. Since Alternative 2 is considered a small construction activity, the post construction stormwater best management practice (BMP) does not require the treatment of a calculated water quality volume ( $WQ_v$ ) according to the guidelines of the permit. However, to minimize impacts of stormwater runoff to adjacent areas, water quality treatment practices may be designed above and beyond the requirements for small construction activities. To do this, the post-construction stormwater treatment practices will incorporate the  $WQ_v$  in order to increase overall water quality. The stormwater control techniques will provide for a treatment storage area that is equivalent to the volume of runoff from a 0.75-inch rainfall event.

**Table 5-4. Summary of Average Daily Pollutants and Mass Balance Analysis.**

Constituent	Alt. 1 (M <sub>1-1</sub> )	Alt.2 (M <sub>1-2</sub> )	Cuyahoga River (M <sub>2</sub> )	M <sub>T1</sub> = (M <sub>1-1</sub> ) + (M <sub>2</sub> )	M <sub>T2</sub> = (M <sub>1-2</sub> ) + (M <sub>2</sub> )	M <sub>T4</sub> = (M <sub>1-4</sub> ) + (M <sub>2</sub> )
TSS kg/day	0.22	0.59	157455 <sup>2</sup>	157455	157456	157456
TP kg/day	0.00012	0.003	255.75 <sup>1</sup>	255.75	255.753	255.753
TN kg/day	0.0016	0.042	1406.61 <sup>2</sup>	1406.61	1406.65	1406.65
F Coli billion col. per day	1.5	40	25304 <sup>2</sup>	25306	25344	25340
Cu kg/day	0.00004	0.001	21.31 <sup>2</sup>	21.31	21.311	21.311
Pb kg/day	0.00002	0.0006	8.269 <sup>2</sup>	8.26902	8.2696	8.2696
Zn kg/day	0.0001	0.003	52.215 <sup>2</sup>	52.2151	52.218	52.218

<sup>1</sup> Ohio EPA, 2003<sup>2</sup> USGS, 2003

Given the above water quality issues and methodology and assumptions, the following impact thresholds were established in order to describe the relative changes in water quality (both overall, localized, short and long term, cumulatively, adverse and beneficial) under the management alternatives.

**Negligible:** Impacts are chemical, physical, or biological effects that would not be detectable, would be well below water quality standards or criteria, and would be within historical or desired water quality conditions.

**Minor:** **Adverse** - Impacts (chemical, physical, or biological effects) would be detectable and adverse, but would be well within water quality standards or criteria and within historical or desired water quality conditions.

**Beneficial** - Impacts (chemical, physical, or biological effects) would be detectable and beneficial, and would be well within water quality standards or criteria and within historical or desired water quality conditions.

**Moderate:** **Adverse** - Impacts (chemical, physical, or biological effects) would be detectable and adverse, but would be at or below water quality standards or criteria; however, historical baseline or desired water quality conditions would be adversely altered on a short-term basis.

**Beneficial** - Impacts (chemical, physical, or biological effects) would be detectable and beneficial, and would be at or above water quality standards or criteria; however, historical baseline or desired water quality conditions would be improved on a short-term basis.

Major: **Adverse** - Impacts (chemical, physical, or biological effects) would be detectable and adverse, and would be frequently altered from the historical baseline or desired water quality conditions, and/or chemical, physical, or biological water quality standards or criteria would be slightly and singularly exceeded on a short-term basis.

**Beneficial** - Impacts (chemical, physical, or biological effects) would be detectable and beneficial and would be frequently altered from the historical baseline or to desired water quality conditions, and/or chemical, physical, or biological water quality standards or criteria would be slightly and singularly exceeded on a short-term basis.

Impairment: Impacts are chemical, physical, or biological effects that would be detectable and that would be substantially and frequently altered from the historical baseline or desired water quality conditions and/or water quality standards, or criteria would be exceeded several times on a short-term and temporary basis. In addition, these adverse, major impacts to park resources and values would contribute to deterioration of the park's water quality and aquatic resources to the extent that the park's purpose could not be fulfilled as established in its enabling legislation, affect resources key to the park's natural or cultural integrity or opportunities for enjoyment, or affect the resource(s) whose conservation is identified as a goal in the park's general management plan or other park planning documents.

### 5.3.3 Alternative 1 - No Action

Direct Impacts –The analysis summarized in Section 5.3.2 shows that impacts from stormwater runoff to the Cuyahoga River are Negligible.

Indirect Impacts – There is no known potential for indirect impacts to water resources under this alternative.

Cumulative Impacts – Cuyahoga Valley National Park is listed as including nearly 11 percent of the TMDL area discussed in Section 5.3.1 above. The report states,

*“The Cuyahoga River is fortunate to have the Cuyahoga Valley National Park along 22 miles of its banks. Protection offered by the park can not be understated and it would be fair to say that restoration would be very difficult without its presence.”*

The potential for beneficial direct impacts from this alternative will be a small contribution to the TMDL process. The Park is also a stakeholder in the Cuyahoga River Remedial Action Plan (RAP)<sup>2</sup>, which continues to be an integral part of the TMDL process. This is an indication that future actions by CVNP and others in the drainage basin will be conducted with the TMDL goals in mind.

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<sup>2</sup> See <http://www.cuyahogariverrap.org/>

Conclusion – This alternative is anticipated to have a Negligible direct, indirect and cumulative impact on the nearby water resources. There are no potential effects that would impair the water resources of CVNP.

#### 5.3.4 Alternative 2 - Expansion & Improvement with Trail Bridge Over the Cuyahoga River

Direct Impacts - The analysis summarized in Section 5.3.2 shows that impacts from stormwater runoff to the Cuyahoga River are Negligible.

Indirect Impacts – There is no known potential for indirect impacts to water resources under this alternative.

Cumulative Impacts – As discussed in Section 5.3.3 above, the TMDL Plan and the RAP are indications that future actions by CVNP and others in the drainage basin will be conducted with the TMDL goals in mind.

Conclusion - This alternative is anticipated to have a Negligible direct, indirect and cumulative impact on the nearby water resources. There are no potential effects that would impair the water resources of CVNP.

Even though the alternative has been shown to have a Negligible impact on water quality of the Cuyahoga River, in view of the TMDL process and other resources (vegetation, wildlife habitat, etc.) that could be impacted by stormwater runoff, treatment of the WQ<sub>V</sub> would be considered. A stormwater drainage scheme is provided that incorporates permanent runoff controls with water quality enhancements. The design concept includes drainage islands to collect impervious sheet flows into concentrated grass-lined swales. Next, drainage culverts of sufficient slope and diameter would be employed to convey flow from the drainage islands to the perimeter of the parking lot. Outlet protection, in the form of a rock or rip rap apron, would be provided for the culverts. Flow conveyance would continue in grass-lined channels from each parking lot culvert outflow location and where sheet flow is allowed to directly runoff from the parking lot. The channels would converge at the south end of the parking area and continue at a gradual slope along the existing topography to the south and east. The runoff control method would terminate by the use of an elevated grass level spreader that diffuses any concentrated flow into sheet flow. Any sheet flow that has not infiltrated will follow the existing topography toward the Cuyahoga River. The grass-lined channel and level spreader design would comply with the Ohio EPA permanent runoff control measures, and the elevated level spreader would be incorporated to enhance water quality benefits by maximizing the detention time of the WQ<sub>V</sub> (Ohio Department of Natural Resources, 1996).

### 5.4 Impacts on Threatened, Endangered or Special Concern Species

#### 5.4.1 Regulations and Policies

The Endangered Species Act directs federal agencies to assess the effects of their proposed actions on threatened and endangered species and critical habitat, and requires consultation with the U.S. Fish and Wildlife Service if an effect is anticipated. Management Policies (NPS, 2001a)

state that potential effects of agency actions will also be considered on state or locally listed species. The NPS is required to control access to critical habitat of such species, and to perpetuate the natural distribution and abundance of these species and the ecosystems upon which they depend.

#### 5.4.2 Methodology

Primary steps in assessing impacts on listed species were taken to determine the following:

1. Which species are found in areas likely to be affected by actions described in the alternatives;
2. Habitat loss or alteration caused by the actions described in the alternatives;
3. Displacement and disturbance potential of the actions and the species' potential to be affected by the activities.

The information in this analysis was obtained through best professional judgment of park staff and experts in the field (as cited in the text), and by conducting a literature review.

The Endangered Species Act defines the terminology used to assess adverse impacts to listed species. This is incorporated in the following impact thresholds used in this EA:

**Negligible:** When a proposed action would not affect a listed species or designated critical habitat.

**Minor:** **Adverse** - Effects on special status species are discountable (i.e., extremely unlikely to occur and not able to be meaningfully measured, detected, or evaluated).

**Beneficial** – Effects on special status species are potentially beneficial to a similar magnitude as a Minor Adverse impact.

**Moderate:** **Adverse** - When an adverse effect to a listed species may occur as a direct or indirect result of proposed actions, and the effect is not discountable.

**Beneficial** – Effects on special status species are potentially beneficial to a similar magnitude as a Moderate Adverse impact.

**Major:** **Adverse** - The appropriate conclusion when the NPS or the U.S. Fish and Wildlife Service identifies situations in which the proposal could jeopardize the continued existence of a proposed species or adversely modify critical habitat to a species within or outside park boundaries. This would be considered “impairment.”

**Beneficial** – Effects on special status species are potentially beneficial to a similar magnitude as a Major Adverse impact.



#### 5.4.3 Alternative 1 - No Action

Direct Impacts – This alternative should not involve any construction or change in habitat. The impact intensity would therefore be Negligible.

Indirect Impacts – There is a potential for indirect impacts under the No Action Alternative. The situation could develop under this alternative where the capacity of the existing parking area is exceeded, and visitors begin to utilize the open areas in the vicinity; however, such an activity should not affect Indiana bat habitat (see Section 4.5). Such impacts would therefore be considered Negligible.

Another consideration would be for stormwater runoff conveying pollutants collected on the existing gravel lot to the adjacent habitat areas. Such an impact would only occur with dramatically increased use of the area which is not anticipated. Since such circumstances will occur rarely, this aspect of potential impacts would therefore be considered Negligible.

Cumulative Impacts – Any actions within CVNP will include consideration for threatened, endangered or special concern species, so that impacts from CVNP actions should be avoided, minimized and/or mitigated. Actions of others beyond CVNP that may impact threatened, endangered or special concern species may not reasonably be assessed in this EA.

Conclusion – There would be no direct impacts under this alternative. The potential for indirect impacts is Negligible. No impairment is expected under this alternative.

#### 5.4.4 Alternative 2 - Expansion & Improvement with Trail Bridge Over the Cuyahoga River

Direct Impacts - Impacts to federal and state listed species would occur primarily through removal of existing ground cover due to construction. Trees suitable as roost sites for Indiana bats could be removed under this alternative. Impacts to Indiana bat habitat (*Myotis sodalis*) are likely to be localized but permanent, resulting in Minor Adverse impacts.

Construction should not involve the removal of large trees; therefore, there should be no impacts to the habitat of the prothonotary warbler (*Protonotaria citrea*) and the Cerulean warbler (*Dendroica cerulea*), both of which are species of concern in Ohio.

There should be no impacts to the bald eagle (*Haliaeetus leucocephalus*). The nearest bald eagle nest was found over 5.5 miles upstream of the Rockside Boarding Area. Construction should not involve the removal of large trees, which is where bald eagles prefer to build nests. Furthermore, Cuyahoga Valley eagles are known to forage between Canal Visitor Center and Bath Road, which are upstream (south) of the project area.

Potential impacts to other species mentioned in Section 4.5 are considered to be Negligible because they are extremely rare in CVNP, with only one or two known historic sightings on record.

Indirect Impacts – There is no known potential for indirect impacts to floodplain resources under this alternative.

Cumulative Impacts – Any actions within CVNP will include consideration for threatened, endangered or special concern species, so that impacts from CVNP actions should be avoided, minimized and/or mitigated. Actions of others beyond CVNP that may impact threatened, endangered or special concern species may not reasonably be assessed in this EA.

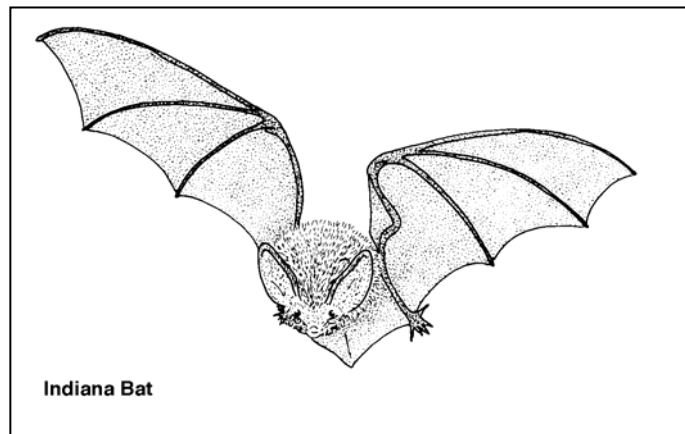
Conclusion - There is a potential for Minor Adverse impacts to Indiana bat habitat. No impairment is expected under this alternative. To prevent impact to Indiana bats, any cutting of trees that may be required (as determined during final design) should take place between 15 September and 15 April, outside the period when Indiana bats are present in the area.

## **5.5 Impacts on Wildlife and Wildlife Habitat**

### **5.5.1 Regulations and Policies**

The NPS Organic Act, which directs parks to conserve wildlife in an unimpaired state for future generations, is interpreted by the agency to mean that native animal life should be protected and perpetuated as part of the park's natural ecosystem. Natural processes are relied on to control populations of native species to the greatest extent possible; otherwise, they are protected from harvest, harassment, or harm by human activities. According to Section 4.1 of NPS Management Policies (NPS, 2001a), the restoration of native species is a high priority. Management goals for wildlife include maintaining components and processes of naturally evolving park ecosystems, including natural abundance, diversity, and the ecological integrity of plants and animals. Section 4.1.5 of Management Policies compels NPS to restore natural conditions and processes to human-disturbed lands. Domestic livestock and other exotic species are permitted (Section 4.4.4.1), so long as they are managed to prevent unacceptable impacts on park natural resources.

Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) directs federal agencies to avoid taking actions that have a measurable negative effect on migratory bird populations (see Appendix A).



### **5.5.2 Methodology**

A qualitative assessment of impacts to vegetation was conducted based on literature review, site inspection, GIS analysis, and existing natural resources data. No original data collection was undertaken in connection with this portion of this EA. The following thresholds were used to describe the magnitude of effects on wildlife and wildlife habitat.

**Negligible:** There would be no observable or measurable impacts to native species, their habitats, or the natural processes sustaining them. Impacts would be of short duration and well within natural fluctuations.

**Minor:** **Adverse** - Impacts would be detectable, but they would not be expected to be outside the natural range of variability and would not be expected to have any long-term effects on native species, their habitats, or the natural processes sustaining them.

Population numbers, population structure, genetic variability, and other demographic factors for species might have small, short-term changes; however long-term characteristics would remain stable and viable. Occasional responses to disturbance by some individuals could be expected, but without interference to feeding, reproduction, or other factors affecting population levels.

Key ecosystem processes might suffer short-term disruptions that would be within natural variation. Sufficient habitat would remain functional, maintaining viability of all species. Impacts would be outside critical reproduction periods for sensitive, native species.

**Beneficial** – A beneficial change of similar magnitude to a Minor Adverse impact on native species, their habitats, or the natural processes sustaining them.

**Moderate:** **Adverse** - Breeding animals of concern are present; animals are present during particularly vulnerable life-stages, such as migration or juvenile stages; mortality or interference with activities necessary for survival can be expected on an occasional basis, but are not expected to threaten the continued existence of the species in the park unit.

Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and may be outside the natural range of variability for short periods of time. Population numbers, population structure, genetic variability, and other demographic factors for species might have short-term changes, but would be expected to rebound to pre-impact numbers and to remain stable and viable in the long term. Frequent responses to disturbance by some individuals could be expected, with some negative impacts to feeding, reproduction, or other factors affecting short-term population levels.

Key ecosystem processes might have short-term disruptions that would be outside natural variation (but would soon return to natural conditions). Sufficient habitat would remain functional, maintaining viability of all native species. Some impacts might occur during critical periods of reproduction or in key habitat of sensitive native species.

**Beneficial** – A beneficial change of similar magnitude to a Moderate Adverse impact on native species, their habitats, or the natural processes sustaining them.

Major: **Adverse** - Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they would be expected to be either outside the natural range of variability for long periods of time or of a permanent nature.

Population numbers, population structure, genetic variability, and other demographic factors for species might have large, short-term declines, while long-term population numbers might be significantly depressed. Frequent responses to disturbance by some individuals would be expected, with negative impacts to feeding, reproduction, or other factors, resulting in a long-term decrease in population levels. Breeding colonies of native species might relocate to other portions of the park.

Key ecosystem processes might be disrupted in the long term or permanently. Loss of habitat might affect the viability of at least some native species.

**Beneficial** – A beneficial change of similar magnitude to a Major Adverse impact on native species, their habitats, or the natural processes sustaining them.

Impairment: Some of the major impacts described above might be an impairment of Park resources if their severity, duration, and timing resulted in the elimination of a native species or significant population declines of a native species, or if they precluded the Park's ability to meet recovery objectives for listed species. In addition, these adverse, major impacts to Park resources and values would contribute to deterioration of the Park's wildlife resources and values to the extent that the Park's purpose could not be fulfilled as established in its enabling legislation; affect resources key to the Park's natural or cultural integrity or opportunities for enjoyment; or affect the resource(s) whose conservation is identified as a goal in the park's general management plan or other park planning documents.

### 5.5.3 Alternative 1 - No Action

Direct Impacts - This alternative should not involve any construction or change in habitat. The impact intensity would therefore be Negligible.

Indirect Impacts – There is a potential for indirect impacts under the No Action Alternative. The situation could develop under this alternative where the capacity of the existing parking area is exceeded, and visitors begin to utilize the open areas in the vicinity. Such impacts would be confined to grassy areas, limiting the impacts to wildlife and wildlife habitat to Minor Adverse.

Another consideration would be for stormwater runoff conveying pollutants collected on the existing gravel lot to the adjacent habitat areas. Such an impact would only occur with dramatically increased use of the area which is not anticipated. Since such circumstances will occur rarely, this aspect of potential impacts would therefore be considered Minor Adverse.

Cumulative Impacts – The potential for adverse direct and indirect impacts is discussed above. The Riparian Buffer Plan for Proposed Agricultural Lands (NPS, 2002a) provides documentation that there are no reasonably foreseeable future plans that would add impacts to similar wildlife habitat areas along the Cuyahoga River within CVNP. Actions of others beyond CVNP that may impact similar wildlife habitat may not reasonably be assessed in this EA.

Conclusion – There would be no direct impacts under this alternative. There is a potential for Minor Adverse indirect impacts, assuming over-capacity use of the parking area. No impairment of wildlife or wildlife habitat is expected under this alternative.

#### 5.5.4 Alternative 2 - Expansion & Improvement with Trail Bridge Over the Cuyahoga River

Direct Impacts – Impacts associated with the alternative would amount to 53,240 square feet (1.22 acres) that would be converted from its existing grasses and small shrubs into the parking area. Of this, 28,599 square feet (0.65 acres) would be converted to asphalt, and 24,641 square feet (0.57 acres) would be converted to stabilized turf. The existing habitat has been previously disturbed, and exhibits minimal biodiversity. On the east side of the Cuyahoga River, approximately 2,421 square feet of successional woods would be removed for construction of the trail bridge. This is a small area relative to the abundance of this vegetation type within CVNP. The potential impacts to the faunal species identified in Section 4.6 would therefore be Minor Adverse. The extension of the platform for 120 feet to the south would cover approximately 1,680 square feet of drainage area along the tracks; the intensity of the impact would be Negligible.

Indirect Impacts – Runoff from the parking area would contain pollutants that would have the potential to extend to the south and east of the site. Because of the conceptual stormwater treatment (see Section 5.3.4), such impact would be limited and would be considered Negligible to Minor Adverse.

Cumulative Impacts – The potential for adverse direct and indirect impacts is discussed above. The Riparian Buffer Plan for Proposed Agricultural Lands (NPS, 2002a) provides documentation that there are no reasonably foreseeable future plans that would add impacts to similar wildlife habitat areas along the Cuyahoga River within CVNP. Actions of others beyond CVNP that may impact similar wildlife habitat may not reasonably be assessed in this EA.

Conclusion – Direct and indirect impacts to wildlife and wildlife habitat would be Minor Adverse. The potential for indirect impacts discussed above is also discussed in Section 5.3, where conceptual design considerations for stormwater treatment are discussed that would avoid such impacts. No impairment of wildlife or wildlife habitat is expected under this alternative.

### 5.6 Impacts On Vegetation and Invasive Species

#### 5.6.1 Regulations and Policies

NPS Management Policies (NPS, 2001a, Section 4) direct the NPS to preserve and restore native plants, animals, and their communities and ecosystems, as well as biological processes, such as

succession. This includes preserving and protecting, “natural abundances, diversity, dynamics, distributions, habitat and behaviors...” as well as by, “minimizing human impacts on” native plant and animal populations (Section 4.4.1). Management Policies (Section 4.1.5) also compel the NPS to restore natural conditions and processes to human-disturbed lands.

NPS Management Policies also provides guidance on the removal of plants from parks. It states that when the NPS allows the removal of plants for any authorized action, the NPS will seek to, "ensure that such removals will not cause unacceptable impacts on native resources, natural processes, or other park resources." Additionally, the NPS, "will manage such removals to prevent them from interfering broadly with: Natural habitats, natural abundances, and natural distributions of native species and natural processes; Rare, threatened, and endangered plant or animal species or their critical habitats; Scientific study, interpretation, environmental education, appreciation of wildlife, or other public benefits; Opportunities to restore depressed populations of native species; or Breeding or spawning grounds of native species" (NPS, 2001a; Section 4.4.2.1).

Executive Order 13112 requires that federal agencies act to prevent the introduction of invasive species, provide for their control, and to minimize the economic, ecological, and human health impacts that invasive species cause.

## 5.6.2 Methodology

A qualitative assessment of impacts to vegetation was conducted based on literature review, site inspection, GIS analysis, and existing natural resources data. No original data collection was undertaken in connection with this portion of this EA. The following thresholds were used to describe the magnitude of adverse effects on vegetation:

Negligible: There would be no observable or measurable impacts to native species, their habitats, or the natural processes sustaining them. Impacts would be of short duration and well within natural fluctuations.

Minor: **Adverse** - Impacts would be detectable, but they would not be expected to be outside the natural range of variability and would not be expected to have any long-term effects on native species, their habitats, or the natural processes sustaining them.

Population numbers, population structure, genetic variability, and other demographic factors for species might have small, short-term changes; however long-term characteristics would remain stable and viable. Occasional responses to disturbance by some individuals could be expected, but without interference to feeding, reproduction, or other factors affecting population levels.

Key ecosystem processes might have short-term disruptions that would fall within natural variation. Sufficient habitat would remain functional, maintaining viability of all species. Impacts would be outside critical reproduction periods for sensitive native species.

**Beneficial** – A beneficial change of similar magnitude to a Minor Adverse impact on native species, their habitats, or the natural processes sustaining them.

Moderate: **Adverse** - Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they may be outside the natural range of variability for short periods of time. Population numbers, population structure, genetic variability, and other demographic factors for species might have short-term changes, but would be expected to rebound to pre-impact numbers, remaining stable and viable in the long term. Frequent responses to disturbance by some individuals could be expected, with some negative impacts to factors affecting short-term population levels.

Key ecosystem processes might have short-term disruptions that would be outside natural variation (but would soon return to natural conditions). Sufficient habitat would remain functional, maintaining viability of all native species. Some impacts might occur in key habitat for sensitive native species.

**Beneficial** – A beneficial change of similar magnitude to a Moderate Adverse impact on native species, their habitats, or the natural processes sustaining them.

Major: **Adverse** - Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they would be expected to be either outside the natural range of variability for long periods of time or permanent in nature.

Population numbers, population structure, genetic variability, and other demographic factors for species might have large, short-term declines, with significant depression of long-term population numbers. Frequent responses to disturbance by some individuals would be expected, with negative impacts to factors resulting in long-term decreases in population levels.

Key ecosystem processes might be disrupted in the long term or permanently. Loss of habitat might affect the viability of at least some native species.

**Beneficial** – A beneficial change of similar magnitude to a Major Adverse impact on native species, their habitats, or the natural processes sustaining them.

Impairment: Some of the major impacts described above might be an impairment of Park resources if their severity, duration, and timing resulted in the elimination of a native species or significant population declines in a native species, or they precluded the Park's ability to meet recovery objectives for listed species. In addition, these adverse, major impacts to park resources and values would contribute to deterioration of the park's plant resources and values to the extent that the park's purpose could not be fulfilled as established in its enabling legislation; affect resources key to the Park's natural or cultural integrity or

opportunities for enjoyment; or affect the resource whose conservation is identified as a goal in the Park's General Management Plan or other park planning documents.

### 5.6.3 Alternative 1 - No Action

Direct Impacts - alternative should not involve any construction or change in vegetative cover. The impact intensity would therefore be Negligible.

Indirect Impacts – There is a potential for indirect impacts under the No Action Alternative. The situation could develop under this alternative where the capacity of the existing parking area is exceeded, and visitors begin to utilize the open areas in the vicinity. Such impacts would be confined to grassy areas, limiting the impacts to vegetation to Minor Adverse.

Another consideration would be for stormwater runoff conveying pollutants collected on the existing gravel lot to the adjacent areas. Such an impact would only occur with dramatically increased use of the area which is not anticipated. Since such circumstances will occur rarely, this aspect of potential impacts would therefore be considered Minor Adverse.

Cumulative Impacts – The potential for adverse direct and indirect impacts is discussed above. The Riparian Buffer Plan for Proposed Agricultural Lands (NPS, 2002a) provides documentation that there are no reasonably foreseeable future plans that would add impacts to similar vegetation areas along the Cuyahoga River within CVNP. The NPS is also required by EO 13112 to prevent and control invasive species in all of their actions. Actions of others beyond CVNP that may impact similar wildlife habitat may not reasonably be assessed in this EA.

Conclusion - There would be no direct impacts under this alternative. There is a potential for Minor Adverse indirect impacts, assuming over-capacity use of the parking area. No impairment of wildlife or wildlife habitat is expected under this alternative.

### 5.6.4 Alternative 2 - Expansion & Improvement with Trail Bridge Over the Cuyahoga River

Direct Impacts – Impacts associated with this alternative would amount to 53,240 square feet (1.22 acres) that would be converted from its existing grasses and small shrubs into the parking area. Of this, 28,599 square feet (0.65 acres) would be converted to asphalt and 24,641 square feet (0.57 acres) would be converted to stabilized turf. The existing habitat has been previously disturbed, and exhibits low biodiversity. On the east side of the Cuyahoga River, approximately 2,421 square feet of successional woods would be removed for construction of the trail bridge. This is a small area relative to the abundance of this



Looking South from Existing Parking Area



vegetation type within CVNP. The potential impacts would therefore be Minor Adverse. Temporary impact from construction may promote colonization by some of the invasive species discussed in Section 4.7. Because of the localization of potential impacts, they would be Minor Adverse. A Minor Beneficial impact would be realized in that the disturbance would remove a number of invasive species, offering minor protection to adjacent vegetation from colonization. Included in this conversion is the 0.30 acres occupied by Wetland B (see Section 5.1) which is dominated completely by the common reed (*Phragmites australis*). The extension of the platform for 120 feet to the south would cover approximately 1,680 square feet of drainage area along the tracks. This may shade some vegetation, but the intensity of the impact would be negligible.

Indirect Impacts – Runoff from the parking area would contain pollutants that could affect the vegetation in the vicinity. Besides Minor Adverse impacts directly affecting the existing vegetation, this may promote colonization by some of the invasive species discussed in Section 4.7. Said impact would be localized to an area of low biodiversity, and would therefore be considered Minor Adverse.

Cumulative Impacts – The potential for adverse direct and indirect impacts is discussed above. The Riparian Buffer Plan for Proposed Agricultural Lands (NPS, 2002a) provides documentation that there are no reasonably foreseeable future plans that would add impacts to similar wildlife habitat areas along the Cuyahoga River within CVNP. Actions of others beyond CVNP that may impact similar wildlife habitat may not reasonably be assessed in this EA.

Conclusion - Direct and indirect impacts to vegetation and invasive species would be Minor Adverse, with a Minor Beneficial aspect in the removal of invasive species. The potential for indirect impacts discussed above is also discussed in Section 5.3, where conceptual design considerations for stormwater treatment are discussed that would avoid such impacts. A Best Management Practice (BMP) located in Appendix 2 of Procedural Manual #77-1: Wetland Protection states,

*“Where plantings or seeding are required, native plant material must be obtained and used in accordance with NPS policies and guidance. Management techniques must be implemented to foster rapid development of target native communities and to eliminate invasion by exotic or other undesirable species.”*

In other projects, the USACE has required five to seven years of invasive species control in disturbed areas. A specific monitoring and treatment plan for invasive species will be developed during final design. No impairment to vegetation is expected under this alternative.

## **5.7 Impacts on Cultural Resources**

### **5.7.1 Regulations and Policies**

Laws, regulations, and policies have general application for cultural resource management throughout the NPS. These include the Antiquities Act, the Historic Sites Act, the National Historic Preservation Act, the National Environmental Policy Act, the Archeological and

Historic Preservation Act, the Archeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act (see Appendix A and Sections 1.3 and 4.2.1 of this EA). Protection of cultural resources is also in accordance with Executive Order 11593, *Protection and Enhancement of the Cultural Environment*, 1971 (see Appendix A).

Cultural resource management procedures are detailed in the NPS Management Policies (NPS, 2001a) and the NPS Cultural Resource Management Guideline (NPS, 1997). Specific standards and guidelines for the treatment of cultural resources are provided in The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, and Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes.

### 5.7.2 Methodology

In this environmental assessment, impacts to cultural resources are described in terms of type, context, duration, and intensity, which is consistent with the CEQ regulations. These impact analyses are intended to comply with the requirements of the National Environmental Policy Act. Compliance with Section 106 of the NHPA is being accomplished concurrently for the preferred alternative.

Impacts to cultural resources were identified and evaluated by: (1) determining the Area of Potential Effect (APE); (2) identifying cultural resources present in the APE (3) applying how the action affects the cultural resource; and (4) considering ways to avoid, minimize, or mitigate adverse effects. CEQ regulations and DO #12 also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact (e.g. reducing the intensity of an impact from major to moderate or minor).

#### 5.7.2.1 Historic Structures

The preservation of historic structures involves the two basic concerns of slowing the rate at which historic material is lost and maintaining historic character. An adverse impact would increase the rate at which a historic structure is lost and/or influence the loss of historic character of the structure. For purposes of analyzing potential impacts to historic structures, the thresholds of change for the intensity of an impact are defined as follows:

Negligible: Impact(s) is at the lowest levels of detection - barely perceptible and not measurable.

Minor: **Adverse** - Impact would not increase the rate at which the historic structure is lost and/or influence the loss of historic character of the structure.

**Beneficial** – The action would decrease the rate at which the historic structure is lost and/or influence the loss of historic character of the structure.

- Moderate:     **Adverse** - Impact would moderately increase the rate at which the historic structure is lost and/or influence the loss of historic character of the structure.
- Beneficial** – The action would moderately decrease the rate at which the historic structure is lost and/or influence the loss of historic character of the structure.
- Major:         **Adverse** – The historic structure would be lost, or the historic character of the structure would be lost.
- Beneficial** – Restoration of a structure in accordance with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties*.

#### 5.7.2.2 Cultural Landscapes

A cultural landscape is a geographic area, including both natural and cultural resources associated with a historic event, activity or person. The cultural landscape is a tangible manifestation of human actions and beliefs that has been set against and within the natural landscape. Preservation treatments should seek to protect and preserve the historic character of a landscape over time through maintaining the continuity of distinctive characteristics; therefore, emphasis is placed on maintaining the character and feeling of the landscape rather than on preserving a specific appearance or time period.

For purposes of analyzing potential impacts to cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

- Negligible:     Impact(s) is at the lowest level of detection – barely perceptible and not measurable.
- Minor:          **Adverse** – Impact(s) would not affect the character-defining patterns and features of the cultural landscape.
- Beneficial** – The action would preserve the cultural landscape in its present condition and would allow for its satisfactory protection, maintenance and interpretation.
- Moderate:      **Adverse** – Impact(s) that would alter a character defining pattern(s) or feature(s) of the cultural landscape but would not diminish the integrity of the landscape.
- Beneficial** – The action would rehabilitate the cultural landscape for contemporary use and would retain its essential features, integrity and character.
- Major:          **Adverse** – Impact(s) that would alter a character defining pattern(s) or feature(s) of the cultural landscape and diminish its integrity so that the general character and feeling is changed.

**Beneficial** – The action would restore the cultural landscape and will not result in disturbance or loss of significant archaeological resources.

### 5.7.3 Alternative 1 - No Action

#### 5.7.3.1 Historic Structures

Direct Impacts – There are no direct impacts anticipated for this alternative.

Indirect Impacts – There are no indirect impacts anticipated for this alternative.

Cumulative Impacts – There are no cumulative impacts anticipated with this alternative.

Conclusion – There are no direct, indirect or cumulative impacts anticipated to historic structures anticipated with this alternative. No impairment to historic structures is expected under this alternative.

#### 5.7.3.2 Cultural Landscapes

Direct Impacts - There are no direct impacts anticipated for this alternative.

Indirect Impacts – There are no indirect impacts anticipated for this alternative.

Cumulative Impacts – There are no cumulative impacts anticipated with this alternative.

Conclusion – There are no direct, indirect or cumulative impacts anticipated to the cultural landscape anticipated with this alternative. No impairment to the cultural landscape is expected under this alternative.

### 5.7.4 Alternative 2 - Expansion & Improvement with Trail Bridge Over the Cuyahoga River

#### 5.7.4.1 Historic Structures

Direct Impacts - The historic Valley Railway rail line runs adjacent to the western edge of the proposed project area; however, direct impacts to the rail line structure are not expected, as it is located beyond the project's APE. In addition, the depot and boarding area located on the site are not historic structures, as they were constructed by CVNP in 2002. The Towpath Trail is adjacent to the eastern edge of the proposed project area, on the east side of the Cuyahoga River. The connecting trail for the proposed bridge intersects another connecting trail from the Lock 39 parking area to the Towpath Trail. It is therefore outside of the APE for the Towpath Trail.

Indirect Impacts – Under this alternative, Minor Adverse indirect impacts could be anticipated from consistent or increased visitation and use of the Valley Railway and the Towpath Trail. Although this alternative does not increase capacity on either the Valley Railway or the Towpath Trail, consistent use of these resources could have a Minor Adverse consumptive impact on the historic fabric of the resources.

Cumulative Impacts – The indirect impact described above may be intensified by the increases anticipated with the planned extension of the Valley Railway to downtown Cleveland, the planned extension to Canton, and the continued promotion of the facilities by NPS and the CVSR, and by the continued addition of railway equipment. Such impacts would be Minor Adverse as long as NPS and CVSR continue to maintain the Valley Railway appropriately. Likewise, the cumulative impact may intensify in correlation with the planned extension of Cleveland Metroparks’ trail system to the north of Lock 39.

Conclusion - There would be no direct impacts to the nearest historic structures, the Valley Railway and the Towpath Trail. There could be Minor Adverse indirect and cumulative impacts associated with growth in the use of the Valley Railway and the Towpath Trail. These would be minimized with appropriate maintenance. No impairment to historic structures is expected under this alternative.

#### 5.7.4.2 Cultural Landscapes

Direct Impacts – This alternative will increase the size of the existing parking lot by approximately 40 percent. The addition of pavement and lighting, while adding to the functionality of the station, would detract from the general character and feeling of the landscape in the area. The impacts are anticipated to be Minor Adverse. This alternative would also add a trail bridge over the Cuyahoga River, which is not a feature of the Valley Railway or the Towpath. This would also detract from the general character and feeling of the landscape in the area with an anticipated Minor Adverse impact.

Indirect Impacts – There are no indirect impacts to the cultural landscape resources anticipated with this alternative.

Cumulative Impacts – Continuing efforts are being made by NPS to protect and preserve the cultural landscape by applying the Secretary of the Interior's Standards for Historic Preservation. One example of this effort is the Rural Landscape Management Program currently being implemented in CVNP (NPS, 2002e). Beneficial impacts are anticipated, and adverse impacts to the cultural landscape should be minimized throughout CVNP.

Conclusion – The direct impacts are anticipated to be Minor Adverse. Cumulative impacts may be beneficial. The direct impacts may be minimized by softening pavement by incorporating grassed or vegetated islands, trees, etc. No impairment to cultural landscapes is expected under this alternative.

## 5.8 Impacts on Nightscape

### 5.8.1 Regulations and Policies

The NPS Management Policies (NPS, 2001a) state that the NPS, “will preserve, to the greatest extent possible, the natural lightscapes of parks, which are natural resource and values that exist in the absence of human-caused light.” Section 4.10 of the NPS Management Policies (NPS,

2001a) includes the statement, “The stars, planets, and earth’s moon that are visible during clear nights influence humans and many other species of animals . . .” The examples include various species, such as the blind cave cricket, sea turtles, birds that navigate by stars, and prey animals that reduce their activities during moonlit nights. Recent publications add the emphasis that the ability to observe the heavenly landscape is what is in danger (Duriscoe, 2001). The NPS Interim Technical Guidance on Assessing Impacts and Impairment to Natural Resources states that, “Light pollution, defined as stray unwanted light outside the range and timing of natural variation, is not only an ecological disrupter, but also adversely affects the natural scenery of the night. The NPS mission to ‘conserve scenery’ extends to the night and the sky above” (NPS, 2003b, p. 52).

In view of the need to protect the nightscape, Section 4.10 of the NPS Management Policies (NPS, 2001a) concludes that, “The Service will:

- Restrict the use of artificial lighting in parks to those areas where security, basic human safety, and specific cultural resource requirements must be met;
- Utilize minimal impact lighting techniques; and
- Shield the use of artificial lighting where necessary to prevent the disruption of the night sky, natural cave processes, physiological processes of living organisms, and similar natural processes.”

#### 5.8.2 Methodology

The NPS Interim Technical Guidance on Assessing Impacts and Impairment to Natural Resources states that, “The degree of adverse impact by light pollution on park lightscapes will vary with the following: (1) if the nighttime environment is very dark, the behavior of light is such that it would only take a very small amount of light pollution to create visibility degradation perceptible to the human eye; (2) poor air quality and dirty air will amplify existing light pollution at short to moderate distances, while sometimes reducing the affect of light pollution at long distances (approximately 100 miles); and (3) the value of a dark night sky is relative to the local or regional scarcity of that resource, the absolute quality of that sky, the value of a dark sky as a scientific resource, the expectation of visitors to experience a dark night sky, the cultural or historic setting and relevance with the night sky, and the known or suspected ecological dependence on a natural lightscape” (NPS, 2003b, pp 52-53).

No original data collection was undertaken in connection with this portion of this EA. The following thresholds were used to describe the magnitude of adverse effects on the nightscape:

- Negligible: There would be no observable or measurable impacts to the nightscape. Light conditions would cycle as they would within the range of natural variability. The experience of the night sky would be no more impacted by artificial light than under existing conditions.
- Minor: **Adverse** - Impacts would be detectable, but they would not be expected to be outside the natural range of variability and would not be expected to have any long-term effects on native species, their habitats, or the natural processes

sustaining them. Artificial lights may be noticed, but would be quickly forgotten and would not affect the experience of the night sky. All visible lights would be shielded or produce no glare to the observer, allowing full use of night vision.

**Beneficial** – A beneficial change of similar magnitude to a Minor Adverse impact on native species and on the night sky.

Moderate: **Adverse** - Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they would be outside the natural range of variability for short periods of time. Artificial lights would be frequently noticed and continue to intrude into the experience of other resources. Outdoor light fixtures would be unshielded, too bright, or otherwise produce glare.

**Beneficial** – A beneficial change of similar magnitude to a Moderate Adverse impact on native species and on the night sky.

Major: **Adverse** - Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they would be expected to be outside the natural range of variability for long periods of time, or would be permanent. Artificial lights would be frequently noticed and continue to intrude into the experience of other resources. Numerous unshielded lights are visible, even at a distance, and produce enough glare, that the human eye never fully adapts to darkness.

**Beneficial** – A beneficial change of similar magnitude to a Major Adverse impact on native species, their habitats, or the natural processes sustaining them.

Impairment: Some of the major impacts described above might be an impairment of Park resources if their severity, duration, and timing resulted in the elimination of a native species or significant population declines in a native species. Unlike many natural resource impacts, the natural lightscape is recoverable within CVNP. Mitigation should always be considered, which includes considering the use of outdoor lighting only where and when necessary, using only enough light to meet the objective, and using the best available lighting technology.

### 5.8.3 Alternative 1 - No Action

Direct Impacts – This alternative would not involve the addition of any lights. Only the low-level nighttime building lighting will remain on through the night year-round for security purposes. The CVSR operates for about 220 days annually. Trains operate into mid-December. No parking lot lighting would be on from then until the start of the excursion season the following June. Only the low-level, nighttime building lighting would remain on through the night year-round for security purposes. The impact intensity would therefore be Negligible.

Indirect Impacts – There are no indirect impacts to the nightscape anticipated with this alternative.

Cumulative Impacts – There are no cumulative impacts to the nightscape anticipated with this alternative.

Conclusion – This alternative would have a negligible impact on the nightscape around the project area.

#### 5.8.4 Alternative 2 - Expansion & Improvement with Trail Bridge Over the Cuyahoga River

Direct Impacts – This alternative would involve replacing the single parking area light with 14 light poles to illuminate the paved and stabilized turf overflow parking areas. The existing nighttime security building lighting would remain. This additional lighting would occur within 700 feet of the Rockside Road corridor. Actual nighttime lighting of the parking area is expected to be minimal, as the rail service operates primarily during daylight hours. Nighttime or holiday excursions do exist; however, they operate for a limited time and the lights would only be used for the duration of the excursion.

The CVSR operates for about 220 days annually. Trains operate into mid-December. No parking lot lighting would be on after that until the start of the excursion season the following June. Only the low-level nighttime building lighting will remain on through the night year-round for security purposes.

The additional lighting may be detectable, but due to its limited duration near the hour of dusk, its location at the northern boundary of the park adjacent to developed land, and the use of cutoffs to minimize or eliminate fugitive light spill, the impacts are expected to be almost negligible.

Indirect Impacts – There are no indirect impacts to the nightscape anticipated with this alternative.

Cumulative Impacts – There are no cumulative impacts to the nightscape anticipated with this alternative.

Conclusion - Overall, there may be short term, minor impacts to the nightscape resulting from the additional parking lot lighting for the paved and turf overflow parking areas. These impacts may be expected to have a Minor Adverse impact on the nightscape, but would be limited to the early hours of the evening during late fall, and would be altogether absent in the summer months and from winter through spring.

## 5.9 Impacts on Health and Safety

### 5.9.1 Regulations and Policies

The NPS Management Policies (NPS, 2001a) state that the NPS is committed to providing appropriate, high-quality opportunities for visitors to enjoy the parks. Section 8.2.5.1 also states that, “While recognizing that there are limitations on its capability to totally eliminate all hazards, the Service and its concessionaires, contractors, and cooperators will seek to provide a



safe and healthful environment for visitors and employees.” Furthermore, the NPS will strive to protect human life and provide for injury-free visits (NPS, 2001a, Section 8.2.5). Director's Order #83: Public Health provides additional guidance.

*Director's Order #9: Law Enforcement Program* (NPS 2000b), in conjunction with *Reference Manual 9: Law Enforcement*, establishes and defines standards and procedures for NPS law enforcement. Along with education and resource management, law enforcement is an important tool in achieving this mission. Commissioned rangers perform resource stewardship, education, and visitor use management activities, including law enforcement. They provide for tranquil, sustainable use and enjoyment of park resources while simultaneously protecting these resources from all forms of degradation. The objectives of the law enforcement program are to (1) prevent criminal activities through resource education, public safety efforts, and deterrence, (2) detect and investigate criminal activity, and (3) apprehend and successfully prosecute criminal violators.

### 5.9.2 Methodology

The methodology on human health and safety involves relative levels of risk invoked by conditions potentially resulting from the alternatives. The potential for change in human health and safety was evaluated by identifying the projected change in risk of potential human health and safety related impacts attributable to either alternative. For each alternative, a judgment was made as to the potential for impact. This potential impact was then characterized by type (beneficial or adverse), context (site-specific, local or regional), duration (short term or long term) and intensity.

The impact intensities for human health and safety follow.

Negligible: The impact to human health and safety would not be measurable or perceptible.

Minor: **Adverse.** The impact would be measurable or perceptible, and it would be limited to a relatively small number of people in localized areas. Impacts to human health and safety could be realized through a minor increase in the potential for conflicts in current accident areas.

**Beneficial.** Conditions would cause a measurable or perceptible improvement that would be limited to a relatively small number of people in localized areas. Such impacts to human health and safety could be realized through a minor decrease in the potential for conflicts in current accident areas.

Moderate: **Adverse.** The impact to human health and safety would be sufficient to cause a permanent increase in accident rates in existing low-accident locations, or to create the potential for additional human conflicts in areas that currently do not exhibit noticeable human conflict trends.

**Beneficial.** The impact to human health and safety would be sufficient to cause a permanent decrease in accident rates in existing high-accident locations, or to

create the potential for fewer human conflicts in areas that currently exhibit noticeable human conflict trends.

Major: **Adverse.** The impact to human health and safety would be substantial through the creation of new areas with a high potential for serious accidents or hazards.

**Beneficial.** The impact to human health and safety would be substantial through the elimination of potential hazards.

### 5.9.3 Alternative 1 - No Action

Direct Impacts – Under this alternative, features such as the smaller parking facility, lack of surface uniformity, lack of lighting, and lack of pavement markings would continue to contribute to unsafe conditions. The smaller size would continue to be more susceptible to overcrowding during events. The lack of pavement markings would add to confusion, especially for events conducted in the dark. Adverse impact to health and safety could also result from flooding of the Cuyahoga River as described in Appendix E. Such circumstances could cause the temporary closing of the facility for the safety of the staff and visitors. Such impacts would be Minor Adverse.

There would also be an increased potential for impact from the use of the Rockside Boarding Area parking as overflow parking for Lock 39. Besides the direct impacts above, there would be a potential for impacts from such users in walking to the Towpath Trail. This walk would include walking along the current access road, which does not provide room for pedestrians, especially where it crosses under Rockside Road. It also includes placing pedestrians along Old Rockside Road to the Cleveland Metroparks trail, which connects to the Towpath Trail at Lock 39. Since this would be an overflow parking area to Lock 39, such impacts would occur on occasion and would also be Minor Adverse.

There would also be increased potential for impact in loading the longer trains at Rockside Station when the trains block the existing vehicular crossing at Old Rockside Road (just north of the Rockside Station). Local access east and west on Old Rockside Road is impeded by trains that block the crossing, causing a safety hazard with traffic and inconvenience for local businesses. This impact would also occur on occasion, and would also be Minor Adverse.

The area along Old Rockside Road to the west of the track is not currently accessible by any other roadways. This area would therefore be inaccessible to emergency vehicles should the timing of an emergency event coincide with the blocking of the vehicular crossing on Old Rockside Road. The impact from the increase in the risk of such an occurrence would be Minor Adverse.

Finally, there is a potential for an adverse impact from flooding, since the Rockside Boarding Area access road and a portion of the existing parking area are located in the floodway for the Cuyahoga River. The remaining portion of the parking area is in the floodplain of the river (see Section 5.2). This impact is considered Minor Adverse because of the probability of such a level

of flooding combined with the use of the parking area at the same time (i.e. visitors will generally not use the facility during times of flooding).

Indirect Impacts – There are no indirect impacts to health and safety anticipated with this alternative.

Cumulative Impacts – There are no cumulative impacts to health and safety anticipated with this alternative.

Conclusion – Overall, there are five occasional and localized impacts to this alternative, each of which may be expected to have a Minor Adverse impact on health and safety. The combination of these impacts may be considered to be Moderate Adverse with the anticipated growth in the use of the Valley Railway and the Towpath Trail.

#### 5.9.4 Alternative 2 - Expansion & Improvement with Trail Bridge Over the Cuyahoga River

Direct Impacts - Under this alternative, features such as the larger parking facility, a uniform, paved surface with pavement markings and lighting would contribute to safer conditions. Its larger size would be less susceptible to overcrowding during events. The pavement markings and lighting would lessen confusion, especially for events conducted in the dark. Such impacts would be Minor Beneficial. Construction activities could cause temporary Minor Adverse impacts to visitors and staff.

The potential for adverse impacts to health and safety from inundation of the parking lot from flooding of the Cuyahoga River would be less for this alternative, since the entire parking area would be removed from the floodway of the Cuyahoga River (see Section 5.2); however, it is not possible to remove the access drive from the floodway. Consideration could be given to developing a flood warning procedure associated with the gage height at Independence. Appendix E provides calculations to show that use of the Rockside Boarding Area could be suspended whenever the Independence gage height exceeds 8.5 feet and is rising. Development of such an operational procedure would be a Minor Beneficial impact to health and safety in that it would reduce the potential that people and vehicles would occupy the floodplain under flooding conditions.

Construction of a trail bridge over the Cuyahoga River would provide those using the parking area as an overflow to the Lock 39 parking facility with a safer means to access the Towpath Trail. The extension of the loading platform would alleviate the need for trains to stop across Old Rockside Road, which would alleviate the hazard from that occurrence. These two aspects of Alternative 2 would each produce Minor Beneficial impacts to health and safety.

Indirect Impacts – During construction, it would be necessary to close the parking facility. This could impose additional use on other stations at CVNP. Such an impact would be temporary, and would be considered Minor Adverse.

Cumulative Impacts – There are no cumulative impacts anticipated with this alternative.

Conclusion - Overall, there are three occasional and localized impacts to this alternative, each of which may be expected to have a Minor Beneficial impact on health and safety. The combination of these impacts may be considered to be Moderate Beneficial, considering the planned growth in the use of the Valley Railway and the Towpath Trail.

One aspect of safety that was investigated was the potential to encounter hazardous waste or contaminated materials on the site. The existence of such substances could be a threat to the health of workers during construction and/or to visitors utilizing the site. A review of on-line U.S. Environmental Protection Agency (US EPA) databases was conducted. One US EPA Comprehensive Environmental Response, Compensation, and Liability Inventory System (CERCLIS) site was found for the NPS Lock 39 parking facility located on the east side of the Cuyahoga River. The record indicates that during grading, buried drums were discovered containing PCB's and metals. Also, the soil survey map published in 1980 for the site labels the site as a "U.S. Military Reservation" (Musgrave and Holloran, 1980). It is recommended that a more detailed environmental site assessment be performed prior to any construction of Alternative 2.

## **5.10 Impacts on Visitor Experience**

### **5.10.1 Regulations and Policies**

NPS Management Policies (NPS, 2001a) state that the enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks, and that the National Park Service is committed to providing appropriate, high-quality opportunities for visitors to enjoy the parks. The NPS Management Policies (NPS, 2001a) provides the basic service-wide policies on visitor use and recreation activities (Section 8.2.2), visitor safety (Section 8.2.5), and interpretation and educational activities (Section 7.1).

### **5.10.2 Methodology**

The purpose of this impact analysis is to determine if the alternatives are compatible or in conflict with the purpose of the park, its visitor use/experience goals, and the direction provided by NPS Management Policies (NPS, 2001a). Thus, these policies and goals were integrated into the impact thresholds.

The potential for change in visitor use/experience was evaluated by identifying projected changes in use of the boarding area and Lock 39. For each alternative, a judgment was made as to the potential for impact. This potential impact was then characterized by type (beneficial or adverse), context (site-specific, local or regional), duration (short term or long term) and intensity.

Impact to visitor use/experience of the boarding area and Lock 39 would result from construction activities. Such activities could cause the temporary closing of the facilities for the safety of visitors. The construction activities could also involve temporary dirt, dust, noise, barricades and other activities common to construction sites, which are not compatible with the natural setting of CVNP. The activities would therefore produce adverse impacts.

The following thresholds for evaluating impacts on visitor use/experience were defined:

**Negligible:** Visitors would not likely be aware of the effects associated with changes resulting from the alternative.

**Minor:** **Adverse.** Visitors would likely be aware of the adverse effects associated with changes resulting from the alternative; however the decrease in visitor use and experience would be slight and likely short term. Other areas in the park would remain available for similar visitor use/experience and use without impairment of park resources and values.

**Beneficial.** Visitors would likely be aware of the beneficial effects associated with changes resulting from the alternative; however the increase in visitor use and experience would be slight and likely short term.

**Moderate:** **Adverse.** Visitors would be aware of the adverse effects associated with changes resulting from the alternative. Decrease in visitor use and experience would be readily apparent and likely long term. Other areas in the park would remain available for similar visitor use/experience and use without impairment of park resources and values, but visitor dissatisfaction might be measurably affected. Some visitors who desire to continue their use and enjoyment of the activity/visitor experience would be required to pursue their choice in other available local or regional areas.

**Beneficial.** Visitors would be aware of the beneficial effects associated with changes resulting from the alternative. Increase in visitor use and experience would be readily apparent and likely long term.

**Major:** **Adverse.** Visitors would be highly aware of the adverse effects associated with changes resulting from the alternative. Decreases in visitor use and experience would be readily apparent and long term. The decrease in visitor use and experience proposed in the alternative would preclude future generations of some visitors from enjoying park resources and values. Some visitors who desire to continue their use and enjoyment of the activity / visitor experience would be required to pursue their choice in other available local or regional areas.

**Beneficial.** Visitors would be highly aware of the beneficial effects associated with changes resulting from the alternative. Increases in visitor use and experience would be readily apparent and long term.

### 5.10.3 Alternative 1 - No Action

Direct Impacts – Features in the existing parking area such as gravel as opposed to pavement and a lack of lighting for evening events have contributed to visitor dissatisfaction, and have been a motivation for adding these features in the proposed project. Visitor satisfaction would also tend

to decrease with increased use and increased parking congestion at the existing parking facility. Visitors to Lock 39 using the Rockside Boarding Area parking facility would continue to be dissatisfied with the walk needed along the access road and Old Rockside Road to connect with the Towpath Trail. This would all result in visitors using other boarding areas or refraining from the use of the Valley Railway and Towpath Trail entirely. The impact for this alternative would range from Minor Adverse to Moderate Adverse.

Indirect Impacts – Other boarding areas could experience increased use with the decreased use of the Rockside Boarding Area. This could be a Minor Adverse or Minor Beneficial impact, depending on the conditions and capacity of those boarding areas.

Cumulative Impacts – There are no cumulative impacts anticipated with this alternative.

Conclusion – This alternative would have a Minor Adverse to Moderate Adverse impact on the quality of the visitor experience.

#### 5.10.4 Alternative 2 - Expansion & Improvement with Trail Bridge Over the Cuyahoga River

Direct Impacts – The improvements of paving and lighting would improve the quality of the visitor experience at the Rockside Boarding Area. The increase in capacity would maintain visitor satisfaction for a longer period of time, if not indefinitely, depending on the rate of growth in the use of the facility. Construction of a trail bridge over the Cuyahoga River would mitigate the walk back to the Towpath Trail. In fact, some may even consider crossing the river on a trail bridge to be a positive experience in itself. The impacts then would be Moderate Beneficial to Major Beneficial.

Indirect Impacts – An increase in the use of the Rockside Boarding Area, resulting from heightened visitor satisfaction, would increase the use of the Valley Railway and the Towpath Trail. This implies an increase in visitor use at the other stations in the system. The quality of the visitor experience at the other stations would be dependent on features at those stations.

Cumulative Impacts – There are no cumulative impacts anticipated with this alternative.

Conclusion - This alternative would have a Moderate Beneficial to Major Beneficial impact on the quality of the visitor experience at the Rockside Boarding Area. It would provide more opportunity for a visitor experience at the other stations on the Valley Railway.

# CUYAHOGA VALLEY NATIONAL PARK

## Environmental Assessment for Rockside Boarding Area Parking Expansion

### 6.0 CONSULTATION AND COORDINATION

#### 6.1 Public Involvement

As part of the NEPA Scoping process, letters dated April 15, 2003 were sent to involved agencies and other interested parties. The letter explained the intent of CVNP to prepare this EA and requested comments and input regarding the analysis to be performed. A copy of this letter and a list of recipients of the letter are included in Appendix B. Comments were received from some of the recipients. Copies of these comments are also included in Appendix B.

During the impact analyses for the alternatives, agencies were consulted for data and expertise in appropriate fields. In particular, the Ohio EPA contributed water quality data for the Cuyahoga River.

The Draft EA was made available for public review on August 1, 2006. Public notices regarding the EA were published locally in the Akron Beacon Journal and the Cleveland Plain Dealer. Notices were also sent to involved agencies and other interested parties. The EA was available for review at CVNP headquarters in Brecksville, Ohio and available electronically on the NPS Planning, Environment and Public Comment (PEPC) website.<sup>1</sup> The comment period ended on September 15, 2006. Copies of the three letters received are included in Appendix B. As a result of the comments, minor revisions were made to Sections 2.7, 4.5 and 5.5.4 of this EA.

#### 6.2 Agencies and Organizations that Received the Environmental Assessment

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Name	Title/Responsibility	Education	Experience
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Kim Norley, ASLA	Landscape Architect	B.S. Landscape Architecture	5 years consultant; 17 years NPS
Lisa Petit	Wildlife Biologist; Wildlife	B.S. Zoology M.S. Biology Ph.D Zoology	8 years federal research; 4 year NPS
Sam Tamburro	Historian, review of park history	B.A. U.S. History & Political Science M.A. U.S. History (Early Republic)	3 years non-profit; 7 years NPS
<b>CONSULTANT - Bergmann Associates</b>			
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# CUYAHOGA VALLEY NATIONAL PARK

## Environmental Assessment for Rockside Boarding Area Parking Expansion

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