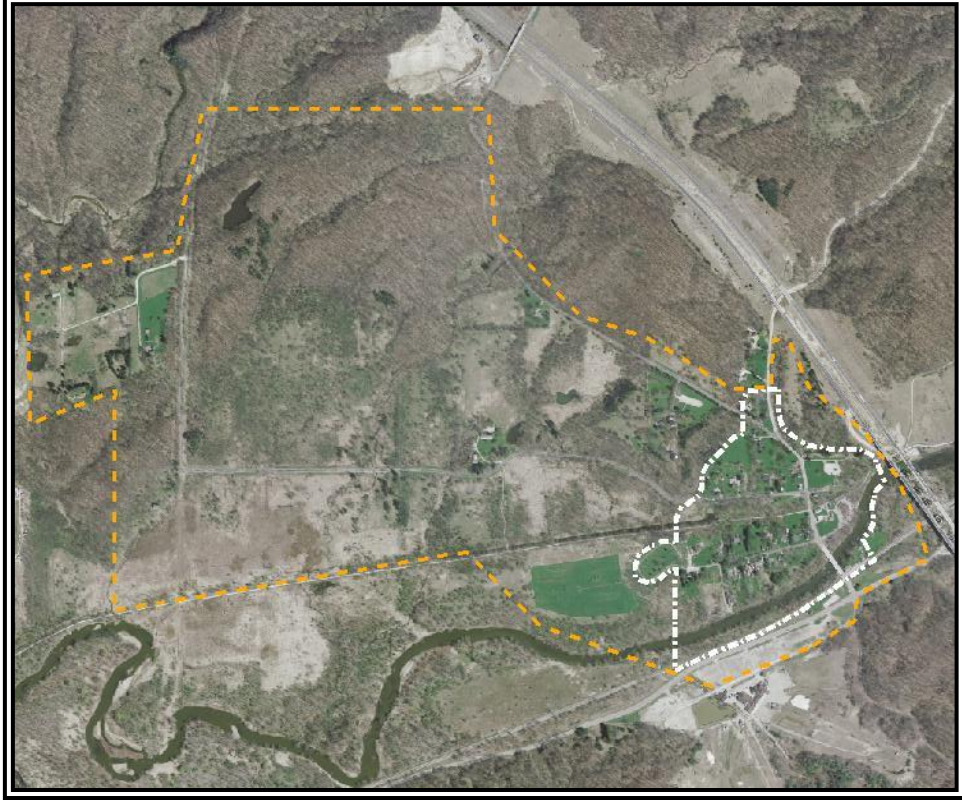




BOSTON MILLS AREA CONCEPTUAL DEVELOPMENT PLAN AND ENVIRONMENTAL ASSESSMENT



August 2012

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1. 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; ... "

NEPA 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, the effects of their actions on the quality of the human environment must be considered. NEPA assigns CEQ the task of ensuring that federal agencies meet their obligations under the Act.

The CEQ developed regulations (40 CFR 1500-1508) that describe the means for federal agencies to develop the Environmental Impact Statements (EIS's) 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 EIS is necessary.
3. Facilitate preparation of a statement when an EIS 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 Interior issued its NEPA regulations as Part 516 of its Departmental Manual (516 DM), last revised in March 2004. In October 2008, the pertinent sections of 516 DM were published in the Code of Federal Regulations. The National Park Service (NPS) has issued

several NEPA handbooks. In January 2001, the NPS released Director's Order #12: Conservation Planning, Environmental Impact Analysis, and Decision Making.

1.2. Purpose and Need for Action

Proposed Action

The NPS is formulating a development plan for current and potential NPS facilities in the Boston Mills area within Cuyahoga Valley National Park to address circulation, parking, visitor service needs and the needs of local residents. The Study Area is also part of the larger Ohio & Erie Canalway, a National Heritage Area designated by Congress in 1996 to preserve the rails, trails, landscapes, towns and sites associated with the first 110 miles of the Ohio & Erie Canal. The general Study Area is depicted in Figure 1. Figures 2-4 provide more detailed inset maps highlighting specific facilities and structures.

Background

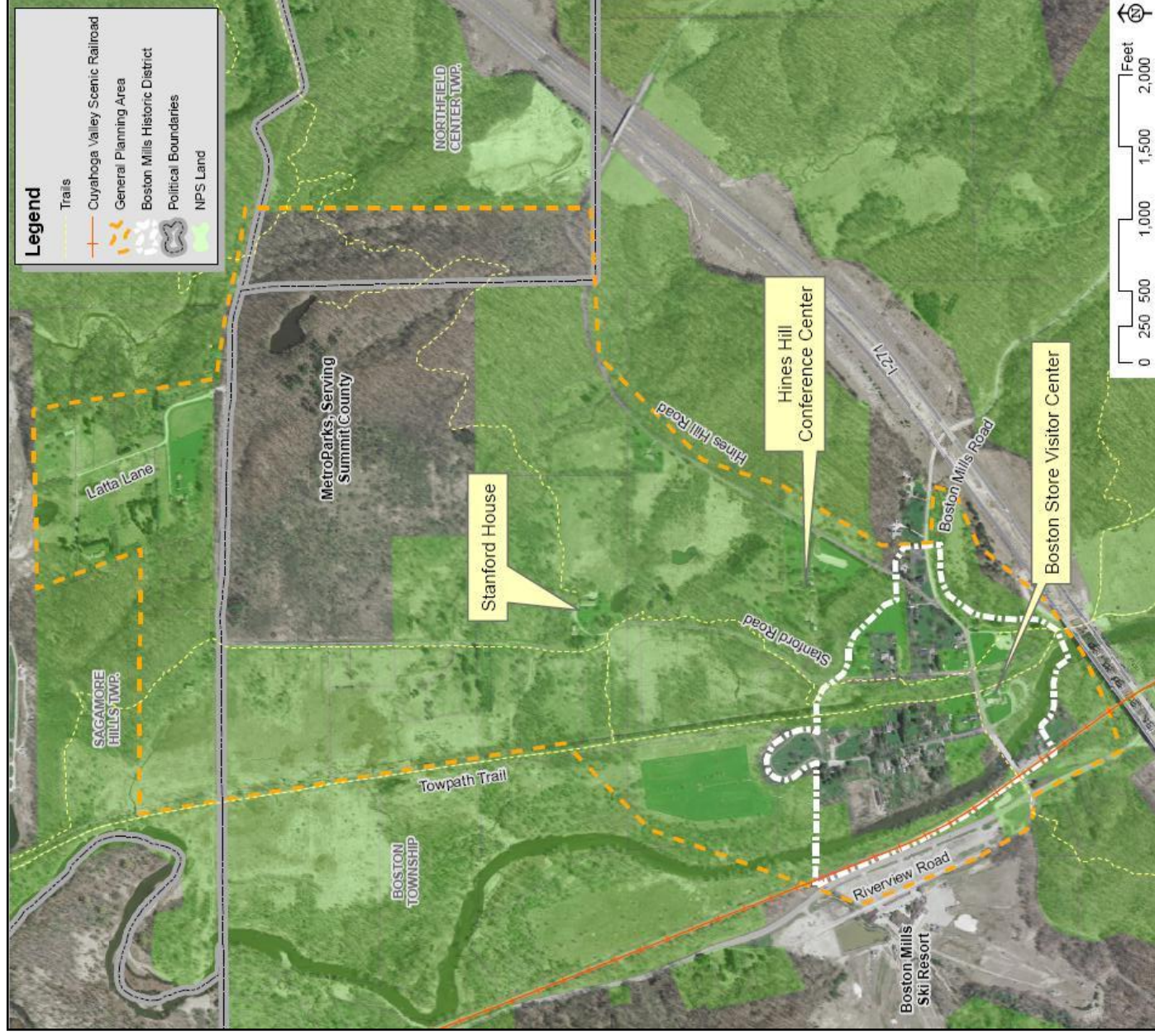
The Boston Mills Historic District is a primary feature in the Study Area. The *Historic Landscape Analysis and Design Recommendations for Boston, Ohio* (NPS 1993) recommends that the Village of Boston should be maintained with a balance of public and private lands, and a mix of commercial, residential, and recreational land uses to maintain the community's historic integrity. This is the guiding principle for NPS planning in the Boston Mills area.

The Boston Mills area has become an important focal point of visitor activity in Cuyahoga Valley National Park. The resources in the Boston Mills area are centrally located in the park and easily accessed from nearby exits from major interstate highways (I-77 and I-271) and the Ohio Turnpike (I-80). Visitors are directed to the area by prominent signage. The NPS currently owns and operates a number of facilities located in or near the Boston Mills Historic District, including the popular Ohio & Erie Canal Towpath Trail, Boston Store Visitor Center, Boston Mill railroad station, MD Garage, and the Volunteer Center. Nearby NPS structures outside of the Historic District on Hines Hill Road and Stanford Road such as Hines Hill Conference Center and Stanford House also provide overnight accommodations, camping, rental facilities for meetings and events and park partner office space. Other popular trails, including the state-wide Buckeye Trail and the equestrian Valley Trail, pass through the Historic District.

Several other structures in Boston serve as office space for park employees, volunteers and partners. Additionally, a partner (Conservancy for CVNP) owns and operates the Trail Mix, Boston store.

There is a potential for additional NPS facilities in Boston. The Conservancy for CVNP currently holds a purchase option for the historic Zielenski Court property (including one large and two small residential structures) located south of Boston Mills Road next to the railroad tracks. A park interpretive planning document prepared for the Park entitled *A Conceptual Framework for*

Figure 1. General Boston Mills study area, Boston Township and Sagamore Hills, Ohio.



Enhancing Visitors' Experiences (NPS 2009) suggests that a main “visitor orientation center” be located in Boston, and that the highly visible Zielski Court property may serve that function if acquired (p.3). The Conservancy intends to purchase the property should the NPS decide to use it for this particular function. The NPS is interested in the property in any case for historic preservation purposes, as it is the last remaining railroad-associated historic structure, and could possibly acquire the property on its own for a variety of uses.

Boston also remains the home of dozens of local residents on Main Street and along Stanford and Hines Hill roads.

A brief summary of the current status of area facilities, parking and circulation follows. A list of potentially affected structures and their current uses and historic characteristics are listed in Appendix A.

Summary of Boston Mills Historic District Visitor Facilities and Structures

Figure 2 depicts resources potentially affected within or near the Historic District.

Boston Store Visitor Center: This visitor center is operated by the NPS and is located along the popular Ohio & Erie Canal Towpath Trail. The center became the *de facto* primary visitor center for the park when Happy Days Visitor Center (now Happy Days Lodge) was converted to a rental facility in 2007.

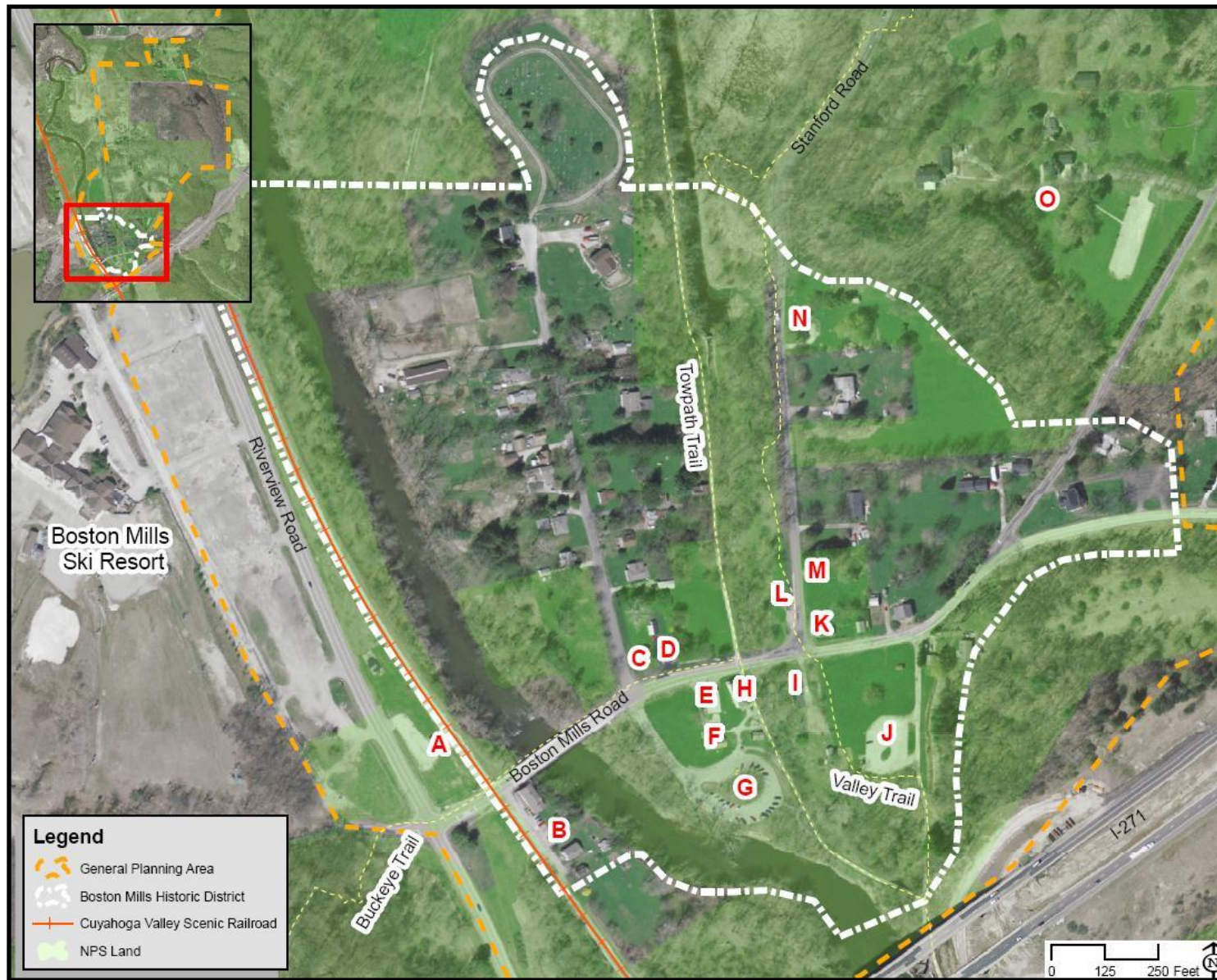
Other visitor centers and information centers include Canal Visitor Center, Hunt Farm Visitor Information Center, Frazee House, Peninsula Depot Visitor Center, and the Winter Sports Center at Kendall Lake. Each of these other centers is small and serves a specific interpretive theme (agriculture, canal era) or seasonal activity.

The Boston Store Visitor Center provides visitors with park information such as maps and brochures, a small sales area of educational materials, a large porch for relaxing, canal era interpretive materials, snowshoe rentals in winter, as well as restrooms and water fountains nearby. The NPS has recently initiated a process of revising interpretive content in the visitor center, as the displays had become outdated (NPS 2009). Upstairs hosts an NPS office and a large room used for meetings and as an auditorium for a park film.

Only a small portion of the park’s visitation (less than 100,000 of 2.5 million) enter a park visitor center each year (NPS 2009), but recent counts indicate most of these visits occur at Boston Store. In 2010, approximately 34,000 visitors utilized Boston Store, which was more than any other visitor information center (NPS 2011a). Visitation at Boston Store has been on an upward trajectory, increasing by 6 percent in FY11 (despite lower park visitation), 21 percent in FY10, and 35 percent in FY09.

The Visitor Center parking lot is a circular thru-drive paved lot with angled parking (45 cars, 2 handicap accessible) that is difficult to safely navigate and back-up, and does not provide

Figure 2. Boston Mills Historic District area structures and facilities (A= Boston Mill Station, B= Zielenski Court, C= Mary Boodey, D= Trail Mix, Boston [Square Deal Food Store], E= MD Garage, F= Dzerzynski, G= Boston Store parking, H= Boston Store Visitor Center, I= Johnston-Rodhe, J= Boston Trailhead parking, K= Volunteer Center [Savacoal], L= Canal Boatyard, M= Conger, N= Nina Stanford, O= Hines Hill Conference Center complex.)



access, parking or an easy exit for larger vehicles like campers and buses. The lot is located very near the Cuyahoga River and has required recent riverbank stabilization to remain viable. This parking lot had approximately 37,000 visits/year from 2007-2010 according to park count estimating procedures (NPS 2011a). Between July, 2010 through June, 2011, there were 36,885 visitations to the Boston Store Parking Lot, with monthly average of 2,751 and peak summer months (June, July and August) averaging 5,123.

A visual parking lot count was conducted 13 times during the Summer of 2011, including weekday and weekend counts. All three Saturdays when counts were conducted, parking capacity (percent of existing parking spaces full) was 86 percent or greater, even with efforts to ensure that staff parking was offsite. One Friday, the parking lot exceeded 100 percent capacity. During weekdays, capacity was generally between 35-60 percent full.

Boston Trailhead Parking: The Boston Trailhead lot provides parking for 8 cars and 5 horse trailers. Since it is not paved, parking is difficult to mark and therefore use of space is inefficient, sometimes blocking trailer access. Pedestrian access to other Boston facilities from the lot is along unpaved trails and roadsides only.

Counts were conducted during the summer in 2011, but this lot was closed or partially occupied for a portion of the summer season due to construction staging. In August, this lot was on average 75 percent full or greater.

Volunteer Center: The Volunteer Center (located in the historic Savacoal House) serves as the primary building for the Volunteer Center complex. It is a working center for volunteers, providing meeting, work and storage space. The barn provides long-needed cold storage critical to the volunteer program. There are 3 parking spaces west of the structure (1 limited mobility).

Offices & Storage: There are many structures that have been converted to office space used by park staff, partners and volunteers (M. Boodey, Dzerzynski) or storage (Conger). Each has a small amount (1-3) of parking spaces, typical of residential structures.

Mary Boodey (the historic R. E. Wise House) houses the Volunteer Program Management Office and shares a driveway with the Trail Mix, Boston store but does not have any parking for volunteers. Nina Stanford House and Johnston-Rodhe House have most recently been in residential uses but are targeted for conversion to office space.

Trail Mix, Boston: Trail Mix, Boston (the historic Square Deal Food Store) is a store owned and operated by the Conservancy for CVNP, providing refreshments and supplies to trail users. Casual drop-in parking for Trail Mix along the road in front of M. Boodey and in its driveway is not controlled, signed nor managed. Since blocked-in cars exit in whatever manner feasible (i.e., driving across the lawn), safety and resource damage has become a concern. A small connecting path to the Towpath Trail exists to facilitate pedestrian access to the store.

Zielenski Court Property: This private property includes 3 historic structures that are currently used for residential purposes: an apartment complex (4340 ft²) and two small residences. These properties are located directly on the historic route of the Valley Railway, now used by the Cuyahoga Valley Scenic Railroad, at the entry point to the Historic District from the west before crossing the river. The large apartment structure is highly visible from Riverview Road, one of the park's central primary roads, which is part of the scenic Ohio & Erie Canalway Byway. These historic structures have been modified and changed over the years, but still retain important historic character and integrity. The Conservancy for CVNP has a purchase option on this property with the intention of acquiring it for NPS uses.

Other Boston Area Facilities and Structures

Boston Mill Station: Boston Mill Station is located just outside the Historic District and provides a boarding location for the Cuyahoga Valley Scenic Railroad. It is also the location of the annual *Day Out With Thomas the Tank Engine*® event that drew over 23,000 people in 2011. Some other events, such as beer tasting and wine tasting excursions, also leave from the station totaling approximately 1,400 riders in 2011. Due to its location north of Boston Mills Road, the road is frequently blocked during train stops (currently 6 times a day, 5 days a week, June through October), a problem that cannot be avoided with train reconfiguration without causing similar problems at all other railroad stations. Blocking the road more than 5 minutes is against state law if cars or pedestrians are waiting to cross (Ohio Rev. Code Ann. § 5589.21.1).

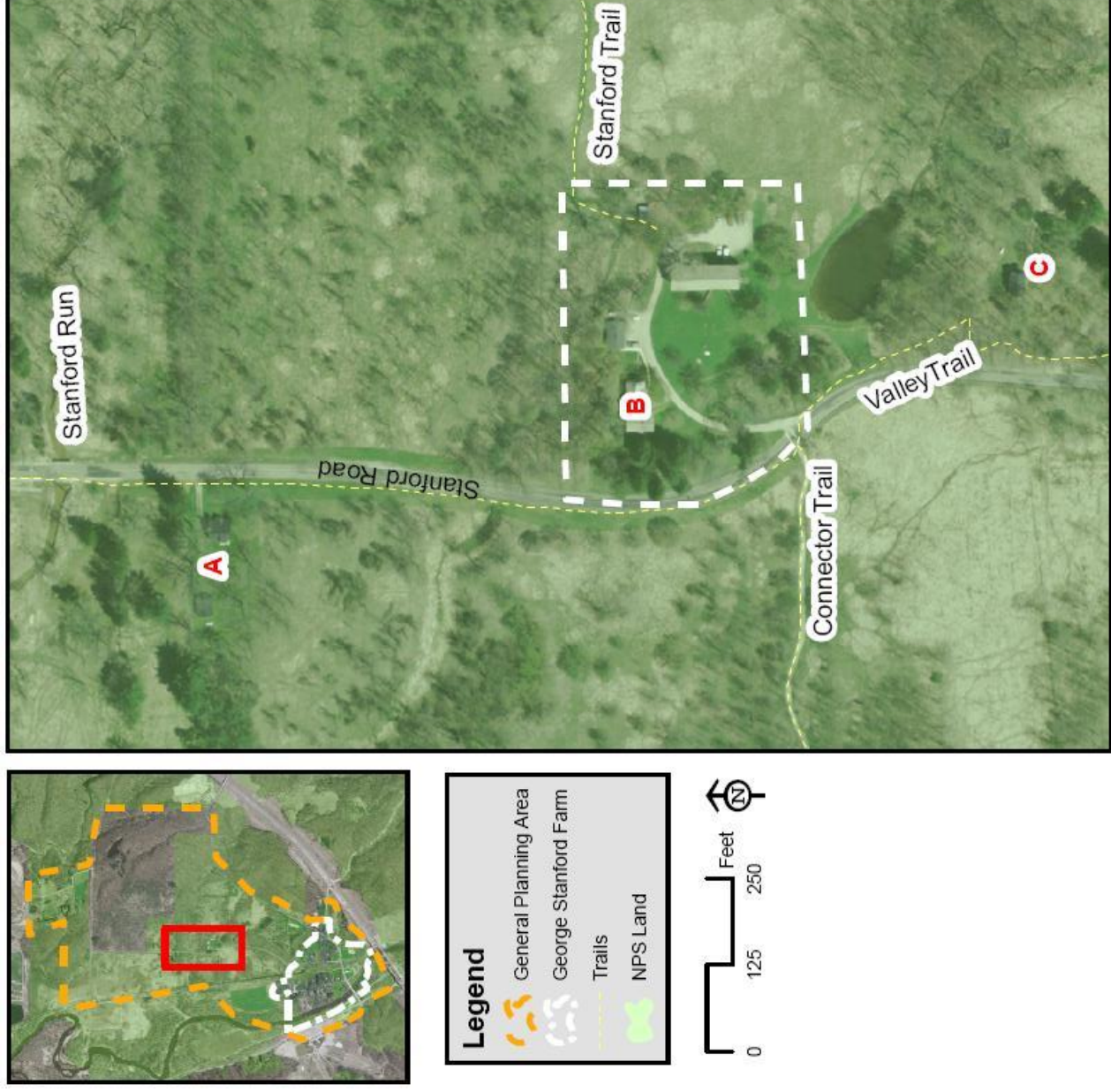
Hines Hill facilities: Hines Hill Conference Center parking lot provides parking for the Center, a small rental facility, and the offices of the Conservancy for CVNP (35 spaces with wheel stops). It is not paved, leading to complaints about its conditions during wet weather from users of the facility (which includes event rentals such as weddings, etc.). The current limestone screenings track into buildings, cars and shoes and leach into a nearby pond. The site hosts events for 80-100 people and parking often is extended to the grass, which is not stabilized for parking.

Most Stanford Road facilities are depicted in Figure 3.

Stanford House facilities: The Stanford House (the historic George Stanford House) provides overnight accommodations for up to 31 people with 9 private rooms and is managed by the Conservancy for CVNP. It currently has parking for 4 cars (1 handicap accessible) at the Office and approximately 9 cars near the barn in an unimproved, gravel lot. In 2011, 3,755 visitors stayed at Stanford House.

Hike-in camping is also provided east of the barn. This campsite offers a hike or bike-in facility with five campsites, and is open from the end of May through October each year. Since opening in 2009 camping permits have increased annually. In 2010, campers consisted of 260 groups (757 individuals) with the typical group size ranging between 2-4 persons. Campers occupied at least one site 60 percent of the time, and overall used 59 percent of available sites during the season. There were six days in which the campsites were near capacity. Most (85

Figure 3. Stanford Road structures (A= Vernon Boodey, B= Stanford House, C= Clayton Stanford).



percent) were one night stays. July had the highest number of stays. In 2011, the number of campers jumped to 1097, a 45 percent increase.

These sites are meant to be hike or bike in only, but NPS observations note that campers are typically dropped off with camping gear with campers then parking their cars nearby in Boston area lots. Parking at the barn also has the potential for conflicts between House occupants and campers during the camping season.

Figure 4. Stanford Road and Latta Lane structures (A = Lindley Barn, B= NPS TEL station [Ostrica], C = Life Estate property). Stanford Road is closed 0.1 mile east of Latta Lane.



Other Stanford Road properties: Clayton Stanford (potentially eligible for NRHP listing) is located just south of the Stanford House complex and Vernon Boodey is located on the west side of Stanford Road north of Stanford House. Both structures currently are used for residential housing purposes for park partners. V. Boodey may become a law enforcement support facility. Each has a small amount (1-3 cars) of parking typical for a residence. Lindley Barn is a historic structure maintained as a rural landscape feature located at the turn in Stanford Road (Figure 4).

Latta Lane area: The NPS maintains a Technology Enhanced Learning (TEL) Station in the last standing structure (Ostrica, non-historic) on Latta Lane (Figure 4) with associated unimproved parking along the drive. Other structures have undergone recent demolition. Stanford Road is currently closed to vehicle traffic 0.1 mile east of the Latta Lane intersection. The NPS also owns a property at the corner of Latta Lane and Stanford Road under a Life Estate, which allows the current resident to live on the property for the duration of his lifetime (Figure 4).

Summary of Current Parking and Circulation Conditions

General Parking Issues: During events and periods of high visitation, parking lots fill and visitors begin looking for other convenient places to park. Parking on the turf along the Boston Store driveway and along Stanford Road on a historic canal boatyard across from the Volunteer Center is typical, but these areas are not improved or stabilized for that purpose. Continued parking on the boatyard may put historic resources at risk. Parking in the road and driveway margins poses a safety risk for both drivers and pedestrians.

Boston Township reports that people regularly park (illegally) on Main St. during large park events, affecting local residents and roadway safety.

Additional overflow parking (on an unpaved grass lot, approximately 15 cars) is located on NPS land across Riverview Road south of the Boston Mills Ski Resort parking. NPS employees often park in this area to reduce congestion in the Boston area, but the area is not currently signed for public use.

The large privately-owned ski resort parking (unpaved gravel lot, approximately 6 acres, >500 cars) is also occasionally used with permission for parking, tents and other temporary support facilities during major NPS events such as the Towpath Marathon, Day Out With Thomas the Tank Engine®, and other train events. The NPS holds an easement (limiting use to parking) over much of the southern portion of the Ski Resort lot. During the winter this lot is often filled with skier parking, and during the summer the ski resort also hosts Boston Mills Arts Fest for two weekends in June and July, drawing significant crowds.

Circulation Issues: Pedestrian circulation around the Boston Store area, to and from the Towpath Trail and to the Trail Mix store is facilitated by short paths, but there are no formal connections from this primary visitor area to the Volunteer Center, Boston Trailhead parking and the Riverview Road Overflow parking areas. This results in pedestrians walking along and across roads haphazardly, causing safety concerns due to cyclist and vehicular traffic.

Trail Use in the Boston Area: The Towpath Trail in Boston is among the busiest trail use areas of the park. The NPS conducted trail counts at the Towpath Trail crossing at Boston Mills Road during the months of June and July in 2010 and June-August 2011.

In 2010, this location had the second highest average counts of all 15 locations surveyed across the park with an average of 219 /count (two-hour survey period). It also had the third highest count for a single counting period among all trail locations counted with 331 trail users. Of the five Towpath Trail locations counted, the Towpath at Boston Mills Road had the highest average bike use on the Towpath Trail for all times (156/count) and the fifth highest numbers of hikers/runners (55.8/count).

In 2011, similar patterns were observed as the site was consistently among the top 3 busiest trail locations (i.e., bikers 181/count; hiker/runners 73/count). Saturdays consistently had the highest number of trail users; for example in 2011 the location averaged 428 users/count on Saturdays.

Purpose and Need

Purpose of the Action: The purpose of this plan is to outline an integrated approach for improving visitor circulation and parking infrastructure, modifying visitor services and programs, and designating uses of structures in the Boston Mills area that considers the Boston Mills as a whole rather than a set of individual projects or plans.

Need For the Action: This plan is needed because recent developments, including the conversion of Happy Days Visitor Center to a rental facility, the opening of the new Volunteer Center, and the establishment of the park's first camping area at Stanford House have resulted in increased congestion and competition for parking which affect local residents, visitors and employees alike. In addition, the NPS needs to evaluate potential future uses of the historic Zielenski Court property so that appropriate infrastructure needs for different uses are considered in this broader planning context.

Objectives: The objectives of the plan are to:

1. Maintain the historic character of the Boston Mills area,
2. Enhance pedestrian and vehicular circulation,
3. Improve parking for visitors, volunteers and employees,
4. Accommodate buses, recreational vehicles, and large horse trailers,
5. Ensure government vehicles can be parked at a government structure,
6. Enhance visitor experiences and services,
7. Improve conditions for and address concerns of the residents of Boston,
8. Enhance safety for visitors, volunteers and employees,
9. Maintain green open space in Boston for events,
10. Improve trail access, and
11. Foster ecological restoration and sustainability.

Cuyahoga Valley National Park (CVNP) has prepared this EA to analyze any potential impacts resulting from each of the identified alternatives. The EA will also identify and analyze potential impacts to the environment resulting from the "No Action" alternative.

1.3. Laws, Executive Orders, Regulations, Policies and Guidelines

The 1977 General Management Plan (GMP) for Cuyahoga Valley National Recreation Area is a concept document intended to provide direction for Park management during the "land acquisition/initial implementation stage." The GMP established objectives to be achieved for natural resource management, cultural resource management, and visitor use and interpretation. The proposed action must be consistent with this approved Plan.

A summary of other applicable statutes, regulations, executive orders, and policies that apply to the proposed action are located in Appendix B.

1.4. Issue Identification

Issues as 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 (defining the range of potential issues) was conducted for this EA to identify what relationships exist between the proposed action and environmental resources.

The following major issues were identified through the internal and public scoping process:

- The Boston Mills Area contains historic districts and resources listed under National Register of Historic Places including the Boston Mills Historic District, the Ohio and Erie Canal, and the Valley Railway.
- The Park's actions in the Boston Mills Area can have direct and indirect impacts on private property owners and local residents.
- Proposed actions may affect cultural resources and landscapes.
- Parking appears to be insufficient in the Boston Mills Area and the parking available for larger vehicles (buses, larger horse trailers, RVs) is particularly inadequate.
- Unimproved parking lots and paths can reduce accessibility, safety, and aesthetics.
- Improvements to better control where parking occurs, use limited space more effectively, ease congestion, reduce conflicts with local residents, and increase public safety should be evaluated.
- Improvements to visitor circulation patterns in Boston should be considered (e.g., improved all-weather paths, signage).
- Camping is a desired visitor activity but the current Stanford House hike-in camping has led to additional parking congestion and conflicts.
- Various options for the potential use of the Zielenski Court property should be considered.
- Additional visitor amenities (e.g., interpretive trails, picnic tables, outdoor exhibits) would add value for NPS visitors.
- Restoration of natural values should be a part of any development plan to offset impacts.
- A centralized visitor center that provides comprehensive introduction to all park themes and experiences is desirable.

CVNP prepared and distributed a letter in June 2011 to potentially interested parties for comment. Scoping was conducted with federal, state, and local agencies, organizations, and private residents of Boston Township who reside within close proximity to the project. A press release was also issued and materials were posted to the NPS Planning Environment and Public Comment (PEPC) system allowing public comment through July 24, 2011. A full scoping list is provided in Appendix C.

1.5. 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 and analyzed in Chapter 3.

Archeological Resources

In the NPS Cultural Resource Management Guidelines (NPS, 1997), archeological resources "are the remains of past human activity and records documenting the scientific analysis of these remains." It further states, "What matters most about an archeological resource is its potential to describe and explain human behavior." Park managers are responsible for ensuring that archeological resources under their jurisdiction are identified, protected, preserved, and interpreted. This is done through a systematic program of inventory, evaluation, documentation, curation of collections and associated records, nomination of eligible resources to the National Register of Historic Places, monitoring, protection, treatment, and interpretation.

The planning process in relation to these projects typically provides for archeological inventory work to be completed prior to the actual ground disturbing activity. This inventory work is the initial step taken to provide data about the location of resources and the level of significance. In turn, potential impacts on archeological resources are reduced through measures such as site avoidance, project redesign, or other site protection measures.

The Boston Mills Historic District and other portions of the Study Area have known prehistoric and historic deposits of archeological resources and therefore this topic will be evaluated further.

Historic Structures

In the NPS *Cultural Resource Management Guidelines* (NPS 1997), 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." Buildings, monuments, dams, canals, bridges, roads, fences, mounds, structural ruins, and outdoor sculpture are all examples of historic structures.

The National Historic Preservation Act, as amended in 1992 (16 USC 470 et seq.) and the NPS *Cultural Resource Management Guidelines* (NPS 1997) and NPS Policies (Director's Order 28) require the consideration of impacts on cultural resources listed in or eligible for listing in the

National Register of Historic Places. Such structures are managed under a stricter interpretation of the guidelines than other structures. The purpose of this action includes continued preservation through use of the historic structures and may lead to the rehabilitation of and modification to those structures. Therefore, this issue will be considered in this document.

Cultural Landscapes

As described in the Park's *Cultural Landscape Report* (NPS, 1987), "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." "The cultural landscape is a tangible manifestation of human actions and beliefs which have been set against and within the natural landscape."

According to NPS Management Policies (NPS, 2006) 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 as changes from both natural processes and human activities are inherent. Thus, the emphasis is on maintaining the character and feeling rather than on preserving a specific appearance or time period.

The proposed project is primarily located within the Boston Mills Historic District, and has elements that may affect the George Stanford Farm as well as other historic properties. As these historic areas are considered part of the CVNP cultural landscape, the issue will be considered in this document.

Health and Safety

The Management Policies (NPS 2006) 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". Further, the NPS will strive to protect human life and provide for injury-free visits. Preserving and improving health and safety in the Boston Mills area is one of the reasons for the proposed action and are therefore evaluated in Chapter 3.

Visitor Experience

The Management Policies (NPS 2006) 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.

Visitors come to CVNP to use and experience the park in many different ways. Annual Visitor Use Surveys conducted by the NPS provide information about the multitude of reasons why visitors come to CVNP, which include various types of recreational activities, educational programs, and relaxing and enjoying nature. Decisions regarding the management of lands, and the location of facilities and park structures may impact visitor use and experience and are therefore evaluated in Chapter 3.

Vegetation and Invasive Species

CVNP is dominated by approximately 27,000 acres of deciduous and mixed forests but also supports approximately 2,000 acres of grassland, 1,700 acres of wetland, 1,300 acres of agricultural land and 150 acres of open water. The remainder of the approximately 33,000-acre park supports roads, lawns, golf courses, buildings and other developments. The alternatives considered in this EA would measurably affect forest and grassland habitats and site-specific details concerning these changes are presented in Chapter 3.

In addition to native vegetation, the alternatives considered in this EA also would affect non-native plants in the project area. Approximately 200 species of non-native plants have been documented at CVNP of which 16 are considered to be locally invasive. Executive Order 13112, *Invasive Species*, requires that federal agencies prevent the introduction of invasive plants and animals and work to control the economic, ecological, and human-health impacts of such species. The alternatives considered in this EA would include the removal of invasive plants and details concerning these species are presented in Chapter 3.

Wildlife and Wildlife Habitat

Wildlife species that have been detected in the park CVNP include approximately 250 species of birds, 91 aquatic macroinvertebrates, 64 fish species, 36 mammals, 18 amphibians, and 20 species of reptiles. In addition, 62 butterfly species have been documented in the Park.

The proposed Actions Alternatives require permanent alterations of existing grassy meadows, forests and mowed lawns, and significant restoration proposals are also included. Such changes may impact or benefit wildlife and an analysis is presented in Chapter 4.

Water Resources and Quality

NPS Management Policies Section 4.6 requires the protection of water resources such as rivers and streams as “integral components of park aquatic and terrestrial ecosystems.” The Cuyahoga River and more than 20 associated perennial streams are critical natural features and ecosystems within the Park. Riparian areas (land adjacent to rivers and streams) help maintain stream water quality and biological health. Most of the Park (53 percent) is considered a functional riparian zone (Holmes and Goebel 2008). The Action Alternatives include possible construction of parking lots and sidewalks, clearing of vegetation as well as native plant restoration in riparian areas, potentially affecting riparian values and water quality. Additionally, a small stream restoration is also proposed that may provide benefits. Therefore an analysis of impacts on water quality is presented in Chapter 3.

Presidential 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 implements this Order according to Director’s Order 77-2: Floodplain Management. A few elements of the Alternatives are located within or near the 100-year floodplain of the Cuyahoga River so this topic is evaluated in Chapter 3.

1.6. Impact Topics Considered But Not Evaluated Further in this EA

Some issues and impact topics were brought up in the scoping process, but after further consideration, it was decided that they do not pose substantial issues in regards to the proposed action or cannot be comparatively evaluated at this conceptual stage of the project. Therefore, the following issues and impact topics are not evaluated further in this document.

Air Quality

The 1963 Clean Air Act (42 USC 7401 et seq., as amended) requires an affirmative responsibility to protect a park’s air quality from adverse air pollution impacts. There is potential for the action to involve the use of construction equipment. Any such changes would be localized, temporary and insignificant to the park’s air quality. Changes in vehicle use patterns in the Boston area are possible as a result of the action and could lead to negligible changes in local air quality, but such changes would likely be insignificant and therefore the issue will not be addressed further.

National Natural Landmarks

The National Natural Landmarks Program was established by the Secretary of the Interior in 1962 under the authority of the Historic Sites Act of 1935 (16 U.S.C 461 et seq.) to identify and encourage the preservation of a full range of geological and biological features that are

determined to represent nationally significant examples of the Nation's natural heritage. Once a landmark is determined nationally significant, designation is recommended and if designated included on the National Registry of Natural Landmarks. Cuyahoga Valley National Park contains one National Natural Landmark, Tinkers Creek Gorge within the Cleveland Metroparks Bedford Reservation. None of the Alternatives involve any action at this location.

Nationwide Rivers Inventory Status

The Cuyahoga River (River) between the confluence with Chippewa Creek and Peninsula is listed on the Nationwide Rivers Inventory (NRI). The NRI is a register of rivers that may be eligible for inclusion in the National Wild and Scenic River System. The intent of the NRI is to provide information to assist agencies in making balanced decisions regarding the use of the nation's river resources and to prevent potential impacts to the values for which a river has been placed on the list. A Presidential Directive and subsequent instructions issued by the Council on Environmental Quality (CEQ) require that each Federal Agency, as part of its normal planning and environmental review processes, take care to avoid or mitigate adverse effects on rivers identified in the NRI. In accordance with NPS Policies 2.3.1.9 and 4.34 all parks with rivers listed on the NRI, are must consider the impacts of their actions prior to taking actions that could effectively foreclose wild, scenic, or recreational status for rivers on the NRI within park boundaries. No management actions that will have an adverse effect on the values for which the river is listed may be taken.

The River is listed on the NRI because of the degree to which it is free-flowing (without straightening, diversion, riprapping, or other modifications of the channel), and for its outstandingly remarkable scenic, recreational, and fish values. Actions proposed under the alternatives include restoration of native vegetation along the river and the possible construction of a pedestrian bridge in a developed area within 250 feet of an existing road bridge. The potential actions are not expected to adversely impact the ORV's for which the Cuyahoga River is listed on the NRI and will not be evaluated further.

Affiliated Tribes

Decisions regarding Federal undertakings that may have significance to affiliated tribes requires due diligence in communicating any significant finds. Additionally, the park will comply with the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 as it pertains to the proposed undertaking. The proposed action is not anticipated to have any effect on affiliated tribes or on cultural resources that may be significant to affiliated tribes; however affiliated tribes will be offered the opportunity to provide comments on the EA document as part of the planning process.

Wetlands

Presidential Executive Order (E.O.) 11990, Protection of Wetlands, requires federal agencies to take in to account the effects of their actions on surface waters and wetlands. NPS Director's Order 77-1 established NPS policies, requirements, and standards for implementing E.O. 11990.

A review of wetland inventories and preliminary field investigations conducted in December 2011 indicate that wetlands may exist near the areas where new, large parking lots along Stanford Road (Alternatives 2 and 3) and Riverview Road (Alternative 3) are proposed under the Alternatives. Emergent wetlands are located west of the proposed Stanford Road lots and a small (0.01 acre) emergent wetland was noted in the southeastern corner of the large Riverview lot. Current conceptual designs for parking lots, paths and trails appear to avoid most direct impacts on wetland areas, and indirect impacts on wetland function and value will be largely minimized by the sustainable design methods described in the previous topic and largely mitigated by stream and riparian forest restoration efforts. However, evaluating direct impacts to wetland value and function cannot be completed until final design stages for these lots.

A wetland delineation will be conducted during the design phase and parking lots will be then be specifically designed to avoid and/or minimize direct and indirect impacts on wetlands, even if this means changing alignments or reducing lot size. Should wetland impacts be unavoidable and required to effectively implement the selected action, a Statement of Findings (SOF) as required under Directors Order 77-1 would be prepared and amended to this EA following public review, including an impact analysis and any required mitigation plans.

A proposed 1000-foot stream and riparian restoration project may have temporary adverse impacts and long-term beneficial effects on riverine wetlands under all Action Alternatives, but these actions are exempted from the SOF requirements since they are unavoidable results of restoration (DO 77-1 Procedural Manual, Section 4.2.1.h). This topic will not be evaluated further in this document.

Sole or Principal Drinking Water Aquifers

CVNP 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.

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 affected 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, and this topic will not be addressed further in this document.

Other Socioeconomic Factors

NEPA requires that not only cultural and natural factors be analyzed but also the "human environment" which includes social and economic factors. This may also include land use (occupancy, income, values, ownership and type of use) and socioeconomics (employment, occupation, income changes, tax base, infrastructures, etc.). The Proposed Action potentially affects the long-term future of the historic Zielenski Court property (apartments and two small residences). Currently, the property (Summit County Parcel #0601033) generates approximately \$4000/year in property taxes that could be removed from the local tax base if eventually acquired by the NPS. This would have a long-term negligible adverse effects on local government income should it occur. Moving Boston Mill Station south of Boston Mills Road and building a parking lot across the railroad tracks from the Zielenski Court property are proposed in some alternatives. If the property is not acquired by the NPS, this may affect property values, causing long-term minor adverse impacts. No other foreseeable socioeconomic changes are expected from this action besides negligible benefits to employment during construction and restoration actions, so it will not be evaluated further.

Other effects on local residents are discussed in the Health and Safety and Visitor Use and Experience topics in Chapter 3.

Prime Farmland

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. One of the soil map units at the proposed site for the Stanford Road parking lot and expansion area of the Boston Overflow lot (affecting approximately 1.5 acres maximum) can potentially be considered prime farmland if drained according to county Soil Survey Geographic Database (SSURGO) soil records. Other areas proposed for restoration of native vegetation may also affect such lands in Boston. However, conversion of these lands to parking lots or restoration to grassland or forest habitats is a reversible action, and removal of other parking areas is actually proposed under some of the Alternatives. Additionally, the NPS evaluated all potential farmland on federal in the park and did not identify these particular areas as ever becoming part of the NPS farming program (NPS 2003). Therefore, this topic will not be further evaluated in this document.

Soundscapes

NPS Management Policies (NPS 2006) 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. Only temporary negligible impacts to soundscapes during construction activities may be expected from the proposed action, so this topic will not be evaluated further.

Geologic and Soil Resources

NPS regulations and Management Policies provide guidance on geologic resources and processes. The proposed alternatives include limited excavation due to the relatively flat topography; therefore the proposed project will not have adverse effects on soils or geologic resources. This impact topic does not require further analysis.

Geohazards

NPS Management Policies (2006) states the National Park Service will strive to avoid placing new visitor and other facilities in geologically hazardous areas that pose hazardous to humans and park infrastructure such as earthquakes, volcanic eruptions, mudflows, landslides, floods, shoreline processes, tsunamis and avalanches. While the park has experienced park facility closing and infrastructure damage from flooding occurrences, the proposed actions will not exasperate flood levels or frequency. Visitor facilities in floodplains are unavoidable in the Park due to the locations of historic structures and districts the NPS is charged to protect for public use and enjoyment. During facility site planning, the park will adhere to NPS Management Policies (Section 9.1.1.5) and “strive to site facilities where they will not be damaged or destroyed by natural physical processes and where dynamic natural processes cannot be avoided, developed facilities should be sustainably designed.” This topic will not be evaluated further though the impacts of flooding and floodplains are discussed in Health and Safety and Water Resources and Quality topics in Chapter 3.

Scenic Values

Preservation of the scenic values of CVNP and adjacent lands is central to CVNP's legislative mandate. The alternatives involve actions and facilities that could affect how the Boston area and surrounding natural and cultural resources appear to visitors, but these will largely be evaluated under the Cultural Landscape topics since most impacts involve the placement of facilities within and near the Boston Mills Historic District and other cultural landscapes. Impacts on visitors will also be considered under the Visitor Use and Experience topic. Therefore this topic will not be evaluated separately in this document.

Threatened, Endangered, or Rare Wildlife Species

There are no federally-designated critical habitats or wilderness areas within the vicinity of the park. The Federally-endangered Indiana bat (*Myotis sodalis*) was found at the Brecksville Reservation in CVNP as part of the 2002/2003 bat study (NPS 2005). One adult male was mist netted on property managed by Cleveland Metroparks. The Park contains an abundance of apparently suitable habitat. Suitable breeding and roosting habitat for Indiana bats can vary widely, but typically consists of large (>8-inch-diameter) trees with peeling bark located near a permanent water source and good foraging areas. Summer foraging habitat is typically in flood plain forests and riparian areas.

Habitat and surrounding trees will be saved wherever possible. Some proposed Alternatives include the need to remove mature trees for new parking areas (an estimated 25-50 trees, maximum with DBH >8", distributed over approximately 0.2 - 0.6 acres depending on the Alternative). Trees would only be removed when the bats are not present in the area (October 1-April 1) to avoid any direct impacts on the species. Indirect impacts due to loss of habitat would be mitigated by the significant amount of nearby habitat available (thousands of protected acres) and the fact that all Alternatives also include significant restoration of native bottomland forests and riparian habitat (6.5 acres) that would more than offset any possible short-term habitat loss for this species. Therefore, this species will not be considered further.

Though de-listed in 2007, bald eagles (*Haliaeetus leucocephalus*) remain a federal species of concern and are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Bald eagles have nested in the Pinery Narrows area of the park since 2007. The site is several miles north of the project area. Additionally, a pair of state-threatened peregrine falcon (*Falco peregrinus*) has successfully nested beneath the Interstate-80 turnpike bridge approximately ½ mile south of the Boston Mills area since 2008. Proposed actions are not expected to affect either species due to distances from the nesting sites, therefore they will not be considered further.

The park is within the range of the piping plover (*Charadrius melodus*), a federally listed endangered bird species. However, the species has not been detected in the park and no suitable breeding habitat for piping plovers exists within park boundaries. 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) and listed as endangered by the State of Ohio. The species has not been detected within the Park. An assessment of potential habitat within the Park for this snake was conducted in 2003 and concluded that much of the area had little potential for supporting viable populations of *S. c. catenatus* (Lockhart, 2003). Therefore, these species will not be considered further.

At least 38 bird species observed in the Park are of conservation concern in Ohio (Ohio Department of Natural Resources 2007a) or at regional and national levels as determined by the international conservation consortium, Partners in Flight (Rich et al. 2004). The proposed actions may require permanent, minor alterations of low-quality bird habitats not typically associated with rare species. Any overall adverse effects on birds of concern are expected to be

absent or negligible and likely offset by beneficial effects from restoration actions. Three State-listed turtles have been recorded in or near the Park but none are within the area of the proposed action. Therefore, these species will not be considered further.

Threatened, Endangered, or Rare Plant Species

Although state-listed species of rare plants have been documented at the Park, no Federally-listed plant species have been documented. The Park supports no Federally-designated critical habitat for any listed species. However, CVNP is within the range of the Federally-threatened northern monkshood (*Aconitum noveboracense*), which is found in cool, shaded ravines with running water; on seeps and talus slopes; and on rock shelters and/or vertical cliff faces (Ohio Department of Natural Resources 2007b). The project area is dominated by lawns and disturbed woodlands, and no suitable habitat for northern monkshood is present in the project area. Therefore, this species will not be considered further.

Of 41 state-listed species of plants documented at CVNP, nine are listed as endangered and ten are listed as threatened. The remaining plants are considered “potentially threatened,” “presumed extirpated” or have no status yet assigned. Such species are not likely to be documented in the habitats and developed areas potentially affected by this action, and have not been documented previously in the project area. Therefore, state-listed species of plants will not be considered further in this EA.

Ethnographic resources

National Park Service’s Director’s Order-28 Cultural Resource Management defines ethnographic resources as any site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it. According to DO-28 and Executive Order 13007 on sacred sites, the National Park Service should try to preserve and protect ethnographic resources. Ethnographic resources are not known to exist in the Park. Coordination with Native American tribes traditionally associated with the Park during scoping did not indicate any change in this issue, so it will not be considered further.

Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by the Department of Interior agencies be explicitly addressed in environmental documents. There are no Indian trust resources at Cuyahoga Valley National Park, and therefore this topic is dismissed from further analysis in this document.

Lightscape Management

NPS Management Policies (2006a) require the NPS to preserve the natural lightscares within a park which include natural resources and the values that exist in the absence of human-cause

light. Cuyahoga Valley National Park maintains minimum lighting within its park facilities to maintain the safety of park visitors and security of park facilities. The park utilizes LED lighting in some areas, has designated areas of night closure and maintains lighting facilities that are sensor on time restrictions to minimize the amount of artificial lighting within the park.

The proposed actions may result in new or improved areas that may require lighting, but are minimal and will adhere to park lighting design practices identified in this section with the goal of continuing to maintain limited artificial lightscaping within the park. Due to the minimal or negligible impact to park resources and the park management practices in place, the lightscape and night sky impact is dismissed for detailed analysis.

Energy Resources

NPS Management Policies requires that Park resources and values will not be degraded to provide energy for NPS purposes and that all facilities, vehicles, and equipment will be operated and managed to minimize the consumption of energy, water, and non-renewable fuels. Alternatives will have a negligible or minor impact to energy use within the park and may reduce energy demands within the park through energy efficiency updates to new and existing facilities. Where energy resources are required for trail facilities, the park will adhere to NPS sustainable energy design and energy management requirements and its Climate Friendly Parks program in compliance with Director's Order 13A. This topic will not be considered further.

Climate Change

The Council of Environmental Quality Draft Guidance on Consideration of Effects of Climate Change and Greenhouse Gas Emissions sets forth general guidance for proposed actions. Some actions affecting vegetation (clearing and proposed restoration actions) may have negligible beneficial effects on carbon sequestering and mitigating the effects of climate change on park resources. Since proposed actions will not directly contribute significantly to the carbon footprint or increase greenhouse gas emissions, this issue is dismissed for further consideration.

Other Resources: Unique or Unknown Environmental Risks, Unique Ecosystems, Marine and Estuarine Resources, Museum Collections.

There are no such resources or risk associated with any aspect of the proposed action, , so it will not be considered further.

2. 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/proposal purpose and need, 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 do not resolve the need for action and fulfill the stated purpose in taking action to a large degree, are therefore not considered reasonable.

The following analysis includes the review of 3 Alternatives which are different visions for the future of NPS facilities in the Boston Mills area, including a No Action (status quo) Alternative and two Action Alternatives. Additionally, for the two Action Alternatives, three options for the potential use of Zielenski Court are evaluated. This was necessary because the use (or non-use) of this facility, and the type of facility it may eventually become, has a considerable effect on planning for the overall Boston Mills Area. These Options will be evaluated as modifiers of the Alternatives. The NPS will eventually make a selection of one Alternative, and if an Action Alternative is selected, will also select a Zielenski Court Option. Detailed figures depicting facilities proposed under the Alternatives are found in Appendix D (i.e., Figures D-1 to D-18).

2.1. *Actions Common to All Alternatives*

Interpretive Services: Ongoing changes in interpretive visitor services across the park would generally continue to follow the recommendations in the report *A Conceptual Framework for Enhancing Visitors' Experiences* (NPS 2009). Among 18 specific recommendations, some particularly relevant for this study include:

- Develop a "visitor orientation center in Boston that introduces the park and all Ohio & Erie Canalway themes and helps visitors create personalized, custom itineraries that will shape their park experiences in accordance with their particular preferences and interests."
- Canal and Hunt Farm Visitor Centers should become "theme- or activity-focused 'visitor centering hubs' with a more limited orientation function."
- Canal-themed interpretation would be based in the current Canal Visitor Center location freeing up Boston Store for other purposes.
- Repurpose interpretive facilities at Boston, including Boston Store and MD Garage.

Revaluation of Programs and Permits: The NPS will evaluate changes in park programs, permits, meetings and other events for possible relocation to other park areas to help reduce

congestion and conflicts in Boston. Such program changes do not typically require environmental review and can be undertaken at park management's discretion.

2.2. Alternative 1 - No Action

The CEQ has specified that one of the alternatives must be the "no action" alternative 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 Alternative 1, The NPS would continue to maintain current visitor services, parking, trails and structural facilities in the Boston Mills Area under current operation and management approaches. It is possible that as opportunities arise and funding becomes available, new acquisitions could occur, parking areas could be improved or enlarged, new trail connections made, changes to the use of structures could be made, and restoration activities implemented but these would occur under other independent, unconnected planning efforts that would be evaluated as they are proposed.

Parking: Current parking areas would remain unchanged and unimproved. Issues and concerns described in Section 1.2 would largely persist. Table 1 summarizes current parking in the Boston Mills Area.

Circulation: Current circulation patterns would remain. Issues and concerns described in Section 1.2 would largely persist.

Visitor services: Changes to visitor services at Boston Store would follow the park's Conceptual Framework described in Section 3.1. No other changes are proposed.

2.3. Actions Common to All Action Alternatives

Site-Specific Surveys and Compliance: This environmental assessment describes the impacts associated with a conceptual plan. As specific elements of the plan are implemented, they will be reviewed to determine that 1) all impact topics have been analyzed for particular actions, 2) that there are no changes to the affected environment or impacts to environmental resources, and 3) that site specific information needed for proper evaluation has been collected. Prior to construction, surveys for archeological resources, rare plants, wetlands, and other critical resources of concern will be conducted as necessary to ensure that these resources are not impacted from the construction of any facility beyond any levels outlined in this document. These reviews may indicate that additional site-specific compliance under NEPA will be required. It is expected that for many elements that involve historic districts, historic structures and cultural landscapes, or ground disturbance additional compliance documentation and review under Section 106 of the NHPA will be needed once specific details of those actions

become known. Projects affecting wetlands and streams may require further compliance with U.S. Army Corps of Engineers and Ohio EPA regulations and permits.

Sustainable Design of Parking Areas and Trails. The NPS will apply the best management practices to minimize storm water impacts from new parking areas by incorporating best management practices and low impact development design principles into all projects. This includes using porous pavements, stabilized turf, bioswales, raingardens, underground filtration, to the greatest extent possible given site conditions, location of sensitive resources, cultural resource impacts, and vehicle load requirements. These elements will be incorporated to the greatest extent possible into the final designs of all parking projects.

Trails and paths proposed will follow sustainable trail design principles to minimize impacts and reduce maintenance needs. The NPS has drafted a set of *Sustainable Trail Guidelines* for the park's Trail Management Plan and Environmental Impact Statement (2012) that outline these best practices in detail, and which would be applied to all future trail development in the park if adopted under that Plan.

When designing parking areas, paths and trails, limited plantings appropriate to the particular cultural landscape and setting may be included to soften edges, provide shade, and enhance aesthetics and historic character.

Table 1 summarizes proposed parking in the Boston Mills Area that is proposed under All Action Alternatives and their Options for Zielenski Court.

Bus and Recreational Vehicle (RV) Parking Lot: A new designated bus/RV parking area (10 spaces, plus overflow; 0.6 acres) would be constructed on the NPS property adjacent to Boston Mills Ski Area parking on the west side of Riverview Road (Appendix D, Figure D-1). A drop-off area (0.14 acres) on the east side of Riverview Road next to the current location of Boston Station would provide a convenient area for loading and unloading buses and a good bus circulation pattern. Coordination with the Summit County Engineers would be required before construction.

Overflow Lot: A lot just north of the Bus/RV lot would be formalized on a portion of the Boston Mills Ski Resort parking lot that is currently unimproved and irregular (Appendix D, Figure D-1). The lot would typically function as overflow for the NPS in busy summer months and for the Ski Resort in the winter months, as well as continue to be used for large event parking. Most of this area is owned by the Ski Resort owners but the NPS has an easement on the property that permits its development for parking only. An agreement between the NPS and the Ski Resort owners would be necessary to implement this action. Capacity would be approximately 140 cars if the lot remains gravel, and 180 cars if paved and marked.

Table 1. Summary of Parking in the Boston Mills Area under each Alternative.

[illegible]

Key: A= Handicap Accessible, LM = Limited Mobility, NA- Not applicable, * = may not be maintained if not used/needed

Traffic Signage: At Riverview Road and Boston Mills Road, a permanent stop sign would be installed. Pedestrian crosswalks would be marked to facilitate crossings from the bus/RV lot and Overflow Lot into Boston through the current Boston Mill Station area.

Boston Mill Station Move: Boston Mill Station would be moved to a location approximately 250 feet south of Boston Mills Road near the historic depot location. A new crushed stone boarding area would extend approximately 375 feet along the west side of the railroad track berm across from the Zielenski Court property (Appendix D, Figure D-2). The relocated Station would remain the boarding site for regularly scheduled train service. The existing boarding area north of Boston Mills Road would remain in place for occasional use during major events when the train stands for long periods.

Stanford House Parking: Existing parking near the main structures would all be designated handicap accessible/limited mobility only (4 spaces) and the drive to the barn would be gated to prevent parking in that location (Appendix D, Figure D-3).

Camping: Existing Stanford House hike-in public camping would eventually be moved to Latta Lane and expanded to 15-20 sites (Appendix D, Figure D-4). Primitive facilities (mowed 25 ft² tent sites, picnic tables, pit toilets, cistern water) would be provided for campers, with locations developed after appropriate surveys and subsequent site planning. Hikers would be directed there via a connector from a new Stanford Parking Lot (described separately in each Action Alternative). A formal 1000' hiking trail connection (on Metro Parks, Serving Summit County land) from Latta Lane south around a pond to a spur on Stanford Trail would be constructed with Metro Parks' permission. An informal trail already exists on this alignment. Other trails may be developed in the future in coordination with Metro Parks. Sites would allow a maximum of two tents and six people per site, with a maximum 10 nights stay per season, as is current policy. No open fires would be permitted. The current camp sites at Stanford House would no longer be available as individual rentals but may be maintained as an added amenity specifically for group rentals of the House.

Stanford Road was recently vacated to the adjacent landowners (NPS and Metro Parks). It is possible that a road closure north of the proposed Stanford Parking Lot would be implemented providing emergency and maintenance access only beyond that point. The NPS would need to purchase the balance of the life estate on Stanford Road or enter into a mutual agreement with the resident to be able to close the road to the general public entirely. The NPS TEL station would also be moved and its non-historic structure (Ostrica) eventually demolished, unless the structure is used to support the camping activities (e.g., as a Camp Manager office). Partial restoration of the road would occur over approximately 4000 feet, with a potential reduction in road berm width, and possibly stabilized turf surface (or other pervious surface) and modifications of stream crossings to allow for natural flows and flooding of streams.

Parking for campers not willing to hike in from the new Stanford Parking Lot (described in each Alternative) would be temporarily provided at the end of Latta Lane (15 informal spaces) until

such a time that Stanford Road is closed, as parking directly at the site would likely be unpreventable.

Interpretive Loop Trail: A short 1-mile self-directed Interpretation Loop Trail highlighting all park themes would be constructed mostly on existing trails with several (7-9) new waysides (Appendix D, Figure D-5). A thematic outline of the tour is found in Appendix E.

Mary Boodey House parking: Three parking spaces (one limited-mobility, one 15-minute drop-off) will be constructed behind the M. Boodey with a drive connecting to Main Street to provide volunteer parking at the structure. The drive may also serve to access Trail Mix for deliveries (Appendix D, Figure D-6).

Trail Mix, Boston parking & access: Two designated 15-minute parking spaces in front of M. Boodey would provide Trail Mix with drop-in customer parking (Appendix D, Figure D-6; coordination with the Summit County Engineer would be required). These spots would be marked and signed. With concurrence from the Conservancy for CVNP, the driveway next to Trail Mix would be blocked as needed (e.g., with a bench) or gated to prevent additional casual parking and deliveries could be directed to the new NPS drive behind M. Boodey off Main St.

Improved paths and sidewalks in Boston Mills Historic District: Under each alternative, major parking areas and NPS structures will be connected by a series of walking paths to improve and direct circulation and improve safety. Surfaces will be selected that remain compatible with the Historic District (e.g., crushed limestone), and hardened only if compatible and appropriate material that mimics a natural surface is available. Currently, one example of this type of path is found between the Towpath Trail and Trail Mix. Design will be sensitive to the historic context of the area, keeping paths narrow, rectilinear, and running parallel to the streets or canal generally following the pattern depicted in Appendix D, Figure D-7. Path placement would depend on final locations, design and proposed use of parking area under each alternative. An improved path from Boston Trailhead parking to Boston Mills Road may not be built under Alternative 3 for overflow use only, since the Valley Trail and a new Interpretive Loop Trail would pass by the area.

Nina Stanford House parking improvements: Currently, this structure's future use has yet to be determined. If it remains residential, then the approximately 3 car parking area may be maintained or improved. If the structure is modified for office uses, a larger (approximately 8 cars, 1 handicap accessible) lot may be implemented (Appendix D, Figure D-8), since it is located near the edge of the Historic District, far from all other proposed parking areas.

Signs: New signage to facilitate circulation within Boston and to direct non-local visitors to the Boston area facilities would be evaluated and implemented.

Outdoor Interpretive Sculptures: Outdoor interpretive sculptural elements appropriate for the cultural landscape may be evaluated and sensitively located in several areas in Boston.

Hines Hill Connector Trail: A short (940-ft) two-foot wide footpath between Hines Hill Conference Center and Clayton Stanford would be constructed to connect Stanford House area with the HHCC facilities for Conservancy staff and visitors who are using both the HHCC facilities and the Stanford House facilities for their events (Appendix D, Figure D-9). No major improvements, modifications to existing terrain or material use will be utilized for the proposed trail.

Hines Hill parking lot improvements: Hines Hill conference center parking lot (35 cars, unpaved) would be paved and expanded to 50 car capacity (Appendix D, Figure D-10).

Restoration of lawn/parking areas to native meadow and forest: Several patches of maintained lawn dominated by non-native grasses are distributed throughout the planning area. Removals of some parking areas under the alternatives also provide an opportunity for restoration. Restoration of bottomland forests (e.g., silver maple, sycamore, black walnut and cottonwood) would occur where appropriate. Lawns would be replaced with low growing (2-3 feet) native grasses (e.g., little bluestem, broomsedge and/or Canada wildrye) and wildflowers (e.g., milkweed, foxglove beardtongue, black-eyed Susan and purple coneflower). These meadows would be maintained by mowing on a 3-year cycle.

Areas to be restored under all Action Alternatives include approximately 6.2 acres of forest and 3.8 acres of native meadows are depicted in Appendix D, Figure D-11, which include:

- **Area 1:** North of Boston Trailhead lot area (1.1 acres native meadow)
- **Area 2:** Between Savacoal and Conger (0.6 acre native meadow)
- **Area 3:** Behind M. Boodey (0.2 acre native meadow)
- **Area 4:** Hines Hill Conference Center (A: 1.3 acres native meadow, B: 0.5 acre forest)
- **Area 5:** East of Nina Stanford (2.0 acres forest, 0.6 acres native meadow)
- **Area 6:** Between Boston Mills Road and I-271 (2.3 acres forest)
- **Area 7:** West of Main Street, north of Boston Mills Road (1.4 acres of forest)

Other areas (i.e., Areas 8-12) proposed for restoration (Boston Store parking lot, Zielenski Court property, the southeast intersection of Riverview Road and Boston Mills Road, and Boston Trailhead parking lot) differ among the Alternatives and will be specifically described under each Alternative.

Invasive plant removal and restoration of channelized stream: A small stream, channelized for most of its length, runs adjacent to Boston Mills Road and the Boston Trailhead lot until its

confluence with the Cuyahoga River. The stream crosses a former residential property (Parcel #118-78) with structures that were recently demolished by the NPS but continues to support a variety of non-native vegetation (e.g., spruces, autumn olive and unmaintained lawn) in areas that were not disturbed during building demolition (Appendix D, Figure D-11, Area 11). The downstream portion of the site is highly eroded, particularly where the stream enters a four-foot-diameter culvert and crosses under the Valley Trail. The current condition of the stream has resulted in numerous overtopping events during heavy rainfalls which have caused extensive damage to the Towpath Trail. The 2004 Programmatic Environmental Assessment for Riverbank Management of the Cuyahoga River evaluated alternatives to protect the Towpath Trail from the erosive forces of the river and its tributaries. The NPS proposes to control non-native, invasive plants over approximately three acres of disturbed habitat between the Boston Store parking lot and the overflow lot, as well as east and north of the Boston Trailhead lot area. In addition, the NPS would re-establish native, bottomland forest on approximately 1.9 acres of disturbed habitat east and upstream of the overflow lot and restore natural geomorphology to approximately 1,000-linear feet of a channelized, culverted creek using bioengineering methods. It is expected that this small restoration project would satisfy the requirements of the US Army Corps Nationwide Permit 27.

2.4. *Alternative 2*

Primary Features of the Alternative

Focus: The NPS would strive to enhance and expand existing facilities to better serve visitors, volunteers, and employees by making small improvements to individual facilities and formalizing available parking in the Boston Mills Area under this alternative.

Parking: Table 1 summarizes proposed parking in the Boston Mills Area under this Alternative. A new parking area (10 trailers, 28 cars; 1 acre) located on Stanford Road north of Stanford House would be constructed to accommodate those staying at the house, trail users, horse trailers, and recreational vehicles (Appendix D, Figure D-12). Short trail segments to connect the lot to Stanford House and the Stanford Trail system, including a set of trailhead facilities would be built. It is possible that a more direct trail connection (approximately 700 feet) that bypasses the Stanford House camping area altogether could be constructed if some camping remains at the House. Trailer parking would be eliminated from the Boston Store Trailhead lot.

A series of small parking areas would be improved or formally designated near several park buildings in Boston (Table 1). Improvements and a modest increase to the Boston Trailhead parking lot would be implemented providing for 59 cars (Appendix D, Figure D-13).

Overflow parking in the form of stabilized turf would be added to the Stanford Road margin on the canal boatyard area to accommodate 20 cars (Appendix D, Figure D-14) and along Boston Store driveway to accommodate 14 cars (Appendix D, Figure D-15).

Circulation: Paths would be installed to improve and direct circulation among these areas as described in the Common to All Action Alternatives section.

Restoration: An additional 1.5 acres of lawn and invasive plants on the east side of Riverview Road at Boston Mills Road would be restored to native meadow (Appendix D, Figure D-11, Areas 8A and 8B).

Zielenski Court Options

Three options for the use of Zielenski Court under Alternative 2 include:

Option A: The Zielenski Court property would not be acquired by the NPS or the Conservancy for park uses. No changes to the actions described under Alternative 2 are proposed. Boston Store would be modified and redesigned to serve as the park's main orientation center as described in the recommendations outlined in 2009 (NPS 2009).

Option B: Zielenski Court would be acquired by the NPS and be transformed into the park's main visitor center with 2500 square feet of exhibit space, a welcome plaza, two information kiosks and five interpretive waysides, providing orientation to the park, all interpretive themes, and recreational opportunities. The restoration of Zielenski Court would implement sustainable practices and strive for LEED certification. The two smaller structures would be used to support the visitor center or any of a number of office, commercial services, rental, residential or interpretive functions. Boston Store would be modified to offer specific interpretive themes, exhibits and services for trail users primarily during the summer months.

Parking: Existing parking near the Zielenski Court structures would be converted to 8 handicap accessible/limited mobility spaces.

Circulation: A pedestrian footbridge spanning the Cuyahoga River would provide visitors their primary path from the Boston Store area. The bridge would bring visitors from the Boston area parking, trails, paths to Zielenski Court.

Restoration: An additional 1.0 acres of bottomland forest on the property would be restored (Appendix D, Figure D-11, Area 9).

Option C: Zielenski Court would be acquired by the NPS or the Conservancy and be used for any of a number of office, commercial services, rental, residential or interpretive functions other than a visitor center. The rehabilitation of Zielenski Court would implement sustainable practices and strive for LEED certification.

Parking: Existing Zielenski Court parking would remain, but may be slightly modified or improved, including the designation of handicap accessible/limited mobility spaces.

Restoration: An additional 1.0 acres of bottomland forest on the property would be restored (Appendix D, Figure D-11, Area 9).

Figure 5 depicts all actions proposed near the Boston Mills Historic District under Alternative 2 (including the Actions Common to All Action Alternatives).

Figure 5. Actions proposed near the Boston Mills Historic District under Alternative 2 (including the Actions Common to All Action Alternatives). A= Overflow Lot, B= Bus & RV Lot and drop-off area, C= Zielenski Court property (Alternative Options B & C only), D= relocated Boston Mill Station, E= Mary Boodey parking, F = Trail Mix, Boston parking, G= Boston Store reinforced turf parking, H= Canal Boatyard reinforced turf parking, I= Nina Stanford parking, J= Hines Hill Conference Center parking, K= Boston Trailhead parking.



2.5. *Alternative 3 (Preferred Alternative)*

Primary Features of the Alternative

Focus: Under this alternative, the NPS would implement substantial changes to the Boston Mills Area in order to focus on improving pedestrian movement and safety, concentrating parking outside of Boston’s center, and restoring and highlighting natural features.

Parking: Table 1 summarizes proposed parking in the Boston Mills Area under this alternative. A new parking area located on Stanford Road north of Stanford House would be constructed to accommodate those staying at the house, trail users, horse trailers, RVs and camper vehicles (15 trailers, 42 cars; Appendix D, Figure D-16). Short trail segments to connect to Stanford House and the Stanford Trail system, including a set of trailhead facilities would be built. It is possible that a more direct trail connection (approximately 700 feet) that bypasses the Stanford House camping area altogether could be constructed if some camping remains at the House.

Parking near buildings and structures would be eliminated except for handicap accessible/limited mobility parking at M. Boodey and the Volunteer Center. Boston Store parking lot and drive (0.6 acres) would be removed and restored to native vegetation while providing scenic overlooks to the river and other amenities such as benches and picnic areas.

An expanded 20-car lot behind Johnston-Rodhe would provide a bank of limited mobility and handicap accessible parking spaces in Boston and parking for several government vehicles (Appendix D, Figure D-17).

A new main 54-car parking lot would be constructed between the railroad tracks and Riverview Road, south of Boston Mills Road to provide the primary visitor parking in Boston (0.55 acres; Appendix D, Figure D-18). The lot would be integrated with the relocated Boston Mill Station and boarding area. Visitors would access Boston area facilities via paths to Boston Mills Road but Option B below offers an alternate route. During peak periods, additional parking would be available at the proposed Overflow Lot. If the Overflow Lot cannot be implemented or becomes untenable due to safety or traffic congestion concerns, this main lot may be expanded to approximately 100-cars in the future to approximately 1 acre. For this analysis, we will consider the impacts of the expanded larger lot.

The current Boston Trailhead parking lot would be closed. Should this area be needed to serve as a seasonal drop-off point specifically for vehicles laden with canoes or kayaks for a river access point that may be developed under the Trail Plan in the future, it may be converted to stabilized turf. If the lot is deemed not needed for this purpose, it would be restored to native meadow (approximately 0.3 acres; Appendix D, Figure D-11, Area 12).

Circulation: Paths would be installed to improve and direct circulation among facilities (Appendix D, Figure D-7).

Restoration: An additional 0.9 acres of lawn and invasive plants on the east side of Riverview Road at Boston Mills Road adjacent to the new main parking lot would be restored to native meadow (Appendix D, Figure D-11, Area 8A). An additional 0.28 acres of bottomland forest would be restored where Boston Store parking lot was removed (Appendix D, Figure D-11, Area 10).

Zielenski Court Options

Three options for the use of Zielenski Court under Alternative 3 include:

Option A: The Zielenski Court property would not be acquired by the NPS or the Conservancy for park uses. Boston Store would be modified and redesigned to serve as the park's main orientation center as described in the park's Conceptual Framework outlined in 2009 (NPS 2009). A small pedestrian bridge would be constructed from the Johnston-Rodhe lot over the canal to Boston Store to provide better access for visitors with limited mobility. No other changes to the actions described under the Alternatives is proposed.

Option B (Preferred Option): Zielenski Court would be acquired by the NPS and be transformed into the park's main visitor center with 2500 square feet of exhibit space, a welcome plaza, two information kiosks and five interpretive waysides, providing orientation to the park, all interpretive themes, and recreational opportunities. The rehabilitation of Zielenski Court would implement sustainable practices and strive for LEED certification. The two smaller structures would be used to support the visitor center or any of a number of office, commercial services, rental, residential or interpretive functions. Boston Store would be modified to offer specific interpretive themes, exhibits and services for trail users primarily during the summer months.

Parking: Existing parking near the structures would be eliminated. Visitors would park at the new 54-car lot on Riverview Road.

Circulation: A pedestrian footbridge spanning the Cuyahoga River would provide visitors their primary path to Boston. This bridge would bring visitors to the restored riparian area and a river overlook restored after the removal of the Boston Store parking lot. The location of the bridge will be determined during design stages.

Restoration: An additional 1.0 acre of bottomland forest on the property would be restored (Appendix D, Figure D-11, Area 9).

Option C: Zielenski Court is acquired by the NPS or the Conservancy and is used for any of a number of office, commercial services, rental, residential or interpretive functions other than a visitor center. The rehabilitation of Zielenski Court would implement sustainable practices and strive for LEED certification.

Circulation: A pedestrian footbridge spanning the Cuyahoga River would provide visitors their primary path to Boston from the new large parking lot. This bridge would bring visitors to the riparian area and a river overlook restored after the removal of the Boston Store parking lot. The location of the bridge will be determined during design stages. A pedestrian bridge would be constructed from the Johnston-Rodhe lot over the canal to Boston Store to provide better access for visitors with limited mobility.

Parking: Existing Zielenski Court parking would be restored to a more natural condition since adequate parking would be available nearby.

Restoration: An additional 1.0 acres of bottomland forest on the property would be restored (Appendix D, Figure D-11, Area 9).

Figure 6 depicts all actions proposed near the Boston Mills Historic District under Alternative 3 (including the elements Common to All Action Alternatives).

Figure 6. Actions proposed near the Boston Mills Historic District under Alternative 3 (including the Actions Common to All Action Alternatives). A= Overflow Lot, B= Bus & RV Lot and drop-off area, C= 54-car main parking lot and possible expansion area (hatched), D= relocated Boston Mill Station, E = Zielenski Court property (Alternative Options B & C only), F= Mary Boodey parking, G = Trail Mix, Boston parking, H= Nina Stanford parking, I= Hines Hill Conference Center parking, J= Johnston-Rodhe parking, K= Boston Trailhead parking lot (closed to become a seasonal reinforced turf lot or a meadow restoration area).



2.6. Alternatives Considered But Dismissed

Abandoning Boston: There was a suggestion that the NPS should abandon all of its facilities in Boston and sell back government property to local residents. This alternative would not achieve the project objectives and the park no longer has the legal authority to sell back property. This alternative will not be considered further.

Visitor Center Locations Other Than Boston Store or Zielenski Court: There were several proposals for developing the park's main orientation or visitor center somewhere else. Suggestions included one within Boston (i.e., share the Boston Mills Ski Resort Lodge) and outside the Boston Area (e.g., Happy Days Lodge on SR 303 in Boston Heights, the closed Olde Players Barn located east of Peninsula on SR 303, the park's Howe Meadow event site south of Peninsula, at a Park entry point, or outside the Park). It was determined that the Ski Resort Lodge option did not meet the goals and objectives of the plan since it failed to improve pedestrian circulation due to its significant distance from the other primary visitor amenities and facilities in the Boston Mills Historic District. The potential location of visitor centers outside of the Boston Study Area is beyond the scope of this document.

Full-Service Campgrounds: Many suggested the park needed a traditional campground and some suggested that this might be ideally located at Latta Lane. Adding this use to the Boston Mills Area with access only via Stanford Road would likely contribute to the congestion problems the NPS is trying to address in the Boston Mills area and are incompatible with some of the goals and objectives of this Plan/EA and the restoration goals of some of the Alternatives. The location of full-service park campgrounds, if desired, would best be considered in a separate park-wide planning process that is beyond the scope of this document.

Other Parking Options: Other alternative locations for parking were suggested during scoping. All proposed locations were evaluated for lot design viability and any that could not be designed safely to accommodate vehicle entry and exit were dismissed (e.g., the area between the Boston RR Station and Boston Mills Road). Parking areas closer to NPS facilities in Boston were selected for full evaluation over other, more distant options farther away to specifically meet project objectives of enhancing safety and pedestrian circulation in Boston. Other locations offered poor opportunities to effectively control pedestrian movement and vehicular access and therefore were not considered since they failed to meet safety objectives. Areas outside of the defined project area were not considered.

2.7. Environmentally Preferable Alternative

The *environmentally preferable alternative* is the alternative required by 40 CFR 1505.2(b) to be identified in a NEPA decision document that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration

and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative.

Based on the analysis in Chapter 3 of this document, the environmentally preferable alternative is Alternative 3, Option C. This alternative is environmentally preferable because it not only provides a long-term approach to address the problems associated with the popularity of NPS facilities in the Boston Mills area, it also results in the long-term protection of a significant historic property (Zielenski Court) associated with the Valley Railroad, including three historic structures. Alternatives 2, Options B and C and Alternative 3, Options B also similarly protect the historic structures and character of the property.

However, all options under Alternative 3 includes moving a significant amount of existing parking lot development outside of the historic district and includes restoring the most native vegetation in the floodplain and riparian area (especially at the Boston Store parking lot), making options under Alternative 3 more environmentally preferable than Alternative 2 options.

Furthermore, Alternative 3, Option C protects the Zielenski Court structures without significant changes in use. While Alternative 3, Option B has similar levels of impact generally, due to the necessary modifications of the structures for use as a Visitor Center, and the development of a welcome plaza on the Zielenski property, Option B would have slightly more impacts on the physical environment than Option C. Therefore, Alternative 3, Option C is considered the environmentally preferable alternative.

2.8. Summary of Impacts of the Alternatives

Table 2 summarizes the impacts of each alternative in relation to the environmental issues considered in this document.

Table 2: Summary of Environmental Impacts

Issue	Alternative 1	Common to All Action Alternatives	Alternative 2			Alternative 3		
			Option A	Option B	Option C	Option A	Option B	Option C
Archeological Resources	Long-term minor-moderate adverse from continued parking on sensitive areas	Long-term negligible adverse from ground disturbance activities	Long-term beneficial from reinforcing turf in two sensitive areas	Long-term beneficial from reinforcing turf in two sensitive areas	Long-term beneficial from reinforcing turf in two sensitive areas	None when using approved methods for burial of sites.	None when using approved methods for burial of sites.	None when using approved methods for burial of sites.
Historic Structures	None.	None.	None.	Long-term beneficial from NPS ownership of Zielenski Court	Long-term beneficial from NPS ownership of Zielenski Court	None.	Long-term beneficial from NPS ownership of Zielenski Court	Long-term beneficial from NPS ownership of Zielenski Court
Cultural Landscapes	Long-term minor to moderate adverse from continued presence of cars and parking	Short-term minor adverse during restoration Long-term negligible to minor adverse impacts from Loop Trail, new sidewalks, and expanded parking Beneficial from moving Station and restoring native vegetation	Long-term moderate adverse from parking and circulation projects in Historic District	Long-term moderate adverse from parking and circulation projects and pedestrian bridge in Historic District	Long-term moderate adverse from parking and circulation projects and pedestrian bridge	Long-term beneficial from removing parking from Historic District	Long-term beneficial from removing parking from Historic District	Long-term beneficial from removing parking from Historic District

Issue	Alternative 1	Common to All Action Alternatives	Alternative 2			Alternative 3		
			Option A	Option B	Option C	Option A	Option B	Option C
Health & Safety	Long-term moderate adverse from current crowding, parking and circulation	Long-term beneficial from providing bus and overflow lots Short-term negligible adverse from construction reroutes Long-term negligible adverse from increased emergency response times to camp site	Long-term minor to moderate from increased congestion	Long-term minor to moderate from increased congestion Additional negligible to minor impacts if bridge not built	Long-term minor to moderate from increased congestion Additional negligible to minor impacts if bridge not built	Long-term beneficial from parking and circulation improvements	Long-term beneficial from parking and circulation improvements Possible negligible to minor impacts if bridge not built	Long-term beneficial from parking and circulation improvements Possible negligible to minor impacts if bridge not built
Visitor Use & Experience	Long-term minor to moderate adverse from current crowding, parking and circulation	Long-term beneficial Short-term negligible adverse during restoration and construction	Long-term minor to moderate adverse from increased congestion and conflicts	Long-term minor adverse from increased congestion and conflicts	Long-term minor to moderate adverse from increased congestion and conflicts	Long-term beneficial from parking and circulation improvements	Long-term beneficial from parking and circulation improvements and new Visitor Center	Long-term beneficial from parking and circulation improvements

Issue	Alternative 1	Common to All Action Alternatives	Alternative 2			Alternative 3		
			Option A	Option B	Option C	Option A	Option B	Option C
Vegetation & Invasive Species	Short-term negligible adverse impacts	Long-term benefits from native grassland and forest restoration	Long-term negligible adverse on forests and minor adverse on bottomland savannah Long-term beneficial on native meadows	Long-term minor adverse on bottomland savannah Short-term negligible adverse and long-term beneficial on forests Long-term beneficial on native meadows	Long-term minor adverse on bottomland savannah Short-term negligible adverse and long-term beneficial on forests Long-term beneficial on native meadows	Long-term negligible adverse on forests and minor adverse on bottomland savannah Long-term beneficial on native meadows	Long-term minor adverse on bottomland savannah Short-term negligible adverse and long-term beneficial on forests Long-term beneficial on native meadows	Long-term minor adverse on bottomland savannah Short-term negligible adverse and long-term beneficial on forests Long-term beneficial on native meadows
Wildlife & Wildlife Habitat	None.	Long-term benefits from native grassland and forest restoration	Long-term negligible adverse on forest species and minor adverse on bottomland savannah species Long-term beneficial on native grass meadow species	Long-term minor adverse on bottomland savannah species Short-term negligible adverse and long-term beneficial on forest species Long-term beneficial on native grass meadow species	Long-term minor adverse on bottomland savannah species Short-term negligible adverse and long-term beneficial on forest species Long-term beneficial on native grass meadow species	Long-term negligible adverse on forest species and minor adverse on bottomland savannah species Long-term beneficial on native grass meadow species	Long-term minor adverse on bottomland savannah species Short-term negligible adverse and long-term beneficial on forest species Long-term beneficial on native grass meadow species	Long-term minor adverse on bottomland savannah species Short-term negligible adverse and long-term beneficial on forest species Long-term beneficial on native grass meadow species

Issue	Alternative 1	Common to All Action Alternatives	Alternative 2			Alternative 3		
			Option A	Option B	Option C	Option A	Option B	Option C
Water Resources and Quality	Long-term minor adverse impacts on water quality from eroding stream and existing facilities.	Long-term negligible to minor adverse impacts on water quality from new facilities. Benefits from stream and native plant restoration.	Long-term negligible to minor adverse impacts on water quality	Long-term negligible to minor adverse impacts on water quality Negligible long-term adverse impacts on floodplains from bridge	Long-term negligible to minor adverse impacts on water quality	Long-term beneficial effects on water quality from removing parking lots and restoring native vegetation	Long-term beneficial effects on water quality from removing parking lots and restoring native vegetation Negligible long-term adverse impacts on floodplains from bridge	Long-term beneficial effects on water quality from removing parking lots and restoring native vegetation Negligible long-term adverse impacts on floodplains from bridge

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1. *Overview*

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 particular impact intensity to a park resource is "minor" compared to "major" and what criteria were used to base that conclusion.

Methodology

This EA evaluates the impacts associated with a conceptual-level development plan for the Boston Mills area. Impacts were reviewed using conceptual drawings and existing information, but site extensive specific surveys were not conducted. Before specific elements of the selected Alternative are implemented, the NPS will conduct a site-specific review of rare, threatened and endangered species, potential wetlands and floodplains, archeology, and effects on historic structures and cultural landscapes to ensure that impacts have been appropriately assessed. This NEPA analysis will be reviewed to determine that 1) all impact topics have been analyzed for particular actions, 2) that there are no changes to the affected environment or impacts to environmental resources. Additional environmental compliance documentation may be required if this EA does not adequately address impacts or concerns. The NPS acknowledges that additional site-specific documentation for Section 106 of the National Historic Preservation Act for actions involving historic structures and landscapes will be required for many actions. The requirements of other federal and state regulatory agencies may also need to be met for construction projects near wetlands, streams or floodplains. Boundary surveys and agreements with communities or counties for use of rights-of-way, as necessary and appropriate will be completed before any construction project is implemented.

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, lasting less than two years, or long-term, lasting more than two years?), 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. In general, 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 and lasting no more than 2 years. The build alternatives will require approximately 2 years for completion of construction and establishment of vegetation.

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.

Cumulative Impacts

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 (see <http://ceq.hss.doe.gov/nepa/ccenepa/ccenepa.htm>).

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 impacts of the alternative 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, if applicable, the surrounding region.

Evaluation of Impacts with Zielenski Court Options

This document evaluates two Action Alternatives that include 3 different "options" for the use of the Zielenski Court property. These options are evaluated comparatively under each Alternative, rather than as separate Alternatives themselves, since they typically have only a few distinct differences that affect specific areas of the analysis. Clear conclusions are provided for each Option.

Cumulative Impact Scenario

New trails proposed in the park's new Trail Management Plan and Environmental Impact Statement (in development) may be implemented in the Boston Mills area, including a new multipurpose trail along or adjacent to Stanford Road connecting Boston to the Brandywine Falls area and a ½ mile Stanford Loop Trail. Additionally, a river access point is being considered south of Boston, and could affect the future design and use of the current Boston Trailhead parking lot as described in the Alternatives.

It is not expected that changes in the location of visitor services under any alternative (e.g., moving Visitor Center functions to Zielenski Court) will in itself change the amount of total visitation to the Park significantly, but it is expected that decisions could affect the distribution of new visitors to the park seeking a main orientation center. Regular park visitors may also redistribute to Boston from other park areas due to increased facilities. The Action Alternatives are all expected to increase visitation to the Boston area.

Operational needs for new facilities are not expected to significantly affect park staffing levels as the NPS plans to redistribute staff from existing facilities to priority areas.

It is assumed for this analysis that the NPS or its partner, the Conservancy for CVNP could eventually acquire the Zielenski Court property should its use be included as part of the Selected Alternative. It is also assumed that the size and nature of the Zielenski Court structures is sufficient for visitor center use.

It is assumed for this analysis that the Overflow Lot on Boston Mills Ski Resort property would be designated and improved, but the Alternatives could be implemented even if agreements

for its use could not be reached. Under this circumstance, no change in Alternative 2 would occur, but under Alternative 3, the 54-car main lot would be expanded to 100-cars. This lot is evaluated as a 100-car lot throughout the analysis.

The recent vacation of Stanford Road to the NPS and Metro Parks, Serving Summit County increases the possibility that sometime in the future, the road would be closed to the general public north of the proposed Stanford Road parking lot. The NPS would likely maintain maintenance access to Lindley Barn and any other NPS facilities at Latta Lane.

It is assumed that the NPS could successfully work with the Summit County Engineer to facilitate some elements (new parking lot entries, signage, parking, crossings, sidewalks, etc.) involving the county right-of-way at the design phase.

The NPS is currently pursuing funding to restore natural flows to Stanford Run stream. A modification or removal of the Stanford Road bridge would add value to this restoration project and may be part of this effort.

Impairment Analysis

In addition to determining the environmental consequences of implementing the alternatives, NPS Management Policies, 2006 require the analysis of potential effects to determine whether the actions would impair park resources (NPS, 2010). As defined by NPS Management Policies (1.4.5), an impairment that is prohibited by the Organic Act and the General Authorities Act is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- 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.

An impairment determination will be included in the final decision document prepared by the NPS as a result of this EA.

3.2. Archeological Resources

Affected Environment

Archeological resources are distributed throughout CVNP. To date, more than half (51 percent) of the park has been archeologically surveyed and 200 archeological sites have been documented, representing human episodes dating as far back as 10,000 years ago and as recent as the historic era of the 20th century. Different environmental settings were favored by groups who have utilized the valley over many millennia, thus predictive modeling, based upon landform types and the distribution of documented archeological sites, can be applied to suggest where additional cultural manifestations attributed to certain time periods might occur. Likewise, there are settings within CVNP that would not have been favorable, or in some cases even accessible, for human utilization and thus are not expected to contain evidence of past use. Additionally, due to more recent undertakings within the park, areas have been identified where there is no potential for archeological resources to exist (e.g., reclamation of degraded areas). Five archeological sites are listed on the National Register of Historic Places.

The Boston, Ohio area, like much of the Cuyahoga River Valley, has a prehistoric occupation history that spans over 10,000 years. Several prehistoric sites have been recorded within the community over the past 30+ years. Boston was settled by Euro-Americans, many of whom came from Connecticut and other locations on the east coast of the U.S., very early in the 19th century. This use began at a shallow area on the Cuyahoga River that served as a landing place during the first decade of the 1800s for settlers attempting to travel overland to their newly acquired parcels to the west in the former Connecticut Western Reserve.

By the 1820s era, multiple structures were present in the community, and by the middle 1830s considerable commercial activity and residential use are documented. A plat from the 1850s era depicts numerous houses and commercial buildings in the core of the community. A few of the early buildings remain (such as the Boston Store from the circa 1835 era), while many others are no longer extant. Archeological deposits have been recorded in association with extant and non-extant building locations. Given this early and extensive settlement history, the archeological record at Boston is understandably complex.

Dense, and occasionally well stratified, archeological deposits occur across much of the community and many of these sites are significant and eligible for listing in the National Register of Historic Places. Given the distribution of artifacts across all of the major landforms in Boston, careful planning is required to avoid adversely impacting the sites. Several locations potentially affected by the proposed actions are known to have significant archeological resources.

The sites of the proposed bus/RV lot, bus drop area and the Overflow Lot at the corner of Riverview Road and Boston Mills Road overlaps the archeological manifestation of the Cleveland Akron Paper Bag Co. (1902-1932) and possibly the Jaite Bag Co. (post 1946). Previous

archeological investigations (Whitman et al. 1996; Mustain et al 1996) have been completed and much of the area has been subjected to extensive ground disturbance.

A site is known near the Mary Boodey property, however no significant resources attributed to the site occur within the footprint of the proposed parking lot.

The grounds adjacent to the Nina Stanford House include a significant prehistoric and historic site. While much of the property has been subjected to ground disturbance (i.e. buried utility lines and tanks), an intact prehistoric thermal feature was encountered in the east yard within the footprint of the proposed parking lot.

A prehistoric site is recorded on the grounds of the Hines Hill Conference Center (Gioia). Much of the site has been impacted from ground disturbing activities from the prior residence, however portions of the site do contain intact deposits and have good integrity. The proposed parking lot expansion project area was inventoried by MWAC in 2006 (Bauermeister and Richner 2012) and no significant archeological resources were encountered.

Investigations in the Latta Lane area revealed two sites of prehistoric artifact scatter recorded at the Shafer property. The extent of one site is unknown since previous investigations primarily targeted the grounds adjacent to the structures (Brose et al. 1981; Bauermeister 2009) The Thiel site artifacts were found in disturbed context (plow zone) and thought to have low potential for significance (Brose et al. 1981).

An historic archeological site associated with a non-extant house depicted on the 1834 plat map is recorded in the middle of the existing Boston Store parking lot loop. It is interpreted as the original Mather House and is considered significant and eligible for the NRHP (Richner 1997). The existing parking lot configuration was designed and constructed to avoid adversely impacting the archeological site by preserving it *in situ* under a layer of fill.

In the location of the proposed reinforced turf along Boston Store driveway, may affect archeological deposits associated with three non-extant historic structures: a house or tavern/inn depicted in the 1856 plat, a residence depicted on the 1856 plat, and a structure present by the late 1820s that has been depicted as a house, tavern, and the Boston Hotel on various maps. The site is significant and eligible for the NRHP.

The area of reinforced turf proposed along Stanford Road is located in the Boston Boatyard, (Finney 1997). It is a significant historic site associated with the canal boatyard and dry dock that William Barnhart and James Fayerweather operated.

The land west of Zielenski Court (the new location for Boston Station, the location of the proposed 54-car parking lot in Alternative 3, and the site of proposed native meadow restoration) includes a historic house site that is approximately 100-135 years old. Additional investigations to determine NRHP eligibility were recommended after its discovery if the site

were to be impacted by construction events associated with the Riverview Road Realignment (Whitman et al. 1996).

A prehistoric and historic site with artifacts confined to the plowzone in mixed context is located near the proposed Johnston-Rodhe lot and the Boston Trailhead parking lot expansion. The site's extent to the south and east is not known; based on what is currently documented, the site is not considered significant.

The Stanford Knoll Site is a significant prehistoric site recorded on the grounds of the Stanford Farm. The new proposed parking lots are outside of the site boundary as it is currently documented.

Methodology

Proposed development and restoration activities were checked against archeological records available in databases maintained by the NPS Midwest Archeological Center and the State of Ohio (Bauermeister 2009, Bauermeister and Richner 2012, Brose et al. 1981, Finney 1997, Mustain et al. 1996, Richner 1997, Whitman et al. 1996).

It was assumed in this analysis that parking lots and reinforced turf areas could be designed in such a way as to not cause an adverse effect on archeological sites, and in cases where current conditions put them at risk, may actually protect them by covering them with material, a process called site burial. Such an activity would be designed using methods using reversible methods previously determined to not cause an adverse effect on significant archeological resources at this location (e.g., the original Boston Store parking lot construction over archeological resources which was approved by the Ohio State Historic Preservation Office [SHPO] and the NPS) and another location (Everett Village) in the park, including building up areas with new material and installing fabric between native and new materials. Impact analysis was conducted in consultation with MWAC archeologists.

The most important aspect of an archeological resource is its potential to describe and explain human behavior. For purposes of analyzing potential impacts to archeological resources, the thresholds of change for the intensity of an impact are defined as follows:

Negligible	Impact is at the lowest levels of detection-barely measurable with no perceptible consequences to archeological resources.
Minor	Disturbance of a site(s) results in little, if any, loss of its potential to describe and explain human behavior.
Moderate	Disturbance of a site(s) does not diminish the significance or integrity of the site(s) to the extent that it loses its ability to describe and explain human behavior. Such an impact would allow sufficient time for inventory, evaluation, documentation, and curation of collections and associated records.

Major	Disturbance of a site(s) diminishes the significance and integrity of the site(s) to the extent that it loses its ability to describe and explain human behavior.
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Impacts Common to All Alternatives

In general, most archeological survey work at CVNP occurs in conjunction with projects that require ground disturbance. The planning process for these projects typically supports the completion of archeological inventory work prior to the actual ground disturbing activity. This inventory work is the initial step taken to provide data about the location of resources and the level of their significance. In turn, potential impacts on archeological resources are reduced through measures such as site avoidance, project redesign, or other site protection measures. Whenever possible, such measures will be implemented rather than archeological excavations, since protecting and preserving these important and nonrenewable cultural resources is the preferred NPS treatment of archeological resources.

The Alternatives considered in this plan propose undertakings that may require ground disturbance to accomplish. To avoid or mitigate adverse impacts to significant archeological sites, the following would be required:

- 1) Phase I archeological inventory of any locations where ground disturbance is anticipated and that have the potential to contain archeological resources and have not been previously inventoried ;
- 2) Evaluative Phase II archeological testing of newly or previously documented archeological sites that are within the Area of Potential Effect (APE) and potentially would be impacted by components of the plan as proposed. The results would be applied in making an appropriate determination on the site's significance and potential eligibility for listing in the National Register of Historic Places (NRHP);
- 3) Finding of effect made for any newly or previously documented archeological sites within the APE for the plan that could not be protected through avoidance, redesign, or engineering methods; and/or
- 4) Phase III data recovery investigations of any significant archeological sites that are, or are deemed eligible for, listing in the NRHP. Archeological data recovery projects must include a written Mitigation Plan and Memorandum of Agreement between the park and the State Historic Preservation Office and Tribal Historic Preservation Offices (THPO), where appropriate, that is filed with the Advisory Council on Historic Preservation. The SHPO and NPS develop the plan and agreement in full cooperation. Phase III testing would only be used if all other methods of mitigating the adverse impact were demonstrated to not be feasible.

The scope, if any, of required archeological investigations for the proposed plan would be determined on a case-by-case basis for each location where ground disturbance is anticipated to occur or where they may intersect a significant archeological site. The NPS's Midwest Archeological Center will work directly with CVNP project planners in determining the appropriate level.

Impacts of Alternative 1

Direct and Indirect Impacts - No direct impacts to archeological resources are expected under this alternative since no specific actions are planned. Continued rutting, erosion and soil compaction could result from continued parking of vehicles on non-stabilized grass at the Canal Boatyard on Stanford Road and along the Boston Store parking lot driveway. Long-term, minor adverse impacts to archeological resources may be expected.

Cumulative Impacts - No cumulative impacts are expected under this Alternative.

Conclusion - Continued parking on unreinforced turf areas associated with archeological resources may have long-term minor-moderate adverse impacts under this Alternative.

Actions Common to All Action Alternatives

Direct and Indirect Impacts – The greatest concern regarding proposed elements for all Action Alternatives is the development of expanded parking at Nina Stanford. There are significant archeological resources in this area. Additional evaluative testing would be required if the parking lot installation is pursued. Data recovery to mitigate the impact of the parking lot might be required, or it is possible that the parking lot could be installed in such a way as to preserve the resources in situ and have no adverse effect. However, if an appropriate lot cannot be designed or located as to not adversely affect resources, the NPS would not construct a new lot to avoid such adverse impacts.

Some areas have been specifically surveyed in the past and were found not to have significant archeological resources, including the areas involving M. Boodey rear parking and the HHHC parking expansion. Minor improvements to parking at Savacoal and George Stanford Farm and short-term parking in front of M. Boodey along the road would also not likely affect resources. Proposed sidewalk and trail developments are not expected to have impacts on resources since it is likely any identified resources can be avoided or designed so as to not affect resources.

There is some concern for the presence of archeological resources for the new bus/RV lot, bus drop-off area, the Overflow Lot, and the new location of Boston Station based on nearby survey work performed for the recent Riverview Road relocation. However, it is expected that the use of existing archeological data can ensure that the construction and staging areas for these facilities would avoid any potentially sensitive areas.

Several surveys have been performed in the Latta Lane area, primarily to inform demolition projects. At least one significant archeological resource was identified in the area. However, this area and any other found during Phase 1 surveys could easily be avoided when developing camping facilities at the site. An archeological inventory of the proposed parking lot project area is needed since the previous investigations did not include that area, and additional site investigations in other areas of development should allow proper siting to avoid impacts to resources.

Proposed restoration actions, including road and stream restoration work, the planting of trees that might include digging small 10" x10" holes in the landscape, would not likely impact archeological resources. If soil preparation activities for restoring native meadows include diskings the surface soils, a pedestrian survey would be conducted after the disturbance for information gathering.

Overall, these proposed actions should not adversely affect archeological resources beyond long-term, negligible adverse effects.

Impacts of Alternative 2

Direct and Indirect Impacts – For all Alternative 2 (all Options) the greatest concern under is the development of the two proposed reinforced turf areas. However, methods would be used that would not disturb archeological resources or they would not be constructed (i.e., areas would be built up, not excavated). It is expected that installing reinforced turf in these areas would actually protect resources from the current and future impacts of visitors parking on these sites during crowded times. Long-term benefits to resources would be expected.

The areas surrounding the proposed Stanford Road parking lot have not been surveyed but possess the landform characteristics of an area that may be rich in archeological resources. No known resources exist in the parking lot area. Since a lot on Stanford Road is critical for dispersing trailer parking out of Boston's center and providing camping parking, it is likely that a lot of some magnitude would be built in the general area. Phase 1 surveys will be needed to identify potential resources to avoid significant impacts. It is expected that the lot could be designed so as to not impact such resources.

Areas involving the Boston Trailhead parking expansion have been specifically surveyed in the past and were found not to have significant archeological resources.

For Options B & C, no surveys have been conducted on the Zielenski Court property, but it is not expected that any significant impacts would result from plans on that property, with appropriate surveys and mitigation.

No impacts from additional restoration actions are expected.

Cumulative Impacts - No cumulative impacts are expected under this Alternative.

Conclusion – No adverse impacts to archeological resources will occur due to surveys prior to any construction and the application of applying appropriate parking lots designs that are sensitive to any existing resources. Long-term benefits from reinforcing turf in two sensitive areas, thereby mitigating current ongoing and potential impacts from parking would be expected under this Alternative.

Impacts of Alternative 3

Direct and Indirect Impacts – For all Alternative 3 (all Options) there are concerns due to the presence of significant archeological resources.

The new 54-car lot on Riverview Road includes a significant archeological site that is potentially eligible for listing under the Nation Register of Historic Places based upon earlier surveys. The lot is the critical element for moving most parking outside of Boston’s center under this Alternative, so it is likely that a lot will be built. Final designs will attempt to avoid the site, but if it cannot be avoided the NPS will conduct additional archeological evaluative testing to determine site significance and protect the site in situ by placing fill over the current grade. Proper investigations and design and application of appropriate design methods should not adversely impact archeological resources in this location.

The Boston Store parking lot restoration is near a significant archeological site that exists below the current lot and in the center “island” of trees. However, these resources were considered and carefully addressed during the initial parking lot construction with SHPO-approved methods. It is expected that lot removal and restoration activities could be conducted without harming underlying archeological resources.

The areas surrounding the proposed Stanford Road parking lot have not been surveyed but possess the landform characteristics of an area that may be rich in archeological resources. No known resources exist in the parking lot area. Since a lot on Stanford Road is critical for dispersing trailer parking out of Boston’s center and providing camping parking Phase 1 surveys will be needed to identify potential resources to avoid significant impacts. It is expected that the lot could be designed so as to not impact such resources.

The area of the proposed Johnston-Rodhe parking lot has not been surveyed, but it should have no adverse effect since it primarily within the footprint of a razed structure. Nevertheless, due to its proximity to the historic Canal it is possible significant archeological resources exist there especially in the area where a bridge over the canal to Boston Store may be constructed (Options A & C), so Phase 1 surveys may be needed to evaluate, avoid and mitigate any potential impacts with appropriate methods.

Areas involving the Boston Trailhead parking lot have been specifically surveyed in the past and were found not to have significant archeological resources. Conversion to reinforced turf or restoration would therefore have no impacts.

For Options B & C, no surveys have been conducted on the Zielenski Court property, but it is not expected that any significant impacts would result from plans on that property, with appropriate surveys and mitigation.

No impacts from additional restoration actions are expected.

Cumulative Impacts - No cumulative impacts are expected under this Alternative.

Conclusion – No adverse impacts to archeological resources will occur due to surveys prior to any construction and the application of appropriate parking lots designs that are sensitive to any existing resources.

3.3. Historic Structures

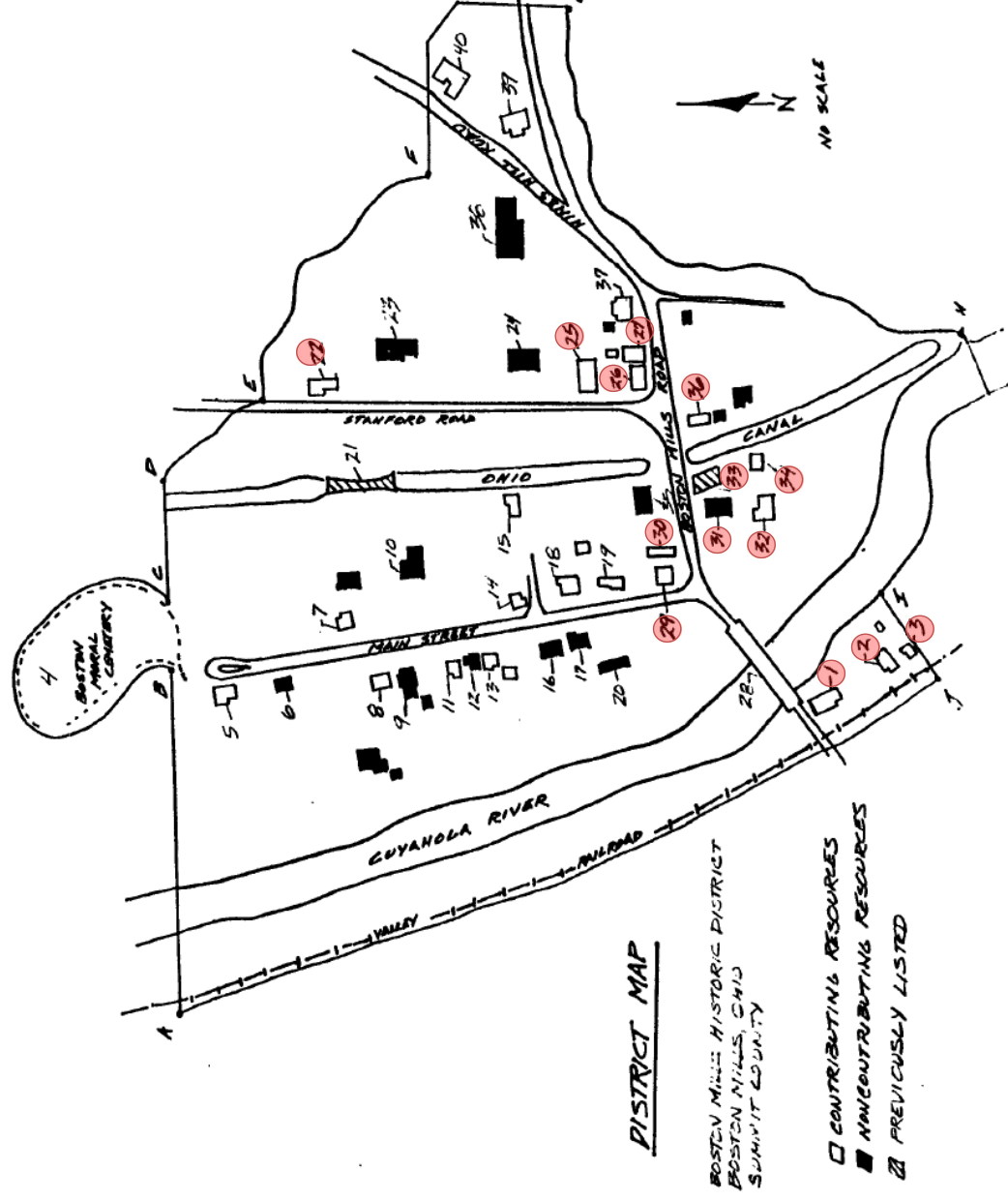
Affected Environment

The Boston Mills Historic District is listed in the National Register of Historic Places as a significant, intact example of a century canal village and for its concentration of intact 19th century architecture. Maintaining occupied buildings is critical to preserving the historic nature of the Boston Mills Historic District. The *Historic Landscape Analysis and Design Recommendations for Boston, Ohio* (NPS 1993) recommends that the overall preservation treatment for the Boston Mills Historic District be “the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural or architectural values.” Compatible uses are generally acceptable as a means of improving, protecting, and preserving historic character. Using historic buildings such as those owned by CVNP for residential, commercial and recreational purposes creates a palpable, lived-in village landscape, reinforcing the cultural use pattern of the site. Consequently, occupied buildings are better maintained, which furthers the historic preservation ideals of the park.

The Boston Mills Historic District is made up of 30 contributing resources (Figure 7). A list of structures that may potentially be affected directly by the proposed action is found in Appendix A. This includes eight NPS properties with structures and one owned by the Conservancy for CVNP (Square Deal Food Store, now known as “Trail Mix, Boston”). Additionally, the Alternatives may also affect the privately-owned Zielenski Court property which includes three structures – an apartment building (Boston Mill General Store) and two residences (Clara Muldowney Houses #1 and #2). These historic structures have been modified and changed over the years, but still retain important historic character and integrity. Several historic structures have a proposed change in use and/or ownership (i.e., Zielenski Court) under the Alternatives.

The resources identified in the Historic District are associated with the canal era or later company town period of the village’s development. The dominant building type is residential typically 1 ½ to 2 story high frame construction with gable roofs and is utilitarian in nature.

Figure 7. Boston Mills Historic District map from nomination to the Federal Register of Historic Places. Potentially affected properties are highlighted in red.



Preservation of these structures is vital to the integrity of the Historic District and is best achieved through continued use of the buildings. The park service made substantial investments in the rehabilitation and preservation of the NPS owned structures in the Historic District over the last 20 years.

The George Stanford Farm is also listed on the National Register of Historic Places and two other properties, Clayton Stanford House and Lindley Barn are potentially eligible for listing. One structure in the Hines Hill Conference Center complex is also considered potentially eligible for listing.

Methodology

The analysis of impacts to historic structures is a qualitative assessment based on a review of existing park policies on the treatment of historic structures and consultation with park cultural resources management team (historical architect/park section 106 coordinator and historian). For purposes of analyzing potential impacts to historic structures/buildings, the thresholds of change for the intensity of an impact are defined as follows:

Negligible	Impact is at the lowest levels of detection - barely measurable with no perceptible consequences to historic structures.
Minor	Impact would not increase the rate at which the historic structure is lost and/or affect the character defining features of a historic structure.
Moderate	Impact would moderately increase the rate at which the historic structure(s) is lost and/or alter a character defining feature of a historic structure but would not diminish the integrity of the structure to the extent that its National Register eligibility is jeopardized.
Major	The historic structure would be lost, or impact would alter a character defining pattern(s) or feature(s) of the structure, diminishing the integrity to the extent that it is no longer eligible to be listed in the National Register.

Impacts Common to All Alternatives

Cumulative Impacts - Minor to moderate long-term adverse impacts could result from future modifications to privately-owned historic structures in the study area, including Zielenski Court. Without federal ownership and maintenance under the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, additional impacts to the historic fabric may occur that could lead to a significant loss in historic character.

Impacts of Alternative 1

Direct and Indirect Impacts - No direct or indirect impacts on historic structures are expected under this Alternative since properties maintained by the NPS will continue to be managed under the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

Cumulative Impacts - No additional cumulative impacts are expected under this Alternative.

Conclusion - No impacts on historic structures from this Alternative are expected.

Impacts Common to All Action Alternatives

No additional impacts on historic structures common to all Action Alternatives are expected.

Impacts of Alternative 2

Direct and Indirect Impacts - Any proposed modification of Boston Store or other structures to accommodate changes in use would be in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, so impacts would not be expected. Under Options B and C, long-term beneficial effects that offset other adverse effects are expected from NPS ownership and management of the Zielenski Court property, since these structures would then be maintained under the same protective standards.

Cumulative Impacts - No additional cumulative impacts are expected under this Alternative.

Conclusion - Under Option A, no impacts are expected. Long-term beneficial effects of NPS ownership and management of the Zielenski Court structures are expected under Options B and C.

Alternative 3

Alternatives 2 and 3 do not propose considerably different treatments of structures, therefore the expected impacts to historic structures are considered identical.

3.4. Cultural Landscapes

Affected Environment

Many of the proposed actions occur within or near the Boston Mills Historic District. A description of the Historic District is found in Section 4.3. The *Historic Landscape Analysis and Design Recommendations for Boston, Ohio* (NPS 1993) recommends a preservation strategy to:

1. Preserve as much of the historic "fabric", both built and biotic, as is practical while allowing for productive contemporary use.
2. Incorporate the rhythm, texture, spatial patterns of the historic town into the design of new construction, future repairs/ replacements, etc., and
3. When appropriate, take actions which could improve the integrity of the historic district by reintroducing elements which have been lost but which now might have a functional purpose, such as fencing, street trees, and pedestrian walkways (NPS 1993, p. 3).

Recommendations found in the document include the need to manage some specific fields as "open space" (p. 27), keep out invasive plants (p.28), mow less frequently leaving a less "manicured" look (p.28), minimize impervious surfaces and use porous materials for walks, drives and parking (p.32), leave vegetation intact on the riverbank (p. 32), design sidewalks to have irregular surface types or soft edges and rectilinear alignments parallel with the street (p.

36), keep such sidewalks and paths narrow (p.40), not add obscuring vegetation that would block views (p. 37) but use typical floodplain trees and shrubs if replanting (p.40).

Changes in and adjacent to the Boston Mills Historic District would include improved parking areas, connecting paths, and other structures such a new pedestrian bridge over the Cuyahoga River, tree removals to accommodate new parking lots, and the restoration of lawn and currently disturbed sites using native grasses and trees. Changes in parking are proposed at the George Stanford House Farm. New parking areas near the George Stanford Farm (but outside its National Register boundaries) are also proposed. A trail access from Hines Hill Conference Center is proposed at Clayton Stanford. An expanded and paved parking lot at Hines Hill Conference Center is also proposed.

Methodology

The analysis of impacts on the cultural landscape is a qualitative assessment based on a review of existing park policies on the treatment of cultural landscapes, existing park data on cultural landscapes, and consultation with park cultural resources management team (park Section 106 coordinator and historical landscape architect).

Potential impacts on the cultural landscape may occur from any undertaking that includes any project, activity, or program that can result in changes in the character or use. Protecting and preserving the historic character of the landscape is the principal goal for cultural landscape management. Thus, the primary goal in this EA is to preserve the cultural landscape by protecting the historic character of the landscape within the Boston Mills Historic District, George Stanford Farm and surrounding areas. 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 is at the lowest levels of detection - barely measurable with no perceptible consequences to the cultural landscape.
Minor	Impact(s) would not affect the character defining patterns and features of a National Register of Historic Places eligible or listed cultural landscape.
Moderate	Impact(s) would alter a character defining pattern(s) or feature(s) of the cultural landscape but would not diminish the integrity of the landscape to the extent that its National Register eligibility is jeopardized.
Major	Impact(s) would alter a character defining pattern(s) or feature(s) of the cultural landscape, diminishing the integrity of the landscape to the extent that it is no longer eligible to be listed in the National Register.

Impacts Common to All Alternatives

Cumulative Impacts – Minor long-term adverse impacts could result from future modifications to the cultural landscape and historic character of privately-held properties.

Impacts of Alternative 1

Direct and Indirect Impacts - Long-term minor-moderate adverse impacts on the cultural landscape from the presence of modern cars and associated parking areas in the Historic District will continue. No other impacts are expected under this alternative as no specific changes are proposed. Any actions taken to address parking or circulation concerns would be reviewed under individual environmental and cultural compliance.

Cumulative Impacts - No additional cumulative impacts are expected under this Alternative.

Conclusion – Continued long-term minor-moderate adverse impacts on the cultural landscape from cars and parking areas in the Historic District are expected.

Impacts Common to All Action Alternatives

Direct and Indirect Impacts –

The proposed bus and RV lot, bus drop-off area and Overflow Lot are located outside of the Boston Mills Historic District in an area already dominated by parking, resulting in no discernable impacts.

Within the Boston Mills Historic District, the new parking lot at Nina Stanford is sensitively located behind the structure, having long-term negligible to minor adverse impacts. M. Boodey's parking lot would have long-term minor adverse impacts, since it is at a location that may be seen from Main Street. Formalizing two 15-minute parking spots in front of M. Boodey will have beneficial impacts by controlling otherwise random parking. Any new signage will be sensitively located so as to cause only negligible long-term adverse impacts. The proposed Interpretive Loop trail has an alignment primarily near the edge of the Historic District near Boston Store, then tracks primarily on existing trails with a small new segment located near Boston Lock, hidden in the woods. This trail is expected to have negligible long-term adverse impacts. Interpretive structures will be evaluated as proposed and approved only if adverse impacts to cultural landscapes are negligible to minor.

Improved paths and sidewalks (Appendix D, Figure D-7) will be designed to be sensitive to the historic context of the area, keeping paths narrow, rectilinear, and running parallel to the streets or canal as recommended in the *Historic Landscape Analysis and Design Recommendations for Boston, Ohio* (NPS 1993). Porous materials, as recommended, would be used whenever possible. Paths are similar between alternatives, but Alternative 2 would not

include an improved path from the Boston Trailhead lot. These new paths and walkways would cause long-term minor adverse impacts.

Moving the Boston Station closer to the historic location of the Depot (but still outside the Historic District) would have beneficial effects since it restores historical circulation patterns and use to the area.

The proposed restoration of native meadows and forests and associated treatment of invasive species are complaint with the *Historic Landscape Analysis and Design Recommendations for Boston, Ohio* (NPS 1993). The restored meadow proposals include an area around the Boston Trailhead lot that was a “first priority” for “open space.” Restored native grasses and wildflowers may better present the desired “less manicured” appearance of the open space (i.e., more like a native meadow) than either the current mowed lawns (or mowing such non-native lawns less frequently, which would not result in a meadow), while increasing aesthetics and habitat values for native species. However, it will be noticeable initially as a change in how the NPS has managed this landscape. Short-term minor adverse impacts are expected while existing lawn is being replaced and replanted with native grasses, which may take several years to establish. Overall long-term beneficial impacts to landscapes from the proposed native grass restoration would be expected within and outside the Historic District.

Forest and stream restoration proposals are appropriate bottomland forest plantings compatible with the *Historic Landscape Analysis and Design Recommendations for Boston, Ohio* (NPS 1993) and are generally located in places that will not directly obstruct views or disrupt landscapes, except for one part of the areas south of Nina Stanford, which was designated a “second priority” for “open space.” Only the eastern portion will be restored to forest, with the western part restored to open, native grasses. This restored area would easily blend into the forested areas beyond without being noticed by visitors. A portion of this long linear tract has become overgrown with trees and shrubs near Stanford Road, and clearing these trees would reconnect the Nina Stanford property visually to the rest of Boston, providing long-term benefits. Short-term minor adverse impacts are expected while trees and meadows become established due to the presence of sparse early growth of native grasses, fencing, tubes or other protective materials. Overall long-term benefits to landscapes from the proposed forest restoration would be expected.

Proposed changes on the George Stanford Farm tract, including moving camping to Latta Lane, designating limited mobility parking spaces and eliminating parking at the barn at George Stanford Farm would have long-term beneficial impacts on the cultural landscape. The new parking lot north of this historic property is outside of the historic boundary of the Farm and would not impact this property. No impacts to cultural landscapes from potential Stanford Road restoration are expected.

Expansion and improvement of parking at the Hines Hill Conference Center would have negligible to minor long-term adverse impacts due to paving of the lot.

Impact of Alternative 2

Direct and Indirect Impacts – Under all Options, in the Boston Mills Historic District the maintenance of the Boston Store parking lot, the expansion of the Boston Trailhead parking lot, and the formal designation of parking on stabilized turf and near structures would have continued long-term moderate adverse impacts from new parking infrastructure and by ensuring that a larger number of modern vehicles will be directed to expanded parking within the Historic District. The new parking lot on Stanford Road would have no effects on George Stanford Farm but would interrupt rural landscape values in a former agricultural area, causing long-term minor adverse impacts.

Under Options B and C, the protection of the Zielenski Court property and its cultural landscape values would have long-term beneficial effects since this property is a highly visible, primary entry element of the Historic District. NPS protection, management and rehabilitation according to the Secretary of the Interior’s standards would improve historic character and visual appeal of the structures. These benefits help to reduce the overall impact of the Alternative’s parking developments in the Historic District.

However, the conversion of the Zielenski Court property into the park’s main visitor center under Option B would have additional long-term minor-moderate adverse impacts on its cultural landscape values, primarily from the added infrastructure of the welcome plaza, waysides, the addition of a modern pedestrian bridge and a new circulation pattern. However, the new bridge would be located within 200 feet of the existing road bridge, and its level of impact is related to its eventual siting. If placed adjacent to the existing bridge, impacts on the landscape would be minor. Overall, Option B would still have long-term moderate adverse effects.

Under Option C, no such additional impacts are expected as changes to the property would not likely affect cultural landscapes, but parking and cars would remain on the historic property, maintaining current impact levels. Overall, Option C would still have long-term moderate adverse effects.

Additional restoration actions under Options B and C, would have negligible additional long-term adverse impacts on cultural landscapes.

Cumulative Impacts – Should the pedestrian bridge not ever be built, fewer adverse impacts may be expected under Option B.

Conclusion - Under Option A moderate adverse impacts to cultural landscapes would be expected largely due to the expansion of parking in the Historic District. Under Options B and C, the benefits of protecting the Zielenski Court property help to offset these impacts somewhat, but still result in overall long-term moderate adverse impacts.

Impacts of Alternative 3

Direct and Indirect Impacts - Under all Options, reductions in parking within the Boston Mills Historic District would have beneficial effects on cultural landscapes from reducing the amount of parking areas and number of vehicles that are parked in this historic setting, largely offsetting the impacts of other improvements, including the single expanded Johnston-Rodhe lot and its associated bridge crossing the canal under Options A and C,. Most parking in Boston would be moved to lots outside of the Historic District. Boston Trailhead parking would be converted to a grass, reinforced turf overflow lot, improving open space views in that area.

Under Options A and C, a new pedestrian bridge from the Johnston-Rodhe lot across the canal to the Boston Store Visitor Center area would have long-term minor adverse impacts on the cultural landscape from introducing a circulation pattern change that may affect how visitors perceive the historic canal prism.

A new 54-car parking lot is located outside of the Historic District and within an existing long corridor of parking along Riverview Road. While it would affect views towards the Historic District, these would be long-term negligible to minor adverse effects.

Restoration actions under all Options and specific to Option B and C, would have negligible long-term adverse impacts on cultural landscapes.

Under Option A, the benefits from removing parking from the Boston Mills Historic District offset any additional impacts of the Alternative, resulting in long-term beneficial effects.

Under Options B and C, the protection of the Zielenski Court property and its cultural landscape values would have long-term beneficial effects since this property is a highly visible, primary entry element of the Historic District. NPS protection, management and rehabilitation according to the Secretary of the Interior's standards would improve historic character and visual appeal of the structures.

The conversion of the Zielenski Court property into the park's main visitor center under Option B would have long-term minor-moderate adverse impacts on its cultural landscape values, primarily from the added infrastructure of the welcome plaza, waysides, the addition of a modern pedestrian bridge and a new circulation pattern. However, the new bridge would be located within 200 feet of the existing road bridge, and its level of impact is related to its eventual siting. If placed adjacent to the existing bridge, impacts on the landscape would be minor. Overall, Option B would still have a net long-term beneficial effect on cultural landscapes from the protection of the Zielenski Court property.

Similarly under Option C, additional minor adverse impacts are expected from maintaining parking and cars on the historic property, the pedestrian bridge and new circulation pattern. Overall, Option C would still have a net beneficial effect on cultural landscapes from the protection of the Zielenski Court property.

Cumulative Impacts - Should the pedestrian bridge not be built, additional beneficial effects may be expected under Options B and C.

Conclusion - Under Option A, the benefits from removing parking from the Boston Mills Historic District offset any additional impacts of the Alternative, resulting in long-term beneficial effects. Under Options B and C, the protection of the Zielenski Court property and its cultural landscape values provides additional long-term beneficial effects, with C slightly more beneficial due to limited development on the property.

3.5. Health and Safety

Affected Environment

As described in Section 1.2, the Boston Mills area of the Park experiences high visitation, especially during peak visitation periods in the summer. The Towpath Trail is the park's most popular trail and Boston Store its most visited visitor center. The area hosts numerous events and includes a variety of facilities that draw people to the area. The health and safety of visitors, residents and employees is a concern especially during times of congestion.

Boston Store parking provides parking for access to the Towpath, but its one-way design can be difficult to maneuver, especially for larger vehicles such as buses and RVs that may not be prepared for its tight design. The Boston Trailhead provides equestrian parking, but is unmarked so cars often affect parking patterns and safe movement through the lot.

Few paths provide direction to pedestrians and bicyclists moving around Boston area facilities and parking area, causing many to walk along and cross Boston Mills Road at random locations. Access from Riverview Road parking and facilities is across the road bridge on raised walks adjacent to moving traffic, which some members of the public perceive as dangerous when crowded according to public scoping.

Much of the Boston Mills Historic District lies within the 100-year floodplain of the Cuyahoga River, which may put visitors, employees and residents at risk during floods.

Methodology

A qualitative evaluation of safety concerns and the effects of potential remedies was completed. Assumptions included that formally designating parking, moving parking away from congested pedestrian areas, directing pedestrian circulation, and moving pedestrians away from roadways was beneficial to health and safety. It was assumed that increased visitation to the Boston Mills area is expected under all Alternatives. Boston is the location of the Park's primary visitor currently and will likely continue to be so in the future, since the interpretive planning document *A Conceptual Framework for Enhancing Visitors' Experiences* (NPS 2009)

recommends that a main “visitor orientation center” be located in Boston. For purposes of analyzing potential impacts to human health and safety, the thresholds of change for the intensity of an impact are defined as follows:

Negligible	The impact to human health and safety would not be measurable or perceptible.
Minor	The impact would be measurable or perceptible, and it would be limited to a relatively small number of people in localized areas.
Moderate	The impact to human health and safety would be sufficient to cause a permanent increase in accident rates.
Major	The impact to human health and safety would be substantial through creation of new areas with a high potential for serious accidents or hazards.

Impacts Common to All Alternatives

Direct and Indirect Impacts - The presence of park facilities in and near the Cuyahoga River floodplain exposes park visitors and employees to health and safety risks during floods. Many of these risks are unavoidable since historic structures and districts are being preserved, used and maintained in their historic locations within floodplains. Under all Alternatives, historic structures, parking, visitor services, and a primary visitor center are in or adjacent to the floodplain. Flooding is a regular occurrence in the Park and the NPS regularly monitors USGS river gauges at Old Portage (upstream of park), Independence (downstream of park), and the new location in Jaite (downstream within park, installed in April 2012), during storm events to initiate closures and alerts to protect the public and staff. The Park has developed a Flood Response Plan (2012) to evaluate flood risks, declare emergencies, coordinate closures and minimize risks to health, safety and property, reducing impacts on public health and safety. Long-term negligible adverse impacts would be expected under any Alternative with this Response Plan in place.

Cumulative Impacts - Programmatic changes may alleviate some major event-related congestion and associated risks, but the large Boston Mills Ski Resort lots along Riverview will always be attractive for very large events. Associated long-term negligible to minor impacts on public safety may continue. It is possible that actions taken by the Summit County Engineer’s office (e.g., signage, signaling, crosswalks) could alleviate potential road safety risks having beneficial effects.

Impacts of Alternative 1

Direct and Indirect Impacts - Under Alternative 1, existing conditions would continue. Congestion in Boston would continue during peak visitation periods. Parking at Boston Store would remain a challenging lot to navigate, especially during crowded times for larger vehicles such as trucks, trailers and RVs that might enter the one-way lot and find it difficult to maneuver or back up. Trailer parking at Boston Trailhead may at times be blocked by cars parking haphazardly. Parking throughout the Boston area along various driveways and

roadides may continue, and safety risks increase as drivers search out an open space among several potential parking areas in Boston. Undirected pedestrians would continue to cross Boston Mills Road in unpredictable ways. Pedestrians parking along Riverview Road or existing Boston Station would continue to access Boston via the existing road bridge. All of these conditions increase the risk of accidents involving pedestrian, cyclists and drivers. Overall, long-term, moderate impacts on public health and safety would be expected.

Cumulative Impacts - No additional cumulative effects are expected under this Alternative.

Conclusion - Under Alternative 1, long-term moderate adverse impacts on public health and safety would be expected.

Impacts Common to All Action Alternatives

Direct and Indirect Impacts - Adding Bus/RV parking outside of the center of Boston with appropriate signage reduces the likelihood that such vehicles find themselves in the Boston Store parking lot. Moving trailer parking and providing additional parking to a larger lot on Stanford Road would disperse equestrian trailer traffic and some visitors out of the center of Boston, alleviating congestion. New sidewalks and paths, designated crossings and a 4-way stop at Riverview/Boston Mills would help direct safe circulation and make pedestrian road crossing more predictable for drivers. All of these conditions reduce the risk of accidents involving pedestrian, cyclists and drivers. Adding the Overflow Lot could increase the number of pedestrians and cyclists crossing Riverview Road, which may have long-term negligible to minor adverse impacts during peak visitation periods. The moving of Boston Mill Station would eliminate the need to block access to and from Boston during train stops, maintaining open emergency access to the community at that location. Overall, long-term, beneficial impacts on public health and safety would be expected from the proposed changes.

Short-term negligible adverse impacts may occur from temporary reroutes and closures during any construction activities.

The future moving and expanding of camping from Stanford House to Latta Lane would increase emergency response times for campers, but access would be maintained so these long-term adverse impacts would be negligible.

Impacts of Alternative 2

Direct and Indirect Impacts - Expansion of the Boston Trailhead parking lot would reduce needs to park along roadways and driveways. New or improved parking at NPS structures would reduce congestion at larger public lots. Adding stabilized turf to overflow parking areas would improve driver safety under wet or muddy conditions. However, these benefits are outweighed by the increased traffic to access the expanded parking areas within the Historic District. Congestion and potential conflicts between vehicles, cyclists, pedestrians may be expected to

increase. Overall, long-term, minor-moderate adverse impacts on public health and safety would be expected.

Under Option B pedestrian circulation directed across the river on a pedestrian bridge would further reduce conflicts on the road bridge providing additional benefits.

Cumulative Impacts - Under Option B, should there be delays in construction of the pedestrian bridge until after the Visitor Center is opened at Zielenski Court, additional pedestrian traffic across the road bridge would be expected. Should this occur, additional short-term negligible to minor adverse impacts on health and safety would be expected. A failure to build the bridge would make these impacts long-term.

Conclusion - Under all Options, long-term, overall minor-moderate impacts on public health and safety would be expected despite the benefits of new parking facilities, due to increased traffic to the area, with additional benefits under Option B from a new pedestrian bridge. Short-term negligible to minor adverse impacts under Option B would be expected if there are delays in constructing the pedestrian bridge, which become long-term if the bridge is not constructed.

Impacts of Alternative 3

Direct and Indirect Impacts - Moving most vehicle parking out of the Boston area and consolidating and improving remaining parking would reduce risks to the public, employees and residents. The new main lot along Riverview road would provide adequate parking under most conditions, reducing traffic in the Historic District and the need for drivers to seek out available parking throughout Boston or park along roadways and driveways. The number of people crossing the railroad tracks regularly would likely increase due to an increase in available parking west of the tracks, but Boston has always been a point of frequent pedestrian crossings and heightened railroad safety. There are flashing railroad crossing gates at Boston Mills Road. Moving the station would eliminate the need to block the intersection with the train during stops, improving emergency access to the residents and visitors. While some parking necessarily remains in the floodplain, the net effect of the proposed action is to move parking to the edge or outside of the floodplain to areas that allow for quicker egress to higher ground, improving health and safety. Overall, long-term, beneficial impacts on public health and safety would be expected from the proposed actions.

Under Options B and C pedestrian circulation directed across the river on a pedestrian bridge would likely further reduce safety concerns on the road bridge, providing additional benefits.

Cumulative Impacts - Under Options B and C, should there be delays in construction of the pedestrian bridge until after the Visitor Center is opened at Zielenski Court, additional pedestrian traffic across the road bridge would be expected. Should this occur, additional short-term negligible to minor adverse impacts on health and safety would be expected. A failure to build the bridge would make these impacts long-term.

Conclusion - Under all Options, long-term, overall beneficial impacts on public health and safety would be expected from moving most parking out of the Historic District, with additional benefits provided under Options B and C due to the pedestrian bridge. Short-term negligible to minor adverse impacts under Options B and C would be expected if there are delays in constructing the pedestrian bridge, which become long-term if the bridge is not constructed.

3.6. Visitor Use and Experience

Affected Environment

The Park is composed of a largely forested landscape bisected by the Cuyahoga River, interspersed with old fields, agriculture, and historic buildings. The abundant scenic resources of the park, within an hour's drive of three cities (Cleveland, Akron and Canton) containing about 4 million people, make it an attractive destination, as well as a respite from the bustle of city life. Visitors come to CVNP to use and experience the park in many different ways. Annual Visitor Use Surveys conducted by the NPS provide information about the multitude of reasons why visitors come to CVNP, which include various types of recreational activities, educational programs, and relaxing and enjoying nature and the historic and natural scenery. The Ohio & Erie Canalway Byway, a scenic America's Byway that anchors the National Heritage Area, includes Riverview Road that passes through the project area.

The Boston Mills area can be considered the center of visitor experiences in the Park, but also remains the home for many local residents. Visitor and resident experiences are unavoidably intertwined, especially in the Historic District. The variety of amenities and activities available in the Boston Mills area as well as recent statistics on visitation and use were described in detail in Section 1.2.

Methodology

The potential for change in visitor use and experience was evaluated by identifying projected increases or decreases in activities or the quality of that activity, and determining whether these projected changes would affect the desired visitor experience or local residents. It was assumed that increased visitation to the Boston Mills area is expected under all Alternatives, as in Section 4.5. The intensity levels for visitor experience are:

Negligible	Visitors would not likely be aware of the effects associated with changes proposed for visitor use and enjoyment of park resources.
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Minor	Visitors would likely be aware of the effects associated with changes proposed for visitor use and enjoyment of park resources; however the changes in visitor use and experience would be slight and likely short term.
Moderate	Visitors would be aware of the effects associated with changes proposed for visitor use and enjoyment of park resources. Changes in visitor use and experience would be readily apparent and likely long term. Other areas in the park would remain available for similar visitor experience and use without derogation of park resources and values, but visitor satisfaction 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.
Major	Visitors would be highly aware of the effects associated with changes proposed for visitor use and enjoyment of park resources. Changes in visitor use and experience would be readily apparent and long term. The change 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.

Impacts Common to All Alternatives

Cumulative Impacts - Programmatic changes may alleviate some major event-related congestion and associated risks, but the large Boston Mills Ski Resort lots along Riverview will always be attractive for very large events. Should park management implement changes in permits that move large events away from Boston, short-term minor to moderate adverse effects on visitor experience may occur for participants in those programs should these events not be held or move outside the park. However, the reduction in area congestion may be viewed as positive by other park visitors and local residents, having short term minor benefits.

If the Selected Alternative in the park's Trail Plan includes new trails or a water access point in Boston, additional beneficial effects on visitor use and experience would be expected.

Impacts of Alternative 1

Direct and Indirect Impacts - Under Alternative 1, visitors would continue to experience congestion and difficulty in finding parking in the Boston area during peak visitation periods. The lack of designated bus/RV parking could frustrate some visitors who wish to explore Boston. Visitor services in Boston would be limited to what the current facilities are able to accommodate. Improvements to Boston Store as the park's primary visitor center and other Boston facilities would continue, providing benefits to visitor experiences. Parking and congestion issues may drive some visitors away from the Boston area and affect the ability of the NPS to provide orientation and interpretive services. Increased demands for camping may

not be met at Stanford House. Conflicts arising from visitors seeking appropriate places to park for “hike-in” Stanford camping and conflicts with House renters would remain unresolved, affecting visitor experiences and expectations during visits, potentially leading to the end of that recreational activity if conflicts increase. Equestrian trailer parking would remain limited. Overall, long-term minor to moderate adverse impacts on visitor use and experiences would be expected.

Cumulative Impacts - No other cumulative impacts are expected under this Alternative.

Conclusion - Overall, long-term minor to moderate adverse impacts on visitor experiences, largely from continued issues associated with limited parking and circulation would be expected under this Alternative.

Impacts Common to All Action Alternatives

Direct and Indirect Impacts - Adding Bus/RV parking outside of the center of Boston, moving trailer parking and providing additional car parking at the Overflow and Stanford Road parking lots would disperse equestrian trailer traffic and some other visitors out of the center of Boston, reducing competition for parking. Parking for campers at Stanford House (and eventually Latta Lane) would be provided and designated, eliminating the issues associated with their attempts to park nearby. Expanded camping opportunities and an improved camping experience (more spacing, permanent facilities, more “remote” backcountry location) would be expected. New sidewalks, paths and designated crossings would help direct circulation. The moving of Boston Mill Station would improve loading/unloading efficiency at the station and eliminate the need to block access to and from Boston during train stops. All of these conditions would provide long-term, beneficial impacts on both visitors and residents.

Restoration of mowed lawns to native grasses and forbs will provide added aesthetic beauty and wildlife viewing opportunities in the Boston area, providing long-term benefits to park visitors. Short-term minor adverse impacts are expected while trees and meadows become established due to the presence of sparse early growth of native grasses, fencing, tubes or other protective materials affecting scenic views and aesthetics.

Short-term negligible adverse impacts may occur from temporary reroutes and closures during any construction activities.

Cumulative Impacts - Should Stanford Road never be vacated and closed to vehicle traffic, the camping experience at Latta Lane would not likely serve primarily hike-in campers, due to the parking provided at the site. The loss of this “remoteness” may reduce benefits of the camping activity. Alternatively, this may be viewed favorably to other visitors who prefer a more direct access route, providing long-term benefits.

Impacts of Alternative 2

Direct and Indirect Impacts - Under all Options, expansion of the Boston Trailhead parking lot, new or improved parking at NPS structures for employees and volunteers, and adding stabilized turf to overflow parking areas would further reduce competition for parking spaces, improving existing conditions for visitors by satisfying visitor needs as they seek parking in the Boston Mills area. However, the increase in parking infrastructure within the Historic District would exacerbate congestion and resulting conflicts between drivers, pedestrians, cyclists by introducing more vehicles and traffic to the area. Overall, continued long-term minor-moderate adverse impacts on visitor use and experience would be expected from the proposed parking changes.

Under Option A, visitor services in Boston would be limited to what the current facilities are able to accommodate. Improvements to Boston Store to have it serve as the park's primary visitor center and improvements to other Boston facilities would continue, providing long-term benefits to visitor experiences. Moving Boston Mill Station across from private residences at Zielenski Court may increase noise and conflicts for a few local residents, causing long-term negligible adverse impacts.

Under Option B, expanded visitor services would be provided as Zielenski Court becomes the parks central visitor orientation center. Establishing a formal information and orientation center will enhance visitor enjoyment and satisfaction, and provide additional opportunities for a deeper understanding of the park's significance through interpretive displays and programming focused on a presentation of all park themes in one location. The pedestrian bridge would add scenic views and an alternative way of entering the center of the Boston Mills Historic District. This option provides the greatest long-term benefits to visitor use and experience for the Alternative.

Under Option C, visitor services in Boston may be expanded if Zielenski Court structures are used specifically for services (commercial services, rental, residential or interpretive functions) as opposed to office space. The pedestrian bridge would add scenic views and an alternative way of entering the Historic District. Together with improvements to Boston Store as the park's primary visitor center and other Boston facilities, additional long-term benefits to visitor use and experience would be expected.

Cumulative Impacts - No additional cumulative effects are expected under this Alternative.

Conclusion - Under Alternative 2, Options A and C, the benefits of meeting visitor parking needs and offering modest increases in visitor services in Boston do not offset the effects of increasing traffic, congestion and visitor conflicts in the Historic District, resulting in overall long-term minor to moderate adverse impacts similar to Alternative 1. Under Option B, the greater benefits of adding a new visitor orientation center, offsets some impacts resulting in overall long-term minor adverse impacts.

Impacts of Alternative 3

Direct and Indirect Impacts - Under all Options, moving most vehicle parking out of the Boston and providing a new main parking lot along Riverview Road would reduce congestion in Boston, provide adequate parking under most conditions, would have long-term, beneficial impacts on visitor use and experience.

While the addition of large parking lots along Riverview Road would adversely affect scenic values and aesthetics outside the Historic District, visitors would experience greater benefits from the improvements of the historic scene inside the Historic District from the removal of modern parking lots. The benefits of removing non-historic materials and vehicles from the Historic District outweighs the benefits of adding more parking adjacent to an existing parking corridor along Riverview Road.

Under Option A, visitor services in Boston would be limited to what the current facilities are able to accommodate. Improvements to Boston Store to have it serve as the park's primary visitor center and improvements to other Boston facilities would continue, proving additional long-term benefits to visitor experiences. Moving Boston Mill Station and building a parking lot across from private residences at Zielenski Court may increase noise and conflicts for a few local residents, causing long-term negligible adverse impacts.

Under Option B, expanded visitor services would be provided as Zielenski Court becomes the park's central visitor orientation center. Establishing a formal information and orientation center will enhance visitor enjoyment and satisfaction, and provide additional opportunities for deeper understanding of the park's significance through interpretive displays and programming focused on a presentation of all park themes in one location. The pedestrian bridge would add scenic views and an alternative way of entering the Historic District near a restored natural area adjacent to the river. The removal and restoration of the existing Boston Store parking lot would provide an opportunity for a scenic picnic and overlook area, improving the area's aesthetics and function for visitors. This option provides the greatest long-term benefits to visitor use and experience for the Alternative.

Under Option C, visitor services in Boston may be expanded if Zielenski Court structures are used specifically for services (commercial services, rental, residential or interpretive functions) as opposed to office space. Together with improvements to Boston Store as the park's primary visitor center and other Boston facilities, additional long-term benefits to visitor use and experience would be expected.

Cumulative Impacts - No additional cumulative effects are expected under this Alternative.

Conclusion - Overall, long-term benefits to visitor experiences are expected under all Options. Option B provides the most benefits, followed by Option C largely due to the additional visitor services and experiences that may be available with uses of the Zielenski Court property.

3.7. Vegetation and Invasive Species

Affected Environment

More than 1,200 species of plants have been documented at CVNP forming a variety of habitats dominated by mixed mesophytic forest. Located in the glaciated Allegheny Plateau of northeastern Ohio, forests cover approximately 27,000 acres (80 percent) of CVNP with the oak-hickory association being the most common. Other forest associations at CVNP include maple-oak, oak-beech-maple, maple-sycamore, pine-spruce and hemlock-beech. A long history of intensive land use has created forests at CVNP with vastly different ages and community structures.

Other habitats are interspersed with forests, including grasslands (approximately 2,000 acres or six percent of CVNP), wetlands (approximately 1,700 acres or five percent), open water (approximately 150 acres or about one-half percent) and agricultural land (approximately 1,300 acres or four percent). Suburban lands and development, including golf courses and cemeteries, cover approximately 1,000 acres – or three percent – of CVNP. Forests at CVNP can be broadly categorized as upland or bottomland, based on landscape position and community composition. Upland forests are primarily dominated by an overstory of oaks (*Quercus* spp.), hickories (*Carya* spp.), maples (*Acer* spp.) and beech (*Fagus grandifolia*). Groundcover in upland forests is generally sparse, typically consisting of a variety of native wildflowers and non-native, invasive shrubs.

Bottomland forests are generally located in the floodplain of the Cuyahoga River and its tributaries and are primarily dominated by an overstory of ash (*Fraxinus* spp.), cottonwood (*Populus deltoides*), sycamore (*Platanus occidentalis*), box elder (*Acer negundo*), Ohio buckeye (*Aesculus glabra*), silver maple (*Acer saccharinum*) and/or red maple (*Acer rubrum*). Groundcover in bottomland forests is generally dense and more frequently dominated by non-native, invasive plants, including privet (*Ligustrum vulgare*), bush honeysuckles (*Lonicera* spp.), glossy buckthorn (*Frangula alna*), multiflora rose (*Rosa multiflora*) and Japanese knotweed (*Polygonum cuspidatum*).

Nearly 20 percent of plants documented at CVNP are not native to northeastern Ohio with approximately 50 of those non-native species considered to be locally invasive (Djuren and Young 2007). Non-native plants of concern in the project area are able to take over and dominate native habitats, displace native species, and form large monocultures that provide limited habitat value to native wildlife. The eleven most-common exotic, invasive plants at CVNP (in descending order) are multiflora rose, garlic mustard (*Alliaria petiolata*), reed canarygrass (*Phalaris arundinacea*), black locust (*Robinia pseudoacacia*), Japanese knotweed, privet, Japanese barberry (*Berberis thunbergii*), common reed (*Phragmites australis*), glossy buckthorn (*Frangula alnus*), Kentucky bluegrass (*Poa pratensis*) and autumn olive (*Elaeagnus umbellata*) (Djuren and Young 2007). All of these species are distributed throughout the Park with some having broad environmental tolerances that enable them to inhabit upland and

bottomland forests, as well as old fields and shrublands (e.g., multiflora rose, garlic mustard, privet and glossy buckthorn). Other exotic plants dominate wetlands and riparian habitat (e.g., reed canarygrass, Japanese knotweed and common reed), while others dominate drier uplands at the Park (e.g., black locust and autumn olive).

Dominant vegetation at the southeast corner of Riverview and Boston Mills Roads is maintained lawn bordered by non-native, invasive shrubs. A large patch of common privet (*Ligustrum vulgare*) is present in the middle of the project area, adjacent to Riverview Road. Autumn olive (*Elaeagnus umbellata*), privet and multiflora rose (*Rosa multiflora*) mixed with wingstem (*Actinomeris alternifolia*), common teasel (*Dipsacus sylvestris*) and goldenrod (*Solidago* sp.) form a border between lawn and young, bottomland forest along the eastern and southern boundaries of the lawn (typical DBH less than 12 inches). The eastern patch of forest between the lawn and railroad tracks is dominated by a large sycamore (*Platanus occidentalis*, DBH approximately 51 inches) surrounded by green ash (*Fraxinus pennsylvanica*), silver maple (*Acer saccharinum*), American elm (*Ulmus americana*), cottonwoods (*Populus deltoides*), and a few large black cherries (*Prunus serotina*). The southern patch of forest is dominated by silver maple and scattered, small, dead elms with flaking bark (typical DBH of approximately five inches).

The island in the middle of the existing parking lot at the Boston Store supports young, bottomland forest dominated by black walnut (*Juglans nigra*, typical DBH of approximately nine inches) and Virginia creeper (*Parthenocissus quinquefolia*) interspersed with a few, small boxelders (*Acer negundo*). Understory vegetation in the island is dominated by mannagrass (*Glyceria* sp.), an unknown perennial grass (possibly a perennial rye, *Elymus* sp.), multiflora rose and Allegheny blackberry (*Rubus allegheniensis*).

The area south of Boston Trailhead is dominated by young bottomland forest of silver maple (typical DBH of approximately 14 inches), and to the east by a channelized ditch dominated by common reed (*Phragmites australis*). The forest understory is highly and recently disturbed, supporting new growth of what appears to be a monoculture of annual ryegrass (*Lolium multiflorum*).

Vegetation within the proposed parking area at Johnston-Rohde is dominated by maintained lawn bordered by ornamental, mostly non-native plantings. Several flowering dogwoods (*Cornus florida*), a burning bush (*Euonymus alatus*), an ornamental spirea (*Spirea* sp.), a few lilacs (*Syringa vulgaris*), a Chinese tree-of-heaven (*Ailanthus altissima*) and a Norway spruce (*Picea abies*) are present in or immediately adjacent to the proposed parking lot. A young (*Tsuga canadensis*) is present a little to the west of the project area.

The Stanford Road area supports bottomland savannah dominated by reed canarygrass (*Phalaris arundinacea*) and redtop (*Agrostis alba*) with sparsely scattered American elms (typical DBH of approximately eight inches). Common shrubs at the site include multiflora rose and Allegheny blackberry, while common forbs include Canada thistle (*Cirsium arvense*), Queen Anne's lace (*Daucus carota*), common teasel and an unidentified aster (*Aster* sp.).

Methodology

A field inspection and previous knowledge of the sites were used to identify baseline conditions within the study area. Vegetation impacts were determined by examining the potential effects of the proposed construction and use of the sites on vegetation according to type and sensitivity. Effects on vegetation on and immediately adjacent to each alternative site were assessed. For purposes of analyzing potential impacts to vegetation, the thresholds of change for the intensity of an impact are defined as follows:

Negligible	Some changes in native vegetation may occur at this threshold but would be slight, and barely detectable. Changes may affect some individual plants but would not affect entire native populations. New areas of plant disturbance would be small or minimal and the risk of invasive plant proliferation would be low and isolated.
Minor	Changes in native vegetation would affect some native plants and local plant populations, but would not affect population viability. Some minimal disturbance would occur in isolated areas of new development and invasive plant proliferation would be detectable but isolated. Changes to local populations and ecological processes would be minimal but detectable.
Moderate	The change in native vegetation would affect a population's abundance and diversity but the changes would not affect the viability of affected populations. Changes to local vegetation and ecological processes would be readily detectable but limited to a geographic area of the park. Invasive plant proliferation would be detectable and require management, but new populations would remain isolated.
Major	Change in vegetation would affect a population and its existence locally and compromise its viability regionally. Native vegetation would be affected in a relatively large area both in and out of the Park. Invasive plant proliferation would increase, new populations become established at several sites and require considerable new management efforts.

Impact Common to All Alternatives

Cumulative Impacts - A variety of past, present and reasonably foreseeable actions have affected and will continue to affect grassland, forest and wetland vegetation in the Park. Most forests were cleared in the 1800s for farmland or timber with adverse effects to associated wetlands. More recently, forests were cleared to create homes, businesses, freeways and other developments. Following establishment of CVNP in 1974, many acres that previously supported buildings or farmland began to revert to forestland. The park continues to maintain some grassland and meadow habitats through mowing and grazing but grasslands in other areas slowly are succeeding to forest. Many invasive plants were introduced to the area prior to the establishment of the Park. Although NPS staff has implemented – and will continue to

implement – efforts to control invasive plants, such species remain widespread on parkland and will continue to cause long-term minor adverse impacts on park vegetation communities.

Impacts of Alternative 1

Direct and Indirect Impacts - No specific actions are proposed that directly impact vegetation. Informal parking on lawns at Boston Store and the Canal boat yard would have negligible short-term adverse impacts. Non-native lawns would be maintained as open space. Invasive species populations will be managed opportunistically as part of the park's overall invasive species treatment plan. Restoration of bottomland forests may occur opportunistically in some areas undergoing individual environmental compliance.

Cumulative Effects - No additional cumulative impacts are expected under this Alternative.

Conclusion - Alternative 1 would not directly impact native vegetation, though grassy areas may experience short-term negligible adverse impacts.

Impacts Common to All Action Alternatives

Direct and Indirect Impacts - Approximately 300 feet of the Interpretive Loop Trail would be constructed through a bottomland forest, affecting understory vegetation but having minimal impacts on trees, as design would avoid tree removals. There is currently a cleared path providing informal access along a similar alignment. Additional impacts on vegetation at Latta Lane from the construction of camping facilities (pit toilets and cistern) and mowing for camp sites would be expected. Moving camping from the Stanford House field would allow mowed campsite to regenerate. Together, these impacts would have long-term negligible adverse effects on vegetation.

Under all Action Alternatives, 6.25 acres of bottomland forests would be restored (Appendix D, Figure D-11, Areas 4B, 5-7), providing long-term beneficial impacts on forest communities in the Boston Mills area. Gaps would be closed and larger, more intact forest blocks would result. Additional forest (~2 acres) would be restored in the stream restoration area. These benefits mitigate and far offset any vegetation impacts of every Alternative.

A small amount of mowed non-native lawn area (approximately 1 acres) would be lost to new parking areas at M. Boodey, Nina Stanford and the new Bus/RV parking lot and OverFlow Lot. However, approximately 3.7 acres of non-native mowed lawns (Appendix D, Figure D-11, Areas 1-3, 4A, 5B) would be restored to native grasses and forbs, having long-term benefits on local native meadow communities. These restored meadows largely offset the loss of lawn/meadow habitats under every Alternative.

The potential restoration of a portion of the Stanford Road berm may provide additional benefits to park vegetation if the road is vacated and closed.

Cumulative Impacts - If the Selected Alternative in the park's Trail Plan include a new Multi-Purpose Trail along Stanford Road, any benefits from the closure and restoration of Stanford Road may be reduced.

Impacts of Alternative 2

Direct and Indirect Impacts - Under all Options, the expansion of the Boston Trailhead parking area would result in the permanent loss of approximately 0.13 acres of mowed lawn and 0.17 acres of forest. The Stanford Parking lot construction would result in the permanent loss of approximately 1 acre of bottomland meadow/savannah vegetation, including several mature elm trees. Total expected loss of vegetation includes 0.13 acres of lawn, 1 acre of bottomland meadow/savannah, and 0.17 acres of bottomland forest.

However, an additional 1.5 acres of native grasses would be planted in the large field between Zielenski Court and Riverview Road (Appendix D, Figure D-11, Areas 8A and 8B). Overall long-term beneficial impacts would be expected for native meadow communities due to restoration. Long-term negligible adverse impacts on forest and minor adverse impacts on bottomland meadow/savannah would be expected.

Under Options B and C, an additional 1 acre of bottomland forest regeneration would be implemented on the Zielenski Court tract (Appendix D, Figure D-11, Area 9), so impacts on forests would be short-term negligible and adverse but then long-term and beneficial.

Cumulative Impacts - No additional cumulative impacts are expected under this Alternative.

Conclusion - Under this Alternative, Option A would have long-term benefits on native grass meadow vegetation, negligible long-term adverse impacts on forests and minor long-term adverse impacts on bottomland savannah communities. Options B and C provide additional forest restoration resulting in short-term negligible and adverse impacts and long-term beneficial impacts on forests.

Impacts of Alternative 3

Direct and Indirect Impacts - Under all Options, the construction of the large 100-car parking lot along Riverview Road would result in the permanent loss of approximately 0.5 acres of mowed lawn and 0.4 acres of forest. The large sycamore tree would be preserved. The Stanford Parking lot construction would result in the permanent loss of approximately 1.34 acres of bottomland meadow/savannah vegetation, including several mature elm trees. The modification to the Boston Store parking lot would result in the loss of several mature black walnuts in the current "island" of trees inside the parking lot loop (0.04 acres). Lawn impacts (0.05 acres) would also occur with the Johnston-Rodhe lot construction. Total expected loss of vegetation includes 0.55 acre of lawn, 1.34 acres of bottomland meadow/savannah, and 0.44 acres of bottomland forest.

However, an additional 0.9 acres of native grasses would be planted in the remaining mowed lawn field adjacent to the new Riverview Road parking lot (Appendix D, Figure D-11, Area 8A). Overall long-term beneficial impacts would be expected for native meadow communities due to this restoration. The Boston Trailhead parking lot (0.3 acres) would be converted to a reinforced grass turf overflow lot, adding some limited benefits. Also, forest restoration of approximately 0.6 acres is planned for most of the area where the current Boston Store lot would be removed, largely offsetting forest losses in the Alternative. Short-term negligible adverse impacts on forest and long-term minor adverse impacts on bottomland meadow/savannah would be expected.

Under Options B and C, an additional 1 acre of bottomland forest regeneration would be implemented on the Zielenski Court tract (Appendix D, Figure D-11, Area 9), so impacts on forests would be short-term, negligible and adverse but then long-term and beneficial.

Cumulative Impacts - If the Selected Alternative in the park's Trail Plan includes a water access point, regular seasonal access to the Boston Trailhead may need to be maintained for vehicles carrying kayaks or canoes, reducing the benefits. If the lot is not needed for water access, an additional 0.4 acres of grassland restoration could occur providing additional benefits.

Conclusion - Under this Alternative, Option A would have long-term benefits on native grass meadow vegetation, negligible short-term adverse impacts on forests and minor long-term adverse impacts on bottomland savannah communities. Options B and C provide additional forest restoration resulting in short-term negligible adverse and long-term beneficial impacts on forests.

3.8. Wildlife and Wildlife Habitat

Affected Environment

Faunal species that have been detected in CVNP include approximately 250 species of birds, 64 fish species, 36 mammals, 20 reptiles, and 18 species of amphibians. Wildlife species are distributed throughout the park and are associated with the three primary habitats the park provides; mature deciduous forests, early successional fields and meadows, and wetland habitats. Because the park landscape predominantly consists of forest (approximately 80 percent), this represents the primary wildlife habitat in the park. Within the park boundary, forests are substantially fragmented by roads, trails, residential development and other non-forest habitats.

Wildlife habitat that would be most affected by the proposed development and restoration actions in this Environmental Assessment are grasslands, bottomland meadow/savannah and forests, most of which are located adjacent to residential developments and roads. Specific vegetation communities affected were described in Section 4.7 and proposed restoration efforts are described in Section 3.3. Forests that are potentially affected are being removed

from small forest fragments a 2 acre fragment between Boston Trailhead parking and the Cuyahoga River, and a 2.2 acre fragment south of Boston Mills Road, between Riverview Road and the railroad tracks. The size, age and configuration of these forest fragments would characterize them as low quality. Two forest restoration areas (Appendix D, Figure D-11, Areas 4, 5 and 8) would add acreage to existing forests blocks that are modestly larger in size (7-15 acres).

There are over 250 bird species including 124 associated with forest habitats and 75 species breeding (year-long residents or summer residents) in park forests (NPS 2011b). Birds associated with smaller forest blocks tend to be common generalists such as northern cardinal (*Cardinalis cardinalis*) and American robin (*Turdus americanus*). Early successional habitats, including grasslands, shrub and savannah habitats are among the most threatened in the world and remain only in small amounts in the Park. Many species, including birds, small mammals, reptiles, insects, spiders and other invertebrates thrive in these types of habitats.

Amphibians and reptiles spend much of their time in and around wetland areas and the riparian zones within the park. Reptiles (snakes and turtles) are frequently found along the Towpath Trail and in watered portions of the canal.

Methodology

Evaluating of changes in vegetation cover and previous knowledge of the sites were used to identify baseline conditions within the study area. Impacts on wildlife and wildlife habitat were determined by examining the potential effects of the proposed construction and use of the sites on the potential abundance and distribution of wildlife and associated vegetation at and immediately adjacent to each alternative site. For purposes of analyzing potential impacts to wildlife and their habitats, the thresholds of change for the intensity of an impact are defined as follows:

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.
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Minor	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, but 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 be within natural variation. Sufficient habitat would remain functional to maintain viability of all species. Impacts would be outside critical reproduction periods for sensitive native species.
Moderate	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 is 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 they could 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 to maintain viability of all native species. Some impacts might occur during critical periods of reproduction or in key habitat for sensitive native species.
Major	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 be permanent. Population numbers, population structure, genetic variability, and other demographic factors for species might have large, short-term declines, with long-term population numbers greatly 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.

Impacts Common to All Alternatives

Cumulative Impacts – A variety of past, present and reasonably foreseeable actions have affected and will continue to affect wildlife populations in the Park. The park continues to maintain some grassland through mowing and grazing but early-successional habitats (grasslands, shrublands) in other areas slowly are succeeding to forest. Many invasive plants were introduced to the area prior to establishment of the Park. Although NPS staff has implemented – and will continue to implement – efforts to control invasive plants, such species remain widespread and will continue to cause long-term minor adverse impacts on wildlife communities.

Impacts of Alternative 1

Direct and Indirect Impacts -Under Alternative 1, the park would continue with the status quo to manage lands within the project area, therefore no impacts would occur.

Cumulative Impacts - No cumulative impacts to wildlife or wildlife habitat are expected under this Alternative.

Conclusion - Under this alternative, no impacts are anticipated.

Impacts Common to All Action Alternatives

Direct and Indirect Impacts - Under all Action Alternatives, 6.25 acres of bottomland forests would be restored (Appendix D, Figure D-11, Areas 4B, 5-7), providing long-term beneficial impacts on forest-associated species in the Boston Mills area. Gaps would be closed and larger, more intact forest blocks would result, benefiting forest species requiring larger forest blocks. Additional forest (~2 acres) would be restored in the stream restoration area. These benefits mitigate and far offset any forest habitat impacts of every Alternative.

A small amount of mowed non-native lawn area (0.7 acres) would be lost to new parking areas at M. Boodey, Nina Stanford and the new Bus/RV parking lot, having negligible effects on any wildlife. However, over 3.5 acres of managed non-native lawns (Appendix D, Figure D-11, Areas 1-3, 4A, 5B) would be restored to native grasses and forbs, having long-term benefits on native grassland meadow-associated species, especially insects and small mammals. While these meadows are located in near visitor use areas, these restored meadows largely offset the loss of lawn and meadow habitats under every Alternative.

The potential restoration of a portion of the Stanford Road berm may provide additional benefits to park wildlife.

Impacts of Alternative 2

Direct and Indirect Impacts - See the Vegetation Impacts section for a quantitative description of impacts on vegetation communities. Long-term negligible adverse impacts on forest species and long-term minor adverse impacts on bottomland meadow/savannah species due to immediate habitat losses would be expected. However, overall long-term beneficial impacts would be expected for native meadow communities due to planned restoration of non-native lawns to native grass meadows.

Under Options B and C, an additional 1 acre of bottomland forest regeneration would be implemented on the Zielenski Court tract (Appendix D, Figure D-11, Area 9), so impacts on forest species would be short-term negligible and adverse but then long-term and beneficial.

Cumulative Impacts - No cumulative impacts to wildlife or wildlife habitat are expected under this alternative.

Conclusion - Under this Alternative, Option A would have long-term benefits on native grass meadow wildlife, negligible long-term adverse impacts on forest species and minor long-term adverse impacts on bottomland savannah species. Options B and C provide additional forest restoration resulting in short-term negligible adverse and long-term beneficial impacts on forest species.

Impacts of Alternative 3

Direct and Indirect Impacts - See the Vegetation Impacts section for a quantitative description of impacts on vegetation communities. Long-term negligible adverse impacts on forest species and long-term minor adverse impacts on bottomland meadow/savannah species due to immediate habitat losses would be expected. However, overall long-term beneficial impacts would be expected for native meadow communities due to planned restoration of non-native lawns to native meadows.

Under Options B and C, additional long-term forest restoration benefits would occur.

Cumulative Impacts - No cumulative impacts to wildlife or wildlife habitat are expected under this alternative.

Conclusion - Under this Alternative, Option A would have long-term benefits on native grass meadow wildlife, negligible long-term adverse impacts on forest species and minor long-term adverse impacts on bottomland savannah species. Options B and C provide additional forest restoration resulting in short-term negligible adverse and long-term beneficial impacts on forest species.

3.9. Water Resources and Quality

Affected Environment

More than 22 miles of the Cuyahoga River pass through the Park. The Cuyahoga River drains more than 800 square miles and 6.5 percent of this drainage is within the Park. According to topographical maps published by the U.S. Geological Survey, more than 20 perennial streams totaling over 200 miles in length exist within the Park boundary.

Water quality standards for Cuyahoga River and its tributaries have been established by the Ohio Environmental Protection Agency and the U.S. Environmental Protection Agency in accordance with the Clean Water Act. The State has established the following use designations that apply to the water resources within the Park: state resource water, warm water habitat, cold water habitat and primary contact recreation (Ohio Revised Code 3745-1-26). Seven streams within the park have been designated by Ohio EPA as Cold Water Habitat. The majority of the tributaries within the park meet the water quality standards set forth by the state for either warm water or cold water habitat designation.

Almost all of the river segments that travel through the Park are in full attainment of the state of Ohio's water quality aquatic life use designation (Ohio EPA, 2003). Fish communities continue to recover and have shown marked improvements in the past four decades. Most of the fish habitat is located in the mainstem of the Cuyahoga River. Several of its tributaries meet or exceed the delisting targets set forth by the Great Lakes Water Quality Agreement (International Joint Commission, 2011). The Brecksville Dam pool, located downstream of Boston, is one of the areas in non-attainment within the Park boundary for fish communities (Cuyahoga River RAP Coordinating Committee, 2009).

Riparian areas (land adjacent to rivers and streams) help maintain stream water quality and biological health (Wenger 1999). In 2008, a park study characterized the conditions of the Park's riparian areas and their quality indicating that approximately 53 percent of the total land area of the park was within a functional riparian area (Holmes and Goebel 2008). Indeed, according to this report, most of the Study Area, except for upland areas of the Hines Hill complex and Latta Lane area are in this functional zone.

In Summit County, Ohio an ordinance to protect critical riparian areas (Ordinance #2002-154) that applies to unincorporated sections of the Study Area including both Boston and Sagamore Townships was passed in 2002. The ordinance does not apply to federal land within the County but the NPS typically voluntarily complies with the recommendations to the greatest extent possible. The ordinance outlines setback recommendations from the ordinary high-watermark for streams and rivers, including a 300-foot setback from the Cuyahoga River, and smaller setbacks (30-100 feet) for smaller drainage areas based on their size. The setback extends to the 100-year floodplain and generally prohibits construction, roads, parking lots, increased impervious cover, motorized vehicles and vegetation modifications.

Approximately 10 percent of the land within the Park is within the 100-year floodplain of the Cuyahoga River. The Cuyahoga River has frequently accessed its floodplain during large rain events. River gauges managed by the U.S. Geological Survey (USGS) are located immediately north of Rockside Road (Independence gauge) outside of the Park boundary and approximately 2.5 miles south of the Park at Old Portage Path (Portage gauge). The Old Portage gauge has not reached Major Flood (18.0') stage for the past one hundred years. Since 2000, the river has reached Moderate Flood stage (13.0') five times and Flood stage (10.5') three times at this location (NWS, 2012).

Much of the Boston Mills Historic District is located within the 100-year Cuyahoga River floodplain (Figure 8). This includes many historic and non-historic structures: Boston Station, the Zielenski Court structures, MD Garage, Dzerzynski, Boston Store barn, M. Boodey, and Trail Mix. Lindley Barn and the Boston Store parking lot are also within the floodplain. By definition all are also in the riparian setback area. A portion of the Boston Trailhead parking lot is in the Cuyahoga River riparian setback but not in the floodplain. The septic systems on the Zielenski Court property are in the floodplain, though their configuration and functionality are unknown at this time. The NPS manages a constructed wetland treatment system for its facilities in Boston that is located outside of the floodplain, south of Boston.

Some of the facilities and actions proposed under the Alternatives are completely or partially located in the Cuyahoga River floodplain including the new location for Boston Station, M. Boodey parking lot, parking for Trail Mix, reinforced turf parking along Boston Store driveway, the entire Zielenski Court property, a new pedestrian bridge over the river, the 54-car lot along Riverview Road, and part of the Johnston-Rodhe parking lot improvements (Figure 8). Additionally, portions of the Bus/RV lot and bus drop-off area, Overflow Lot, and additional area of the 54-car Riverview Road lot are within the riparian setbacks.

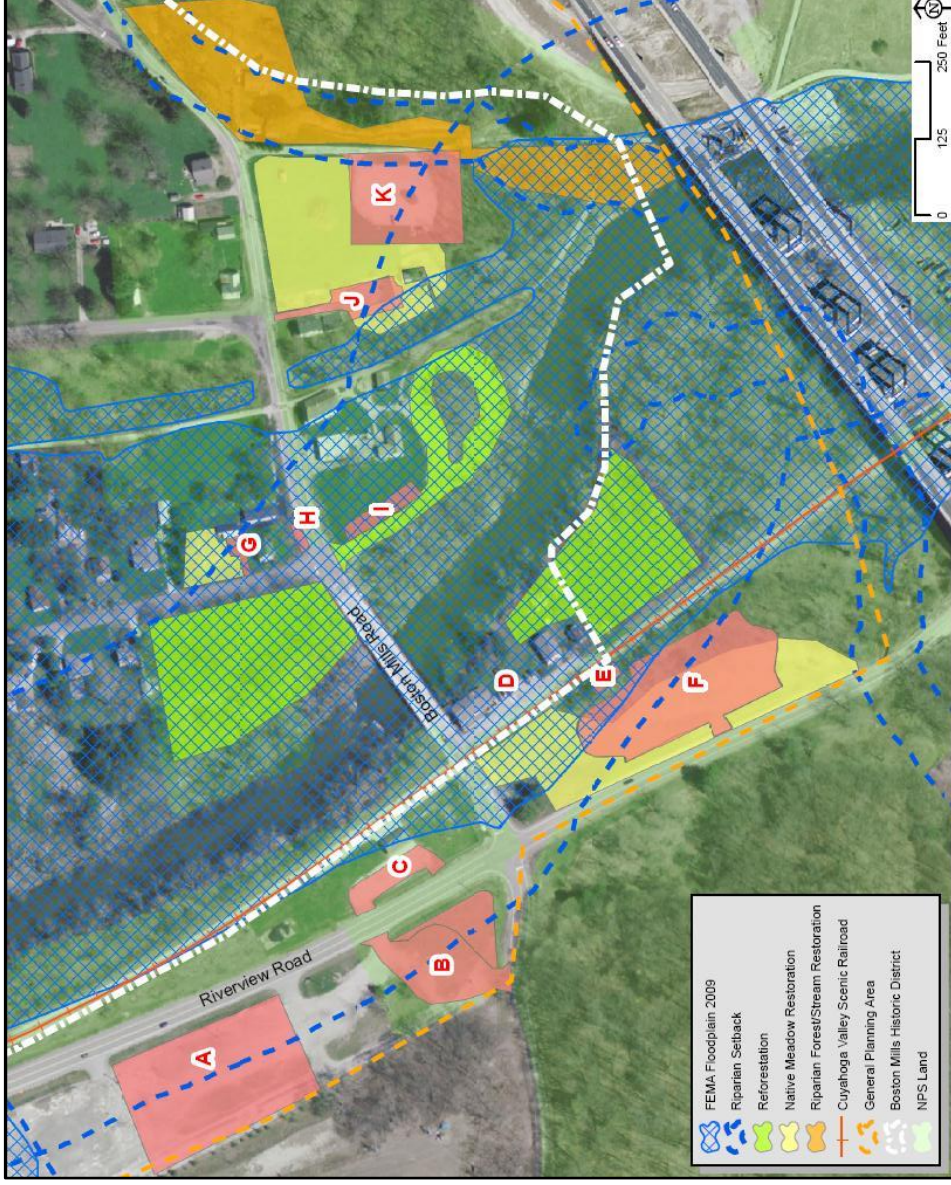
Many proposed native plant restoration areas are located within the floodplain and riparian setbacks. The proposed parking lot removal at Boston Store and removal of parking at Zielenski Court are also fully in the floodplain and riparian setback.

A scenic overlook, picnic area, and trails are also expected in the floodplain and riparian areas.

Methodology

Executive Order 11988 (Floodplain Management) requires the NPS and other federal agencies to evaluate the likely impacts of actions in floodplains. NPS Director's Order #77-2 Floodplain Management and Procedural Manual #77-2 provide NPS policies and procedures

Figure 8. Proposed actions located within floodplains or riparian setback areas in the Boston Mills Historic District (A= Overflow Lot, B= Bus/RV parking lot, C= Bus drop-off area, D= Zielenski Court property, E= new location of Boston Mill Station, F=54-car parking lot & expansion area, G= M. Boodey parking, H= Trail Mix, Boston parking, I=Reinforced Turf, J= Johnston-Rodhe parking lot, K= Boston Trailhead parking). Proposed native plant restoration actions are also depicted.



for complying with EO 11988. A draft Statement of Findings as required by these policies is attached as a separate document in Appendix F. Impacts on floodplains were assessed by quantifying changes occurring within the Summit County floodplain as mapped by FEMA in 2009. Impacts on natural floodplain function were evaluated. It was assumed that parking lots, reinforced turf areas and trails did not interfere with floodplain function since they do not impede or restrict flooding or markedly raise floodplain levels. Impacts on water quality were evaluated by quantifying changes within the riparian setbacks depicted on the Summit County Riparian Setback Map (extended to the 100-year FEMA floodplain as necessary).

Water quality impacts were assumed to result from increased storm water run-off from hardened surfaces, loss of vegetation, and potential spills and pollutants from vehicles. Water

quality benefits were assumed to result from native plant restoration efforts due to slowing of surface flows and greater infiltration expected compared to lawns or developed areas.

It was also assumed that the NPS will apply the highest sustainability standards to minimize storm water impacts from parking areas and other developments by incorporating best management practices and low impact development design principles into all projects and enforcing them during construction. This includes using porous pavements, stabilized turf, bioswales, raingardens, underground filtration, to the greatest extent possible given site conditions, location of sensitive resources, cultural resource impacts, and vehicle load requirements. For purposes of analyzing potential impacts to water resources and quality, the thresholds of change for the intensity of an impact are defined as follows:

Negligible	Impacts on water resources and quality would be barely detectable and would not have an impact to the physical and biological integrity of the water resources locally or regionally. Minimal or no change in riparian zone characteristics are expected.
Minor	The impacts on water resources and quality would be small and measurable, but barely detectable. Impacts could easily be mitigated by use of standard best management practices. Changes in affected riparian zones would be localized and not widespread.
Moderate	The impacts on water resources and quality would be detectable and noticeably affect the river or a tributary. Serious encroachment on and loss of riparian zones would be observed, and best management practices would not likely mitigate all impacts of these changes.
Major	The impacts on water resources and quality would be substantial and obvious and may extend outside of the Park boundary. Significant alteration of riparian zones would occur. Serious mitigation measures would be necessary and would likely still result in the loss of riparian value and function at large scales.

Impacts Common to All Alternatives

Cumulative Impacts - The continued presence of historic structures and parking facilities in the Cuyahoga River floodplain will have long-term minor adverse impacts on floodplain functions and values. Should global climate change result in increased flood frequency and flashiness as most scientists expect for this area (e.g., Union of Concerned Scientists 2009), the impacts of the Alternatives may be exacerbated.

Impacts of Alternative 1

Direct and Indirect Impacts - A small stream may continue to erode and become incised, having long-term minor adverse impacts on water quality downstream. Existing parking conditions in the riparian area may continue to have long-term minor impacts on water quality.

Cumulative Impacts - No cumulative impacts to are expected under this alternative.

Conclusion - Continued long-term minor adverse impacts on water quality from an eroding stream and existing parking facilities is expected.

Impacts Common to All Action Alternatives

Facilities located in areas outside riparian areas may have impacts on water quality due to the removal of vegetation, increased imperviousness and construction activities. However, it is expected that best management practices and sustainable design will largely mitigate these effects resulting in at most, long-term negligible adverse impacts from such facilities and improvements.

Moving Boston Station will cause no new impacts on water resources as it is currently located in the floodplain and is a modest structure with limited footprint (1,400 ft²).

The areas of the proposed Trail Mix parking is currently a compacted road shoulder. The modest amount of improved parking at Trail Mix (725 ft²) and M. Boodey (1,400 ft²) and series of proposed sidewalks would have negligible long-term adverse impacts on water quality that would be largely mitigated with proper design.

The proposed bus drop off area (6,300 ft²), a portion of the Bus/RV lot (7,000 ft²) its overflow area (4900 ft²), and about half of the Overflow Lot (23,500 ft²) are located outside the floodplain but within the 300-foot riparian setback. Much of these areas are either currently developed for pedestrian use or parking, having mostly gravel surfaces with no modern pollution or run-off controls in place. The bus drop-off area is currently a gravel surface for pedestrian access to Boston Station. The proposed Overflow Lot is located within the existing Boston Mills Ski Resort gravel parking lot. Both lots are located west of Riverview Road over 230 feet from the river. These lots have limited hydrological connectivity to the river due to the road and railroad berms separating them. With improved storm water management and design, the improved lots and drop-off area would not cause more than negligible to minor long-term adverse impacts on water quality and may actually help improve existing conditions by better managing, filtering and directing run-off.

The planned restoration of forests and native meadows and 1000 linear feet of an eroding, incised small tributary and its riparian area would provide direct and indirect long-term beneficial effects to water quality that should offset most impacts. The stream restoration should arrest erosion impacts on water quality. Native vegetation slows and filters water better than mowed lawns. Some areas of restoration are completely or mostly within the riparian setback including the stream restoration (Area 11; 37,600 ft²), Area 1 (5200 ft²), Area 3 (6,600 ft²) and Area 7 (61,215 ft²).

Impacts of Alternative 2

Direct and Indirect Impacts - Existing parking conditions in the riparian area may continue to have long-term minor impacts on water quality.

Reinforced turf along the Boston Store Parking lot driveway for overflow parking is located with the floodplain and riparian setback (3800 ft²). A portion of the Boston Trailhead expansion (11,900 ft²) is located within the riparian setback. Overall, these new facilities would have negligible additional long-term adverse effects water quality and no effects on floodplains.

Under Option B, a pedestrian bridge across the Cuyahoga River could affect floodplain function if not designed properly. It is expected however, that the bridge could be effectively designed to minimize any long-term adverse effects on floodplain function to negligible levels and would not be installed unless less this could be accomplished. Removing parking on the Zielenski Court property would provide beneficial effects on water quality.

Under Options B and C, linking Zielenski Court septic systems to the NPS sewage treatment facility would provide additional beneficial effects on water quality.

Additional native meadow restoration in the riparian areas (0.6 acres; 26,000 ft²) would provide long-term benefits on water quality helping offset impacts of the Alternative and improving existing conditions. Overall, this alternative would have long-term negligible to minor adverse impacts on water quality. Under Options B and C, additional benefits from an additional acre of bottomland forest restoration (Area 9) would be expected, offsetting the impacts of the new facilities.

Cumulative Impacts - If the pedestrian bridge is not built under Option B, then no impacts to floodplains are expected.

Conclusion - Overall, this alternative would have long-term negligible to minor adverse impacts on water quality. Additional benefits from restoration and sewer connections are expected under Options B and C. Negligible long-term adverse impacts on floodplains may occur from a pedestrian bridge under Option B.

Impacts of Alternative 3

Direct and Indirect Impacts - A portion of the 54-car lot along Riverview Road riparian setback area (16,469 ft²) with about 1/3 of it also in the floodplain (4,900 ft²). The railroad berm between the proposed lot and the river has no culverts, thereby reducing hydrological connectivity to the river, forcing water to slowly infiltrate or flow over surfaces south through a small forest fragment with pockets of wetlands to a small tributary over 250 feet away. As such the direct impacts on water quality from the proposed parking lot are somewhat mitigated by this hydrological isolation from the river. A portion of the Johnston-Rodhe parking lot is located in the riparian setback (2,750 ft²) with a small part of that in the floodplain (414 ft²). Overall,

these lot facilities would have negligible long-term adverse effects water quality and no effects on floodplains.

However, impacts from these facilities would be completely offset by the removal and restoration of the Boston Store parking lot and driveway from the floodplain and riparian setback area (Area 10; 26,500 ft²). This lot is located within 25 feet of the river, whereas the new proposed lots that replace it are mostly outside of the riparian zone with a net reduction in parking footprint in the riparian setback of over 7,200 ft². This would result in a net beneficial effect on water quality from existing conditions.

Under Options B and C, a pedestrian bridge across the Cuyahoga River could affect floodplain function if not designed properly. It is expected however, that the bridge could be effectively designed to minimize any long-term adverse effects on floodplain function to negligible levels and would not be installed unless less this could be accomplished.

Under Option B, removing parking on the Zielenski Court property would provide beneficial effects on water quality.

Under Options B and C, linking Zielenski Court septic systems to the NPS sewage treatment facility would provide additional beneficial effects on water quality.

Additional native meadow restoration in the riparian areas (0.44 acres; 26,000 ft²) would provide long-term benefits on water quality helping offset impacts of the Alternative and improving existing conditions. Overall, this alternative would have long-term beneficial impacts on water quality. Under Options B and C, additional benefits from an additional acre of bottomland forest restoration (Area 9) would be expected, offsetting the impacts of the new facilities.

Cumulative Impacts - No cumulative impacts to are expected under this alternative.

Conclusion - Overall, this alternative would have long-term beneficial effects on water quality, with additional benefits under Options B and C. Negligible long-term adverse impacts on floodplains may occur from a pedestrian bridge under Options B and C.

4. CONSULTATION AND COORDINATION

4.1. *Public Involvement*

Interagency and public scoping was conducted in July 2011.

Information about the project was published to the National Park Service’s Planning, Environment and Public Comment (PEPC) system on June 21, 2011 and was open for comment through July 27, 2011. Press releases and mailings were sent out encouraging the public to comment on the project. Boston Twp. residents in the project area were included on the mailing list. A total of 51 comments were received and incorporated into the document.

Scoping included federal, state, and local agencies and organizations having direct and indirect jurisdiction, insight, knowledge, expertise or concern for CVNP resources as well as private property owners in close proximity to the project.

This draft document was also published in PEPC and announced via press release and mailings.

4.2. *Individuals and Agencies Consulted*

A list of agencies, organizations and individuals that were sent a public scoping letter is presented in Appendix C of this document.

4.3. *Preparers and Contributors*

Table3. List of Preparers and Contributors

Name	Title: Responsibility
Kevin Skerl	Ecologist: Project Lead, Primary Author; Maps and Analysis
Kim Norley	Landscape Architect: Project Plans and Drawings
Paulette Cossel	Historical Architect and NHPA Section 106 Coordinator
Darlene Kelbach	Historical Landscape Architect
Christopher Davis	Plant Ecologist: Vegetation Surveys, Restoration Proposals
Lynn Garrity	Trail Planner: Trail Concepts, Counts, Compiled Statistics
Rebecca Jones	Park Ranger (IEVS): Concept for Interpretive Loop Trail
Jennie Vasarhelyi	Chief, Interpretation, Education, and Visitor Services (IEVS)
Steven Roberts	Field Operations Supervisor (IEVS)
Mary Pat Doorley	Operation Supervisor (IEVS)
Arrye Rosser	Interpretive and Education Assistant (IEVS)
Josh Bates	Volunteer Coordinator (IEVS)
Sonia Bingham	Wetland Biologist
Janet Popielski, P.E.	Civil Engineer

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Eric Semple
Dennis Hamm

Superintendent
Deputy Superintendent
Chief, Resource Management
Chief, Visitor and Resource Protection
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Appendix A: Structures in the Boston Mill Area potentially affected by the Proposed Action.

Historic District	Structure (<i>Current Use</i>)	Historic Name*	Year Built
<i>Boston Mills Historic District</i>			
<u><i>NPS Properties</i></u>			
	Boston Store Visitor Center	Boston Land and Manufacturing Company Store & Barn	1835
	MD Garage (<i>Public Gallery</i>)	MD Garage	1946
	Volunteer Center	Savacoal House & Barn	1920
	Dzerzynski (<i>Offices</i>)	Joseph Dzerzynski	1927
	Conger (<i>Storage</i>)	S.P. Conger House	1910
	Mary Boodey (<i>Offices</i>)	R.E. Wise House	1893
	Johnston-Rodhe (<i>Vacant</i>)	Woodrow and Helen R. Johnston House	1910
	Nina Stanford (<i>Vacant</i>)	Barnhart House	1835
<u><i>Conservancy for CVNP Property</i></u>			
	Trail Mix, Boston (<i>Store</i>)	Square Deal Food Store	1911
<u><i>Zielenski Court Property</i></u>			
	Apartments	Boston Mill General Store	1905
	House #1	Clara Muldowney House #1	1920
	House #2	Clara Muldowney House #2	1920
<i>George Stanford Farm</i>			
	Stanford House (Overnight rental)	George Stanford House & associated structures	~1830
<i>Not in a District</i>			
	Clayton Stanford (Residential)	Potentially eligible	early 1900s
	Hines Hill Conference Center	One structure (Gioia) potentially eligible for listing	1904, 1970s
	Vernon Boodey (<i>Residential</i>)	Not eligible for listing	1938, 1952
	Ostrica (<i>NPS TEL Station</i>)	Not eligible for listing	1968
	Lindley Barn	Potentially eligible	1881

* As it appears in the Historic District nomination for Boston Mills (1992) or George Stanford Farm (1982).

Appendix B. Laws (Statutes), Executive Orders, Regulations, Policies, and Guidelines.

Following are descriptions for some of the laws, executive orders, regulations, and policies that are referenced or apply to issues covered in the Environmental Assessment.

Antiquities Act of 1906 provided for protection of historic, prehistoric, and scientific features on federal lands, with penalties for unauthorized destruction or appropriation of antiquities; authorized the President to proclaim nation monuments; authorized scientific investigation of antiquities on federal lands subject to permit and regulations.

Archeological and Historic Preservation Act of 1974 (P.L. 93-291; 88 Stat. 174) amended the 1960 Reservoir Salvage Act; provided for the preservation of significant scientific, prehistoric, historic and archeological materials and data that might be lost or destroyed as a result of federally sponsored projects; provided that up to one percent of project costs could be applied to survey, data recovery, analysis, and publication.

Archeological Resources Protection Act (ARPA) of 1979 (P.L. 96-95; 93 Stat. 712) defined archaeological resources as any material remains of past human life or activities that are of archaeological interest and at least 100 years old; required federal permits for their excavation or removal and set penalties for violators; provided for preservation and custody of excavated materials, records, and data; provided for confidentiality of archaeological site locations; encouraged cooperation with other parties to improve protection of archaeological resources. Amended in 1988 to require development of plans for surveying public lands for archaeological resources and systems for reporting incidents of suspected violations.

The Clean Air Act of 1963 requires federal land managers to have an affirmative responsibility to protect a park's air quality from adverse air pollution impacts.

The Endangered Species Act of 1973, as amended, prohibits federal actions from jeopardizing the existence of federally-listed threatened or endangered species or adversely affecting designated critical habitat. Federal agencies must consult with the U.S. Fish and Wildlife Service to determine the potential for adverse effects. Federal agencies are also responsible for improving the status of listed species.

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.

Historic Sites Act of 1935, declared it a national policy to preserve historic sites, buildings, and objects for public use and authorized the NPS to “restore, reconstruct, rehabilitate, preserve,

and maintain historic and prehistoric sites, buildings, objects, and properties of national historical or archaeological significance.”

The National Environmental Policy Act of 1969 (NEPA), as amended, requires detailed and documented environmental analysis of proposed federal actions that may affect the quality of the human environment.

The National Historic Preservation Act (NHPA) of 1966, as amended, declared historic preservation as a national policy and authorized the Secretary of the Interior to expand and maintain a National Register of Historic Places that would include properties of national, state, and local historic significance. The Act recommends that federal agencies proposing action consult with the State Historic Preservation Officer regarding the existence and significance of cultural and historical resource sites.

National Park Service Organic Act of 1916 is the law that established the National Park Service (NPS) and outlined its fundamental mission, philosophy, and policies.

National Park System General Authorities Act of 1970 is an amendment to the NPS Organic Act that improved the administration of the NPS by designating that all units were to be managed as one system.

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990. These regulations address the rights of lineal descendants, Indian tribes, and native Hawaiian organizations to Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony. They require federal agencies and institutions that receive federal funds to provide information about Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony to lineal descendants, Indian tribes, and native Hawaiian organizations and, upon presentation of a valid request, dispose of or repatriate these objects to them.

Public Law 93-555 is enabling legislation that established the Cuyahoga Valley National Recreation Area

Executive Order (EO) 11593 (Protection and Enhancement of the Cultural Environment) instructs all federal agencies to support the preservation of cultural properties and directs them to identify and nominate to the National Register cultural properties under their jurisdiction and to “exercise caution...to assure that any federally-owned property that might qualify for nomination is not inadvertently transferred, sold, demolished, or substantially altered.”

EO 11988 directs federal agencies to protect, preserve, and restore the natural resources and functions of floodplains; avoid the long- and short-term environmental effects associated with the occupancy and modification of floodplains; and avoid direct and indirect support of floodplain development and actions that could adversely affect the natural resources and functions of floodplains or increase flood risks.

EO 11990 (Protection of Wetlands) directs federal agencies to minimize impacts 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. NPS policies for implementing EO 11990 are found in Director's Order 77-1 "Wetland Protection" and the associated Procedural Manual. This order requires that parks assess all direct or indirect impacts, including whether each alternative "supports, encourages, or otherwise facilitates additional wetland development."

EO 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.

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

EO 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. If such actions are taken, the EO directs agencies "to develop and implement within two years a Memorandum of Understanding with the U.S. Fish and Wildlife Service that shall promote the conservation of migratory bird populations." This EO also defines migratory bird "species of concern" as "those species listed in the periodic report Migratory Nongame Birds of Management Concern in the United States, priority migratory bird species as documented by established plans such as Bird Conservation Regions in the North American Bird Conservation Initiative or Partners in Flight physiographic areas], and those species listed in 50 CFR 17.11 [Endangered Species Act]".

Special Directive 82-12 "Historic Property Leases and Exchanges," elaborates on the leasing and exchange of historic properties under Section 111 of the NHPA of 1966 as amended.

Part 36 of the Code of Federal Regulations (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.

- 36 CFR 18 (NHPA of 1966), "Leases and Exchanges of Historic Property," govern the historic property leasing and exchange provisions of this law.
- 36 CFR 60 (NHPA and EO 11593), "National Register of Historic Places," addresses concurrent state and federal nominations, nominations by federal agencies, and removal of properties from the National Register.
- 36 CFR 63 (NHPA and EO 11593), "Determinations of Eligibility for inclusion in the National Register of Historic Places," establishes process for federal agencies to obtain determinations of eligibility on properties.

- 36 CFR 65 (Historic Sites Act of 1935), “National Historic Landmarks Program,” establishes criteria and procedures for identifying properties of national significance, designating them as national historic landmarks, revising landmark boundaries, and removing landmark designations.
- 36 CFR 68 (NHPA) contains the Secretary of the Interior’s standards for historic preservation projects, including acquisition, protection, stabilization, restoration, and reconstruction.
- 36 CFR 800 (NHPA and EO 11593), “Protection of Historic and Cultural Properties,” includes regulations of the Advisory Council on Historic Preservation to implement Section 106 of the NHPA as amended, and presidential directives issued pursuant thereto.

40 CFR 1500-1508 (Council on Environmental Quality NEPA regulations of 1978) – provides Regulations for Implementing the Procedural Provisions of NEPA.

43 CFR 3 (Antiquities Act) establishes procedures to be followed for permitting the excavation or collection of prehistoric and historic objects on federal lands.

43 CFR 7 Subparts A and B (ARPA, as amended), "Protection of Archeological Resources, Uniform Regulations" and "Department of the Interior Supplemental Regulations," provides definitions, standards, and procedures for federal land managers to protect archaeological resources and provides further guidance for Interior bureaus on definitions, permitting procedures, and civil penalty hearings.

43 CFR Part 46 “Implementation of the National Environmental Policy Act Of 1969” which outlines the Department of the Interior’s regulations for the implementation of NEPA

The NPS Management Policies (NPS 2006) provide general guidance for managing natural resources.

Cuyahoga Valley National Park’s General Management Plan (NPS, 1977) provides the overall concept for management and resource preservation for compatible recreational use.

Appendix C. Public Scoping List.

Agencies, Organizations and Local Communities

Akron Metropolitan Area Transportation Study	Girl Scouts of Northeast Ohio (Camp Ledgerwood)
Army Corp of Engineers	Greater Akron Audubon Society
Bath Township	House of Blues - Blossom Music Center
Boston Mills Ski Area	Hudson Park-Wildlife Woods
Boston Mills/Brandywine Ski Resorts	Metro Parks, Serving Summit County
Boston Township	Metroparks, Serving Summit County
Camp Manatoc B.S.A.	Miami Tribe of Oklahoma
Carriage Trade Farm	National Parks Conservation Association
City of Akron	NOACA
City of Bedford	Northfield Center Township
City of Brecksville	Ohio and Erie Canal Corridor Coalition
City of Cuyahoga Falls	Ohio Canal Corridor
City of Fairlawn	Ohio Department of Natural Resources
City of Hudson	Ohio Department of Natural Resources - Division of Wildlife, District 3
City of Independence	Ohio EPA
City of Valley View	Ohio Historical Society
Cleveland Audubon	Ohio Horseman's Council
Cleveland Metroparks	Ohio Horseman's Council
Cleveland Metroparks	Old Trail School
Cleveland Museum of Natural History	Ottawa Tribe of Oklahoma
County of Cuyahoga County	Phyllis Wheatley Association
County of Summit County	Richfield Township
Cuyahoga County Engineers	Sagamore Hills Township
Cuyahoga County Engineers Office	Seneca Nation
Cuyahoga County Horseman's Council	Seneca-Cayuga Tribe of Oklahoma
Cuyahoga County Planning Commission	Shawnee Tribe
Cuyahoga Ohio Horseman's Council	Shawnee Tribe of Oklahoma
Cuyahoga River RAP	Sierra Club - Portage Trail Group
Cuyahoga Soil & Water Conservation District	Summit County Department of Development, Planning Division
Cuyahoga Valley Countryside Conservancy	Summit County Engineer Main Office
Cuyahoga Valley National Park Association	Summit Soil & Water Conservation District
Cuyahoga Valley Scenic Railroad	The Inn at Brandywine Falls
Cuyahoga Valley Trails Council	U.S. EPA
Delaware Nation	U.S. Fish & Wildlife Service
Delaware Tribe	Village of Boston Heights
Eastern Shawnee Tribe of Oklahoma	Village of Peninsula
Friends of the Crooked River	Village of Richfield
	Village of Walton Hills
	Western Cuyahoga Audubon Society

Western Reserve Historical Society
Western Reserve Historical Society - Hale
Farm & Village
Western Reserve Land Conservancy
Western Reserve Resource Conservation and
Development Council
Wyandotte Nation

Calaway, David Allen
Caldwell, Michael P.
Duff, Michael
Feterle, Ronald and Mary
Fisher Jr., Richard
Fogg, Max D.
Fulton, Lisa
Getz, Don
Harrah, Joan
Jansen, Ellen
Jeric, Jr, William
Johnson, Kathleen
Johnson, William
Johnston, John F.
Krolak, Roberta
Lipchek, Susan
Malloy, Donald
Mathies, Kathleen
Mcdowell, Connie Lou
Orahoske, Jr, Joseph and Nancy
Rapp, Jason
Rickenbacher, Judith C.
Rodhe, Tom
Sherman, Michael
Spencer-Trueeman, Joseph and Holly
Szymanski, Daniel
Taylor, Ms. Patricia
Taylor, Patricia
Waight, David
Wojtkowski, Sigmund

US Congress

Representative Dennis Kucinich
Representative Marcia Fudge
Representative Steven LaTourette
Representative Timothy Ryan
Representative Jim Renacci
Representative Betty Sutton
Senator Robert Portman
Senator Sherrod Brown

Local Residents

Adams, Carla
Anderson, Amy Z.
Ausperk, Charles and Lisa
Bellian, Kim
Black, Susan
Blubaugh, Thomas and Patricia
Boston Community Church
Brooks, Dale G.
Calaway, David

Appendix D. Figures of Proposed Facilities and Developments (Figures D1-D18).

Appendix E. A Conceptual Thematic Tour of the Proposed Interpretive Loop Trail.

Background: A simple, easy grade, 1 mile loop trail around Boston would facilitate the visitor experience, giving a sample of the “Many faces of Cuyahoga Valley National Park.” The loop should have minimal grade and be fairly accessible for all abilities (though it does include using steps at Boston Lock for the full loop unless a bypass is built). A fully handicap accessible option, using about half of this trail could be also designated. This loop trail can introduce visitors to the variety of experiences that can be had in Cuyahoga Valley National Park. Themes presented here are flexible and may be modified to highlight other important topics including native plant restoration efforts, etc.

Parks to the People: The Many Faces of Cuyahoga Valley National Park
Zielenski Court Start (Alternative 2, Option B or Alternative 3, Option B): From the back area of Zielenski Court, visitors leave heading east across the river. Ideally they would cross the river on a pedestrian bridge that was accessible to all, not just the tall. Once across the bridge...

Cultural Natural Interplay: Bustling Boston

Boston Store Start (Alternative 2, Options A or C, Alternative 3, Options A or C): A wayside introduces the bustling village of Boston, with a picture looking north along Main Street at the company houses (image currently in our files). An inset picture of the Akron-Cleveland Bag Company helps the text explain why the village was bustling. Visitors turn right and travel along the river and at .13 miles...

Watershed Connections: The Cuyahoga River

A wayside tells a bit of the story of the Cuyahoga River, including its comeback, restoration and attraction of bald eagles, fish, potential for recreation etc.

Visitors continue following along the edge of the river to the back of the picnic area, turning right on the Towpath to the low spot in the path, where the former canal bed ran (.19 miles)...

Evolution of Transportation: The Cuyahoga Valley as a transportation corridor

A wayside overlooking the river, with the canal bed behind the visitor, introduces the valley as a transportation corridor that ran north and south. A bit of the history from prehistoric trade routes to modern interstates is touched on.

Visitors continue to follow the Towpath until the intersection with the connector trail, turning left on the connector trail towards the parking lot. Visitors follow the bridle path around the parking lot and at .36 miles, cross the road into the former boatyard. At .37 miles....

Impact of the Canal: The Boatyards of Boston

A wayside pictures a boatyard and explains that they are standing in a former boatyard. The Canal brought the first boom to Boston and speculation went wild. In time, two boatyards here built dozens of boats.

Visitors travel north on the bridle trail, veering left at .49 miles...

Natural Diversity: Natural Faces of Cuyahoga Valley National Park

This is one of two options for this theme, where visitors are standing in a small stand of woods, and the many habitats of the park are introduced. Other natural areas to explore can also be highlighted here.

Visitors continue following the foot trail, to .51 miles...

Impact of the Canal: Waste Weir

Wayside explains canal logistics and the need for a waste weir. (Structure exists in the woods, opportunity to explain it).

Visitors veer right along the top of the lock at .53 miles...

Impact of the Canal: Boston Lock

Using a historic image from the Boston Lock, the wayside explains the need for a lock and how locks helped build up towns.

Visitors travel over the top of the lock on the footbridge, follow the stairs down and turn right on the Towpath. At .64 miles, at the foot of the cemetery...

Cultural Natural Interplay: Prehistoric Peoples

Explaining that many early settlers believed this to be a mound, archeologists now know that prehistoric peoples inhabited the area as early as 12,000 years ago. This wayside is on the right, sort of across from

Natural Diversity: The Natural Faces of Cuyahoga Valley National Park

This is the alternative location for a wayside on natural diversity, as this one overlooks a marshy area, with fields and forest in the distance. Here the many habitats of the park can be introduced, with suggestions for further exploration. (This kiosk is on the left side of the trail.)

Visitors must turn around at this point and travel south on the towpath, back towards Boston Store. At the Boston Store, at .86 miles ...

Cultural Natural Interplay: Bustling Boston

This wayside re-introduces the bustling village of Boston, citing its boom and busts and current status as a living village within the national park. The wayside invites visitors in for more exploration or they may turn right to continue back for the full 1 mile.

Appendix F: Statement of Findings for Executive Order 11988 “Floodplain Management”

CUYAHOGA VALLEY NATIONAL PARK

**Boston Mills Area
Conceptual Development Plan and Environmental Assessment**

Appendix F

Statement of Findings

for

Executive Order 11988 “Floodplain Management”

Recommended: _____ Superintendent, Cuyahoga Valley National Park	Date
Concurred: _____ Chief, Water Resources Division	Date
Approved: _____ Director, Midwest Region	Date

INTRODUCTION

Executive Order 11988 (Floodplain Management) requires the NPS and other federal agencies to evaluate the likely impacts of actions in floodplains. The objective of E.O. 11988 is to avoid, to the extent possible, the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. NPS Director's Order #77-2 Floodplain Management and Procedural Manual #77-2 provide NPS policies and procedures for complying with E.O. 11988. This Statement of Findings (SOF) documents compliance with these NPS floodplain management procedures.

PROPOSED ACTION

Alternative 3, Option B (the Preferred Alternative) proposes redevelopment in the Boston Mills area that focuses on improving pedestrian movement, concentrating parking outside of Boston's center, and restoring and highlighting natural features. Actions proposed under this Alternative (including actions common to all other Alternatives) include new parking lots, parking lot removals, moving a structure, changes in use of structures, new trails and sidewalks, interpretive exhibits, a pedestrian bridge, and native vegetation and stream restoration.

The following actions are located at least partially within the 100-year floodplain (Figure F-1):

Zielenski Court Visitor Center: The historic Zielenski Court property (3 structures: 1 apartment building and two residential structures) would be acquired by the NPS and be transformed into the park's main visitor center with 2500 square feet of exhibit space, a welcome plaza, two information kiosks and five interpretive waysides. The two smaller structures would be used to support the visitor center or any of a number of office, commercial services, rental, residential or interpretive functions. Existing parking near the structures would be eliminated. The property is completely within the floodplain.

Main Parking Lot: A new main 54-car parking lot would be constructed between the railroad tracks and Riverview Road, south of Boston Mills Road to provide the primary visitor parking in Boston (0.55 acres). If the proposed Overflow Lot (described below) cannot be implemented or becomes untenable due to safety or traffic congestion concerns, this main lot may be expanded to approximately 100-cars in the future to approximately 1 acre. For this analysis, we will consider the impacts of the expanded larger lot. Approximately 1/3 of the proposed lot area is within the floodplain.

Pedestrian Footbridge: A pedestrian footbridge spanning the Cuyahoga River would provide visitors their primary path to Boston from Zielenski Court. The bridge is completely within the floodplain, though its actual location will be determined at design stage.

Johnston-Rodhe parking lot: An expanded 20-car lot behind Johnston-Rodhe would provide a bank of limited mobility and handicap accessible parking spaces in Boston and parking for several government vehicles. A small part of this lot is the floodplain (414 ft²).

Trail Mix parking: Two designated 15-minute parking spaces in front of Boodey House would provide Trail Mix with drop-in customer parking. These spaces are completely within the floodplain.

Mary Boodey House parking: Three parking spaces (one limited-mobility, one 15-minute drop-off) will be constructed behind the M. Boodey House with a drive connecting to Main Street to provide volunteer parking at the structure. This lot is completely within the floodplain.

Boston Store parking lot removal: Boston Store parking lot and drive (26,500 ft²) would be removed and restored to native vegetation while providing scenic overlooks to the river and other amenities such as benches and picnic areas. This lot is completely within the floodplain.

Boston Mill Station move: Boston Mill Station would be moved from a site north of Boston Mills Road to a location approximately 250 feet south of Boston Mills Road near the historic depot location. A new crushed stone boarding area would extend approximately 375 feet along the west side of the railroad track berm across from the Zielenski Court property. Both locations are in the floodplain.

Restoration to native grasses and forest: Several patches of lawn dominated by non-native grasses are distributed throughout the planning area. Areas to be restored include approximately 7.5 acres of forest and 4.7 acres of native meadows including 3.4 acres of restoration in the floodplain.

Invasive plant removal and restoration of channelized stream: A small stream, channelized for most of its length, runs adjacent to Boston Mills Road and the Boston Trailhead lot until its confluence with the Cuyahoga River. The NPS would re-establish native, bottomland forest on approximately 1.9 acres of disturbed habitat east and upstream of the overflow lot and restore natural geomorphology to approximately 1,000-linear feet of a channelized, culverted creek using bioengineering methods. The 2004 Programmatic Environmental Assessment for Riverbank Management of the Cuyahoga River evaluated alternatives to protect the Towpath Trail from the erosive forces of the river and its tributaries. About 0.5 acres of this restoration work is in the floodplain of the Cuyahoga River.

Other proposed actions under the Preferred Alternative that are located outside the floodplain include:

New Parking Lots: A new bus and recreational vehicle (RV) parking lot and bus drop-off area, and improved overflow parking lot on a the existing Boston Mills Ski Resort parking lot, expansion of the Hines Hill parking lot, a new parking lot located on Stanford Road north of Stanford House, and new parking spaces at Nina Stanford.

Closed Parking Lots: The existing parking lot at Boston Store would be closed, removed and restored. Boston trailhead would be closed and converted to reinforced turf for seasonal use or restored, depending on Trail Plan outcomes.

New Facilities: Existing Stanford House hike-in public camping would eventually move to Latta Lane and be expanded. New signage to facilitate circulation would be evaluated and implemented. Outdoor interpretive sculptural elements appropriate for the cultural landscape may be evaluated and sensitively located in several areas in Boston.

Trails, paths, scenic overlooks, and a picnic area are also proposed but these facilities are excepted from compliance with DO 77-2.

Based on the proposed actions fitting the DO 77-2 description for Class I actions, the Regulatory Floodplain is the Base (100-year) Floodplain. No museum artifact, paper records or other irreplaceable items would be stored in any structure.

SITE DESCRIPTION

Federal Emergency Management Agency (FEMA) Flood Insurance Rate maps (2009) indicate that some of the proposed actions in the Preferred Alternative are within a Zone A 100-year-flood floodplain (Figure A). Zone A identifies that the floodplain limits were established using approximate methods and that detailed studies have not been completed by FEMA in this area to determine specific Base Flood Elevations. However, following EO 11988, this level of mapping is considered adequate for floodplain analyses.

The floodplain extends west of the railroad tracks and approaches but does not reach Boston Store to the east, including parts of the low-lying historic Ohio and Erie Canal prism. The main channel of the Cuyahoga River is located within a floodplain approximately 800 feet wide as it passes through Boston. The river is hardened at the I-271 bridge piers and along the eastern edge as it approaches Boston. Boston Mills Road bridge is located completely in floodplain.

JUSTIFICATION FOR USE OF THE FLOODPLAIN

The proposed project is focused on redevelopment of an active visitor use area in the park that was established around the Boston Mills Historic District. Historic structures in the Historic

District including the Zielenski Court structures, MD Garage, Dzerzynski, Boston Store barn, Mary Boodey, Square Deal Food Store (i.e., Trail Mix, owned by the park's partner Conservancy for CVNP), and the Ohio and Erie Canal are located within the floodplain, therefore the use of these structures and any associated infrastructure (e.g., access, handicap and limited mobility parking, exhibits etc.) must be located within the floodplain.

DESCRIPTION OF SITE-SPECIFIC FLOOD RISK

The Cuyahoga River has frequently accessed its floodplain during large rain events. River gages managed by the U.S. Geological Survey (USGS) are located immediately north of Rockside Road (Independence gage) outside of the Park boundary and approximately 2.5 miles south of the Park at Old Portage Path (Portage gage). In the past ten years, the Independence gage site has reached Major Flood Stage (18.5 feet) seven times with the most recent occurring in February, 2011. The river has also reached Moderate Flood Stage (17.0') twice at Independence since 2000. The Old Portage gage has not reached Major Flood (18') stage for the past one hundred years. Since 2000, the river has reached Moderate Flood stage (13.0') five times and Flood stage (10.5') three times at this location (NWS, 2012).

Much of the Boston Mills Historic District is located within the 100-year Cuyahoga River floodplain. The majority of flood flows are conveyed in the main channel area. There are few records of floods affecting Boston facilities or structures according to data collected in for the park's 2012 Flood Response Plan. It was noted that when the Independence gage reached 17.5 feet, flooding adjacent to the railroad tracks was observed in Boston. Park staff is not aware of any flood event affecting NPS structures in Boston.

FLOODPLAIN MITIGATION

Protection of Human Life

There is adequate warning time in the event of flooding, because high water levels can be easily observed upstream, the park actively monitors gage levels during storm events, and a Flood Response Plan (2012) is in effect. Additionally, a new river gage has been placed in the park at Jaite (near Highland Road, downstream of Boston) that should allow for improved monitoring of river water levels in the future.

While some parking associated with historic structures necessarily remains in the floodplain, the net effect of the proposed action is to move parking to the edge or outside of the floodplain to areas that allow for quicker egress to higher ground, improving health and safety. Should evacuation of the site be necessary in the event of flooding, visitors and Park staff would be able to exit the area via Boston Mills Road to the east or west and Riverview Road to the north or south to leave the area.

The park's Flood Response Plan (2012) outlines a standard procedure for monitoring for flood risks, declaring flood emergencies, protecting life and resources, issuing evacuations and

closures, and setting up the Incident Command System. The plan also outlines flood safety measures and responsibilities for thoroughly and efficiently evaluating on park resources and structures to document facilitate a full flood assessment and response. These measures mitigate risks to human health and safety and capital investments.

Protection of Capital Investment

There is no documented evidence that flooding events in Boston have resulted in significant damage to current park infrastructure, despite their location in the floodplain. The fact that historic structures from the early 1900s remain is evidence that risks of catastrophic losses are not expected. Parking lots are typically not greatly harmed by infrequent floods, and historic structures can usually be protected from minor floods through the use of sand bags, sump pumps and other temporary measures.

The proposed visitor center may have temporary displays of historical or archeological items but the NPS would place displays on the second story or establish plans for quick removal to higher ground during periods of flood risk. Any sensitive equipment and paper records will stored on second story levels and/or plans will be in place to remove such items from lower areas during times of elevated flood risk. Any property damages that may occur after taking these measures is accepted as a consequence of maintaining access to historic structures and recreation in in floodplains and would be replaced in kind.

Preservation of Floodplain Values

Parking lots and other minor developments proposed in this plan are not expected to affect floodplain value or function. The NPS will apply the best management practices to minimize storm water impacts from new parking areas by incorporating best management practices and low impact development design principles into all projects. This includes using porous pavements, stabilized turf, bioswales, rain gardens, underground filtration, to the greatest extent possible given site conditions, location of sensitive resources, cultural resource impacts, and vehicle load requirements. These elements will be incorporated to the greatest extent possible into the final designs of all parking projects. The small Boston Station structure is simply moved within the floodplain. The pedestrian bridge, if constructed, would be designed so as to not cause adverse impacts on floodplain function beyond negligible levels. All facilities would be designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (44 CFR Part 60).

Furthermore, any new parking lot development within the floodplain is offset by parking lot and driveway removals, relocation of parking outside of or to the edges of floodplains, and native plant and stream restoration measures in the floodplain areas.

CONCLUSION

The National Park Service concludes that there is no practical alternative for developing and maintaining facilities and resources in the floodplain, due to their association with historic resources the NPS is charged to protect and provide for public access and use. The proposed actions under the Preferred Alternative would not measurably impact floodplain function and would improve health and safety, protect public and private property, and reduce environmental impacts by moving most parking to safer locations at the edge and outside of floodplains.

Sustainable design, mitigation and compliance with regulations, policies, and the park's Flood Response Plan to prevent impacts to water quality, floodplain values, and loss of property or human life would be strictly adhered to during and after construction. Individual permits with other federal, state and local agencies would be obtained prior to any construction activities as required. No long-term adverse impacts would occur from the Preferred Alternative. Therefore, the National Park Service finds the Preferred Alternative to be acceptable under Executive Order 11988 and DO 77-2 for the protection of floodplains.

Figure F-1. Proposed actions located within the Cuyahoga River 100-year floodplain, Boston Mills Historic District, Boston Ohio (A= Boston Mill Station current location, B= Boston Mill Station new location, C= 54-car Main Parking Lot & expansion area, D= proposed Zielenski Court Visitor Center and associated structures, E= potential pedestrian bridge location, F= Mary Boodey parking, G= Trail Mix parking, H= Johnston-Rodhe parking lot, I= Boston Store parking lot removal & restoration. Other proposed native plant and stream restoration actions are also depicted.

