

Finding of No Significant Impact: Jefferson National Expansion Memorial Emerald Ash Borer Strategy Environmental Assessment

Background

As stated in the 2009 General Management Plan (GMP), "Jefferson National Expansion Memorial was the brainchild of Luther Ely Smith, a prominent St. Louis attorney. Smith convinced the city mayor, Bernard Dickmann, and prominent St. Louis business men that '...a suitable and permanent public memorial to the men who made possible the western territorial expansion of the United States, particularly President Jefferson,' should be built on the St. Louis riverfront. On December 21, 1936, President Franklin D. Roosevelt signed an executive order providing direction to the Secretary of the Interior for the acquisition and development of Jefferson National Expansion Memorial. The Memorial was the first Secretarial designation under the Historic Sites Act of 1935, and was to be administered by the National Park Service."

The purpose of Jefferson National Expansion Memorial is:

- To commemorate, through a designed memorial, Thomas Jefferson's vision of building a unified continental nation and St. Louis' role as a confluence and gateway of the American westward expansion during the 19th century.
- To interpret the key individuals and cultural groups involved in exploring, exploiting, and inhabiting the western lands from the Mississippi River to the Pacific Ocean.
- To preserve the architecturally significant Old Courthouse as the site of the Dred Scott case, which divided North and South over the extension of slavery into the western territories and led to the American Civil War.

The Memorial is located entirely within downtown St. Louis, Missouri. The 91-acre Memorial sits on the west bank of the Mississippi River and occupies 40 blocks between Eads Bridge and Poplar Street, bounded on the east by Leonor K. Sullivan Boulevard and on the west by Memorial Drive, except for 2 blocks immediately west of Memorial Drive occupied by Luther Ely Smith Square and the Old Courthouse. The Memorial includes the Gateway Arch, the Museum of Westward Expansion, the grounds around the Gateway Arch, and the Old Courthouse. The Memorial is iconic due to its Modernist character, which is the work of master architect Eero Saarinen and master landscape architect Dan Kiley. The designed landscape includes a single-species tree planting that frames views to the Gateway Arch along its curving walks:

The National Park Service (NPS) has completed an Environmental Assessment (EA) analyzing the environmental consequences of managing the potential threat from the Emerald Ash Borer (*Agrilus planipennis* Fairmaire) (EAB) on the historic landscape of the Jefferson National Expansion Memorial by removing the single species planting of Rosehill ash (*Fraxinus americana* 'Rosehill') and replacing it with a new uniform planting using a compatible new species. The EA proposes a strategy for addressing the EAB, establishes criteria and decision-making process for identifying a compatible species for replacing the Rosehill ash, and assesses the impacts of replacing the ash trees in the historic planting. The goals of the project include maintaining the integrity of the National Historic Landmark (NHL), retaining the character-defining features of the Memorial (including the single species tree planting along the allées), minimizing the impact on National Park Service operations, and maintaining and enhancing the visitor experience. The primary goal of the tree replacement is to maintain the significant character-defining qualities of the planting as they contribute to the Memorial's status as a National Historic Landmark (NHL).

The National Park Service is proposing action at this time due to the current state of decline of the Rosehill ash trees as well as the impending arrival of the EAB in the St. Louis metropolitan area. The Rosehill ash has been identified as a species that is susceptible to EAB damage; and it is anticipated that once the EAB becomes established in the St. Louis area, the ash trees would quickly succumb to the insect. In addition, the existing ash trees have reached maturity—due to decline, a number of trees have already been removed—leaving gaps in this character-defining feature. The Memorial's General Management Plan directs park managers to protect the allee, along with the NHL's other character-defining landscape features.

Alternatives

The CLR/EA includes two alternatives for addressing the Emerald Ash Borer threat. The alternatives include the current management (no action alternative) and one action alternative which proposes changes to the uniform planting.

The Current Management Alternative (no-action alternative) provides the basis for evaluating impacts associated with the action alternative.

Current Management (No-action Alternative)

Under the no-action alternative, the uniform planting would continue to be managed as it is currently and no new policies would be implemented. With this alternative, the NPS would retain the existing Rosehill ash trees in place and remove trees on an individual basis as they decline. (From 2004 to 2009, the Rosehill ash trees that were removed were not replaced because of concerns about the future potential for EAB infestation. However, the grounds crew planted 35 Rosehill Ash in the Spring of 2010 to reduce the number of missing trees in strategic locations.) The ash trees on the Memorial grounds are routinely trimmed and maintained by Memorial grounds maintenance staff. Damaged limbs or entire trees are removed when necessary to prevent hazards to visitors.

This alternative would not meet project objectives because, eventually, the arrival of the EAB would make it impossible for the NPS to perpetuate the ash planting. The allee would deteriorate or be damaged to the point that the planting would be lost. This alternative would not be consistent with the GMP or the Memorial's *Cultural Landscape Report*. Dan Kiley's original design intent and the integrity of the NHL would potentially be diminished due to the loss of this essential character-defining feature.

Proposed Action (Preferred Alternative)

This Alternative was determined to be the preferred NPS alternative and the environmentally preferable alternative because it meets the project objectives better than the no-action alternative. Under this proposal, the Rosehill ash trees would be removed in a phased approach, coordinated with implementation of the overall design competition identified in the 2009 GMP preferred alternative and specific treatment recommendations from the CLR. The replacement trees in the allées would be a single species of uniform height, form, and caliper.

The alternative would be consistent and compatible with Kiley's design intent. The integrity of the NHL would be retained through the use of a single replacement tree species that features similar caliper, height, and spread. The replacement tree species would also be chosen based on its compatibility with growing conditions at the Memorial.

The Proposed Action was determined to be the environmentally preferred alternative when measured against the six criteria listed in Section 101 of NEPA. The recommended treatments for the Preferred Alternative are summarized below.

Criterion 1

Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations, is best met by the Proposed Action, which emphasizes:

- Retention of character-defining features that contribute to the Memorial's NHL status.
- Minimal disturbance of surrounding landscape areas.
- Sustainable maintenance practices related to planting, watering, and fertilizing features within the historic designed landscape.

Criterion 2

Assure for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings, is best met by the Proposed Action, which emphasizes:

- Selection of a replacement tree species that is compatible with site growing conditions, maximizing the potential of a successful and sustainable planting.
- Retention of character-defining features that contribute to the Memorial's NHL status.
- Continued access to shade for visitors and park staff.
- Minimal disruption to park operations.

Criterion 3

Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences, is best met by the Proposed Action, which emphasizes:

- Reduction in long-term maintenance needs by installing trees that are compatible with site growing conditions.

Criterion 4

Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice, is best met by the Proposed Action, which emphasizes:

- Maximizing the rehabilitation of a character-defining feature in the historic landscape and enhance the overall integrity of the Memorial landscape.
- Increasing the ability of visitors to experience the historic landscape by maintaining features in good condition.
- Enhancing tree health and creating a positive urban environment in downtown St. Louis.
- Minimizing disturbance to surrounding landscape areas.

Criterion 5

Achieve a balance between population and resource use that will permit high standards of living and wide sharing of life's amenities, is best met by the Proposed Action, which emphasizes:

- Providing pedestrian access with shade in summer.
- Developing research partnerships with universities by exploring use of pest resistant replacement tree species.

- Coordination of all planning and implementation efforts with partner organizations, local communities and non-NPS property owners to allow continued visitor use.

Criterion 6

Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources, is best met by the Proposed Action, which emphasizes:

- Respect local restrictions on disposal of EAB infected bio-mass.

Why the Selected Alternative Will Not Have a Significant Effect on the Human Environment

The intensity or severity of impacts resulting from implementation of the Proposed Action is evaluated using the ten (10) criteria listed in 40 CFR 1508.27. Key areas in which impacts were evaluated include Natural resources (vegetation), Cultural resources (including cultural landscapes, historic properties, and visual and aesthetic resources), Visitor use and experience, National Park Service operations, Public health and safety, and Transportation and access.

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Criterion 1

Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

Over the short term, the Proposed Action would have a minor to moderate adverse impact on the Memorial landscape as a result of the replacement of the mature trees with smaller, immature trees. However, since the new trees would occupy the same locations as the existing Rosehill ash and the rhythmic spacing contained in the original planting plan would be maintained, the integrity of the NHL would be retained. The Proposed Action would also retain the integrity of the setting of the Gateway Arch, which is an individually listed NHL. Over the long term, the effects of the Proposed Action on historic properties would be negligible, and potentially beneficial.

Criterion 2

The degree to which the proposed action affects public health or safety.

Under the Proposed Action, the Rosehill ash trees would be removed in phases and extensive areas of the walkways would be cordoned off during tree removal activities to eliminate conflicts between visitors and the construction activity. Signs would direct pedestrians around the areas of active construction, and these measures are expected to provide an adequate margin of safety to visitors to the Memorial.

Due to the large number of trees to be removed in any one phase, there would be an increase in maintenance and construction vehicle traffic during the active construction period. Vehicle routes would be chosen to minimize conflicts between maintenance vehicles and pedestrians. In addition, the locations of construction staging areas would be planned and designed to minimize dust, noise, and other hazards to visitors and Memorial staff. As a result of precautions taken during the active construction period, the impact on public health and safety would be minor.

Criterion 3

Unique characteristics of the geographic area such as proximity to historic or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The Proposed Action does not affect any parklands, prime farmland, wild and scenic rivers, or wetlands. There are no known federally listed species, or critical habitat within the project area. Extant historic and cultural resources would be protected during construction and rehabilitated over the long term.

Criterion 4

The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The Proposed Action is not highly controversial. No issues arose during the preparation EA from park staff and no issue was brought to the park's attention during the public review period that indicated a dispute with either the methodology or results of the analysis of topics. A number of comments (less than 20) were received that questioned replacing the Ash trees with a uniform planting, however, a mixed planting would not meet the project criteria.

Criterion 5

The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

There were no highly uncertain, unique, or unknown risks identified during either the preparation of the EA or the public review period.

Criterion 6

The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The Proposed Action does not establish a precedent for future actions with significant effects since the alternative rehabilitates a character-defining feature in such a manner that it protects the integrity of the NHL. Furthermore, the Proposed Action is consistent with the General Management Plan and Cultural Landscape Report.

Criterion 7

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

The EA was prepared to protect a character-defining feature of the Memorial Landscape. Likely future actions taken individually or collectively under the General Management Plan as currently written would not result in a cumulative impact to the human or natural environment.

Criterion 8

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

The Proposed Action would not have an adverse impact on cultural landscapes or historical buildings or structures listed in or eligible for listing in the National Register of Historic Places. The Missouri Department of Natural Resources, State Historic Preservation Office, concurred with the determination of no adverse effect in a letter dated November 14, 2011.

Criterion 9

The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

There are no federally listed plant or animal species known within the project area. Park staff sent a Section 7 coordination letter to the U.S. Fish and Wildlife Service (USFWS) on August 2, 2011. The field supervisor responded on August 15, 2011, stating that "the U.S. Fish and Wildlife Service has reviewed the proposed action and determined that no federally listed species, candidate species, or designated critical habitat occurs within the project area. Furthermore, the Service has determined that this action will have negligible impacts on wetlands, migratory birds, and other priority fish and wildlife resources."

Criterion 10

Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.

The Proposed Action would not violate any environmental protection law or regulation. Appropriate consultation, coordination, and permitting actions would be necessary prior to implementing the Selected Alternative. These actions would include Section 106 consultation under the National Historic Preservation Act, Section 7 of the Endangered Species Act, and Section 404 and 401 permits under the Clean Water Act, as necessary.

Public Involvement

The Memorial held three public involvement activities between 2009 and 2010. A round table discussion was held in May 2009 with Memorial staff and local entomologists, arborists, and urban foresters. The group discussed EAB, the spread of EAB in the Midwest, and impacts to the Rosehill ash at the Memorial.

During a meeting held in April 2010, the National Park Service presented information to stakeholders and the general public regarding EAB and the Rosehill ash trees. This presentation included a discussion regarding the significance of the Rosehill ash planting to the overall site design, the current status of EAB in Missouri, the existing conditions of the Rosehill ash planting, and the strategy for addressing the EAB threat.

A public information meeting regarding the EA was held on October 12, 2010 at the Old Courthouse. The National Park Service notified the public through a press release, and an article about the meeting was published in the St. Louis Post-Dispatch on October 11, 2010. Approximately 50 people attended the meeting. Issues raised by attendees included concern over continued presence of a uniform planting because of the threat from future pest infestation or disease to the replacement trees. There was support for use of native species in the replacement planting, and recommendations for how to cultivate the replacement trees.

On July 29, 2011 the EA was distributed for public review and comment for a 30-day period. Park staff distributed a press release, and the Environmental Assessment was made available at the Park's administrative office and on the Park's website. When requested, copies of the Environmental Assessment were mailed to interested individuals. The park received fourteen comment letters. Several of the letters repeated the concerns about a uniform planting and support for planting native trees that were raised in the October 2010 public meeting.

As the City Arch River 2015 (CAR 2015) design competition moves forward, the EAB threat will continue to evolve. Although Missouri's EAB threat is relatively localized in Wayne County, it has been located 70 miles away in Salem, Illinois. The Memorial will continue to monitor the infestation and follow the response recommended by the University of Missouri Extension and United States Army Corps of

Engineers—known as the “Slow Ash Mortality Project” or “SLAM.” Because the final determination of the replacement species will be made as part of CAR 2015, the design team will continue to refine the suggested list of compatible species. They will need to determine the benefits and drawbacks of planting seedlings, single cultivars, or a mix of several cultivars. If the allee and tree pits can be replaced as part of CAR 2015, the Memorial will have more flexibility in choosing the ultimate replacement tree.

Finding of No Significant Impact and No Impairment

Based on my review of the facts and analysis contained in this Environmental Assessment, which is incorporated herein, I conclude that the Preferred Alternative for the EA at Jefferson National Expansion Memorial would not have a significant impact either by itself or in consideration of cumulative impacts. Accordingly, the requirements of the National Environmental Policy Act, regulations promulgated by the President’s Council on Environmental Quality, and provisions of National Park Service Director’s Order-12 and Handbook (Conservation Planning and Environmental Impact Analysis and Decision-Making) have been fulfilled. Furthermore, the Alternative selected for implementation would not impair park resources or values and would not violate the NPS Organic Act. The Selected Alternative supports the enabling legislation establishing Jefferson National Expansion Memorial under the Antiquities Act of 1906 with the intended purpose of preserving the scientific and public interests for future generations. An Environmental Impact Statement is not required and will not be prepared for implementation of the Selected Alternative.

Recommended: Tom Bradley 1/23/12
Tom Bradley, Superintendent Date

Approved: Patricia S. Trip 2-17-12
for Michael Reynolds, Regional Director Date

FINDINGS ON IMPAIRMENT OF PARK RESOURCES AND VALUES

BACKGROUND

National Park Service's *Management Policies, 2006* require analysis of potential effects to determine whether or not actions would impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the National Park Service (NPS) the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of these resources or values. An impact to any park resource or value may, but does not necessarily, constitute an impairment, but an impact would be more likely to constitute an impairment when there is a major or severe adverse effect upon a resource or value whose conservation is:

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

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

The park resources and values that are subject to the no-impairment standard include:

- the park's cultural and historic objects, including archeological resources; cultural landscapes; ethnographic resources; historic structures; and museum collections;
- appropriate opportunities to experience enjoyment of the national historic site, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities

undertaken by concessioners, contractors, and others operating in the park. The NPS's threshold for considering whether there could be an impairment is based on whether an action would have major (or significant) effects.

Natural Resources: Vegetation

Vegetation at the Jefferson National Expansion Memorial functions to define spaces, direct pedestrian circulation, frame views of the Gateway Arch and ponds, and define nonprogrammed passive use areas, such as lawns. The Rosehill ash trees are planted mostly in the allees along the walks. The single-species uniform planting, as envisioned by Dan Kiley, creates a sense of enclosure along the pedestrian walks. These plantings provide changing character throughout the year, shading the walks that are heavily used by visitors in summer, providing a mass of orange, red, and purple leaf color in the fall, and sheltering the walkways from wind and weather. Rosehill ash is a cultivar of white ash, a tree species native to the region. Any uniform planting, native or introduced, has an inherent risk that a single disease or pest, such as the Emerald Ash Borer, could severely damage or kill the trees due to their shared susceptibility.

Replacing Rosehill ash trees with immature young trees would alter the landscape over the short to medium term by opening more expansive views to the Gateway Arch and temporarily opening the enclosed space along the allées. Over the long term, replacing the existing planting with a new compatible species would have a negligible impact on the Memorial's vegetation because replacement species would be selected for hardiness, disease resistance, and other positive horticultural qualities. In the replacement tree selection process, native species, including tulip poplar, have been given careful consideration and are generally preferred when compared with nonnative species. Because vegetation would not be adversely impacted, there would be no impairment of the Memorial's resources or values.

Cultural Resources: Cultural Landscapes

The Memorial grounds are a historic designed landscape, one of the four types of cultural landscapes recognized by the National Park Service (Cultural Landscape Report, 2010). Per National Park Service policy, cultural landscapes require particular treatments and management approaches, which are addressed comprehensively in the 2010 Cultural Landscape Report (CLR). The CLR identifies all of the cultural landscape elements at the Memorial, and the General Management Plan provides direction and a framework for protecting those elements. The cultural landscape is considered a contributing resource in the National Register-listed Historic District and National Historic Landmark. The presence of a closely spaced, uniform, single-species planting along the walks, though not specifically of Rosehill ash, is a primary character-defining feature of the Memorial grounds. If this planting were to be modified in terms of its spacing, density, location, and uniform character, its integrity and that of the Memorial landscape would be diminished and an important design characteristic lost.

The replacement of the Rosehill ash with a similar single-species planting is consistent with the CLR. Over the short and medium term, the cultural landscape would experience a negligible adverse impact as a result of replacing the mature trees with immature trees. This adverse impact would persist until the replacement trees grow tall enough to once again form the canopy and frame views of the Gateway Arch as Kiley intended. The Selected Action is not anticipated to result in cumulative impacts since a character-defining feature of the Memorial would be ultimately restored to its intended condition. Because the negligible adverse impact is only temporary, there are no cumulative impacts, and National Park Service would follow all appropriate standards and guidelines for the treatment of the historic designed landscape, there would be no impairment as a result of implementation of the preferred alternative.

Cultural Resources: Historic Properties/National Register of Historic Places

Over the short term, the Selected Action would have a minor to moderate adverse impact on the Historic District as a result of the replacement of the mature trees with smaller, immature trees. However, since the new trees would occupy the same locations as the existing Rosehill ash and the rhythmic spacing contained in the original planting plan would be maintained, the integrity of the National Register listed Historic District and NHL would be retained. The Selected Action would also retain the integrity of setting of the Gateway Arch, which is an individually listed NHL. Over the long term, the effects of the Selected Action on historic properties would be negligible, and potentially beneficial. Thus, there would be no impairment of the Memorial's resources or values.

Cultural Resources: Visual Resources

The Memorial's designed views and vistas, both along the east-west and north-south axes of the symmetrical plan of the grounds, centered on the Gateway Arch, are an essential character-defining feature of the Saarinen-Kiley design. In addition, the east-west views, both from and towards the Memorial grounds, establish crucial connections between the Memorial, the city of St. Louis, the Mississippi River, and East St. Louis. The views and vistas control visitor perception and experience of the Gateway Arch by framing its immense size and sculptural qualities. Conversely, the Gateway Arch provides a framing element, particularly when viewed from the east or the west. The important axial relationships of the Memorial landscape's design are enhanced, in part, through these designed views and vistas. The Rosehill ash trees, planted along the curving walkways, frame the Gateway Arch legs from both views.

Replacing the Rosehill ash trees, per the selection criteria and process and with CLR guidance, by a compatible species would ultimately maintain the character-defining views to the Gateway Arch. Over the short and medium term, the views and vistas at the Memorial would be altered as a result of the tree removal and replacement process. The defined views from the walkways to the Gateway Arch would be affected as the large, mature trees are replaced with younger, smaller trees that lack the height, width, and crown of the existing Rosehill ash. While the trees are maturing, the Gateway Arch would not be framed by the trees. This would result in a short- to medium-term moderate adverse impact. Because the adverse impact is a temporary condition there would be no impairment of the Memorial's visual resources.

CONCLUSION

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the superintendent's professional judgment that there would be no impairment of park resources and values from implementation of the preferred alternative.