



Chesapeake and Ohio Canal National Historical Park
Maryland, West Virginia, District of Columbia

FINDING OF NO SIGNIFICANT IMPACT

Reconstruct/Stabilize the Historic Stone Wall and Towpath from McMahon's Mill to Lock 42 Environmental Assessment Williamsport, Maryland

The National Park Service (NPS) prepared an environmental assessment (EA) to evaluate the impacts of rehabilitating the existing historic stone wall and reestablishing the towpath along approximately 0.9 miles of the Chesapeake and Ohio Canal National Historical Park (C&O Canal NHP or the park). This area of the historic stone wall and towpath is located in Washington County, Maryland and extends along the Potomac River from McMahon's Mill (milepost 88.1) to Lock 42 (milepost 89.0). This project is being undertaken because the historic stone wall that supports the towpath has been badly damaged by repeated floods and destabilized by vegetation growth within the masonry.

The EA was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] 4321 et seq.) and its implementing regulations (40 Code of Federal Regulations [CFR] 1500-1508.9); the Department of the Interior NEPA regulations (43 CFR Part 46); and with NPS Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (2011) and its accompanying handbook (2015). The statements and conclusion reached in this finding of no significant impact (FONSI) are based on the documentation and analysis provided in the EA and associated decision file. To the extent necessary, relevant sections of the EA are incorporated by reference below.

SELECTED ALTERNATIVE

The EA analyzed two alternatives (no-action alternative and the proposed action/preferred alternative) and the associated impacts on the environment. Based on the analysis presented in the EA, the NPS has selected the proposed action/preferred alternative for implementation.

Selected Alternative Description

The selected alternative (see page 9 of the EA) will resurface 0.9 miles of the towpath from milepost 88.1 to 89.0. The towpath in this area will be raised to an elevation between 328 to 329 feet to correspond more closely to the anticipated river water surface elevation profile during high water events. Reconstruction and stabilization activities proposed along the stone wall and towpath will include: 1) re-contouring, and in some areas, raising the elevation of the towpath; 2) widening select areas along the towpath; 3) resurfacing portions of the towpath; 4) stone wall stabilization, and in select areas, full reconstruction; 5) replacement of drainage infrastructure; and 6) revegetation of areas disturbed by construction activities along the towpath. These actions are summarized in the following paragraphs and are described in detail in Chapter 2: Alternatives of the EA.

Towpath

- Under the selected alternative, sections of the towpath from milepost 88.1 to 89.0 that are frequently flooded will be raised from 1 to 5 feet to accomplish the target elevation of 328 to

329 feet. Although the lowest portions of the towpath will be elevated, the undulations in the towpath will not be removed entirely, as they are a unique characteristic along this section of the towpath.

- Some portions of the towpath will be moved inland to accommodate repair and stabilization of the stone wall.
- To allow access for emergency and maintenance vehicles, the towpath will be widened to a minimum of 8 feet and be designed to accommodate vehicles.
- The entire towpath between mileposts 88.1 and 89.0 will be resurfaced by removing the top 14 inches of material, placing geotextile for stabilization, and installing 14 inches of new compacted densely graded aggregate pavement material.

Stone Wall

- Missing or washed out sections of the historic stone wall will be reconstructed by stabilizing or reinforcing the wall or establishing new foundations. Where erosion from Potomac River wave action is visible, rip-rap will be placed at the base of the existing stone wall.
- Where grade changes are required for the towpath or where the current wall has collapsed, the existing wall will be built upon to gain adequate elevation. Stone will be placed to the desired height, reinforced with geogrid material for stabilization, and backfilled with additional stone.
- In areas where the sloped armament type wall requires repair, the armament will be extended to a higher elevation using new stone material. The towpath will be moved inland in areas where the angle of the stone wall is currently too steep, allowing the wall to be repaired using new material at a sufficient angle to ensure stability.
- For all work on the historic stone wall, the NPS will use as much of the existing historic building materials as practicable. Historic material that has fallen into the river will be retrieved and reused, where feasible. Where the use of new material is necessary, consideration will be given to the characteristics of the historic material. The reconstruction and repairs would be compatible with the historic materials in terms of design, color, and texture and be in accordance with the Secretary of Interior's Standards for restoration and reconstruction.

Stormwater Conveyance

- The surface of the towpath is currently drained by three small culverts, ranging from 15 to 36 inches that drain into the Potomac River. The NPS will remove the existing culverts and replace them with new 24- to 36-inch culverts in preparation for potentially larger and more intense storm events.

Vegetation

- Between McMahon's Mill and Lock 41, all trees and woody vegetation between the towpath and the river will be removed. Between Lock 41 and Lock 42, only those trees and woody vegetation adjacent to the towpath (5-foot buffer) and along the retaining wall will be removed. Select trees and other woody vegetation on the landward side of the towpath will be removed.
- Trees and woody vegetation will be cut below the proposed grade of the towpath in areas where the towpath will be moved landward or widened. In areas adjacent to the towpath and along the stone wall, all trees and brush will be cut flush with the existing grade. Existing stumps between the towpath and the Potomac River will be cut flush and an herbicide treatment will be applied to complete stabilization and reconstruction of the stone wall.

- Following construction, the NPS will revegetate the areas of disturbance and new construction on both sides of the towpath. Cleared and disturbed areas will be revegetated with a weed-free native plant seed mix to support natural regeneration and reduce the potential for spread of invasive species.
- The selected alternative will include measures for protecting existing larger trees that will not be removed for construction.

Construction Activities Including Equipment, Timing, and Detours

- It is expected that the construction activities will take approximately 18 months.
- A barge will be used for transport of construction materials and will require the construction of a temporary dock at McMahon's Mill. The temporary loading dock will be approximately 40 by 50 feet and will be welded to an existing steel support structure; therefore, ground disturbance will not be required within the McMahon's Mill area for this project.
- McMahon's Mill parking area and an existing concrete pad near McMahon's Mill will be used as the staging areas for construction materials, equipment, and vehicles.
- Visitors will be excluded from the construction and staging areas using signage and fencing.

Rationale for Decision

The NPS selected the proposed action/preferred alternative for implementation because it will improve visitor and staff safety and accessibility and preserve the historic integrity of the portion of the C&O Canal NHP between McMahon's Mill and Lock 42. Although there will be minor adverse impacts to vegetation, state listed-plants, historic structures, and cultural landscapes as a result of the reconstruction and stabilization activities, these impacts are small (0.9 mile in length) compared with the overall benefit of preserving this portion of the towpath for continued visitor use, thus preserving the continuity of the 184.5 mile of the entire park.

Mitigation Measures

The selected alternative incorporates the mitigation measures listed in Appendix A of this document.

Finding of No Significant Impact

As documented in the EA, the selected alternative has the potential for adverse impacts on vegetation, state plants of concern, cultural resources, and visitor use and experience; however, no significant adverse impacts were identified.

The selected action will result in the removal of trees and shrubs throughout an approximate 0.5-acre area between the towpath and the river, and a permanent loss of vegetation in approximately 0.2 acres along the landward side of the towpath. These areas would be maintained free of trees and woody vegetation. Although vegetation removal would be mostly confined to previously disturbed areas along existing forest edge habitats, there will be a permanent loss of riparian and shrub vegetation along the towpath. Prior to construction, all rare plants will be located and flagged or fenced and avoided to the extent possible; however, some individual plants of Limestone wild petunia (*Ruellia strepens*) and Short's aster (*Symphotrichum shortii*) could be lost during construction activities, particularly those that grow in areas where the towpath will be moved inland. When considering the small amount of area that would be impacted and the larger native vegetation communities surrounding the towpath along the C&O Canal NHP, the loss of vegetation would be minimal.

Implementing the selected alternative will result in both beneficial and adverse effects to the historic structure (the towpath) and cultural landscape from altering the unique characteristics of the towpath by changing the design and form, modifying the spatial organization, and introducing new materials. The

construction actions that will stabilize and reconstruct portions of the stone wall will have a physical and visual effect, which will alter the integrity of materials, workmanship, design, feeling, and association. Vegetation clearing and maintenance will provide a more historic landscape, resulting in beneficial impacts. The McMahon's Mill section of the towpath will remain intact, will remain open to the public, and will retain its listing in the National Register. Adverse impacts will be minimized and mitigated through the measures identified in Appendix A and outlined in a Memorandum of Agreement (MOA; Appendix C). The project will not result in the loss or destruction of significant scientific, cultural, or historical resources.

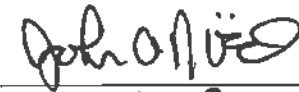
The visitor experience in the McMahon's Mill section of the C&O Canal will be slightly altered by the selected alternative. Following the short-term adverse impacts from disruption of use in the project area, the viewshed and cultural context will be permanently changed. This could result in beneficial or adverse impacts on the visitor experience, depending on the visitor's expectations. However, following construction, impacts on visitor use will be beneficial, as the stabilized, widened, and resurfaced towpath will reduce the potential for slips, trips, and falls, will be less susceptible to flooding, and will be accessible by emergency vehicles.

CONCLUSION

As described above, the selected alternative does not constitute an action meeting the criteria that normally requires preparation of an environmental impact statement (EIS). The selected alternative will not have a significant effect on the human environment in accordance with Section 102(2)(c) of NEPA.

Based on the foregoing, it has been determined that an EIS is not required for this project and, thus, will not be prepared.

Recommended:



Kevin Brandt
Superintendent

for
Chesapeake and Ohio Canal National Historical Park
National Capital Region

4/5/19
Date

Approved:



Lisa A. Mendelson-Ielmini
Acting Regional Director
National Capital Region

4/15/2019
Date

- Appendix A Mitigation Measures
- Appendix B Non-Impairment Determination
- Appendix C Memorandum of Agreement
- Appendix D Response to Public Comments (if needed)
- Appendix E Errata (if needed)

APPENDIX A: MITIGATION MEASURES

To minimize impacts related to the selected alternative, the NPS will implement mitigation measures whenever feasible. Subject to the final design and approval of plans by relevant agencies, mitigation measures will include, but will not be limited to, the items listed below.

- The removal of vegetation will result in exposed soils during construction, presenting the possibility for erosion at the proposed study area located immediately adjacent to the Potomac River. An erosion and sediment control plan will be prepared and implemented in accordance with Maryland Erosion and Sediment Control Guidelines for State and Federal Projects (MDE 2015). The plan will include resource protection measures that conform to Maryland Standards and Specifications for Erosion and Sediment Control (MDE 2011) and will be submitted to the Maryland Department of the Environment (MDE) Water Management Administration for approval.
- To minimize potential impacts on northern long-eared bat habitat, removal of trees greater than 4 inches in diameter at breast height (DBH) will be prohibited from June 1 to July 31.
- State-listed sensitive plants will be located and fenced or flagged prior to construction.
- The NPS will coordinate efforts with the Maryland Department of Natural Resources (MDNR) regarding mitigation measures, including timing restrictions of in-water activities.
- The NPS will coordinate with MDNR to relocate mussel species of conservation concern.
- In-water work will require turbidity curtains to minimize sedimentation in the Potomac River.
- Care will be taken to avoid any rutting caused by vehicles or equipment.
- Buffers between areas of soil disturbance and waterways will be planned and maintained. Soil erosion best management practices will be used (e.g., sediment traps, erosion check screen filters, silt fences) to prevent the entry of sediment into waterways.
- Any structure or fill will be maintained to avoid adverse impacts on aquatic environments or public safety.
- Where seeding is required, a weed-free native plant seed mix will be obtained and used in accordance with NPS policies and guidance. Management techniques will be implemented to foster rapid development of native plant growth.
- Any water vessels used for construction (i.e., barge) will be decontaminated prior to use in the Potomac River so they are free of any vegetation, animals, mud, and any other organic material that is not native to the river.
- To avoid transport of nonnative species to terrestrial portions of the study area, all construction vehicles will be washed prior to use on the towpath and only clean and weed-free fill material will be used.
- Historic American Engineering Record (HAER) documentation of the Chesapeake and Ohio Canal, Big Slackwater Towpath, McMahon's Mill to Lock 42 was completed in consultation with Maryland Historical Trust (MHT) and has been submitted to the Library of Congress.
- The stone wall will be reconstructed to historic specifications using existing historic stone where possible.
- Adequate drainage will be maintained around historic structures (culverts) to promote stability and preservation.

- The towpath will be designed to fit into the cultural landscape as best as possible while also accomplishing flood resiliency. This will include materials used, as well as the width and height of the towpath.
- Some historic and contributing features, such as rope burns, will be buried in place by raising the towpath. These features are documented in the HAER report and preserved under the fill material.
- Visitors will be informed of construction activities by posting information at the trail and C&O Canal website. Visitors will also be routed away from work areas during construction.
- Construction employees will be instructed on the sensitivity of the general environment, and their activity will be monitored.
- Best management practices will be followed to avoid exposure of the terrestrial and aquatic environment to risks such as fuel spills.
- All protection measures will be clearly stated in the construction specifications.

APPENDIX B: NON-IMPAIRMENT DETERMINATION

By enacting the National Park Service (NPS) Organic Act of 1916 (Organic Act), Congress directed the US Department of Interior and the NPS to manage units “to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations” (54 USC 100101). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that NPS must conduct its actions in a manner that will ensure no “derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress” (54 USC 100101).

NPS Management Policies 2006, Section 1.4 explains the prohibition on impairment of park resources and values. While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

This determination on impairment has been prepared for the selected alternative described in this Finding of No Significant Impact. An impairment determination is made for the resource topics of vegetation (including state-listed plants) and cultural resources (historic structures and cultural landscapes). These resources are considered fundamental to Chesapeake and Ohio Canal National Historical Park (C&O Canal NHP or park) because plant diversity is the highest priority natural resource in the park and because of the historical significance of the park. An impairment determination is not made for visitor use and experience because impairment findings relate back to park resources and values, and these impact areas are not generally considered to be park resources or values according to the Organic Act and cannot be impaired in the same way that an action can impair park resources and values.

VEGETATION

The selected alternative will not impair vegetation at C&O Canal NHP. The selected action will require approximately 1 acre of vegetation clearing, which will result in a small amount of permanent vegetation loss from moving or widening the towpath. Vegetation along the stone wall will be maintained to be free of trees and woody vegetation to protect the structural integrity of the wall, but all other disturbed areas will be revegetated following construction with weed-free native seed mixes and will be allowed to succeed. The area of impacts to vegetation under the selected alternative is small relative to the overall size of the section of the C&O Canal NHP in Washington County and the park as a whole. Because impacts will be extremely localized and due to the size of the C&O Canal NHP no impairment to vegetation will occur.

State Plants of Concern

Limestone wild petunia (*Ruellia strepens*) and Short's aster (*Symphyotrichum shortii*) are located in areas where the towpath will be moved landward. Prior to construction, all rare plants will be located and flagged or fenced. These plants will be avoided to the extent possible, but some individual Limestone wild petunia and Short's aster plants will likely be impacted. These species will not be impacted at a population level and will continue to grow in the study area and in the park where habitat is present; therefore, implementation of the selected alternative will not result in impairment of state plants of concern.

CULTURAL RESOURCES

Within the project area, the towpath, with integral stone wall and culverts, is identified as a historic structure. The towpath and additional manmade and natural components comprise the cultural landscape. The C&O Canal was nominated to the National Register of Historic Places as a historic district in 1979, and the towpath and the cultural landscape, including the 0.9-mile section in the McMahon's Mill area, are identified as two of the resources that contribute to the significance of the canal historic district.

Historic Structure

Although the selected alternative will change the design and form of the historic structures by modifying the spatial organization and introducing new materials along the towpath, the selected alternative will not result in impairment of the historic structures. The reconstruction and repairs will be made in accordance with the Secretary of Interior's Standards for restoration and reconstruction. Adverse impacts will be further mitigated through measures identified in Appendix A and outlined in the 2018 Memorandum of Agreement (Appendix C). Under the selected alternative, the historic stone wall will be maintained, the overall integrity of the towpath will be minimally affected, and the towpath in the McMahon's Mill area will continue to be experienced by visitors.

Cultural Landscape

The selected alternative will not result in impairment of cultural landscapes. There will be adverse impacts to elements and features of the cultural landscape, but vegetation removal and maintenance along the historic stone wall will create beneficial impacts through expanded views restoring a more historic viewsbed and landscape. Overall, the selected alternative will result in an overall long-term beneficial effect to the cultural landscape by keeping the towpath contiguous and avoiding further deterioration and failure in this section.

SUMMARY

The NPS has determined that the implementation of the NPS selected alternative will not constitute an impairment of the resources or values of the C&O Canal NHP. As described above, implementing the selected alternative is not anticipated to impair resources or values that are essential to the purposes identified in the establishing legislation of the park, key to the natural or cultural integrity of the park, or identified as significant in the park's relevant planning documents. This conclusion is based on consideration of the park's purpose and significance, a thorough analysis of the environmental impacts described in the EA, the comments provided by the public and others, and the professional judgment of the decision-maker guided by the direction of the *NPS Management Policies 2006*.

APPENDIX C: MEMORANDUM OF AGREEMENT

MEMORANDUM OF AGREEMENT
Between
THE NATIONAL PARK SERVICE
And
THE MARYLAND STATE HISTORIC PRESERVATION OFFICER
Regarding
MITIGATION OF ADVERSE EFFECTS FOR ACTIVITIES ASSOCIATED WITH THE
RECONSTRUCTION AND REHABILITATION OF THE HISTORIC STONE WALL
AND TOWPATH OF THE CHESAPEAKE AND OHIO CANAL NATIONAL
HISTORICAL PARK FROM MCMAHON'S MILL TO LOCK 42

December 2018

WHEREAS, the Chesapeake & Ohio Canal National Historical Park is a unit of the National Park Service (NPS) within the National Capital Region (NCR) and charged to meet the directives of the NPS Organic Act of 1916 (P.L. 64-235, 39 Stat. 535) to "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations," as it applies to the park units; and

WHEREAS, the NPS is proposing to rehabilitate the existing historic towpath and variously rehabilitate and reconstruct the historic stone wall of the towpath along approximately 0.9 mile of the Chesapeake and Ohio Canal National Historical Park (C&O Canal NHP or the park) (see Attachment A). This area of the historic stone wall and towpath is located in Washington County, Maryland and extends along the Potomac River from McMahon's Mill (milepost 88.1) to Lock 42 (milepost 89.0) (Project); and

WHEREAS, the NPS, in compliance with the National Environmental Policy Act of 1969, as amended (NEPA) (Public Law 91-190), its implementing regulations (40 CFR 1500-1508), and the Department of the Interior's NEPA regulations (43 CFR Part 46), has prepared an environmental assessment. The assessment of potential impacts determined that the reconstruction and rehabilitation of this section of the towpath and stone wall could have adverse effects on historic properties; and

WHEREAS, the NPS has determined that this Project constitutes an undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA), as amended, 54 USC 306108 (formerly 16 USC § 470f), and *Protection of Historic Properties*, its implementing regulations, 36 CFR Part 800, herein referred to as Section 106; and

WHEREAS, the NPS has determined that implementation of this Project may affect properties listed in or eligible for listing in the National Register of Historic Places (NRHP) (see Attachment B) and the NPS has consulted with the Maryland State Historic Preservation Officer (MD SHPO) pursuant to 36 CFR Part 800.14(b)(1)(ii); and

WHEREAS, the NPS has completed Historic American Engineering Record (HAER) documentation on the Big Slackwater Towpath from McMahon's Mill to Lock 42, which includes this approximately 0.9 mile of the Chesapeake and Ohio Canal in 2018; and

WHEREAS, the NPS has notified the Advisory Council on Historic Preservation (ACHP) of the potential adverse effect pursuant to 36 CFR Part 800.6(a)(1) and 36 CFR Part 800.14(b)(3) on November 20, 2018 and has invited the ACHP to participate in consultation; and

WHEREAS, the NPS has solicited and considered the views of the public using its NEPA public involvement procedures pursuant to 40 CFR Part 1500.2(d) and 40 CFR Part 1506.6, and National Preservation Act notification 36 CFR 800.2 (d) (2); the NPS has notified the public through news releases (July 9, 2018 and December 3, 2018), a public scoping meeting (July 23, 2018), and public review periods (July 9 through August 10, 2018 and December 3, 2018 through January 4, 2019); and

NOW, THEREFORE, the NPS and the MD SHPO agree that should the NPS proceed with the Undertaking, the NPS will ensure that the following stipulations are implemented to satisfy the NPS's Section 106 responsibilities for all individual actions related to the Undertaking:

STIPULATIONS

I. FINAL DESIGN AND MATERIALS SELECTION

The NPS and MD SHPO will continue consultation on the final design refinements, including materials, color, texture, and alignments. The NPS shall provide the proposed final design documentation to the MD SHPO for consideration and consultation. The determinations of effect related to any changes made to the final plans to be considered as part of the MD SHPO review and decide as to whether the final design may result in new adverse effects that have not already been resolved and/or the intensification of known adverse effects to historic properties.

The NPS will also post the final design documentation at that time on NPS's Planning, Environment, and Public Comment (PEPC) website to notify the public so that they may review and comment.

If the NPS and MD SHPO determine that no new adverse effects may result or no known adverse effects to historic properties would be intensified, and the public has no objections within the review period, the NPS shall consider the design final for the purposes of implementing this Project.

If the NPS and MD SHPO determine that a new adverse effect may result or a known adverse effect to a historic property would be intensified, the NPS shall revise the final design documentation to avoid, minimize, or mitigate the new or intensified adverse effect. If the NPS and MD SHPO determine that unavoidable adverse effects to historic properties may result or be intensified, the NPS shall consult with the MD SHPO to determine whether the final design documentation warrants an Amendment to this Memorandum of Agreement (MOA) to identify additional measures that will be carried out to avoid, minimize, or mitigate any new or intensified adverse effects.

II. POST REVIEW DISCOVERIES

A. The NPS shall ensure that all application documents include the following provisions:

1. If previously unidentified historic properties or unanticipated effects to historic properties are discovered during restoration activities, the contractor shall immediately halt all activity within a one hundred (100) foot radius of the discovery, notify the NPS of the discovery and implement interim measures to protect the discovery from looting and vandalism.
2. Immediately upon receipt of the notification required in Stipulation II.A.1 of this MOA, the NPS shall:
 - a) inspect the application site to determine the extent of the discovery and ensure that activities have halted;
 - b) clearly mark the area of the discovery;
 - c) implement additional measures, as appropriate, to protect the discovery from looting and vandalism; and
 - d) have a professional archeologist inspect the application site to determine the extent of the discovery and provide recommendations regarding its NRHP eligibility and treatment; and
 - e) notify the MD SHPO of the discovery describing the measures that have been implemented to comply with Stipulations II.A.1 and A.2 (a-d) of this MOA.
3. Within forty-eight (48) hours of receipt of the notification described in Stipulation II.A.2 (e) of this MOA, the NPS shall provide the MD SHPO with its assessment of the NRHP eligibility of the discovery and the measures it proposes to take to resolve adverse effects. In making its official evaluation, the NPS, in consultation with the MD SHPO may assume the discovery to be NRHP eligible for the purposes of Section 106 pursuant to 36 CFR Part 800.13(c). The MD SHPO shall respond within forty-eight (48) hours of receipt.
4. The application activities may proceed in the area of the discovery when the NPS has determined that implementation of the actions undertaken to address the discovery pursuant to Stipulation II.A are complete.

III. HUMAN REMAINS

Should any Native American burial sites, human remains, funerary objects, sacred objects, and/or objects of cultural patrimony be encountered, the NPS shall ensure they are treated with

appropriate respect and according to federal law, including but not limited to the Native American Graves Protection and Repatriation Act (PL 101-601; hereinafter NAGPRA).

- A. In the unlikely event that human remains are uncovered during the undertaking, the NPS shall treat all human remains in a manner consistent with the ACHP's "Policy Statement Regarding Treatment of Burial Sites, Human Remains and Funerary Objects" (February 23, 2007) or ACHP policy in effect at the time remains and funerary artifacts are handled.
 - 1. If the remains found on federal lands are determined to be of Native American origin, the NPS shall comply with the provisions of NAGPRA (25 USC Sec 3001 et seq.). If the remains are determined not to be of Native American origin, the NPS shall comply with the *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994).
 - 2. The NPS shall use reasonable efforts to ensure that the general public is excluded from viewing any burial site or associated funerary artifacts. The consulting parties to this MOA shall release no photographs of any burial site or associated funerary artifacts to the press or general public. The NPS shall notify the tribes when burials, human skeletal remains, or funerary artifacts are encountered on the Project.

IV. MONITORING AND REPORTING

Each year following the execution of this MOA until it expires or is terminated, the NPS shall provide the MD SHPO a summary report detailing work undertaken pursuant to the Project and provide photographs of work completed. The report shall include any scheduling changes proposed, any problems encountered, and disputes and objections received in the NPS's efforts to carry out the terms of the MOA.

V. DISPUTE RESOLUTION

- A. Should any consulting party object in writing to the NPS regarding any action carried out or proposed with respect to this MOA or the implementation of its terms, the NPS shall consult with the objecting party in an effort to resolve the objection. If, after initiating such consultation, the NPS determines that the objection cannot be resolved, the NPS shall:
 - 1. Forward all documentation relevant to the dispute, including the NPS's proposed resolution, to the ACHP. The ACHP shall provide the NPS with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the NPS shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, consulting parties to this MOA, and

provide them with a copy of this written response. The NPS will then proceed according to its final decision.

2. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, the NPS may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the NPS shall prepare a written response that takes into account any timely comments regarding the dispute from the consulting parties to this MOA and provide them and the ACHP with a copy of such written response.

- B. The NPS's responsibility to carry out all actions under this MOA that are not the subject of the objection remains unchanged.

VI. RESOLUTION OF OBJECTIONS BY THE PUBLIC

At any time during implementation of the measures stipulated in this MOA, should an objection pertaining to this MOA or the effect of the Project on historic properties be raised by a member of the public, the NPS shall notify the other consulting parties, and attempt to resolve the objection. If the NPS determines that the objection cannot be resolved, the NPS shall comply with Stipulations V.A and V.B of this MOA.

VII. AMENDMENT

Should any party to this MOA request an amendment, the requesting party shall notify all other parties in writing. The written notification shall include a statement of purpose of the required modification and the proposed working to amend the MOA. All parties shall review the proposed amendment and, if necessary, shall consult among themselves to discuss the amendment. If after consultation it is agreed that the amendment is necessary or desirable, all parties to this original MOA shall sign the amended MOA. If necessary, dispute resolution shall follow Stipulation VI.

VIII. TERMINATION

If any signatory determines that the terms of this MOA will not or cannot be carried out, that party shall immediately consult with the other signatories and concurring parties to seek an amendment in accordance with Stipulation VII of this MOA. If within thirty (30) days an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories and concurring parties.

Once the MOA is terminated, and prior to work continuing on the Undertaking, the NPS must either (a) execute another MOA pursuant to 36 CFR Part 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR Part 800.7. The NPS shall notify the signatories as to the course of action it will pursue.

IX. DURATION OF AGREEMENT

Memorandum of Agreement

Reconstruct/Stabilize the Historic Stone Wall and Towpath from McMahon's Mill to Lock 42

C&O Canal National Historical Park

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This MOA will expire if its terms are not carried out within five (5) years from the date of its execution. Prior to such time, the signatories may consult and agree in writing to an extension for carrying out the terms of the MOA in accordance with Stipulation VII above.

Execution of this MOA by the NPS and the MD SHPO and implementation of its terms are evidence that the NPS has taken into account the effects of the Project on historic properties, and that the NPS has satisfied its Section 106 responsibilities for the Undertakings covered by this agreement.

Upon the completion of all stipulations to this MOA, the NPS shall circulate to the MD SHPO a signed memorandum documenting that the NPS has fulfilled all its responsibilities under this MOA.

SIGNATORIES:

NATIONAL PARK SERVICE:



Kevin D. Brandt
Superintendent, C&O Canal NHP

National Park Service, US Department of the Interior

Date: 12/10/18

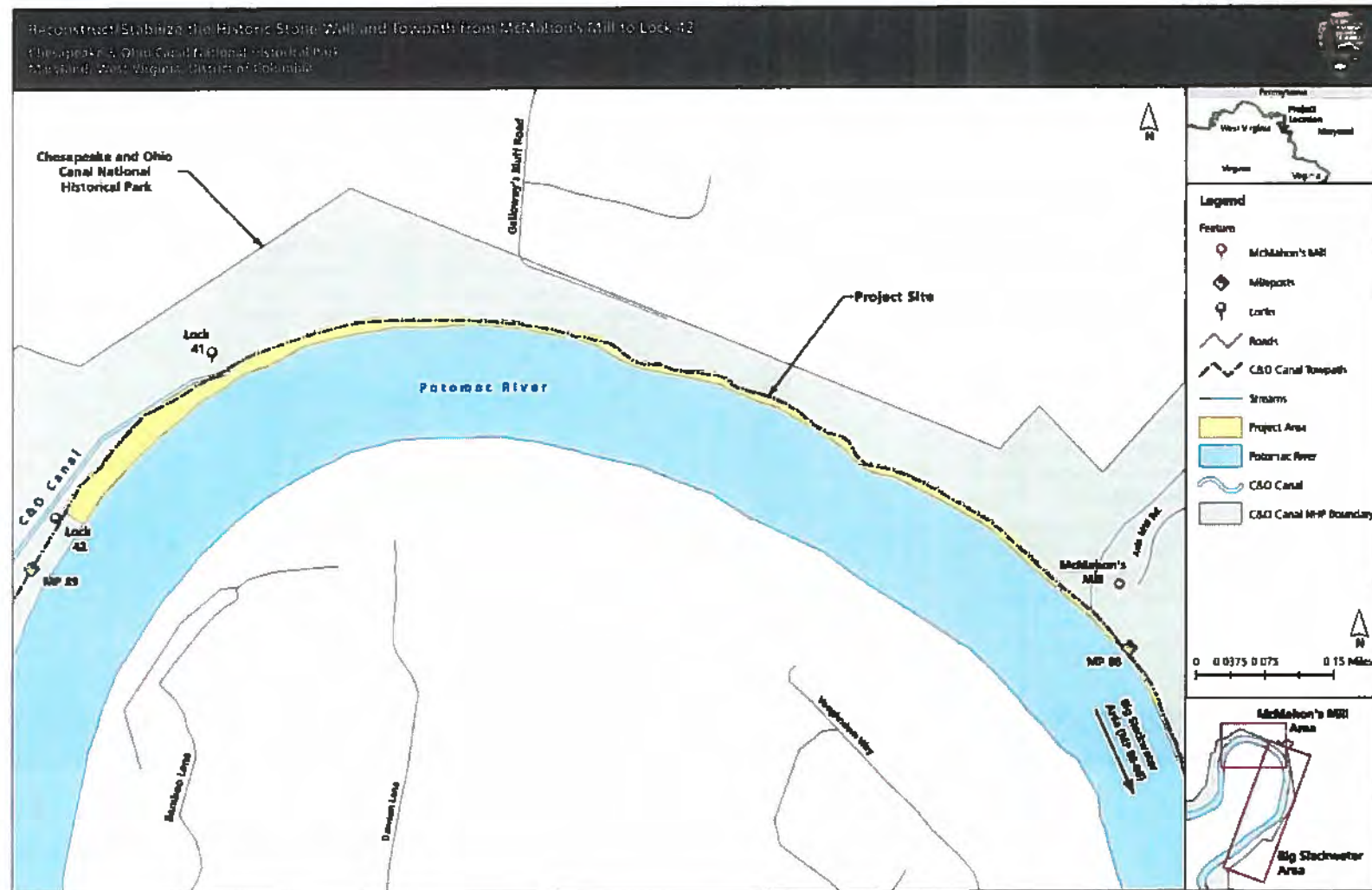
MARYLAND STATE HISTORIC PRESERVATION OFFICER:



Elizabeth Hughes
Maryland State Historic Preservation Officer

Date: 4/3/2019

ATTACHMENT A - PROJECT AREA MAP



ATTACHMENT B - ASSESSMENT OF EFFECTS TABLE

Features Associated with Canal Construction and Use			
Towpath	<p>A 1-mile section of gravel path, approximately 6 to 15 feet wide. The gravel is on top of 4 to 12 feet of historic fill over limestone bedrock.</p> <p>Most of the canal towpath between McMahon's Mill to Lock 42 is relatively level between 331 to 333 feet above mean sea level (amsl) from east to west.</p> <p>However, there are several areas that dip as much as 4 to 5 feet in height. These undulations are unique along this section of the towpath.</p>	<p>Periodic flooding would continue to erode the towpath and ultimately result in the loss of this feature.</p> <p>No change.</p>	<p>The overall alignment would be reserved. A few segments would be moved inland toward the cliffs. The towpath would be widened and made more consistent, except in a few places where the cliffs prevent widening.</p> <p>The towpath height would be raised, and the undulations would be decreased with minor grade changes. This would reduce a historic and unique characteristic of this segment of the towpath and diminish the historic feel.</p> <p>Adverse effect</p>
45-degree angle retaining wall	<p>Located along the scour side of the river in a steep bend. The stone retaining wall adjacent to the towpath includes both mortared and un-mortared (dry laid) sections.</p>	<p>Periodic flooding would continue to erode the stone retaining wall and ultimately result in the loss of this feature.</p> <p>No change.</p>	<p>The towpath would be moved inland to allow reconstruction of 45-degree angled wall. Stones would be added to the top of the historic wall to achieve desired height introducing modern materials.</p> <p>Adverse effect</p>
Vertical retaining wall	<p>The stone retaining wall adjacent to the towpath and river; includes both mortared and un-mortared (dry laid) sections.</p>	<p>Periodic flooding would continue to erode the stone retaining wall and ultimately result in the loss of this feature.</p> <p>No change.</p>	<p>Rip rap would be placed at base of wall and collapsed walls would be reconstructed. Stones would be added to the top of historic wall to achieve desired height, introducing modern materials where use of historic material is not available or feasible.</p> <p>Adverse effect</p>
Two stone culvert inflow headwalls	<p>Approximately 2.5-foot-wide stone headwall</p>	<p>No effect</p>	<p>New pipe added to culvert. No change to stone headwall.</p> <p>Effect, no adverse effect.</p>

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McMahon's Mill Culvert No. 138 (Downey Branch Culvert)	Concrete and stone culvert associated with the McMahon's Mill	No effect	No change / No effect
20 th century concrete bridge (construction date unknown) over the McMahon's Mill Culvert No. 138 (Downey Branch Culvert)	Flat slab concrete bridge over culvert where Downey Branch Creek empties into the Potomac River	No effect	No change / No effect
Landscape feature	Seven clusters of rope burns that vary in length and are 0.5-inch diameter. They are located from approximately 1.5 to 3.5 feet above the present grade of the towpath.	These features may be obscured from view seasonally due to vegetation growth. No adverse effect	Towpath elevation would be raised, burying the rope burns. Visitors would no longer see the markings; however, the markings would be preserved in place. Effect, no adverse effect.
Landscape feature	Natural caves	No effect	No change / No effect
Landscape feature	Potomac River and bend in river – relatively calm section of the Potomac River with a large bend	No effect	No change / No effect
Landscape feature	Galloway's Cliffs – steep limestone cliffs	No effect	No change / No effect
Landscape feature	Trees and other vegetation lining path	No effect	The visual corridor would be widened with removal of the trees lining towpath, restoring the historic landscape. Effect, no adverse effect
Landscape feature	Viewshed – rural, woods, river, farms, and docks	No effect	The visual corridor would be widened and the viewshed expanded with removal of the trees lining the towpath, restoring the historic landscape and viewshed. Effect, no adverse effect
Structures in Vicinity of Proposed Project			

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Lockhouse and Lock 41	The stone foundation of the former lockhouse (built in 1836) is located above the upper end of the lock and on the berm side. The overall dimensions are 16 by 28 feet. There are several other unidentified foundations in the nearby area.	No effect	No change / No effect
Lock 42	A poor-quality local gray-blue limestone was used on this lock. The breast wall was flush with the upper end of the upper lock gate pockets. Around 1900, the breast wall from mid-lock down was removed, stones piled beyond the towpath (where they remain) and replaced by concrete. Much of the remaining stone is deteriorated and some are missing. The lock is generally in poor condition. The current bridge is a modern replacement.	No effect	No change / No effect
McMahon's Mill	Dating from 1778, the mill is a large frame gambrel-roofed structure on a high fieldstone foundation, which forms the first story on the west side, where the mill wheel is located. The wooden overshot wheel was replaced by a steel wheel in the 1920s. Condition of the structure is fair.	No effect	The visual corridor would be widened, and the views expanded with removal of trees lining the towpath, restoring historic landscape and views. Effect, no adverse effect.
Features Associated with Post-Canal Use Period			
Braided metal cable and associated stone structure	Approximately 0.25-inch diameter, part of a social trail	This feature may be obscured from view seasonally due to vegetation growth. No adverse effect	Features would be buried. No adverse effect to post-canal use period.
Corrugated steel culvert	Corrugated steel measuring 15 by 18 inches in diameter, stone headwall, integrated into the existing stone retaining wall of the towpath	This feature may be obscured from view seasonally due to vegetation growth. No adverse effect	Pipe would be replaced; however, pipe is not historic. No adverse effect to post-canal use period.
Two 1-inch 20 th century iron pipes embedded in towpath adjacent to cliff face;	Two 1-inch iron pipes embedded in cliff face; likely for access to top of cliff	This feature may be obscured from view seasonally due to vegetation growth. No adverse effect	Features would be buried. No adverse effect to post-canal use period.

Braided metal cable embedded in tree	Approximately 0.25-inch diameter, likely used for boat mooring	This feature may be obscured from view seasonally due to vegetation growth. No adverse effect	Features may be removed during vegetation clearing. Adverse effect to post-commercial period.
Metal pipe embedded into cliff face	Iron pipe likely used for access to top of cliff	This feature may be obscured from view seasonally due to vegetation growth. No adverse effect	No effect
One 1-inch 20 th century rebar imbedded in towpath	Approximately 1-inch diameter, likely used for boat mooring	This feature may be obscured from view seasonally due to vegetation growth. No adverse effect	Features would be buried. No adverse effect to post-canal use period.
Two angle iron sections embedded into towpath	Likely used for boat mooring	This feature may be obscured from view seasonally due to vegetation growth. No adverse effect	Features buried. No adverse effect to post-canal use period.
Two iron pipes embedded into towpath	Likely used for boat mooring	This feature may be obscured from view seasonally due to vegetation growth. No adverse effect	Features buried. No adverse effect to post-canal use period.

APPENDIX D: RESPONSE TO PUBLIC COMMENT

The Reconstruct/Stabilize Historic Stone Wall & Towpath McMahon's Mill to Lock 42 Environmental Assessment was released for public review on December 3, 2018, and was available via the park's Planning, Environment, and Public Comment (PEPC) website (<http://parkplanning.nps.gov/CHOH>) and at the park headquarters. An open public comment period was held from December 3, 2018 through February 20, 2019.

During the comment period, a total of 14 correspondences were received, including 2 letters mailed to the National Park Service (NPS), 1 email to the superintendent, and 11 entered directly into the park's PEPC website. The NPS is required to respond to substantive comments submitted during the public review period for the EA. Substantive comments are those that: question, with a reasonable basis, the accuracy of information presented in the EA; question, with a reasonable basis, the adequacy of the environmental analysis; present reasonable alternatives other than those presented in the EA; and cause changes or revisions in the proposal. Substantive comments raise, debate, or question a point of fact or analysis. Comments that merely support or oppose an alternative or that merely agree or disagree with NPS policy are not considered substantive. The discussion below includes concern statements expressed in the comments and topical responses to those concerns. Changes made to the EA based on these comments are included in Appendix E of this Finding of No Significant Impacts.

CONCERN: One commenter suggested that the towpath closure and detour periods be kept to a minimum and that the NPS can find ways to allow visitors to use the towpath during the construction period, which is estimated to be approximately 18 months.

RESPONSE: The NPS will work to minimize the amount of time that the towpath is closed to visitors; however, visitor safety is a foremost concern for the NPS. Due to the small project area, the use of heavy machinery, and construction activities, the NPS will likely need to close the portion of the towpath between McMahon's Mill and Lock 42 for the duration of the reconstruction and stabilization activities. Such consideration does not require a change in the analysis of potential impacts contained in the environmental assessment.

CONCERN: One commenter requested that the NPS minimize the number of mature trees removed for construction on the landward side of the towpath.

RESPONSE: On page 6, the EA states that "selective removal of trees and other woody vegetation on the landward side of the towpath would be completed." Some mature trees must be removed to accommodate moving the trail inland in some sections (approximately 0.35 mile total). Based on current design, approximately 43 trees with a diameter at breast height of 6 inches or larger will be removed. *NPS Management Policies 2006* states that the NPS "will minimize human impacts on native plants, animals, populations, communities, and ecosystems, and the processes that sustain them." Therefore, the NPS will minimize the number of mature trees removed to the extent possible during final design for this action; the NPS will remove only those necessary to safely complete construction. No changes were made to the environmental assessment.

CONCERN: One commenter suggested that the NPS use as much historic material as possible when rebuilding the three culverts within the project area. Where historic material is not available, care should be taken to use new material that matches historic material.

RESPONSE: The EA states that the NPS would use as much of the existing historic building materials as practicable, including material that has fallen into the Potomac River, and that consideration would be given to the characteristics of the historic material when using new material (page 10). The same methodology would be used when rebuilding the culverts, as the culverts are considered part of the historic stone wall. No changes were made to the environmental assessment.

CONCERN: One commenter suggested that the EA should outline or reference the specific best management practices that would be employed to minimize impacts to wetlands during construction activities.

RESPONSE: The EA states that the NPS will implement appropriate best management practices, as identified in NPS Procedural Manual 77-1: *Wetland Protection* (page 7). These best management practices are incorporated into the mitigation measures presented on page 15 of the EA. No changes were made to the environmental assessment.

CONCERN: One commenter suggested extending decontamination practices in the mitigation measures section to include any construction equipment that will be used within the project area.

RESPONSE: On page 15, the EA states that all water vessels will be decontaminated to minimize the risk of transporting any non-native plant, animal, or material to the project area. This mitigation measure has been revised to state that all water vessels or construction equipment used in the project area will be decontaminated prior to use.

CONCERN: One commenter recommended that the EA address how seeding will reduce erosion in disturbed areas, specifically in areas where trees will be removed.

RESPONSE: Following construction, all disturbed areas will be seeded with a weed-free native grass/forb mix, and areas on the landward side of the towpath will be allowed to succeed naturally, as discussed in the mitigation measures on page 15 and the impacts analysis for vegetation on pages 26 and 27. By choosing a seed mix that is appropriate for the project area, herbaceous cover will become established, helping to stabilize the disturbed soils. No changes were made to the environmental assessment.

APPENDIX E: ERRATA

The following change has been made to the Reconstruct/Stabilize Historic Stone Wall & Towpath McMahon's Mill to Lock 42 Environmental Assessment (December 2018) to correct minor statements of facts and update information. Additions to the text are identified by red, italicized text and deletions are marked by strikeout unless otherwise noted. These revisions do not change the outcome of the impact analysis, nor do they affect the final decision documented in the Finding of No Significant Impact.

Mitigation Measures, Page 15

Any ~~water vessels~~ **equipment** used for construction (~~e.g., barge~~) would be decontaminated prior to use ~~in the Potomac River~~ so they are free of any vegetation, animals, mud, and any other organic material that is not native to the **project area** river.