FINDING OF NO SIGNIFICANT IMPACT

WHITE-TAILED DEER MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT

Chesapeake and Ohio Canal and Harpers Ferry National Historical Parks

Maryland, Virginia, West Virginia

INTRODUCTION

The National Park Service (NPS) prepared a White-tailed Deer Management Plan and Environmental Assessment (plan/EA) to evaluate a range of alternatives for managing white-tailed deer (*Odocoileus virginianus*) at two parks, Chesapeake and Ohio Canal National Historical Park (C&O Canal NHP) and Harpers Ferry National Historical Park (Harpers Ferry NHP) (the parks), and to assess the impacts that could result from continuation of the current management framework (no action alternative) or implementation of any of the action alternatives. The purpose of the plan/EA is to develop a white-tailed deer management strategy that supports long-term protection of both natural and cultural resources and provides for the management of chronic wasting disease (CWD) in the parks. The plan is needed because:

- Deer have the potential to become the dominant force in the parks' ecosystems and adversely affect native vegetation and other wildlife.
- Browsing and other damage to native seedlings, saplings, and understory vegetation by deer in the parks has prevented successful forest regeneration and resulted in undesirable changes to the forest.
- Attainment of the parks' cultural landscape preservation and restoration goals and mandates are compromised by the high density of deer.
- Opportunities exist to improve coordination with other nearby jurisdictional entities currently implementing deer management actions and other stakeholders.
- CWD has been identified in deer near the parks and represents an imminent threat to park resources. Opportunities exist to evaluate and plan responses to threats from CWD over the long term and help maintain the overall health of the deer herds in the two parks.

The EA was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), the regulations of the Council on Environmental Quality (CEQ) for implementing NEPA (40 Code of Federal Regulations [CFR] 1500–1508), and NPS Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making*, and the accompanying NPS *NEPA Handbook*. Compliance with section 106 of the National Historic Preservation Act of 1966, as amended, and with section 7 of the Endangered Species Act was conducted separately but concurrently with the NEPA process. The statements and conclusions reached in this finding of no significant impact (FONSI) are based on 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

Based on the analysis presented in the plan/EA, NPS selected Alternative D: Combined Lethal and Nonlethal Deer Management (Selected Alternative) for implementation. A detailed description of the

Selected Alternative can be found on pages 46–50 of the plan/EA. The Selected Alternative is focused on incorporating a combination of lethal and nonlethal deer management actions to address high deer density. Lethal actions (including removal with firearms and/or selective use of archery, along with very limited capture/euthanasia if necessary) will be taken initially to reduce the deer herd numbers quickly. Use of firearms and/or selective use of archery will be conducted by NPS employees or authorized agents (including certified skilled volunteers), who will be designated to remove deer as directed by NPS. Use of bait stations to attract deer to facilitate lethal removal may be considered based on appropriate location and conditions and at the discretion of the Park.

Additional work will include spotlighting, handling the carcasses (field dressing), taking CWD samples, and assisting in removal of salvageable meat. Capture and euthanasia will be used in very limited circumstances where removal with firearms and/or selective use of archery is not appropriate due to safety or security concerns. If capture and euthanasia is required, qualified federal employees or authorized agents will trap the deer, approach them on foot, and euthanize them. Deer will be captured with nets or traps. Deer can also be immobilized by darting with a tranquilizer gun. In certain situations where lethal removal or darting is not feasible, deer would be captured and euthanized as humanely as possible, in accordance with current veterinary recommendations such as those published by the American Veterinary Medical Association. If chemicals are used, it might not be possible to donate the meat from that animal as food, and the carcass might be unsuitable for surface disposal. In this case, the carcasses will be taken to a local landfill.

Population maintenance will then be conducted as needed, either by lethal removal or by nonsurgical reproductive control methods. Nonsurgical reproductive control includes treating female deer with a chemical reproductive control agent to reduce population growth, which could be implemented to maintain the deer population at the deer density goal once reduction has already occurred. Reproductive control may commence at the time deer per square mile reached a location-specific threshold. Reproductive control agents will only be used if they meet all of the criteria listed in table 5 on page 37 of the plan/EA. Both population maintenance methods (lethal removal and nonsurgical reproductive control) are retained as options to maintain maximum flexibility for future management. At this time there is no nonsurgical reproductive control methods that meet the listed criteria, and will not likely be used in the near future.

In addition, NPS will continue current park deer management actions, including monitoring and research, protective caging / tree tubing, educational and interpretive measures, and agency and inter-jurisdictional cooperation. Fenced exclosures may be also considered if it is determined feasible, and can ensure that all deer can be driven out of the exclosed areas. Additional techniques may be implemented to prevent adverse deer impacts, including changing crop configurations or crop selection at the parks, using repellents for short-term situations or during growing seasons, and using aversive conditioning in selected areas or at specific times.

NPS has also identified actions pertaining to CWD management. Under the Selected Alternative, surveillance and testing will continue, and opportunistic surveillance will be added. Additionally, a long-term CWD management plan will be implemented under the Selected Alternative to address concerns about CWD and its proximity to the parks. As described in the plan/EA, the CWD response and management plan is based on evidence that high deer population densities generally support greater rates of disease transmission, have been found to be positively correlated with the prevalence of CWD, and that immediate action will be needed to reduce the deer population to reduce amplification of CWD. Integration of CWD response represents an effort on the part of NPS to be proactive and fully prepared given the high level of risk. All CWD response actions will be coordinated closely with the states because of the scale identified in state CWD plans to address CWD (minimum 79 square miles) relative to the size of the parks. Cooperation with state efforts to address CWD will continue as long as these actions do not

conflict with NPS or park mission and mandates, and actions taken within park boundaries may be conducted independently of state actions.

The threshold for taking action under the long-term CWD response plan is tied to the distance of a confirmed case from the parks' boundaries and location of the park in relation to a state-established CWD containment area (a 5-mile buffer around a documented CWD-positive case). For both parks, the NPS planning team decided that the long-term CWD response plan will be triggered only if a positive case of CWD is found within park boundaries or within 5 miles of the parks' boundaries, which means that one or both of the parks fall within a state CWD containment area. The plan will allow the parks the option to reduce the deer population in the portion of the park within the CWD containment area to a density similar to that found outside the parks or even to a lower level as needed. The response could also be limited to an increase in monitoring or cooperation with state program and testing requirements. However, if deer density reduction occurs, the deer population will not be reduced below 10 deer per square mile.

RATIONALE FOR DECISION

In selecting alternative D (Combined Lethal and Nonlethal Deer Management) for implementation, NPS evaluated each alternative based on its ability to meet the plan purpose and need (see above), the potential impacts on the environment ("Chapter 4: Environmental Consequences" of the final plan/EA), anticipated effort with implementation, and degree of management flexibility.

Alternatives C and D both meet the purpose and needs of the plan; however, alternative C does not provide the same flexibility of management techniques as alternative D. Alternative D allows the use of a wider variety of management methods, including reproductive control, which will become an option when an agent becomes available that meets NPS-established criteria. Alternative D provides tools to efficiently remove deer initially and flexibility in management methods to address future removals. Alternative B only partially meets the needs of the plan because of the lack of immediate reduction in deer numbers and the uncertainty that the deer density goal would be achieved even over an extended period of time. Many impacts on park resources, especially impacts on vegetation, wildlife habitat, and cultural landscapes, would be greater under alternative B because of the length of time required before deer numbers would be reduced, thus continuing the adverse impacts of deer browse on vegetation in the parks. Alternative A (no action) fails to meet or fully meet the needs of the plan because no action would be taken to reduce deer numbers or effect a change in conditions that are the basis for the purpose of and need for action.

ALTERNATIVES CONSIDERED

The plan/EA provides an overview of the proposed plan and analyzes four alternatives and their impacts on the environment: Alternative A, the No Action Alternative (page 26 of the plan/EA); Alternative B, Nonlethal Deer Management (page 28 of the plan/EA); Alternative C, Lethal Deer Management (page 40 of the plan/EA), and Alternative D, Combined Lethal and Nonlethal Deer Management (page 44 of the plan/EA).

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 plan/EA, the Selected Alternative has the potential for adverse impacts on vegetation, white-tailed deer, other wildlife and wildlife habitat, visitor use and experience, human health and safety, and park management and operations; however, NPS has determined that the Selected Alternative can be implemented without significant adverse impacts, as defined in 40 CFR §1508.27.

Setting up bait stations, shooting stations, and traps for capture and euthanasia and transporting deer will result in minimal, short-term, adverse impacts on vegetation from trampling. However, as a result of a decrease in the deer herd and reduced browse impacts on park vegetation, impacts on vegetation will be long term and beneficial. CWD response actions will result in similar impacts, with short-term impacts (mainly from trampling) from surveillance and benefits from the reduction of deer and deer browse on vegetation.

Deer were analyzed in terms of the desired conditions for the deer populations as a whole, including their overall health and ability to function in as natural a condition as possible. The Selected Alternative will result in measurable adverse impacts on individual deer that are taken and short-term, adverse impacts on the parks' deer populations from removing a relatively large percentage of the population over a short period of time. However, these adverse impacts are limited to a limited number of animals, and long-term deer population impacts will be beneficial because the relatively rapid deer herd reduction will allow the abundance and diversity of vegetation to recover to better protect deer habitat, and health issues associated with high deer population density will decrease. Impacts from implementing deer management actions, such as changing crop configurations, using repellents, using bait piles, making additional noise from lethal removal activities, and/or using aversive conditioning, will be short term, minimal, and adverse. CWD actions will have long-term benefits from the reduction of the potential for disease amplification, spread, and establishment.

Non-federally listed and special status wildlife species will experience long-term, beneficial impacts as a result of the decrease in the deer herd and associated deer browse impacts on habitat, resulting in improved diversity and abundance of wildlife. Limited adverse impacts from the management actions themselves (disruption or noise from human presence when setting traps, placing bait stations, lethal removal, or during implementation of reproductive control techniques) will result in minimal adverse impacts. CWD actions will have similar impacts, including beneficial impacts from the reduction of deer and associated reduction on deer browse on vegetation/habitat.

Effects on historic districts and cultural landscapes will be long term and beneficial as a result of the decrease in the deer herd and reduced browse impacts on park vegetation (an important element of the parks' cultural landscapes and historic districts). Limited adverse impacts will occur from the management actions themselves from vegetation trampling, and limited benefits are expected from the use of the techniques to prevent adverse deer impacts, such as changing crop configurations or selection, using repellents, and using aversive conditioning. CWD actions will have short-term impacts (mainly from trampling) from surveillance and beneficial impacts from the reduction of deer and deer browse on vegetation. It has been determined that implementation of the Selected Alternative would have no effect on historic properties. State Historic Preservation Officers in Maryland, West Virginia, and Virginia have concurred with this determination.

Impacts on the visitor use and experience under the Selected Alternative will vary. Some visitors may experience adverse impacts as a result of potentially observing reproductive control activities, associated area closures, seeing tagged deer in natural areas, and disagreeing with deer management activities. However, long-term, beneficial impacts on many other visitors will occur as a result of forest recovery and cultural landscape improvements. Any CWD response that is taken under the long-term response plan will result in similar impacts, with beneficial impacts related to the appearance of vegetation in the parks and adverse effects on visitor use and experience during implementation.

Under the Selected Alternative, there will be long-term, minor impacts and substantial benefits on visitor use and experience from the relatively rapid reduction in deer population and associated reduction in potential for deer-vehicle collisions. CWD response actions under a long-term response plan will result in short-term, adverse effects from the actions themselves and long-term benefits from the reduction of deer tick hosts and the reduced potential for deer-vehicle collisions.

Human health and safety will experience long-term, minor impacts and substantial benefits related to the relatively rapid reduction in deer population and associated potential for reduced deer-vehicle collisions. CWD response actions under a long-term response plan will have short-term, adverse effects from the actions themselves and long-term benefits from the reduction of deer tick hosts and the reduced potential for deer-vehicle collisions. The direct effects of deer reduction on Lyme disease prevalence cannot be determined.

Long-term, adverse impacts on park management and operations during the direct reduction and reproductive control periods are expected because of the need for increased staff. Once the initial deer herd reduction is complete, more staff time will be available for other activities, resulting in diminishing long-term, adverse impacts. Any CWD response taken under the long-term plan will provide short and long-term, adverse impacts on park management and operations.

In summary, the Selected Alternative will not have a significant adverse effect on the human environment. There will be no significant impacts on vegetation, white-tailed deer, other wildlife and wildlife habitat, visitor use and experience, human health and safety, or park management and operations. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the NPS Selected Alternative will not violate any federal, state, or local environmental protection law.

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 plan and, thus, will not be prepared.

Recommended: Kevin O. Brandt — 06/12/2018

Kevin Brandt
Park Superintendent
Chesapeake and Ohio National Historical Park

Date

Recommended: — 07 June 2018

Tyrone Brandyburg
Park Superintendent
Harpers Ferry National Historical Park

Date

Approved: Robert A. Vogel — 22/June/2018

Robert A. Vogel
Regional Director
National Capital Region

Date

Appendix A Mitigation Measures

Appendix B Non-Impairment Determination

Appendix C Response to Public Comment

Appendix D Errata

APPENDIX A: MITIGATION MEASURES

A number of mitigation measures will be implemented as part of the Selected Alternative to ensure protection of park resources and reduce the risk of injury to employees, park visitors, and adjacent landowners during implementation of population reduction and maintenance activities. These actions include the following:

- Non-lead ammunition will be used for any lethal removal of deer to preserve the opportunity to donate the meat or to leave the carcass in the field for scavenging wildlife.
- Lethal removal with firearms will primarily occur at night (between dusk and dawn), during late fall and winter months when deer are more visible and fewer visitors are in the parks. Similarly, any capture and euthanasia actions or treatment of does will occur during the off-peak visitor hours (early morning and evening) and weekdays to the extent possible.
- Areas could be temporarily closed to park visitors. NPS will patrol public areas to ensure compliance with park closures and public safety measures, and the public will be notified of any park closures in advance. Information regarding deer management will be available at visitor contact facilities posted on the parks' websites to inform the public of deer management actions. If more than one shooting location is used, areas will be adequately separated to ensure safety.
- For lethal removal, noise suppression devices and night vision equipment may be used to reduce disturbance to the public. Activities will be in compliance with all federal firearm laws and regulations.
- Bait stations will be placed, where appropriate and at the discretion of the park, in park-approved locations away from public use areas to maximize both the efficiency and safety of the reduction program.
- If capture and euthanasia are used, park staff will follow safety precautions to avoid harm during this procedures.
- Does treated with a reproductive control agent will be appropriately marked or tagged to facilitate identification of treated individuals and to prevent human consumption of meat from treated animals.
- When donating meat, the parks will follow current guidance from the NPS Office of Public Health and the Biological Resource Management Division with regard to donation of meat from areas affected by CWD and state and local requirements.
- Only NPS staff and authorized agents, including certified skilled volunteers, will be used to administer lethal removal or reproductive control agents.
- Exclosures will be located some distance from common visitor use areas so that they will not intrude on the parks' cultural or natural landscapes.

APPENDIX B: NON-IMPAIRMENT DETERMINATION

By enacting the National Park Service (NPS) Organic Act of 1916 (Organic Act), Congress directed the US Department of the Interior and NPS to manage units "to conserve the scenery and the natural and historic objects and wild life 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 United States Code [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 1.4.4, 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 Nation 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.

NPS has discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of a park (NPS *Management Policies 2006*, section 1.4.3). However, NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values (section 1.4.3). An action constitutes an impairment when its impacts "harm the integrity of Park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values" (section 1.4.5). To determine impairment, NPS must evaluate "the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts" (section 1.4.5).

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, white-tailed deer, other wildlife and wildlife habitat, and historic districts and cultural landscapes. These resources are considered fundamental to the Chesapeake and Ohio Canal and Harpers Ferry National Historical Parks (the parks) because of the ecological importance of the biodiversity and natural communities within the Potomac Gorge and the historical significance of the Chesapeake & Ohio (C&O) Canal.

An impairment determination is not made for visitor use and experience, public and employee health and safety, and park management and operations 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 the parks. Native vegetation, including trees, shrubs, vascular plants, and fields and crops are necessary to fulfill the purposes for which the parks were established and are key to the natural and cultural integrity and enjoyment of the parks. Vegetation contributes to the cultural landscapes that are to be preserved or restored in the battlefields. Park planning documents recognize the natural resources of the parks, including vegetation, as important to the regional ecology and historic context of the parks and to promote protection of natural resources.

Although deer management implementation actions will have short-term, minor impacts (mainly from trampling) on vegetation, the overall impact on vegetation under the Selected Alternative for deer

population management will be long term and beneficial because the relatively rapid deer herd reduction will allow the abundance and diversity of vegetation throughout the parks to recover. The Selected Alternative will enhance natural forest regeneration by quickly reducing deer browsing pressure and maintaining a smaller deer population. It will also help to reduce damage to cropland that is a critical element to both parks. Chronic wasting disease (CWD) plan actions will have similar short-term impacts (mainly from trampling) from surveillance but will result in overall benefits from the reduction of deer and deer browse on vegetation. The overall cumulative impact on vegetation will be long term and beneficial, and the Selected Alternative will contribute appreciable beneficial increments to this cumulative impact. The Selected Alternative will have limited adverse effects overall, will not inhibit the ability of the parks to protect natural resources, and will help promote long-term vegetation health and the ability of the parks to fulfill their designated purposes. Therefore, the Selected Alternative will not result in impairment to vegetation at the parks.

WHITE-TAILED DEER

The selected action will not impair the white-tailed deer populations at the parks. Viable wildlife populations, which include white-tailed deer, are important components of the natural landscape of the parks. Park planning documents recognize the natural resources of the parks as important to the regional ecology; these documents also promote managing deer to protect resources from being harmed by overbrowsing.

Implementing deer management actions will have short-term, adverse impacts because of noise and disturbance and from removing a relatively large percentage of the population over a short period of time to achieve the desired long-term benefit. Removal and reproductive control actions will adversely affect individual deer as a result of handling stress and the possible physiological or behavioral changes associated with the use of sterilization/reproductive controls. Although changes to numbers, structure, or other demographic factors would occur, the parks' populations are expected to remain viable. The overall impact on white-tailed deer under the Selected Alternative will be long-term and beneficial because the relatively rapid deer herd reduction will allow the abundance and diversity of vegetation throughout the two parks to recover and better protect wildlife habitat and the reduced density will minimize the potential for nutritional stress and disease. CWD plan actions will have short-term impacts from surveillance and long-term benefits from the reduction of the potential for disease amplification, spread, and establishment. The overall cumulative impact will be long-term and beneficial, and the Selected Alternative will contribute appreciable beneficial increments to this cumulative impact. The Selected Alternative will have limited adverse impacts, mainly limited to individual deer; it will not inhibit the ability of the parks to protect natural resources and will help promote long-term viability of the deer population and the ability of the parks to fulfill their designated purposes. Therefore, the Selected Alternative will not result in impairment of the white-tailed deer populations at the parks.

OTHER WILDLIFE AND WILDLIFE HABITAT

The Selected Alternative will not impair wildlife and wildlife habitat. Viable wildlife populations and wildlife habitat are key to the natural integrity of the parks and to opportunities for enjoyment of the parks. Park planning documents recognize the natural resources of the parks, including wildlife, as being important to the regional ecology and historic context of the parks and to promote protection of natural resources.

Species that prefer open habitat will experience long-term, adverse effects from the regrowth of the understory and short-term, adverse impacts from disturbance and noise during the implementation of the Selected Alternative and use of deer management. Other wildlife that may experience additional adverse impacts include predators that use deer as a food source, grassland nesting birds that could be affected by a lower deer density or denser understory conditions, or other animals that feed on deer carcasses; however, none of these species solely depend on deer as a food source, so the adverse impacts on these species would be long term and mostly minimal. The overall impact on wildlife of the Selected Alternative will be long term and beneficial because the relatively rapid deer herd reduction will result in

decreased browsing pressure and natural forest regeneration, allowing increased abundance and diversity of other wildlife that depend on understory vegetation. CWD plan actions will have short-term impacts (mainly from trampling) from surveillance and benefits from the reduction of deer and associated deer browse on vegetation and wildlife habitat. The overall cumulative impact will be long term and beneficial, and the Selected Alternative will contribute appreciable beneficial increments to the cumulative impact on wildlife habitat. The Selected Alternative will have limited adverse impacts, will not inhibit the ability of the parks to protect wildlife resources, and will help promote the parks fulfill their designated purposes. For these reasons, the Selected Alternative will not result in impairment of wildlife and wildlife habitat.

HISTORIC DISTRICTS AND CULTURAL LANDSCAPES

The Selected Alternative will not impair historic districts and cultural landscapes. Preservation of historic districts and cultural landscapes is necessary to fulfill the purposes for which the parks were established and is key to the cultural integrity of the parks. Both parks' purposes are tied to the preservation or restoration of cultural landscapes.

Although impacts from deer implementation actions will be short term and minimal (mainly from trampling), the overall effect on historic districts and cultural landscapes under the Selected Alternative will be long term and beneficial because of decreased browsing and deer depredation of agricultural crops. Enhancing natural forest regeneration by quickly reducing deer browsing pressure and maintaining a smaller deer population will result in beneficial, long-term impacts because vegetation, which is an important component of cultural landscapes, can thrive and recover throughout the parks. Also, the reduction in deer density and associated browsing pressure will help reduce damage to crops and landscaping. This will lead to increased chances of viability for the parks' farm ventures and maintain the open and closed patterns of the cultural landscape. CWD plan actions will have similar short-term impacts (mainly trampling) from surveillance and benefits from the reduction of deer and deer browse on vegetation. The overall cumulative impact will be long term and beneficial, and the Selected Alternative will contribute appreciable beneficial increments to the cumulative effect on cultural landscapes. Because adverse effects on historic districts and cultural landscapes will be limited in nature and the actions taken will provide long-term protection of these key resources and promote the ability of the parks to fulfill their designated purposes, the Selected Alternative will not result in impairment of historic districts and cultural landscapes.

SUMMARY

NPS has determined that the implementation of the Selected Alternative (alternative D) will not constitute an impairment of the resources or values of the parks. As described above, implementing the Selected Alternative is not anticipated to result in adverse impacts, constituting impairment of resources or values whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the parks, key to the natural or cultural integrity of the parks or to opportunities for enjoyment of the parks, or identified as significant in the parks' general management plans or other relevant NPS planning documents. This conclusion is based on the consideration of the parks' purpose and significance, a thorough analysis of the environmental impacts described in the final plan/environmental assessment, relevant scientific studies, 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: RESPONSE TO PUBLIC COMMENT

C&O Canal NHP and Harpers Ferry NHP Deer Management Plan and EA
Concern Response Report

AL200 Alternatives: Alternative B: Non-Lethal Deer Management

Correspondence Id: 22 **Comment Id:** 645868

Concern Statement: One commenter suggested that the parks use a specific brand of non-lethal deer repellant on vegetation to see if this specific product could be successful.

Response: As stated on page 29, under "Additional Proposed Actions under Alternative B", NPS may consider use of small amounts of commercially available odor- or taste-based deer repellents for use at each park. Park staff would experiment with available repellent products to determine which work best in each application area.

Comment Text: I have a service that uses a very successful product to keep deer from eating plants. I understand the problem with deer destroying native plants in our regional environment. It might be interesting to try selective treatment of some native species to see if this were to help "build-up" the natives the area.

Organization: NoVa Deer Shield

Page: Paragraph:

Kept Private: No

AL300 Alternatives: Alternative C: Lethal Deer Management

Concern Statement: One commenter expressed support for use of archery (as part of alternative C) because it would be less costly and could be used in densely populated areas.

Response: As stated on page 40, under "Alternative C: Lethal Deer Management", archery is included in Alternative C on a case-by-case basis, in certain areas where firearms are not appropriate (such as near developed areas).

Correspondence Id: 21 **Comment Id:** 645867

Comment Text: The bow hunting option makes the most sense since it can be used with less cost and in the close quarters of the high population areas.

Organization: Potomac Village Garden Club

Page: Paragraph:

Kept Private: No

AL400 Alternatives: Alternative D: Combination of Lethal and Nonlethal Deer Management

Concern Statement: One commenter objected to the lethal methods outlined under alternative D and expressed concerns over the narrowness of the park and potential for bullets to travel into neighboring private properties near the C&O Canal.

Response: As noted on page 28 of the EA, there are some very narrow portions of C&O Canal NHP that are not suitable for conducting safe lethal reduction activities because it is difficult to ensure that shots from firearms or bow and arrow remain within park property. Lethal removal would not be conducted in these areas.

Correspondence Id: 32 **Comment Id:** 645897

Comment Text: I'd like to comment on "Alternative D; Combined Lethal and Nonlethal Deer Management" proposal for managing the deer in Harpers Ferry and the C&O Canal parks. For the record, I object to all or any form use of "lethal" methods to control the deer on the C& O and/or any NPS property for that matter. Slaughtering deer with so called "sharp shooters" on the C&O Canal is NOT practical given the width of the C&O park in and of itself. The trajectory of a shell/bullet from ANY firearms will easily exceed the boundaries of the C&O Canal. As someone who lives across the Potomac River from the C&O Canal, I know firsthand that bullets shot from the Maryland side - travel through the C&O Canal property - ricochet off the water and are able to hit the Virginia side of the Potomac. The issue of using sharpshooters should raise huge liability issue flags for the NPS especially sharpshooters on the C&O.

Organization:

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AL500 Alternatives: Location of Deer Management

Concern Statement: One commenter expressed support for the implementation of deer management to begin near the Gold Mine Tract at Great Falls. Another commenter noted that deer overpopulation is not an issue in the western Maryland portions of the C&O Canal; the commenter also suggested that NPS needs to work with landowners prior to initiating reduction actions in this area.

Response: As described on page 28 of the EA, the parks currently have identified 22 possible implementation areas. C&O Canal NHP and Harpers Ferry NHP will focus first on Great Falls and Maryland Heights implementation areas, respectively, because of known vegetation issues and a documented high population of deer. Future implementation will be based on deer density and vegetation monitoring. Before deer management is implemented in a chosen area, additional monitoring for deer density or herd health (which also indicates that the herd may be in need of density reduction) would occur to best estimate deer population in the area, confirm a need exists, and determine the extent of the management action. In all cases, NPS will coordinate with adjacent landowners in implementing the plan. [Park to confirm final sentence].

Correspondence Id: 15 **Comment Id:** 645856

Comment Text: While we leave details of the implementation of the plan to the NPS, we find positive the recommendation that removal of deer begin in the Gold Mine tract at Great Falls.

Organization: Chesapeake & Ohio Canal Association

Page: Paragraph:

Kept Private: No

Correspondence Id: 27 **Comment Id:** 645886

Comment Text: as far as the deer population where I live, we see less deer now then 10 years ago. that is because the landowners have worked with the state and each other to improve

this.my opinion is, as small as the canal is here, you should work with the adjoining landowners IF there is ever a problem with deer numbers. Keep in mind, I have almost a mile of property line that joins the park. If you need to control deer numbers in the city, that's fine, not here where we hunt as a family tradition!! Please, keep us informed and thanks again for involving us!

Organization:

Page: Paragraph:

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Organization: Chesapeake & Ohio Canal Association

Page: Paragraph:

Kept Private: No

Correspondence Id: 33 **Comment Id:** 645902

AL700 Alternatives: Options Dismissed from Further Analysis

Concern Statement: Several commenters suggested that NPS allow a dedicated hunt on its lands, rather than hire contractors. Suggestions included: permitting bow hunting in closed-in areas, using the hunt as an educational opportunity for young hunters, and building partnerships with local sportsmen to accomplish the task. Commenters stated that a dedicated hunt by local hunters, rather than contractors, offered the following advantages: cost effectiveness, improved deer coverage and results, creation of a source of local revenue, and recreational engagement opportunities for the local community. One commenter stated that hunters are a local resource, are expert marksmen, understand hunter safety, and respect deer as a source of food.

Response: The NPS considered but dismissed from detailed analysis an alternative that would have allowed recreational public hunting within the parks. A detailed discussion of reasons for dismissal is included in chapter 2, on page 65 of the EA. The discussion notes that hunting would be inconsistent with long standing laws, policies, and regulations for NPS units where hunting has not specifically been authorized by Congress. Changing these longstanding servicewide policies and regulations regarding hunting in parks is beyond the scope of this plan/EA.

Correspondence Id: 4 **Comment Id:** 645828

Comment Text: Why don’t you open it up for Bow hunting and or controlled shotgun managed hunts? It won’t cost NPS a dime. Fairfax County has an outstanding management program in place. Check them out.

Organization:

Page: Paragraph:

Kept Private: No

Correspondence Id: 16 **Comment Id:** 645894

Comment Text: I do not support professional sharpshooters. I believe in letting local hunters, known for their expert marksmanship, hunter safety and respect for deer as a food source, have the honor and privilege to thin the deer herds. Please treat this local issue with local resources, and include participants from demographic groups that are not traditionally engaged as partners

with NPS. This approach would be supported by the objectives of the National Park Service System Plan, which states: "NPS parks and programs should strive to: promote, build upon, and expand already successful partnerships nurture and sustain reciprocal relationships with community members and partners develop new, innovative, and collaborative approaches to park and regional planning , and landscape-scale resource protection partner more broadly with other federal, state, and local agencies, local communities, and increasingly, private and nonprofit groups to conserve important wildlife corridors, historic places and trails, and larger ecosystems."

Organization:

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 12 **Comment Id:** 645853

Comment Text: I would like to see these overpopulated areas utilize the conservation techniques that ethical hunters can provide. If the areas are open to controlled hunting, it would provide more recreational opportunities for the residents of the state. It can also provide revenue to the state as well if as are regulated like some other areas across the country (PA DMAP program and Fort Indiantown Gap to name a few). Registering and signing in and out would help to regulate. Avoid the expense and utilize the ethical sportsman.

Organization:

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 10 **Comment Id:** 645851

Comment Text: Let the hunters in there to harvest the deer. Don't be a pansy. If it is a confined area where rifles would be dangerous, consider shotguns. If that is unrealistic, keep it strictly bowhunting. Let me know and I could bring several bowhunters with me.

Organization:

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 9 **Comment Id:** 645850

Comment Text: The first option should be a special hunt or extended hunting season in those affected areas. Require a deer check-in station in several locations to get a better count of deer taken for each area. Sharpshooters and birth control should be a last resort as they are extremely expensive with limited results. With opening it to hunters, you are getting better coverage and better results.

Organization: National Deer Alliance

Kept Private: No

Correspondence Id: 8 **Comment Id:** 645849

Comment Text: That being said....if you MUST murder them, why not only SAVE money, but MAKE money! Instead of the expense of hiring government, expensive sharpshooters - why not open this up to hunters to PAY YOU for the opportunity to shoot them, and use them for food? I don't understand why the idea to PAY someone to do this for you is even considered, when this area is rich with hunters. Know your audience, and take advantage of this opportunity. You can have strict requirements, but I still guarantee people will pay for a license to hunt them for you.

Organization:

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 6 **Comment Id:** 645831

Comment Text: What about a few evening hunts by lottery? I think there are city parks in md where this is done.

Organization:

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 5 **Comment Id:** 645829

Comment Text: You should consider allowing archery hunting like other MD State Parks do and have proven to be safe and effective. Rather than pay sharp shooters you could generate revenue from hunters and benefit the local community.

Organization:

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 3 **Comment Id:** 645893

Comment Text: Why not make it a learning experience for young people? Teach them to hunt, hunter safety, then prepare the deer for food. The food could be donated. I think this might be better received than having sharpshooters at night using spot lights. They could learn a lot about park management and may even become volunteers.

Organization:

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 25 **Comment Id:** 645881

Comment Text: I would hope the program would use bow hunting and not sharp shooting. Most residents have no idea that we have a hunt on from the beginning of September to the end of the year. I would also hope the Park hunt can occur during the same time of year as our town hunt and would allow the hunters the town has signed off to participate.

Organization: Tree Committee

Page: Paragraph:

Kept Private: No

Concern Statement: One commenter suggested the NPS consider managing the deer population by capturing and moving the deer to another area.

Response: The NPS considered but dismissed from detailed analysis an alternative that would have allowed capture and relocation of deer in the park. A detailed discussion of reasons for dismissal is included in chapter 2, on page 66 of the EA. The discussion notes that capture and relocation efforts would be in violation of NPS policy regarding translocation and the prevention of disease spread, and state agencies would also likely not support the option. Additionally, areas for relocation would be very limited or nonexistent given the abundance of deer in Maryland, Virginia, and West Virginia; live capture and relocation methods can cause stress that can result in high mortality rates among captured and/or relocated deer; and quarantine processes would likely be required due to CWD concerns.

Correspondence Id: 33 **Comment Id:** 645901

Comment Text: Have you considered trapping and transporting to other areas? I know of local residents that would be glad to take these deer off of your hands.

Organization:

Page: Paragraph:

Kept Private: No

AL900 Alternatives: Alternatives Framework and Alternatives Elements

Concern Statement: A number of commenters requested that meat be distributed to restaurants, food banks, or others in need. Other commenters suggested that the venison be sold to grocery stores.

Response: Carcass disposal is addressed on pages 18, 40, 43-44, 47, 49-50, and 54 of the EA, and in Appendix C (C-3). As noted, the park intends to donate deer meat to local charitable organizations and nonprofit food banks to the maximum extent possible or practical. Carcasses not suitable for donation would be disposed of at a landfill. When donating meat, the parks would follow current guidance from the NPS Office of Public Health and the Biological Resource Management Division with regard to donation of meat from areas affected by CWD, in addition to state and local requirements. Deer would be donated for consumption only if they are confirmed CWD-negative or if the required detection confidence level indicates that CWD is not present within the population.

According to federal regulations, the meat could be sold as surplus federal property through an auction or bidding process only. The parks would not directly benefit from the proceeds, which would go to the General Treasury, and it would involve considerable staff time and costs to implement such a sale. Therefore, the parks will donate as much meat as possible to local charitable organizations.

Correspondence Id: 17 **Comment Id:** 645861

Comment Text: We had the good fortune to work with the Maryland Bowhunters Society in our neighborhood, Potomac Highlands. The unselfish efforts of their members fed many families through the Maryland "Farmers Feeding The Hungry" program. We now have a manageable deer population in that the many fewer deer are now healthy and no longer a hazard on our roads and property. Per my experience I am confident that a coordinated effort at managing White-Tail deer is important to residents and deer alike.

Organization:

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 23 **Comment Id:** 645870

Comment Text: Venison is a delicious food which should not be wasted. Plans should be made to use it, either for sale in high end grocery stores and restaurants or for feeding programs for the homeless and low income families.

Organization:

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 21 **Comment Id:** 645865

Comment Text: We would also like to see the venison donated to the soup kitchens.

Organization: Potomac Village Garden Club

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 19 **Comment Id:** 645864

Comment Text: My comment on deer population - Did it ever occur to anyone that deer meat is edible? I personally love deer meat. Hunters mostly eat the game they hunt for- schools could use it as well as needy families. Didn't the pioneers and early settlers use wild game for food? Our laws and restrictions prevent the ability to hunt and help the needy. Rethink the solution to destroying a source of food supply from nature.

Organization:

Page: **Paragraph:**

Kept Private: No

Concern Statement: One commenter suggested that NPS collaborate with the Maryland Department of Natural Resources Game Commission to designate the deer management area as “Region B” in Maryland and realign the boundaries between Regions A and B, which have different rules. Hunting in Region B allows a landowner to use multiple weapons and remove more than one deer at a time. The commenter noted that this arrangement would be cost effective and ethical.

Response: The NPS considered but dismissed from detailed analysis an alternative that would have allowed recreational public hunting within the parks. A detailed discussion of reasons for dismissal is included in chapter 2, on page 65 of the EA. The discussion notes that hunting would be inconsistent with long standing laws, policies, and regulations for NPS units where hunting has not specifically been authorized by Congress, and this is the case for both parks. Since hunting is not allowed in C&O Canal NHP, areas of the park cannot be added to a state hunting area. NPS may use skilled volunteers (as discussed on page 41-42 of the EA) to allow the park managers to make strategic use of available resources.

Correspondence Id: 35 **Comment Id:** 646391

Comment Text: With regards to the deer management plan for the C&O Canal NHP and specifically that portion of the park that lies south of Clear Spring, Maryland in an area referred to as "The Neck" due to the Potomac Rivers configuration in that area, (Copy Attached), it has become abundantly clear that the NPS has not considered lobbying with the Department of Natural Resources Game Commission in order to include that area as part of "Region B". Region B allows a land owner to harvest 10 doe with each of three weapons (bow, muzzleloader and rifle). In Region A (this region) a hunter is allowed only one doe with each weapon.

Therefore, before spending out tax dollars to hire sharp shooters, please do the ethical, proper and most cost effective way first and petition the DNR to change Region B to include this area. I have attached a map whereby the red line shows the current A/B (B being on the east side of the line) line. By re-adjusting the red line to follow the blue line would solve many of your problems and save tax payer dollars. The blue line continues west along Route 56 and then south along McCoys Ferry Road to the river.

Organization:

Page: Paragraph:

Kept Private: No

Concern Statement: A commenter expressed concern that there was not enough information on chronic wasting disease (CWD) to understand the proposed action related to CWD. The commenter noted that if CWD is a native organism, then reducing the deer population could run counter to NPS policies.

Response: Information relating to the CWD proposed action can be found throughout the EA. The purpose and need of the project in regards to CWD are discussed on page 1 of the EA, current CWD management and information specific to the parks is discussed on pages 6 and 15 of the EA, county and state CWD management are discussed on pages 7 and 10-13 of the EA, and proposed CWD actions are discussed on page 22 of the EA. CWD actions will occur in relationship to deer management actions and will be dependent on the extent, location, and spread of the disease, as well as coordination with the states. The NPS has reviewed the potential origins of CWD and how to manage it in prior documents. The NPS concluded that although the origins may never be known, it is "strongly suspected that CWD is a non-native disease of deer and elk in parks" and that the NPS will work to prevent and control CWD within park units (NPS CWD Handbook 2012; NPS Director's CWD Guidance Memorandum, July 26, 2002).

Correspondence Id: 34 **Comment Id:** 645925

Comment Text: Chronic Wasting Disease: The NPS failed to provide sufficient information about CWD to facilitate the public's review of this element of the plan. In particular, the NPS fails to disclose whether CWD is considered a native or foreign organism. If it is of native origin, the draconian proposal to kill massive numbers of deer in site specific CWD infection zones may be misplaced and potentially in violation of NPS own legal mandates and policies. This is not to say if CWD is or is not a native organism but only to suggest that such data is relevant to the analysis. Similarly, the NPS fails to consider the potential value of allowing CWD to run its course in the parks. While this would be contrary to how the state wildlife agencies are addressing evidence of CWD exposure, since disease is a naturally controlling or limiting factor for wildlife, allowing the disease to run its course in the parks would reduce its deer population (consistent with what the NPS is proposing to do using sharpshooters) and, for those deer who survive, they will likely have a genetic or developed resistance to the disease allowing them to become the foundation of a new deer population that is not susceptible to CWD.

Organization:

Page: Paragraph:

Kept Private: No

Concern Statement: A commenter noted that the criteria for use of immunocontraceptives are unduly restrictive and seem biased against their use; the commenter indicated that immunocontraceptives could effectively reduce the deer population.

Response: The NPS has jurisdiction over the wildlife on its land and can set criteria for any wildlife management tool to ensure it is consistent with NPS and park-specific mandates, as well as other federal policies. The criteria included in this plan are relatively straightforward in terms of NPS policy, and there are currently no fertility control agents that fulfill all of the criteria. The rationale for each criterion is included on page 37 in Table 5 of the EA, and discussed below.

Criterion 1: Federally approved fertility control agent for application to free ranging populations.

It is critical that all aspects of a fertility control program be consistent with federal laws and regulations and NPS policies. The regulation of free-ranging wildlife immunocontraceptives is under the Environmental Protection Agency (EPA) and is administered under the Federal Insecticide, Fungicide, and Rodenticide Act (7 USC §136 et seq. 1996). Prior to use in a management context, an immunocontraceptive must be registered for use in white-tailed deer. They may be used under an experimental use permit for research purposes only. As such, PZP is not currently available for managing deer population sizes. The GnRH vaccine GonaCon™ is registered, but neither it nor PZP has met more than two of the additional criteria listed below (criteria 2-5). Pharmaceutical reproductive control agents (e.g., leuprolide, prostaglandins) are regulated by the Food and Drug Administration (FDA) and can be applied for management purposes under the Animal Medicinal Drug Use Clarification Act within a valid veterinarian-client/patient relationship. Products regulated by the FDA can be used for research purposes under an Investigational New Animal Drug (INAD) exemption. However, none of the potential pharmaceuticals meet all of the additional criteria listed below.

Criteria 2 and 3: Can be remotely injected and has multiple-year efficacy (3 to 5 years).
Modeling efforts have clearly demonstrated that (1) "the efficacy of fertility control as a management technique depends strongly on the [multi-year] persistence of…the fertility control agent;" and (2) the only scenarios in which fertility control is more efficient than culling at maintaining population size is when a multi-year efficacy is achieved (Hobbs et al. 2000). In addition to increasing the efficiency of a fertility control program, these requirements benefit and protect individual deer because they reduce the frequency of stressful capture and/or drug delivery operations.

Criterion 4: Leave no hormonal residue in meat (i.e., meat derived from treated animals should be safe for human consumption according to applicable regulatory agencies, and safe for consumption by other animals).
Any fertility control agent applied in free-ranging wildlife populations that are contiguous with areas or with the same species that are hunted must be safe for human consumption, either immediately after delivery or after an established withdrawal period. While the NPS understands that antibodies induced by immunocontraceptives do not pose a human health risk, only the regulatory agency can make a claim of appropriateness for human consumption. Any fertility control agent approved for use should have minimal ecological impacts on other species that could eat deer.

Criterion 5: Overall, use of the agent results in an acceptable level of reduction in the free-ranging deer population with limited behavioral impacts.
This criterion was included to ensure that the agene used would reduce deer numbers in free-ranging populations to the extent needed to allow for tree regeneration. Also, it is important that any agent used meet NPS policies, including those regarding altered behavior (NPS Management Policies 2006, section 4.4.1). Two studies have demonstrated that fertility control agents (e.g. PZP) can be used to reduce closed deer populations in small areas (less than 1 square mile; Rutberg and Naugle 2008a). However, no study has demonstrated that fertility control works to reduce deer numbers in free-ranging populations to the extent needed to allow for forest regeneration, so it is important to demonstrate proof of success to a review panel. The rationale for this criterion is further supported when one examines the modeling efforts to date by Hobbs et al. (2000) and Merrill et al. (2006). These studies clearly indicate that meaningful population reductions (e.g., >50%) would be difficult and inefficient (compared to culling) when conducted on free-ranging populations that are more abundant and inhabit larger areas than the aforementioned, small-scale field demonstrations to date (by Rutberg and Naugle 2008). Conversely, there is good evidence that a multi-year fertility control agent can be as efficient or even more efficient (compared to culling) when the goal is to maintain a population at a particular level that has already been realized (Hobbs et al. 2000; this also assumes all animals are marked and identifiable).

Correspondence Id: 34 **Comment Id:** 647587

Comment Text: Immunocontraception: As previously noted, the NPS has intentionally created immunocontraceptive efficacy and delivery criteria that are so rigorous that it knew no vaccines could be immediately used to try to gradually reduce deer densities in the parks. That oversight needs to be corrected and the NPS must revisit these standards to ensure that the perfect doesn't

get in the way of the good. Contrary to the clear bias that the NPS has against immunocontraceptive vaccines, these vaccines have been proven to be safe and efficacious in deer, could and would work in stopping deer population growth and causing a decline in deer numbers, and, even if implemented in year 1 without any prior lethal deer control in the parks, there could be a noticeable reduction in park deer within the lifetime of the plan depending on the number of vaccine doses delivered, the frequency of delivery, and given the existing mortality rate attributable to any number of factors.

Organization:

Page: Paragraph:

Kept Private: No

CC1000 Consultation and Coordination: General Comments

Concern Statement: One commenter requested that NPS coordinate deer management activities with the town of Harpers Ferry; a second commenter requested additional review time and consultation with the West Virginia Department of Natural Resources (WVDNR).

Response: As stated on page 27, under "Continued Agency and Interjurisdictional Cooperation", the parks will continue to coordinate with other agencies involved with deer management, such as USFWS, MD DNR, VDGIF, VDCR, and WVDNR, as well as county and local governments. [NPS to update regarding WV, as needed].

Correspondence Id: 11 **Comment Id:** 645852

Comment Text: I commend the park service for joining with the Corporation of Harpers Ferry in finding solutions to the invasion of white tailed deer. The town has been engaged in efforts to reduce the number of deer and the damage that they cause to private property for several years. Since we are surrounded by the lands of the Harpers Ferry National Historical Park, our efforts cannot succeed without a coordinated effort by the park service. While the decision to reduce herds is emotionally fraught, the sight of starving animals who have been forced to eat foods that are unnatural to them is equally painful. As sentient beings, we have a responsibility to solve the problem in as humane a manner as possible. May I suggest a coordinated effort here in Harpers Ferry since our situation, as a town embedded in a park, is a singular one.

Organization:

Page: Paragraph:

Kept Private: No

Correspondence Id: 26 **Comment Id:** 645882

Comment Text: We would like to request an extended period to comment on the plan as well as a joint meeting between our two agencies in the immediate future. Our deer project leader has a number of issues on which he would like clarification. Although we applaud your efforts to attempt to control deer densities on the park, we remain somewhat perplexed as to why we were left out of the dialog regarding potential management activities of a resource under our jurisdiction. We trust it was a simple oversight and look forward to hearing from you.

Organization: WV Department of Natural Resources

Page: Paragraph:

Kept Private: No

GA1000 Impact Analysis: Impact Analyses

Concern Statement: Commenters expressed legal concerns regarding deer management and associated impact analyses. One commenter stated that various proposed actions for deer management were not permitted in the state of West Virginia, and indicated that if an alternative is approved, it would be unenforceable. Another commenter stated that the EA lacks a legal basis and legal analysis that sufficiently supports the need for deer management and the proposed actions.

Response: The park will cooperate with the state; however, NPS is not required to follow state laws and regulations when carrying out deer management actions. As explained in the EA on page 13 under "State Hunting Regulations," NPS has the authority to manage wildlife and other natural resources within the boundaries and units of the National Park system. In addition to the general mandate to conserve park resources and prevent impairment, section 3 of the NPS Organic Act expressly authorizes the Secretary of the Interior to, "…provide in his discretion for the destruction of such animals and of such plant life as may be detrimental to the use of [the parks, monuments, and reservations under the jurisdiction of the National Park Service]." This plan is a straightforward exercise of that discretion. The courts have consistently upheld NPS authority to conduct actions of this sort, at Rock Creek Park, Rocky Mountain National Park, Gettysburg National Military Park, and at Valley Forge National Historical Park [any additional parks to add to this list?]

Correspondence Id: 26 **Comment Id:** 645883

Comment Text: Being that your plan's alternative actions would involve several illegal activities in West Virginia, it is our concern that should one of these be approved, the plan will not be allowed to proceed in our state. Some of the more questionable items include: 1. Use of contraceptives which are not approved for use in West Virginia. 2. Use of professional sharpshooters to remove deer. 3. Collection of deer carcasses and biological samples without proper permitting. 4. Planning of collections or hunts outside of regular hunting seasons.

Organization: WV Department of Natural Resources

Page: Paragraph:

Kept Private: No

Correspondence Id: 34 **Comment Id:** 645918

Comment Text: The NPS has failed to articulate a clear legal basis to justify the slaughter of a native ungulate: The NPS does not clearly specify the legal authority to implement the preferred alternative of engaging in the wide-scales slaughter of deer in C&O/Harper's Ferry parks. It suggests the killing is consistent the NPS policies but fails to provide a substantive analysis of all relevant policies and how or why they are applicable in this case. It also fails to cite to a single regulation to justify lethal control. As NPS regulations and policies must be consistent with law (e.g., the NPS Organic Act), absent statutory authority to engage in such whole-sale slaughter of a native ungulate, the legal foundation for the preferred alternative is weak - if it exists at all. There is a single reference to 16 USC 1, which the NPS may believe provides the legal authority for killing deer. This is wrong. The "use" referred to in this particular statute applies to human use of the national parks and the need to regulate such use in

order to preserve park resources for future generations. It strains the bounds of credulity - not to mention past scholarly review of this statute and case law - - - to claim that the NPS duty to prevent excessive or harmful "use" in this statute can be applied to deer use of C&O/Harper's Ferry parks. If this were true, it would open the floodgates for potential abuse by the NPS which could concoct any number of justifications to warrant lethal control of virtually any native species in any national park. If black bears girdled and killed too many trees thereby adversely impacting forest generation, the NPS could justify the slaughter of bears based on their "use" of trees. If beaver dams were flooding and destroying cultural sites or artefacts or altering the cultural vista in a manner not consistent with the NPS vision, it could justify the slaughter of beavers based on their use of park resources to build dams. While these examples may be written off as unrealistic, they reflect exactly what the NPS has done with deer in the C&O/Harper's Ferry parks. The deer are eating (a completely natural behavior) plants (an entirely normal choice of food) and causing impacts (forest regeneration, crop loss) that the NPS doesn't like and, therefore, such use under 16 USC 1 is impermissible. Indeed, the deer example is even more egregious considering that humans (acting both inside and outside the parks) have created ideal habitat to sustain abundant deer numbers including intentionally planting crops/hay to preserve a cultural landscape/vista. When the deer dare take advantage of the habitat and foodstuffs that humans, through our development activities and even NPS management decision, have provided the NPS solution is to shoot them instead of finding ways to use changes in land management practices to non-lethally reduce deer numbers in the parks. The NPS could attempt to justify the slaughter under 16 USC 3 but, to do that, it would have to prove that the deer had adversely impacted public use of the parks. This could not be done simply by citing dropping park visitor numbers (which is not the case in either C&O or Harper's Ferry parks) but, rather, the NPS would have to prove (presumably via survey data) that the public is avoiding the parks due to impacts attributable to deer.

Organization:

Page: **Paragraph:**

Kept Private: No

IT1000 Issues/Impact Topics: White-Tailed Deer

Concern Statement: One commenter stated that the proposed alternatives that involve sharpshooting and capture and euthanasia as part of management activities are inhumane and can cause trauma in deer.

Response: As explained on pages 40 and 41 of the EA, every effort would be made to make sharpshooting and capture and euthanasia efforts as humane as possible. Deer injured during the operation would be put down as quickly as possible to minimize suffering. Authorized agents under direct NPS supervision would receive training to ensure the humane removal of animals. All firearm use would comply with relevant NPS directives related to firearm use in parks and federal firearm laws administered by the Bureau of Alcohol, Tobacco, and Firearms. As explained on page 43 of the EA, capture and euthanasia would be used only in select situations and would supplement sharpshooting. Neither park expects to use capture and euthanasia, but it is included in the plan in case its use is necessary. If necessary, captured deer will be euthanized as humanely as possible, in accordance with current veterinary recommendations such as those published by the American Veterinary Medical Association.

Correspondence Id: 32 **Comment Id:** 645900

Comment Text: The National Park Service's job is to protect the natural resources of our National Parks - deer are a part of the 'natural beauty' of our parks and should be managed with the most humane resource available (reproductive controls.) If the NPS believes shooting deer is a humane approach then we need more intelligent people running our NPS. Times and attitudes have changed in our country and despite what the good-old-boys would have me believe, I know deer hunting is cruel, and the option to use limited capture to euthanize deer is not viable option either - as it still equates to trauma for an innocent creature. Every hunting season (in Loudoun County, VA deer season runs from September to March), I have so called expert (ex-military) marksmen trespassing on my property trying to track and recover the deer they shot. Do not insult the intelligence of the public by stating that the NPS will use "sharpshooters" to kill the deer. Deer do not always instantly die when shot - even by "sharpshooters." Can you appreciate the horror I experience when I stumble upon rotten deer carcasses while I'm hiking on my own property? Managing deer by shooting them is an apathetic, lazy and archaic answer period! And by the way, I own 20 acres (in Lovettsville, VA) where a number (12 - 40) of deer call my property home. The deer and I live symbiotically most of the time and in those instances where our paths cross and the deer cause problems, I learn from their clues. I plant deer resistant plants, fence in my non-deer resistant gardens and have 3 dogs to remind the deer to stay on their side of the fence. I very much appreciate the opportunity to voice my opinion, however, think of the time and resources the NPS could saved in this particular case if the NPS was already doing the 'right thing' and already had a long term reproductive control program in place to manage the deer instead of this Public Input process whereby the NPS is trying to garner public permission to slaughter those deer.

Organization:

Page: Paragraph:

Kept Private: No

Concern Statement: One commenter stated that the EA needs to more fully describe sampling methods used to monitor deer populations and analyze impacts to deer.

Response: Needs NPS Input. Appendix D explains sampling methods for vegetation. Not sure how to NPS would like to respond. Other deer plans (except AMM) had deer sampling methods as part of the appendix.

Correspondence Id: 34 **Comment Id:** 645922

Comment Text: Deer numbers and impacts: The NPS provides estimates of deer densities in both parks (and specific sections of the parks) based on various methods used to count or survey deer. The methods are identified but not described. Just as the NPS described the vegetation sampling methods used in the parks, it should have provided a description of the deer sampling methods to identify their weaknesses and strengths, to disclose any relevant assumptions, and to articulate how raw data is translated into deer numbers/density estimates. For example, the use of spotlight counts, since they are typically done along park roadways, may result in higher calculated deer densities if the surveyed areas are more attractive to deer than other areas not near roads. As roads create edge habitat, there is reason to believe that such a bias exists with spotlight counts. Or, for infrared technology, if used in the parks during hunting season outside the parks, has the distribution of the deer changed in order to seek out

the relative safety of national park lands where the deer can't be hunted. Or, even if infrared data collection occurs after hunting season have closed, would any deer distribution changes to flee hunters continue to persist thereby impacting the validity of the estimated deer numbers particularly if deer count numbers from the parks are extrapolated to a larger landscape. Even just disclosing all of the raw deer count/survey data collected in both parks by count/survey method over the years would have provided required information that could have been considered in preparing this letter. Without that data, no independent analysis can be done and without the additional missing information (as identified above), the DEA is inadequate and invalid.

Organization:

Page: **Paragraph:**

Kept Private: No

IT1100 Issues/Impact Topics: Vegetation (including consideration of invasive species)

Concern Statement: One commenter stated that a number of factors were omitted from the impact analyses for vegetation in the EA, including anthropogenic impacts, plant diseases, soil toxins, changes in precipitation from climate change, increase of wildlife species, forest canopy density, and effects of invertebrate species.

Response: The current EA discusses vegetation and the relationship of deer management to the parks' vegetation on pages 6 and 9-10, as well as in the vegetation section on pages 74-76. From the data gathered and results, it is clear that the lack of forest are directly attributable to deer browsing and that deer are affecting the understory structure, which diminishes the value of habitat for other wildlife. The focus of the EA is on deer management, not vegetation management. While deer and vegetation management are related, the NPS has broad discretion in determining how best to handle related, yet discrete issues. The NPS is not required to address all issues that affect vegetation in the same planning process, and there is a need to take action relating to deer impacts now.

[Note to NPS: This plan is a deer management plan to address adverse effects on vegetation that have definitely been tied to high deer density at the parks. Although other factors do affect vegetation, this plan is focused on one particular stressor and is not a general vegetation management plan that would address all factors that can influence vegetative condition. See AMM concern 49290]

Page: **Paragraph:**

Kept Private: No

Correspondence Id: 34 **Comment Id:** 645920

Comment Text: Other factors causing adverse impacts to park vegetation/other wildlife: Even if the NPS had credible park-specific information to demonstrate the alleged adverse impacts of deer to park vegetation and other species, the NPS has an obligation to both disclose and consider other factors that may be causing or contributing to the alleged vegetation/forest regeneration impacts reported in the DEA. Such factors, which the NPS did not even mention let alone evaluate in the DEA include, but are not limited to: anthropogenic impacts to vegetation (off trail hiking, biking, horseback riding); plant diseases and pathogens; soil toxicity and pathogens; changes in precipitation levels/types/timing in response to climate change; changes in abundance and composition of other wildlife species particularly

herbivores/granivores; forest canopy presence and density; and the invertebrate species assemblage and, in particular, species that can impact vegetation characteristics and health. The NPS simply failed to identify any of these other factors that can affect vegetation/forest regeneration in the DEA and, consequently, didn't include any analysis of the presence/absence of these factors in C&O/Harper's Ferry parks or if/how they may be impact vegetation characteristics in the parks. Without such information the DEA is incomplete and the ability of decision-makers to render a fully informed decision is impossible.

Organization:

Page: **Paragraph:**

Kept Private: No

Concern Statement: One commenter stated that the EA does not disclose enough information on invasive plant species and requested additional details regarding invasive plant species, including where in the park they can be found, impacts on vegetation production and forest regeneration, growth and spreading rate, and impacts on other wildlife.

The commenter also stated that the EA is missing information on NPS vegetative plots throughout the study area. The commenter requested additional details for each plot be added to the EA, including locations, habitat and canopy cover characteristics, soil data, and characteristics of invasive species. Additionally, the commenter stated that vegetative plot monitoring data for C&O Canal Park from 2000–2003 is missing, and that vegetative plot monitoring data from Harpers Ferry are not disclosed.

Response: NPS believes that invasive plant species (often referred to as nonnative species in the EA) are adequately addressed in the context of deer management. Nonnative plants in the parks are described in the EA on pages 72 and 73, effects of alternatives on nonnative plants are addressed in chapter 4 (e.g. see pages 105 and 106), and invasive nonnative plants are included in the cumulative impact analysis.

The vegetation data presented in the EIS are representative of the conditions behind the purpose and need for the plan. These data are sufficient to support the purpose and need for the plan, and the results of current and future monitoring will be incorporated into decisions made in the future following the principles of adaptive management, as described in the EA. [Response may need more detail regarding what data should be in the EA/needs park input].

Correspondence Id: 34 **Comment Id:** 645921

Comment Text: Presence and impact of invasive species: The one factor that the NPS did include and discuss in the DEA that may be impacting vegetation characteristics in C&O/Harper's Ferry parks is non-invasive species. However, even though the NPS noted the problem with invasive species in the parks, identified some of the invasive species, and even conceded that invasive vines can adversely impact native forest species, it failed to fully disclose all relevant information about the severity of the invasive species problem in the park, whether alleged remediation/mitigation measures are working, and how such species may be impacting vegetation production/forest regeneration measures from the open and closed plots established in both parks. The NPS should have included additional information about all invasive species identified in the parks, where they are found, information about the spreading

rate of the species annually, information about their palatability to deer, their reproduction mechanisms (i.e., seeds, whether seeds are distributed by the wind, tubers), their impacts (positive/negative) on other wildlife species (for food/nesting cover), and, in particular, information about the presence/absence of invasive species (by species) and their density, abundance, composition, and health in and near open and closed vegetation monitoring plots. Absent disclosure of such detailed information and a high quality analysis of the direct, indirect, and cumulative impacts of invasive species on vegetation/forest characteristics in C&O/Harper's Ferry's parks, the DEA is incomplete and any decision will be invalid.

Vegetation data and analysis: The NPS reveals that it has established fenced (closed) and unfenced (open) vegetation monitoring plots to assess vegetation production/forest regeneration in the parks, provided their measurements, and described the methods used to assess production/cover (including vertical cover) and sapling density but it failed to share other critical information. That information would include: the location of the plots; the habitat characteristics where each is located; the soil characteristics for each plot; the presence/absence and density of any canopy cover or any measure of light penetration to the ground at each plot site; and characteristics of invasive species at each plot site. Not only must it disclose this information but it is required to subject such information to high-quality analysis in order to determine how such specific factors may be impacting vegetation/forest regeneration measures in addition to any alleged impacts attributable to deer. The vegetation/forest regeneration data that was disclosed in the DEA, particularly for 2003 and 2009 from C&O park, was also not complete. As indicated in DEA, the NPS has been monitoring vegetation plots in C& O park since 2000 yet only data from 2003 and 2009 was disclosed. Additional data is clearly available and should have been disclosed. Why the NPS failed to disclose all relevant data and subject it to credible analysis is unclear but, regardless, this failure is evidence of a lack of integrity in the DEA process and that the DEA is not consistent with NEPA requirements. For Harper's Ferry park, Appendix D, the NPS has been monitoring the vegetation/forest regeneration in the Maryland Heights section the park since 2010 and, most recently, in 2014. Prior to 2010 it would appear based on information contained in the DEA that the NPS only had deer pellet plots established within Harper's Ferry park. Despite this, the NPS did not disclose any vegetation monitoring data from Harper's Ferry park. Again, this deficiency is inexplicable, undermines the integrity of the DEA, and provides clear evidence that that DEA is not consistent with the law.

Organization:

Page: **Paragraph:**

Kept Private: No

IT1200 Issues/Impact Topics: Other Wildlife and Wildlife Habitat

Concern Statement: One commenter stated that the EA does not include sufficient data or evidence of deer impacts on bird populations in the C&O and Harpers Ferry Parks and suggested that NPS conduct bird monitoring over time to measure long-term impacts on various bird species.

Response: Impacts on birds that inhabit the parks and could be affected by deer are described on pages 116-121 in “Impacts on Other Wildlife and Wildlife Habitat”. The evaluation of all wildlife (other than deer) and wildlife habitat was based on a qualitative assessment of how

expected changes to park vegetation, as described in the "Impacts on Vegetation" section in chapter 4, would affect the abundance and diversity of wildlife populations, including birds. Change in the quality and quantity of forage, availability of suitable nesting sites, amount of cover, and level of competition for existing resources may lead to changes in the size, reproductive success, rate of predation, and mortality rate for wildlife populations.

As stated in NPS *Management Policies 2006*, section 4.1, "decisions about the extent and degree of management actions taken to protect or restore park ecosystems or their components will be based on...management objectives and the best scientific information available." This information may be obtained through "consultation with technical experts, literature review, inventory, monitoring, or research to evaluate the identified need for management..." (NPS *Management Policies 2006*, section 4.4.2.1). Information provided on the impacts of white-tailed deer on other wildlife species including birds is based on referenced scientific literature that the NPS believes is sufficient to assess the likely effects of deer on these species. The scientific studies used to assess impacts were conducted in eastern deciduous forests that have similar species to those found in the parks, and the types of impacts are applicable to the parks. It is neither possible nor necessary to have park-specific studies for exactly every type of impact assessed to draw reasonable and ecologically sound conclusions in an EIS, and much of the analysis of effects to wildlife is based on best scientific judgment of the NPS staff and scientists who are familiar with the parks and the scientific literature.

Regarding the suggestion for bird monitoring over time,[needs park input]

Correspondence Id: 34 **Comment Id:** 646393

Comment Text: Deer impacts on other species: The NPS claims that deer in C&O/Harper's Ferry parks have adverse impacts on other wildlife species, particularly birds. The NPS identifies a few bird species that may be impacted based on their traditional nesting characteristics (low or ground nesting birds) but it failed to provide any data or evidence to prove that such population declines have occurred. Instead, the NPS relies on studies from other sites and supposition to allege that the number of select bird species in the parks has declined. The NPS may be right, but without park specific bird count data over time, such claims reflect only a possibility and not what has actually occurred. In addition, even if such data were available, the NPS would have to provide bird-species specific count/density data over time to identify potential fluctuations in the number of the bird species of greatest concern to determine if there may be factors, other than deer and perhaps not even relevant to the parks, that may be adversely impacting the bird species. This data must be included if the analysis is to meet legal requirements.

Organization:

Page: **Paragraph:**

Kept Private: No

IT1400 Issues/Impact Topics: Cultural Landscapes

Concern Statement: One commenter stated that the EA does not disclose which forests and crops in the park are designated as cultural landscapes, and that the EA does not provide sufficient detail regarding their cultural significance to the park.

Response: Chapter 3, on pages 84 – 89 of the EA, defines cultural landscapes and identifies the cultural landscapes that are present at the parks. The significance of these landscapes and the reasons they are considered cultural landscapes is discussed in the document and is explored in detail in numerous cultural landscape inventories and reports cited in the EA. Management and protection of cultural resources, including cultural landscapes is set forth in NPS Director's Order 28: Cultural Resources, described on page 124 in "Impacts on Historic Districts and Cultural Landscapes". [Requires additional NPS input]

Correspondence Id: 34 **Comment Id:** 645923

Comment Text: Cultural landscapes: The NPS identifies some of the culture properties/landscapes in the parks by name and even provides a description of some of them. As most of those identified by name are historic structures it does not appear that the NPS is alleging that deer are impacting such structures. Instead, alleged impacts to cultural resources appear to be limited to forest regeneration and crops. What the NPS fails to disclose or describe is which forests and crops are considered cultural resources, why they are so designated, what time period from history the NPS is trying to recreate with forests/crops designated as cultural resources/landscapes, why it has selected that time period, whether it is trying to recreate the characteristics and/or look of that time period in its entirely or just selectively for particular resources, and why the NPS can't use alternative options (e.g., displays featuring artist rendering) to educate visitors of what the parks may have looked like during a particular period of history while allowing park landscapes to experience natural succession instead of direct and substantive manipulation to create characteristics or a look from a long-ago era. While it makes sense to designate and protect historic building and structures as cultural/historical resources, claiming that forested habitat or crop lands somehow have a cultural value is unnecessary. Not only can - and should - the NPS use alternative means of providing depictions of what the landscape in the parks looked like over time but it could utilize such information to also explain the process of natural succession. More information about cultural resources/landscapes must be included in the DEA for it to be complete and valid.

Organization:

Page: **Paragraph:**

Kept Private: No

IT1600 Issues/Impact Topics: Public and Employee Health and Safety

Concern Statement: One commenter stated that the impacts of deer in the park on public and employee safety are overstated in the EA, and indicated that the evidence to support the statement made in the EA that current deer populations in the park present a safety threat is insufficient. The commenter stated that reduction of deer in the park would lead to increased instances of Lyme disease as a result of improved vegetation growth and the subsequent increase in small mammals that carry the disease.

Response: Deer-vehicle collisions are common in the region surrounding the parks, and although the parks have not collected data on collisions [park to confirm/provide input], several studies have shown that deer-vehicle collisions increase as local deer populations increase (DeNicola and Williams 2008; Rutberg and Naugle 2008a).

Regarding Lyme disease, there is public concern that a high deer population could support a higher than normal tick population compared to lower deer densities (CDC 2007). NPS agrees that tick populations may be more likely tied to populations of smaller mammals. As stated in the EA on page 139, current understanding of Lyme disease dynamics does not allow an accurate prediction about how substantially a continued high deer density contributes to greater occurrence of Lyme disease. Therefore, the precise impacts on the prevalence of Lyme disease cannot be determined.

Correspondence Id: 34 **Comment Id:** 645924

Comment Text: Deer and public safety: The NPS dramatically overstates the impact of deer on public safety in the parks claiming, in particular, that as deer abundance increases there is a greater risk of deer/vehicle collisions and the potential for the transmission of Lyme disease. In both cases, the NPS offers no actual evidence to substantiate this claim. The NPS provides statewide or even, in some cases, county-wide data on deer vehicle collisions but it concedes that no such data is maintained for such incidents occurring in the park. More than likely this is because there has never been such an incident and/or the frequency is so minimal that the NPS doesn't even bother to collect and track such data. If there's no evidence of deer-vehicle collisions in the parks despite fluctuating deer densities over time, the NPS should have dismissed deer-vehicle collisions as an issue warranting additional analysis in the DEA. For Lyme disease, while the NPS concedes that there are other species that can harbor disease-carrying ticks (all life forms), it fails to sufficiently evaluate how the proposed reduction in deer could substantially increase the potential for visitors to be exposed to Lyme disease. If deer numbers are significantly reduced, herbaceous vegetation will increase providing improved habitat for small mammals and reducing predation of the species. Since these small mammals are known to harbor disease-infected ticks including nymphs (who are the most difficult to detect), the NPS preferred alternative may substantially increase, not decrease, the potential for park visitors to be exposed to Lyme disease.

Organization:

Page: **Paragraph:**

Kept Private: No

IT1700 Issues/Impact Topics: Visitor Use and Experience

Concern Statement: A commenter stated that there is no reason for a reduction because regular hunting season is sufficient in controlling the deer population, based on the number of deer they observe while biking through the park. [NPS feedback – potentially non-substantive/doesn’t need a response].

Response: The parks are taking action to reduce deer based on monitoring data that indicate that vegetation that is being overbrowsed at the high deer densities that are now present in the parks, not on observations of deer presence. These data indicate a need to take action to reduce the deer population, with a goal of 15-20 deer per square mile, so that deer can continue to be observed in the parks but not be present at densities that adversely affect other park resources.

Correspondence Id: 7 **Comment Id:** 645833

Comment Text: I do not see a reason to further reduce the deer population along the canal in Washington County. I feel that the regular hunting season is sufficient in controlling the deer population along the canal. Seeing wildlife is one of the pleasures that can be experienced in

our national parks. I cover over 30 miles a week as I bike the canal, and I only see deer about once a month.

Organization:

Page: Paragraph:

Kept Private: No

IT1800 Issues/Impact Topics: Park Management and Operations

Concern: One commenter stated that the description of the urban hunt in Harpers Ferry is inaccurate and erroneously leads readers to the conclusion that sharpshooters are currently managing deer in the town.

Response: Response needs to be confirmed with HAFE. Two responses are provided.

The information on page 7 of the EA, under "Deer Management in Adjacent Jurisdictions" was incorrect and has been corrected to read as "volunteer archery hunters" in the Errata.

Additionally, the NPS considered but dismissed from detailed analysis an alternative that would have allowed recreational public hunting within the parks. A detailed discussion of reasons for dismissal is included on page 65 in chapter 2 of the EA. This discussion notes that hunting would be inconsistent with long standing laws, policies, and regulations for NPS units where hunting has not specifically been authorized by Congress, which is the case for both Harpers Ferry and the Chesapeake and Ohio Canal National Historical Parks. Changing these longstanding service wide policies and regulations regarding hunting in parks is beyond the scope of this plan/EA. The specific federal properties mentioned, including New River Gorge National River, allow for hunting.

Correspondence Id: 26 **Comment Id:** 645884

Comment Text: There are also inaccuracies in the text of the document regarding the urban hunt at Harpers Ferry that would lead readers to believe that professional sharpshooters are already managing deer in that city.

Organization: WV Department of Natural Resources

Page: Paragraph:

Kept Private: No

PN1000 Purpose And Need: Planning Process And Policy (Substantive)

Concern Statement: One commenter stated that key information to aid in the analysis of lethal deer management, such as General Management Plans and other planning documents, were not considered in the planning process or in the EA. Additionally, the commenter stated that the public should have input regarding the lethal management trigger thresholds.

Response: Review of park planning documents, including the Harpers Ferry NHP General Management Plan and the C&O Canal NHP Foundation Document, was an important part of the scoping for this EA. In particular, the Harpers Ferry NHP General Management Plan is cited and used throughout the document.

The public had an opportunity to comment on all aspects of the planning process during the public scoping comment period and had another opportunity to comment specifically on the lethal management action thresholds in their review of the public EA**.** [NPS input needed on response]

Correspondence Id: 34 **Comment Id:** 645919

Comment Text: Absent disclosure and explanation of a legitimate and credible legal basis to engage in the slaughter of native deer in the parks, the NPS cannot continue with the present decision-making process. Merely articulating a legal basis in a Finding of No Significant Impact would not suffice either as NEPA requires and the public deserves an opportunity to understand and comment on such a legal justification. Furthermore, given the tiered decision-making structure for the NPS reflected in its management policies, the NPS should have (but did not) provided additional information about the step down planning documents for each park including whether each plan, including General Management Plans, exist for each park, what information they contain, and how such plans support (or not) the preferred alternative in the DEA to slaughter deer. The NPS has failed to develop specific lethal management trigger thresholds to public review and input: The NPS has established three triggers for lethal deer control (forest regeneration and crop loss to measure cultural impacts) and for the use of immunocontraception. Despite the critical importance of these triggers in determining if lethal control is initiated or not in the parks, the NPS has failed to subject them to public review and comment. Instead, they were obtained from other planning documents and applied to C&O/Harper's Ferry parks, they were created through an internal NPS decision-making process, or they were developed explicitly for the current planning document. The public should be provided an opportunity to provide input into these trigger factors instead of the NPS creating and implementing self-serving criteria that it uses to justify lethal deer control. Beyond merely disclosing what the triggers are, the NPS has to provide a detailed description of each trigger, the evidence supporting the trigger, how the trigger is consistent (or not) with NPS laws, regulations, and policies, and the relationships amongst the triggers (particularly the forest regeneration and crop loss triggers to explain what decision is made if the evidence indicates one but not both triggers is met or exceeded).

Organization:

Page: **Paragraph:**

Kept Private: No

Concern Statement: A commenter indicated that the correlation between deer and impacts on vegetation needs to be clarified in the EA. The commenter also noted that the EA needs to explain the factors contributing to deer fluctuations in Chesapeake and Ohio Canal NHP between 2010 and 2014.

Response: Need park input on the response.

Correspondence Id: 34 **Comment Id:** 646392

Comment Text: For C& O park, the vegetation data provided for 2003 and 2009 doesn't match the deer data reflected in Figure 6 in the DEA which provides deer population trend numbers for 2010-2015. The data would be much more meaningful if the time frame in each table matched so that it can be determined if a correlation does exist between deer numbers and vegetation impacts and whether such impact can be entirely attributable to deer. The NPS

provides deer density numbers for C& O park for 2010 through 2014 and it acknowledges a fluctuation in deer numbers over time, but it fails to provide any explanation as to what factors contributed to the fluctuation in deer numbers over time. Since there's no clear explanation for such fluctuations, this is critical for the NPS to disclose and discuss as it has direct implications to the alleged need for lethal deer control. For Harper's Ferry park, the NPS provides some deer density information but no corresponding vegetation impact data

Organization:

Page: Paragraph:

Kept Private: No

RF1000 Suggested References

Concern Statement: A commenter suggested including a reference on controlling Lyme disease: http://www.pbs.org/newshour/bb/finding-solution-control-lyme-disease-isnt-simple/.

Response: The only substantial information that is not currently included in the EA: "10 per square mile is considered a density that could reduce the spread of Lyme." But this is in a news report with no study to confirm the information. Non-sub/no response needed?

Correspondence Id: 28 **Comment Id:** 645888

Comment Text: http://www.pbs.org/newshour/bb/finding-solution-control-lyme-disease-isnt-simple/

Organization:

Page: Paragraph:

Kept Private: No

ERRATA

White-tailed Deer Management Plan and Environmental Assessment

Harpers Ferry National Historical Park

Chesapeake & Ohio Canal National Historical Park

The following changes have been made to the White-tailed Deer Management Plan and Environmental Assessment (April 2017) Finding of No Significant Impact (FONSI) to correct minor statements of fact 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 FONSI.

Page 6

A correction has been made to the statement that said monitoring of deer and vegetation has been conducted since 2000; that year is only valid for deer monitoring. The data from 2003 and 2009 are from a study that looked at vegetation at the Chesapeake & Ohio (C&O) Canal for 2003 and 2009 only; those plots are no longer being monitored. Text changed to:

"Since 2000, C&O Canal NHP staff has *conducted deer density surveys at Great Falls.* ~~conducted deer density surveys and NPS has maintained vegetation monitoring plots at the Gold Mine tract at Great Falls.~~ Overall, NPS maintains 75 plots in the park, the majority of which are in the Washington and Montgomery County portions of the park (NPS, Schmit, pers. comm. 2016a). *A separate vegetation study was conducted in 2003 and 2009 that also included Antietam and Monocacy National Battlefields (McShea and Bourg 2009).*"

Page 6

Correct the name of the Murphy-Chambers Farm and clarify its location:

"Harpers Ferry NHP staff has monitored all parts of the park, although monitoring has been focused on Maryland Heights. ~~At Harpers Ferry, p~~Park staff began to notice effects from deer overabundance and overbrowsing in 1998 and installed 100 deer pellet plots on Maryland Heights in 1999 *to measure deer abundance and density*… Staff from the US Department of Agriculture, Animal and Plant Health Inspection Service (APHIS)-Wildlife Services also has conducted a ground-based infrared survey at the Murphy-*Chambers* Farm, *in the West Virginia portion of the park,* and counted approximately 260 deer per square mile (NPS, Nisbet, pers. comm. 2016b)."

Page 7

Correct the information on the Town of Harpers Ferry Deer Management Program. Text changed to read:

"The county acquires its data by aerial and distance surveys and holds a meeting once a year to discuss progress and issues related to deer management. Park and county staff discussed the benefits of holding an annual meeting for C&O Canal NHP and Harpers Ferry NHP to discuss the effects of their deer management planning as implementation takes place. It is currently unknown whether deer management in Montgomery County is affecting deer density in C&O Canal NHP; however, there are no county parks near the Gold Mine tract. Additional data sampling likely would be necessary to determine this. County monitoring of vegetation and its recovery on county land has been minimal, and county resource personnel are reassessing their vegetation goals. Hunting is permitted on lands adjacent to both parks, including state lands and land owned by private organizations such as game and hunting clubs, and therefore must be considered in the management plan. The town of Harpers Ferry started a deer management program in 2012. It consisted of installing eight cameras

around the town to monitor deer activity and estimate deer populations and ~~hiring~~ *recruiting volunteer* archery ~~sharpshooters~~ *hunters*. The first year, the ~~sharpshooters~~ *hunters* removed 28 deer from the area; in 2013, an additional 24 deer were removed; 17 deer were removed in 2014; and 5 deer were removed in 2015. Removal numbers in 2015 were lower because West Virginia did not allow bait stations because of CWD policy. The town of Harpers Ferry is completely surrounded by Harpers Ferry NHP, so if the deer population were lowered in the park, then the deer population most likely would decrease in town."

Page 26

Clarify potential use of different deer monitoring approaches in the future. Add text too the end of the third bullet under the Monitoring and Research header:

"…It is likely that the trail cameras would be used in place of the pellet-group counts or infrared scans because they are more time and cost efficient."

Page 39, 45

Clarify that reproductive control would not be used in the West Virginia portion of Harpers Ferry NHP under alternative B or D. Add text after the last sentence in the Harpers Ferry NHP subsection on page 39:

"Reproductive control would not be used in the West Virginia implementation areas of Harpers Ferry NHP."

Add text to the end of the following paragraph on page 45:

If reproductive control were initiated when the parks' deer population densities had reached the desired deer densities, it would commence at the time there are about 16 deer per square mile at the Gold Mine tract and about 20 deer per square mile on Maryland Heights, based on current densities (see table 6). Assuming the proportion of does in the remaining deer remains the same as described under alternative B (53%), and based on the results reported by Hobbs, Bowden, and Baker (2000), it would be necessary to treat 70%–90% of the does to maintain the population at the lowered density. Taking a conservative approach of treating 90% of the remaining does, NPS would treat 8 does at C&O Canal NHP and 10 does at Harpers Ferry NHP. Does would need to be treated every three years and marked for identification for subsequent retreatment during the initial application to keep the population at the desired level. *"Reproductive control would not be used in the West Virginia implementation areas of Harpers Ferry NHP."*

Page 77

C&O Canal NHP has conducted deer density surveys at the Gold Mine tract at Great Falls *in Montgomery County, Maryland*.

Page 78

Under the Harpers Ferry National Park heading: US Department of Agriculture, APHIS-Wildlife Services also has conducted a *one-time* ground-based infrared survey at the Murphy-*Chambers Farm, in the West Virginia portion of the park,* and counted approximately 260 deer per square mile.

Page 78-79

Delete empty rows for 2006, 2009, 2011, 2012, and 2014 in table 9.

Page 148

This monitoring program would continue after the density goals were reached to determine if vegetation was showing signs of recovery, and monitoring also would include a review of crop yield reports~~ and assessment of orchard conditions~~.

Page D-1

Monitoring for cultural landscapes is based on economic analysis of crop yields in comparison with average county crop yields~~ and on arboriculture standards related to the percentage of new growth browsed from the orchard trees in a season~~.

References

Page 171 ~~2014d Schmit Harpers Ferry and C&O Canal Deer Management EA Meeting: Deer Impacts on Vegetation (Forest Regeneration).~~

Page 83 A study of forest sapling stocking rates at both parks indicates that successful forest regeneration will not occur under current deer densities (~~NPS 2014d~~*Schmit 2014*).

20180059

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NPS
NSL/EJC

United States Department of the Interior

NATIONAL PARK SERVICE

HARPERS FERRY NATIONAL HISTORICAL PARK
P. O. BOX 65
HARPERS FERRY, WEST VIRGINIA 25425

IN REPLY REFER TO

RECEIVED
FEB 01 2018
By

1.A.2. (HAFE-H4217)

January 26, 2018

Mr. J. Rodney Little
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032

Re: White-tailed Deer Management Plan and Environmental Assessment for the Chesapeake and Ohio Canal National Historical Park and Harpers Ferry National Historical Park

C + O

Dear Mr. Little:

The National Park Service is forwarding a copy of the *White-tailed Deer Management Plan and Environmental Assessment for the Chesapeake and Ohio Canal National Historical Park and Harpers Ferry National Historical Park.*

This environmental assessment describes four alternatives for managing white-tailed deer at the parks, analyzes the effects of these alternatives on the environment, and details the environmental consequences of implementing these alternatives. The National Park Service has identified "Alternative D: Combined Lethal and Nonlethal Deer Management" as the preferred alternative. Under this alternative, sharpshooting, limited capture/euthanasia, and reproductive controls would be used where and when appropriate to manage the deer population, protect cultural landscapes and vegetation, and detect chronic wasting disease.

The environmental assessment considers potential impacts on the natural and human-made environments, including vegetation, white-tailed deer, other wildlife and wildlife habitat, cultural resources, visitor use and experience, human health and safety, and park management and operations.

This letter serves as the assessment of effect for this project. The analysis of the proposed undertaking (alternative D) concludes that a potential benefit to the cultural landscape could result at these parks as the deer population is reduced and the forest, which is part of the cultural landscapes at the parks, regenerates. No activities would occur that would affect historic resources. The National Park Service has determined that *no historic properties will be affected* at either park.

If you have any questions, please contact Mia Parsons, Chief of Integrated Resources Management, Harpers Ferry National Historical Park, at mia_parsons@nps.gov, or at (304) 535-6167.

Sincerely,

H. Tyrone Brandyburg
Superintendent

cc: Kevin Brandt, Superintendent, Chesapeake and Ohio Canal National Historical Park

The Maryland Historical Trust has determined that this undertaking will have no adverse effect on historic properties.

Beth Cole 2/27/18
Date

NSL
2nd
2/23/18

#13BC 2/27/18

WEST VIRGINIA
Division of Culture and History

The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300
Randall Reid-Smith, Commissioner
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

April 6, 2018

Mr. Tyrone Brandyburg
Superintendent
Harpers Ferry National Historical Park
P.O. Box 65
Harpers Ferry, WV 25425

RE: White-tail Deer Management Plan and Environmental Assessment for the Chesapeake and Ohio Canal National Historical Park and Harpers Ferry National Historical Park
FR#: 18-474-MULTI

Dear Superintendent Brandyburg:

We have reviewed the above referenced project to determine potential effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to the submitted information, Harpers Ferry National Historical Park and the Chesapeake and Ohio Canal National Historical Park propose to undertake a white-tailed deer management plan. The parks evaluated four alternatives for the project:

- **Alternative A: No Action** – continue current management actions, including deer and vegetation monitoring, research, use of protective caging and tree tubes as need, education and interpretation, opportunistic and targeting sampling for Chronic Wasting Disease, and agency/interjurisdictional cooperation.
- **Alternative B: Nonlethal Deer Management** –Includes all actions described under Alternative A and several additional management techniques that could be used to prevent adverse deer impact, such as changing crop configurations or crop selection, using repellents for short-term situations or over growing seasons, and using aversive conditioning. The main focus would be the use of a combination of nonlethal actions, including the construction of large-scale deer exclosures for the purpose of vegetation restoration; the installation of fencing to protect gardens, restoration areas, or agricultural fields; and the use of nonsurgical reproductive control of does to restrict deer population in the implementation areas.
- **Alternative C: Lethal Deer Management** - Includes all actions described under Alternative A and the additional management techniques described under Alternative B. Instead of large-scale exclosures and reproductive control, Alternative C adds a primary focus of using lethal deer management actions to reduce the herd size (e.g., sharpshooting with firearms and/or selective use of archery by park staff or authorized agents.
- **Alternative D: Combined Lethal and Nonlethal Deer Management** – Is the same as Alternative C, but adds the potential use of reproductive control to maintain deer populations after the initial population density has been reduced. Lethal actions (including sharpshooting, with very limited capture/euthanasia if necessary) would be taken initially in designated

implementation areas. Population maintenance could be conducted either by nonsurgical reproductive control methods, or by sharpshooting, or both.

Architectural Resources & Archaeological Resources:
According to the submitted information, the National Park Service has identified Alternative D: Combined Lethal and Nonlethal Deer Management as the preferred alternative. Under this alternative, sharpshooting, limited capture/euthanasia, and reproductive controls would be used where and when appropriate to manage the deer population, protect cultural landscapes and vegetation, and detect chronic wasting disease. No activities would occur that would affect historic resources. We concur with the National Park Service's recommendation that no historic properties will be affected at either park. No further consultation is necessary with respect to cultural resources.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Benjamin M. Riggle, Structural Historian, or Carolyn M. Kender, Archaeologist, at (304) 558-0240.*

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/CMK/BMR