

## FINDING OF NO SIGNIFICANT IMPACT

### Fire Management Program George Washington Birthplace National Monument

#### Westmoreland County, Virginia

The National Park Service (NPS) proposes to implement a fire management program at George Washington Birthplace National Monument, Westmoreland County, Virginia, in accordance with the directives of NPS Director's Order #18: Wildland Fire Management (D)-18) which requires all national park units with burnable vegetation to develop such a fire management program. Action is needed at this time because the past exclusion of fire from the ecosystem at the park has contributed to changes in the natural and cultural landscapes of the park. The present-day landscape does not represent that which would have existed during the colonial period and the time of George Washington's birth, either ecologically or culturally. In addition, an accumulation of hazardous fuels poses a serious threat to human life and property and to park natural and cultural resources. Since a significant number of these hazardous fuel areas exist along the park boundary, there is increased risk that a wildland fire could spread to lands outside of the park.

In 2004, the NPS prepared and circulated an environmental assessment (EA) that evaluated alternatives for a fire management program at George Washington Birthplace National Monument (park) and analyzed the impacts of the alternatives. The EA was prepared in accordance with the requirements of the National Environmental Policy Act of 1969, as amended (NEPA), and its implementing regulations (40 CFR 1500-1508), and NPS Director's Order #12: *Conservation Planning, Environmental Impact Analysis, and Decision-Making* (DO-12), and accompanying DO-12 Handbook. Because of the time that has passed since the EA was circulated for public review, the NPS re-examined the alternatives and impact analysis presented in the 2004 EA, and the results of public comment and determined that the alternatives and impact analysis are still valid. Therefore, the NPS has decided to implement a fire management program at the park based on the 2004 EA and documented in this Finding of No Significant Impact (FONSI).

#### **SELECTED ALTERNATIVE: Alternative II –Management Response and Integrated Fuels Management**

The NPS has selected Alternative II –Management Response and Integrated Fuels Management, for implementation. Alternative II is described on pages 7-8 of the EA. It describes the preparation of a fire management plan that will include wildland fire management preparedness actions as well as detailed procedural actions during wildland fire events. It will provide a detailed action plan for preparedness and suppression of wildland fires including safety, the mitigation of impacts, and resource protection. Firefighters will have the option to employ tactics that provide them with the best opportunity to safely suppress the fire, while at the same time allowing them the option to employ suppression strategies and tactics that minimize negative impacts to park resources..

Alternative II will include an integrated fuels management approach to accomplish the full range of natural and cultural resource management and hazardous fuel reduction goals, and will include prescribed fire and non-fire treatments such as mechanical fuel reduction and chemical and biological controls. All prescribed fires and non-fire fuels treatments will be planned and approved consistent with the method and format required by NPS Reference Manual 18 (RM-18) (Wildland Fire Management).

Prescribed fire will be used to reduce hazardous fuels conditions that have developed over past years of fire exclusion, in order to decrease the risks associated with a large, severe wildland fire. In those areas where fuel loading is heavier (~26+ tons/acre), particularly near structures, manual reduction methods will be used instead of or in combination with prescribed fire to reduce fuel loading. Where access is available, fuels will be removed and disposed of by removing them from the site. In those areas where access is limited, piles of cut debris will be constructed for burning at an opportune time.

The use of prescribed fire to achieve resource benefits and cultural scene preservation will be confined to places where fire can be successfully employed to manage invasive vegetation or restore stand diversity, health and vigor, such as the restoration and maintenance of native warm-season grasses, forests and plantations that are found in several areas of the park, and marsh environments. It may also be used to reduce invasive species in those areas where previous treatments may have encouraged their establishment and spread.

## **OTHER ALTERNATIVES CONSIDERED**

In addition to the selected alternative, the EA analyzed two other alternatives: the no action alternative and another action alternative. These are briefly described below along with the reasons they were not selected. Two more action alternatives were considered but rejected because they were unreasonable, as described below.

### **Alternative I – No Action**

Under Alternative 1, the current fire program direction would continue. Because there is no Fire Management Plan, all fires would be aggressively suppressed using the most expeditious means necessary. Mechanical and chemical non-fire fuel treatments would continue, but would require examination on a case-by-case basis and might not conform to a unified fire management plan. Under the guidance of an already approved plan for management of invasive vegetation, chemical treatments would still be used to meet management objectives in regards to invasive species, though these treatments would probably be less effective without the benefit of adjunctive treatments of prescribed fire. Alternative I was not selected because aggressive suppression tactics would result in undesirable adverse impacts on the park's natural and cultural resources, because the FMP would not address any actions for the reduction of risk associated with hazardous fuels, and because the FMP would not permit the use prescribed fire in order to meet resource management objectives.

### **Alternative III – Management Response and Non-Fire Fuels Management**

Under Alternative III, the fire management program would, as in Alternative II, suppress all wildland fire ignitions using the appropriate management response. It would also include the coordinated use of non-fire fuel treatments including mechanical fuel reduction and the use of chemical herbicides, either individually or in combination. Prescribed fire would not be used. Alternative III was not selected because the inability to use prescribed fire as a management tool would greatly limit the ability of park management to meet cultural and resource protection goals.

### **Alternative IV – Use of Wildland Fire (rejected)**

Under Alternative IV, the fire management program would encompass the full range of available fire management strategies, including suppressing using the management response, wildland fire use, prescribed fire, and non-fire fuel treatments including mechanical fuel reduction and chemical herbicides. Alternative IV was rejected because it is not feasible to safely manage a wildland fire to achieve resource benefit considering the small size and suburban setting of Washington Birthplace NM.

### **Alternative V – No Management (rejected)**

Under Alternative V, the fire management program would allow all wildland fire ignitions to burn unimpeded by management actions. Prescribed fire and non-fire fuel treatments would not be used, except chemical herbicide treatments as allowed under other approved management plans. Alternative V was rejected because unmanaged wildland fire would present an unacceptable risk to the safety of park visitors, neighbors, and staff and would threaten the integrity of park cultural and natural resources and cultural landscapes.

## **ENVIRONMENTALLY PREFERABLE ALTERNATIVE**

In accordance with the DO-12 Handbook, the NPS identifies the environmentally preferable alternative in its NEPA documents for public review and comment [Sect. 4.5 E(9)]. The environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative (43 CFR 46.30).

The environmentally preferable alternative is the selected alternative, **Alternative II – Management Response and Integrated Fuels Management**, because the use of prescribed fire provides a clear advantage over the other alternatives that do not use techniques that most closely replicate natural processes. It incorporates the use of fire suppression strategies and tactics that allow for suppression of wildland fires while still allowing opportunities to utilize methods and

techniques that minimize damage to cultural and natural resources. Prescribed fire will be used to closely mimic the presence and effects of naturally occurring fire in those portions of the park where fire-adapted ecosystem components are found (such as loblolly pine-willow oak forest and native grassland meadows). The implementation of this alternative will provide for the most natural method of restoration and maintenance of open meadows, park forests, and the wildlife that inhabit them.

## **MITIGATION MEASURES**

The fire management activities included in the selected alternative - fire suppression, the use of prescribed fire, non-fire fuel treatments, and vegetation management - have the potential to result in adverse impacts on various park resources such as soils, vegetation, air quality, riparian resources, and wildlife. To minimize adverse impacts of implementing a fire management program, the selected alternative integrates the mitigation measures outlined in Attachment 1 and Attachment 2 of this FONSI.

## **WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT**

As documented in the EA, the National Park Service has determined that the selected alternative can be implemented with no significant adverse impacts to vegetation, cultural resources, wetlands, floodplains, soils, wildlife habitat, socio-economic environment, firefighter and public safety, and air quality. The environmental effects are summarized below:

### **1. Impacts that may have both beneficial and adverse aspects and which on balance may be beneficial, but that may still have significant adverse impacts that require analysis in an EIS.**

The implementation of the selected alternative will not have a significant effect on the human environment as defined in 40 CFR 1508.27. The selected alternative is expected to result in an overall benefit to park resources. The selected alternative will have minor adverse impacts on air quality, sounds, the visitor experience, and on natural and cultural resources. These adverse impacts are expected to be short in duration and relatively small in scope. The use of the wide range of Minimum Impact Suppression Tactics (MIST; see Attachment 2) techniques will serve to effectively mitigate impacts upon soil, vegetation, wildlife, and even park aesthetics and the cultural scene. Impacts from non-fire fuel treatments are generally confined to minor short term soil compaction and vegetation trampling caused by the presence of crews performing hand-cutting and fuel removal. The use of mitigation techniques described in Attachment 1 largely mitigates these short-term impacts.

### **2. The degree to which public health and safety are affected.**

Public health and safety concerns for employees and visitors in the park, as well as for those living adjacent to the park boundary, would be improved through the implementation of the selected alternative. This would be largely achieved through a program of hazardous fuel

reduction, utilizing both prescribed fire and non-fire methods. The potential for the ignition of unwanted wildland fires would be greatly decreased, as also would the potential for a conflagration occurring should an unplanned ignition take place. Despite all of these benefits, there is always the potential for a prescribed fire exceeding projected intensity levels and escaping control lines. While the chances of this occurring are small, appropriate pre-planning and the development of contingencies for such an event are found in the prescribed burn plan developed for each prescribed fire project. Prescriptions would be strictly adhered to during implementation.

The health effects of smoke from wildland fires to park neighbors and those living in quarters would be minimized due to the reduction of available fuels. Because the smoke produced from prescribed fires can be managed in terms of both intensity and location, only those locations and time periods in which smoke dispersion could be maximized would be selected for implementation activities. Direct impacts from prescribed fire smoke would be short lived, generally lasting from between 12 and 24 hours. Impacts of prescribed fire smoke can be effectively mitigated by a series of actions developed in the planning stage and implemented as a part of the prescribed fire treatment. By burning small units as opposed to a single larger unit, overall smoke production is minimized. Conducting prescribed burning with mixing heights greater than 500 meters and when transport winds are greater than 12 mile per hour ensures good smoke dispersion in the atmosphere. Designation of critical targets before implementation provides the opportunity to only use fire when wind direction is favorable. Once a prescribed fire has been implemented, rapid extinguishment of residual fire reduces smoke production within a very short time period. In some cases, the presence of large quantities of large diameter dead and downed fuels (such as logs) can increase the longevity with which residual fires burn. This can be prevented by pre-treatment removal of these types of fuels or otherwise isolating them from the fuel complex. Neighbors and those living within the park boundary will be notified so they can prepare for temporary reductions in air quality.

### **3. Any unique characteristics of the area (proximity to historic and cultural resources, wild and scenic rivers, ecologically critical areas, wetlands and floodplains, etc.)**

GEWA serves as an important sanctuary for both natural and cultural resources. The landscape remains fairly close in appearance to that of the early 18<sup>th</sup> century. As development in surrounding communities increases, so too will GEWA become a critical refuge for native vegetation, wildlife, and other natural resources. As a shrine to George Washington, GEWA will remain an important place to reflect upon the man and his accomplishments and what they provided to the Nation as well as an increasingly valuable cultural landscape preserving remnants of an 18<sup>th</sup> century scene. The enabling legislation of the park sets it aside as an area unique in both content and context. As a result of the implementation of the selected alternative, important cultural scenes would be restored to more closely approximate the appearance and structure they engendered during the colonial period of significance (circa 1732) and the commemorative landscape (1930s) that the park is mandated to preserve. For example, prescribed fire would restore and enhance open meadows and elements of the loblolly pine/willow oak forest and create a diverse stand within the pine plantations. A recommendation in the July 1999 Cultural Landscape Report provides for the establishment of grasslands

currently planted in tall and red fescue with native warm season grasses. Restoration of selected meadow habitats with native warm season grasses, primarily through the application of prescribed fire, is expected to enhance populations of grasses, forbs, and the wildlife that utilize these areas for their feeding, breeding and other life activities. Short-term negative impacts would be almost totally aesthetic, and those would disappear after just a few weeks. In order to protect bird nesting and breeding, prescribed burns in the open meadow areas would only proceed prior to or after breeding and nesting have occurred. In forested areas, some trees would show the effects of prescribed fire for a longer period of time, largely manifesting in the form of scorch marks on trunks and blackened leaf litter that was not consumed by the fire. These results are largely cosmetic and have little or no impact upon the majority of mature hardwood tree species. Smaller trees and pole-sized saplings would be consumed entirely or be killed by the fire. These impacts are desirable, as they reduce the density of these less than desirable species in the forest, in particular American holly which has become invasive, allowing the more fire-resistant pine species to flourish. The restoration and maintenance of these forests will lead to greater species diversity and promote a forest ecosystem that is more fire tolerant and supportive of systems indigenous to the park. The positive impacts would generally outweigh the negative. For example, dead trees provide habitat for nest cavity species and serve as food resources for many others, and the post-fire re-growth of succulent herbaceous vegetation is an important food resource.

Historic structures and archeological sites would benefit from the removal of some surrounding vegetation, providing protection from flames and heat produced in a fire. Miles of ditch and berm systems are currently compromised due to tree growth on and within the system. Vegetation composition and structure would also be enhanced through a program of prescribed fire. Some short-term impacts would occur (as already discussed), as well some ground disturbance, which would be primarily soil compaction from fuel reduction activities such as foot traffic, the felling and bucking of trees, and the cutting and removal of brush and ground cover. Some trampling of ground cover would be a very short-term impact that would be self-correcting in just a few weeks. In more severe cases, re-seeding and erosion protection measures could be undertaken to mitigate impacts upon soil and vegetation.

The removal of invasive species is often difficult and time-consuming, and generally requires a multi-faceted restoration process involving manual removal, use of prescribed fire, and herbicide application. Some short-term negative impacts can be expected, but after a few years invasive populations can be expected to decline. All use of herbicides will conform to the stringent application qualifications and procedures outline in NPS-77 (Resource Management Guideline). Application of herbicides only may occur in accordance with the application and mitigation measures outlined in the mentioned document. Since short-term applications of relatively benign herbicides are indicated, impacts produced are sufficient to assist in the reduction of invasive species, not to have a significant effect on the environment.

In the rare instance where fire may be used in wetlands or marshes, such as for management of phragmites, it is anticipated these actions will pose a very minimal risk to and the overall benefits would outweigh temporary impacts. In general, marshes and wetlands are normally not treated with fire but when they are, they are normally less prone to adverse effects as they act as

natural fire breaks due to the presence of standing water, higher relative humidity, and vegetation that is more succulent by virtue of its presence in a water-related environment. In cases where fires do occur, vegetative growth readily responds post-fire, greatly reducing the potential for plant loss or erosion and resulting in enhanced diversity and habitat.

**4. The degree to which impacts are likely to be highly controversial.**

The impact analysis is based on the best available scientific knowledge about fire management and its impacts, and the fire management strategies are tested, and established practices. Agency comments received did not identify any controversial issues or concerns regarding implementation of the selected alternative. No comments on the FMP/EA were received from the public; therefore, to the NPS' knowledge, no controversy exists regarding fire management and/or implementation of the selected alternative.

**5. The degree to which the potential impacts are highly uncertain or involve unique or unknown risks.**

Current knowledge of fire behavior and the use of fire as a land management tool has developed to the point that predictions on the nature and extent of impacts as a result of these practices can be made. Prescribed burning and the use of non-fire methods of hazardous fuel reduction have been adequately addressed in NPS policy and implementation documents. Data on the impacts of fire on vegetation, soils, air, water, and wildlife has been painstakingly researched and collected. The requirement for a project-specific plan to be developed and approved prior to implementation, be it for non-fire or prescribed fire fuels treatment, further serves as a buffer against uncertain or unique results or risk. For example, if during the planning process, environmental conditions exist that run contrary to those necessary to achieve desired results, implementation will not occur until environmental (or social, political, etc) parameters fall within the acceptable range of values.

**6. Whether the action establishes a precedent for future actions with significant effects, or represents a decision in principle about a future consideration.**

Development of this Fire Management Plan for George Washington Birthplace NM is in response to a Service-wide requirement to have such a plan in place, and utilizes established, accepted strategies for fire management; therefore, the proposed action does not establish a precedent.

**7. Whether the action is related to other actions that may have individual insignificant impacts but cumulatively significant effects. Significance cannot be avoided by terming an action temporary or breaking it down into small component parts.**

The selected alternative allows park management the opportunity to directly protect, enhance, and restore park resources. There are areas along park boundaries where the arrangement of forest fuels presents increased fire danger to both the park and adjacent lands. Through the use of prescribed fire and non-fire fuel treatments, overall fuels hazards can be greatly reduced. In

addition, the forest buffers in many boundary areas will be converted to a less fire-prone and more historically appropriate oak-hickory forest. Smoke production from prescribed fires in these areas may be heavy at times, but mitigation actions as described in previous paragraphs and the adherence to proper prescriptions (mixing heights, transport wind speeds, wind direction, atmospheric instability, etc) will allow for dissipation of smoke and reduce the presence to a very short time period (12-24 hours). Most smoke will dissipate into the atmosphere at levels well above ground level. The park may have to impose short-term closures in the designated burn areas in order to ensure the safety of visitors and the public. Significant cumulative adverse effects are not anticipated as related actions fall within current prescription parameters and meet overall landscape goals as stated in the Cultural Landscape Report and the Resource and proposed Integrated Resource Management Plans.

**8. The degree to which the action may adversely affect historic properties in or eligible for listing in the National Register of Historic Places, or other significant scientific, archaeological, or cultural resources.**

George Washington Birthplace NM was created with legislation designed to preserve the cultural and historical values of both the land and the structures now found within park boundaries. No component of the selected alternative derogates the value or places at risk any of the historic structures, archeological sites, or cultural scenes that engender what the park. Hazardous fuels will be removed from the close proximity of structures and known archeological sites, cultural scenes will be restored, and there is a real possibility that new and as yet unknown sites may be discovered as covering vegetation is removed from areas where significant accumulations have developed over time. Non-fire methods of fuel reduction, such as hand cutting and pruning, would be used in those areas where cultural features might be too sensitive to utilize prescribed fire. Historic features (structures, archeological sites) will be treated with non-fire methods of fuel reduction in order to protect them from degradation, not only from unwanted wildland fire, but from the deleterious effects of vegetative encroachment. Negative impacts associated with removal of vegetation near cultural resources, largely resulting from compaction and foot-traffic, are negligible, short-lived, and therefore not significant.

The Virginia Department of Historic Resources reviewed the EA for the George Washington Birthplace NM FMP for effects on historic properties, pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA §106) and concurred with the park's selection of Alternative II, with the understanding that any future projects proposed under the umbrella of the FMP that have potential to affect cultural resources will undergo individual §106 review to ensure cultural resources are protected.

**9. The degree to which an action may adversely affect an endangered or threatened species or its habitat.**

There are no federally listed threatened or endangered species found in the park, and no designated critical habitat in the park. At the time that the EA was prepared, the bald eagle (*Haliaeetus leucocephalus*), which is present and actively nesting in the park, was listed as

threatened; however, the bald eagle was de-listed in 2007. Nonetheless, the park is still bound by the Bald Eagle Protection Act of 1940 and will continue to coordinate with the Virginia Department of Game and Inland Fisheries, Montross Office, and to adhere to the Bald Eagle Protection Guidelines for Virginia, as stated in the EA. The park has concluded that implementing the selected alternative will have no effect on threatened or endangered species.

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

No activities included in the selected alternative are in violation of any federal, state, or local law or requirement imposed for the protection of the environment.

**IMPAIRMENT OF PARK RESOURCES OR VALUES**

By enacting the NPS Organic Act of 1916 (Organic Act), Congress directed the U.S. Department of Interior and the NPS to manage units “to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations” (16 USC § 1). 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” (16 USC 1a-1).

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.

The NPS has discretion to allow impacts on Park resources and values when necessary and appropriate to fulfill the purposes of a Park (NPS 2006 sec. 1.4.3). However, the NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values (NPS 2006 sec 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” (NPS 2006 sec 1.4.5). To determine impairment, the 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” (NPS 2006 sec 1.4.5). A determination on impairment for the selected alternative is attached to this FONSI (Attachment 3).

## PUBLIC INVOLVEMENT

Internal scoping and interdisciplinary team member meetings were conducted at Washington Birthplace MN on March 1st and 2nd, 2000, and on November 19th, 2002. Staff specialists from the park were present as were staff fire specialists from the National Park Service's regional and area offices. Phone conversations with Virginia Department of Forestry officials at the Montross office provided information exchange regarding state procedures relating to fire management.

The FMP/EA was released for a 30-day public comment period beginning September 12, and ending October 12, 2004. Notices soliciting public comments were placed in several local newspapers. Individual letters of invitation to comment were sent to all park neighbors and the Virginia Department of Forestry, Montross office. The FMP/EA was available for review electronically on the NPS Planning, Environment, and Public Comment (PEPC) web site (<http://parkplanning.nps.gov>) and on the park's website (<http://www.nps.gov>). Copies were made available on request, and were available for review at the GEWA Visitor Center as well as public libraries in Colonial Beach and Montross. No comments were received from the public or local agencies regarding the EA or Draft FMP.

## FINDING OF NO SIGNIFICANT IMPACT

The NPS has selected Alternative II: Management Response and Integrated Fuels Management for implementation. The selected alternative is described on pages 7-8 of the EA. The selected alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are minor or moderate in intensity. There are no significant impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the selected alternative will not violate any federal, state, or local environmental protection law.

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

**Recommended:** \_\_\_\_\_

**Lucy Lawliss, Superintendent**

Date

George Washington Birthplace National Monument and  
Thomas Stone National Historic Site

**Approved:** \_\_\_\_\_

**Dennis R. Reidenbach, Regional Director**

Date

Northeast Region  
National Park Service

**Attachment 1. Mitigation Measures for the Selected Alternative.**

Program Component	Mitigation Measures
<b>Soil</b>	<ul style="list-style-type: none"> <li>Minimum Impact Suppression Tactics (see Attachment 2)</li> <li>Re-seeding</li> <li>Water or foam instead of hand line</li> <li>Avoidance (where practicable)</li> </ul>
<b>Smoke</b>	<ul style="list-style-type: none"> <li>Time of ignition (favorable to burning)</li> <li>Burning small units vs. larger</li> <li>Ignition pattern (backing fire vs. head)</li> <li>Fuel moisture levels (low vs. high)</li> <li>Mixing heights &gt; 500 m</li> <li>Transport winds &gt; 12 mph</li> <li>Wind direction opposite critical targets</li> <li>Burn under unstable atmosphere</li> <li>Rapid extinguishment of fire (mop-up)</li> <li>Pre-identify critical targets/ areas of concern</li> </ul>
<b>Prescribed Fire</b>	<ul style="list-style-type: none"> <li>A comprehensive prescribed fire plan <i>must</i> be developed and approved prior to implementation</li> <li>Planned escape alternatives (contingencies) identified</li> </ul>
<b>Safety</b>	<ul style="list-style-type: none"> <li>All involved personnel must have certified training</li> <li>Personal Protective Equipment (PPE)</li> <li>Rotation of personnel for rest and reduction of risk exposure</li> </ul>
<b>Wildlife</b>	<ul style="list-style-type: none"> <li>Burn during non-nesting/ breeding season</li> <li>Treatment conducted after mast production occurs</li> <li>Burn mosaic patterns</li> </ul>
<b>Cultural Resources</b>	<ul style="list-style-type: none"> <li>Management Response</li> <li>MIST (see Attachment 2)</li> <li>Plan for low intensity Rx fire</li> <li>Utilize water, foam, suppressants to protect prior to burn</li> <li>Avoidance (accurate GIS mapping)</li> <li>Cultural Resource Professional assigned to each project</li> <li>Ongoing communication with SHPO</li> </ul>
<b>Socio-economics</b>	<ul style="list-style-type: none"> <li>Pro-active education, coordination among involved entities</li> </ul>

**Attachment 2. Minimum Impact Suppression Tactics (MIST; RM-18, Chapter 9).**

Fire management activities within the park will be carried out in a manner that minimizes impacts to the park's natural and cultural resources. Managers will choose methods and equipment commensurate with the need and a strategy that will least alter the landscape or disturb park resources. Minimum impact suppression guidelines, commonly called Minimum Impact Suppression Tactics, or MIST, take the park ethic into account. They apply equally to all aspects of fire management, including prescribed fire and non-fire fuel treatments, not just to suppression activities. They are not an excuse to relax normal safe firefighting practices. Techniques and policies of minimum impact firefighting that will be used in the park include (but are not limited to):

- Incident facilities, when practical, will be located outside of natural and historic zones.
- Minimize use of retardant. It will be standard practice to keep chemical retardant use at least 200 yards from any water source.
- Cold-trail the fire edge when practical.
- Use natural firebreaks or wet lines wherever possible (in lieu of handline construction).
- Construct water bars on all hand lines on steep slopes (> 15%).
- Use soaker hose or foggers in mop-up to avoid "boring" and hydraulic action on soils.
- Keep fire lines to the minimum width needed to allow backfiring, burnout, or the creation of a safe black line; use natural barriers wherever possible.
- Minimize tree-falling. Remove snags within or adjacent to fire lines only if they show evidence of fire, present hazard to firefighters, or constitute a legitimate threat to the fireline integrity. Living trees will be undisturbed whenever possible. Limb lower branches to remove ladder fuels whenever possible rather than removing the tree.
- Maximize archeological protection measures in order to protect cultural resources.
- Scatter or remove debris, as prescribed by the resource advisor.
- Rehabilitate all fire lines, camps, or other disturbance in visually sensitive areas to maintain a natural appearance.
- After the fire emergency is over, transport of personnel, equipment, and trash out of the park in a manner that is consistent with resource management objectives.
- Use engines only on established roads within park boundaries, unless approval from the Superintendent has been obtained to leave park roads.
- Bulldozers are allowed only with written authorization from the Superintendent, who may authorize their use when high value resources are at risk. In these cases, archeologists, para-archeologists and/or natural resource specialists will be assigned to dozers (if possible) to minimize damage to resources.
- Utilize a "consumption strategy" when dealing with mop-up operations to minimize the exposure of firefighters to the physical hazards present along fire lines and allow the fire to consume fuels inside of the line without placing firefighters at unnecessary risk. Maximize the opportunity for the fire to consume fuels inside of the line without extensive mop-up activity by crews.

**Attachment 3:  
FINAL IMPAIRMENT DETERMINATION  
Fire Management Plan  
George Washington Birthplace National Monument**

**The Prohibition on Impairment of Park Resources and Values**

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.

**What is Impairment?**

NPS *Management Policies 2006*, Section 1.4.5, *What Constitutes Impairment of Park Resources and Values*, and Section 1.4.6, *What Constitutes Park Resources and Values*, provide an explanation of impairment.

Impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

The NPS has discretion to allow impacts on Park resources and values when necessary and appropriate to fulfill the purposes of a Park (NPS 2006 sec. 1.4.3). However, the NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values (NPS 2006 sec 1.4.3).

Section 1.4.5 of *Management Policies 2006* states:

An impact to any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or

- Identified as a goal in the park's general management plan or other relevant NPS planning documents as being of significance.

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

Per Section 1.4.6 of *Management Policies 2006*, park resources and values that may be impaired include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and condition that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structure, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park, but this would not be a violation of the Organic Act unless the NPS was in some way responsible for the action.

### **How is an Impairment Determination Made?**

Section 1.4.7 of *Management Policies 2006* states, "[i]n making a determination of whether there would be an impairment, an NPS decision maker must use his or her professional judgment. This means that the decision-maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision.

*Management Policies 2006* further define "professional judgment" as "a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account the decision-maker's education, training, and experience; advice or insights offered by

subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities relation to the decision

### **Impairment Determination for the Selected Alternative**

This determination on impairment has been prepared for the selected alternative described in this FONSI. An impairment determination is made for all resource impact topics analyzed for the selected alternative. An impairment determination is not made for visitor experience, socioeconomics, public health and safety, environmental justice, land use, and park 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.

The NPS has determined that implementation of the selected alternative will not constitute an impairment to George Washington Birthplace National Monument resources and values. This conclusion is based upon a thorough analysis of the environmental impacts described in the Environmental Assessment (EA) for the FMP, the public comments received, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction found in *NPS Management Policies* (2006). Although the FMP has some negative impacts, in all cases these adverse impacts are the result of actions taken in order to preserve and restore other park resources and values. Overall, the Washington Birthplace NM Fire Management Plan results in benefits to park resources and values and opportunities for their enjoyment, and does not result in their impairment.