



FINDING OF NO SIGNIFICANT IMPACT

Fire Management Plan

Manassas National Battlefield Park

The Manassas National Battlefield Park (park) proposes to develop an updated Fire Management Plan that would provide strategies to manage wildland fires, use prescribed fires, manage vegetation and fuels, while protecting human life and property, in order to preserve and restore landscapes as they were during the Civil War battles for which the park was established. Prescribed fires are fires intentionally ignited by management personnel to meet specific management objectives. Fuels management is the act or practice of controlling flammability and reducing wildland fire intensity through mechanical, chemical, biological, or manual means or the use of prescribed fire in support of land management objectives. It typically involves strategic removal of large amounts of deadwood and other vegetation in the understory that, when dry, can serve as fuel and create higher intensity fires that are harder to control.

The current 2010 fire management plan calls for wildland fire suppression only; it does not provide for the strategic integration of any fuels treatments, including prescribed fire use, into fire management goals, and thus does not allow a full range of tools to implement the *2008 Manassas National Battlefield Park General Management Plan /Environmental Impact Statement*. The Fire Management Plan Environmental Assessment for Manassas National Battlefield Park documents the results of a study of the potential environmental impacts of actions proposed in revisions to the existing Manassas National Battlefield Park Fire Management Plan.

The environmental assessment that was prepared for the proposed fire management plan was done in accordance with National Environmental Policy Act (NEPA) and implementing regulations, Title 40 Code of Federal Regulations (CFR) §§1500–1508; National Park Service Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision Making* and Handbook; and Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations, 36 CFR §800.

SELECTED ALTERNATIVE (ALTERNATIVE 2)

Under the selected alternative (Alternative 2: Prescribed Fire, Fire Suppression, and Mechanical and Chemical Fuels Management), all unplanned wildland fires will be suppressed. Mechanical and chemical methods and prescribed fire will be used to manage fuels, promote biodiversity and ecosystem health, restore historic landscapes, and/or replace agricultural mowing and haying if park farming leases are unable to be let.

Wildland Fire Suppression

All unplanned wildland fires within the park will be fully and aggressively suppressed using procedures, tools, and equipment that least impact the environment, to the extent possible (Please see attached list of suppression tactics).

Fuels Reduction

Fuels reduction in fuels reduction priority areas will be achieved by mechanical and/or chemical removal of fuels and prescribed fire. These areas are primarily located along existing roads and trails that act as natural fire breaks, park boundaries, and in the viewshed restoration areas, particularly at Deep Cut and Brawner Farm.

Mechanical and chemical fuel removal techniques will be used. Mechanical vegetation management includes vegetation removal using hand tools such as axes, rakes, and chainsaws, as well as machines such as brush hogs (rotary mower attached to a tractor) and chippers. Chemical fuel removal refers to the removal of vegetation fuel sources using targeted application of herbicides. Herbicides could be used to reduce and remove existing species that are prone to creating fuels buildup, or they could be used to prevent plant seeds from germinating. These applications could be used as the sole treatment, with no additional management strategies, but are likely to be applied in combination with other management treatments, for example, to prevent regrowth of vegetation following mechanical removal. Chemical fuel removal will most likely be used in areas where non-native plants dominate or along the park boundary near the wildland/urban interface. Herbicides will be used in a manner consistent with integrated pest management practices at the park.

Prescribed Fire

Prescribed fires will be used in the viewshed restoration units in combination with targeted mechanical or chemical methods to remove some fuels prior to the burn to minimize the potential heat of the prescribed burns. Farm and grassland units are also candidates for prescribed burns to promote biodiversity and ecosystem health and to improve crops. Prescribed burns could also be useful in these areas, if it is necessary to replace the mowing and hay cutting that currently occurs within the park.

Prescribed fires will be small, on 10- to 20-acre areas, in some instances covering only a portion of a fuels treatment unit. When prescribed fires are implemented, each treatment will follow a burn plan approved by the park superintendent. Treatment boundaries will be made in areas where fires can be contained and controlled, such as natural fuel breaks or areas with reduced fuels/vegetation densities. Such treatment unit boundaries could be augmented by mechanical means to improve firefighter safety during fire operations by reducing fire intensity along the edge. Each prescribed fire will be managed and monitored by qualified personnel prior to and during all operations until the fire is declared to be extinguished. Each burn plan will specify ignition tools and patterns, all of which will be ground-based and could include use of mixed gasoline and diesel fuel in drip torches, railroad-type flares, flare fire from hand-held pistols, lasers, and matches. This list does not preclude the use of new ground-based ignition tools developed during the life of this the fire management plan. Prescribed fire will not be used in these areas or anywhere near the park boundary and urban interface. Prescribed fires will burn at a low enough intensity and at a burn rate to allow for a sufficient litter layer to remain to protect the forest floor from erosion after the fire.

Prescribed fire will not be allowed in areas at the edges of the park in the wildland/urban interface, or in certain forested areas. Prescribed burns that begin to exceed the scope of the burn plan will be immediately suppressed. Water used to suppress unplanned wildland fires or to extinguish prescribed burns will be brought in from outside the park, likely by tanker truck, or hydrants along the boundary of the park will be used. Existing roads and trails will be used as firebreaks to the greatest extent possible and fire lines will consist only of raked up debris and not ground/soil disturbance.

Seeding of burned areas with an NPS-approved seed mix that emphasizes regeneration of native species will be considered when such seeding will increase the probability of achieving resource objectives. This seeding may allow native plants to effectively compete with non-native ones.

The Deep Cut and Brawner Farm areas have different fuels conditions and archeological sensitivity than other units identified for prescribed burns. Prescribed fire will not be considered as a management option in Deep Cut where the presence of unexploded ordnance (UXO) is suspected, or at Brawner Farm until additional archeological investigations are completed to identify and evaluate the archeological resources present and all archeological artifacts have been documented and catalogued. Until that time, mechanical and chemical means of fuels reduction will be used in these areas. Goat grazing may be used as a tool to maintain vegetation in a low-growing condition at Deep Cut and could be used as a management option in other areas as necessary. The goats will be trailered to the site and allowed to graze in small sections in portable enclosures fenced with electric wire, then moved to the next section as vegetation is reduced.

OTHER ALTERNATIVES CONSIDERED

In addition to the NPS-selected alternative described above, the environmental assessment analyzed the no-action alternative, and an alternative that included only fire suppression and mechanical and chemical fuels management.

Alternative 1: No-Action Alternative

This alternative would continue current fire management practices, which are described by the current fire management plan as “suppression only.” Under the no-action alternative, no specific treatment units would be defined, and prescribed fire would not be used as a management tool. All fires would be suppressed under the conditions of the park’s current fire management plan, which defines all fires as wildland fires and mandates that all fires are fully and aggressively suppressed. The park would also continue its vegetation management practices, which use both mechanical vegetation removal and chemical vegetation management techniques in a manner consistent with the park’s integrated pest management principles. Mechanical vegetation management includes vegetation removal using hand tools such as axes, rakes, and chainsaws, as well as machines such as brush hogs (rotary mower attached to a tractor) and chippers.

These vegetation management practices serve to remove fuels, but are not strategically integrated into the existing fire management plan. Rather, they are primarily focused on maintenance of the cultural landscape. Therefore, they may not remove fuels in areas that would benefit most from fuels management.

Alternative 3: Fire Suppression and Mechanical and Chemical Fuels Management

Under this alternative, the park would identify treatment areas for expanded use of mechanical and chemical methods to reduce and manage fuels. Prescribed fire would not be used as a management tool under this alternative. Treatment areas would likely be similar to those established under alternative 2, but they may be configured differently. All unplanned wildland fires would be suppressed, and vegetation management practices would be strategically integrated into the fire management plan.

Alternative 3 was not selected because it would not allow for consideration of prescribed burns, which are an important tool in the fuels management and vegetative health for warm season grasses, and could be instrumental in the restoration of cultural landscapes.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The NPS is required to identify the environmentally preferable alternative in its NEPA documents for public review and comment. The NPS, in accordance with the U.S. Department of the Interior policies contained in the Departmental Manual (516 Departmental Manual 4.10) and the Council on Environmental Quality’s *NEPA’s Forty Most Asked Questions*, defines the environmentally preferable alternative (or alternatives) as the alternative that best promotes the national environmental policy expressed in the National Environmental Policy Act (section 101(b) (516 Departmental Manual 4.10). In its *Forty Most Asked Questions*, the Council on Environmental Quality further clarifies the identification of the environmentally preferable alternative, stating: “Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources” (Q6a).

After completing the environmental analysis, the NPS identified alternative 2 as the environmentally preferable alternative in the environmental assessment because it best meets the definition established by the Council on Environmental Quality and provides the most benefits and protections to park resources.

MITIGATION MEASURES OF THE SELECTED ALTERNATIVE

The NPS places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources, protect the safety of firefighters and the public, and promote biodiversity and ecosystem health, the impacts of fire management operations will be mitigated by following the measures listed in agency fire policy, such as NPS Director’s Order 18, *Wildland Fire Management*, and *Reference Manual 18*. Archeological

investigations would occur at Deep Cut and Brawner Farm areas to identify resources before prescribed burns will take place. Specific mitigation measures and other management practices that may be implemented as part of the selected action alternative are listed in the Fire Management Plan, see attached. The NPS will also implement an appropriate level of monitoring to help ensure that protective measures are being properly implemented and achieving their intended results.

The fire management staff of the park will work with the resource management staff to ensure that natural and cultural resource management issues and concerns are considered on all fire suppression activities and on all planned fire management actions at the park. The superintendent has overall responsibility and oversight for all park activities and staff and sets goals, approves park restrictions and closures, coordinates relations with neighbors and partner agencies, and approves the fire management plan and other major fire documents and plans. The fire management officer and incident commanders assigned by the park superintendent have direct responsibility for public, resident, and staff safety. They will coordinate evacuations and other actions with the appropriate park ranger staff, park supervisors, and local emergency management agencies.

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

As documented in the environmental assessment, the NPS has determined that the selected alternative, alternative 2, can be implemented without significant adverse effects. As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

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 Environmental Impact Statement:

No significant impacts were identified that will require analysis in an environmental impact statement. Anticipated impacts that will occur to the affected resources are summarized below by activity.

Suppression of Unplanned Wildland Fires—The suppression of unplanned wildfires will prevent the chance of significant impacts to both cultural and natural resources from fire. The use of minimum impact suppression tactics, water to suppress fires to the extent possible to avoid contaminating soils and waterways with fire retardants, and other practices during fire suppression will result in only short-term, negligible, and mostly localized effects on resources such as soils, vegetation, water resources, wildlife and will minimize the chance significant, adverse impacts on air quality from uncontrolled fires. Areas damaged by fire or during suppression will also be stabilized with vegetation to prevent future, adverse effects to natural resources or otherwise mitigated so that the potential for significant effects will be prevented. Suppression and the use of minimum impact suppression tactics will also prevent significant impacts on cultural resources. Suppression activities will have short-term, minor to moderate, adverse effects on visitor use, while areas of the park may be closed, and long-term, adverse effects on visual resources will likely be reversible over time. Impacts to health and safety are related to foreseeable risks associated with fire suppression activities, and staff will be trained to carry out fire suppression activities in a safe manner and to use equipment properly.

If wildland fire suppression intensity remains low and fire suppression is performed quickly and in a sensitive way per the existing fire management plan, with an awareness of important archeological and historical sites, the adverse impacts to archeological resources will be localized and minor. If fires are more intense and require more aggressive suppression, there could be more effects on archeological resources because soils that contain artifacts could become compressed. The National Park Service has identified mitigation measures that will be employed to reduce the potential effects of wildland fire suppression on archeological sites.

Suppression of wildland fires will help preserve important features of these landscapes. Given the mitigation measures in place for the consideration of cultural resources during suppression activities, the suppression of wildland fires will have little effect on the cultural landscapes.

Mechanical and Chemical Fuels Reduction—Mechanical and chemical fuels reduction, as well as the potential use of goats for fuels management, will result in short-term, negligible to minor effects on soils, water, vegetation, and wildlife. Long-term benefits to these resources will occur by reducing the likelihood of high intensity, difficult to control, unplanned wildland fires. In general, mechanical fuel removal will not occur within 50 feet of streams or surface waters to prevent impacts to stream banks and potential adverse effects on water quality. Mechanical and chemical fuels reduction will have localized, short-term, negligible to minor, adverse impacts to air quality due to emissions and dust from mechanical equipment and spray drift from herbicide application. Adverse effects on visitor use and experience will be minimal and will be related to the short-term closure of areas in which work is occurring. Short-term, negligible to minor, adverse impacts on park management and resources would occur from additional demands on park staff and resources through the implementation of the selected alternative. Long-term, beneficial impacts, however, would result from potential reduction in frequency and intensity of unplanned wildland fires. Adverse effects on health and safety related to use of equipment or application of herbicides will also be minimal, and staff will be trained to perform these activities correctly and safely.

Employing proactive vegetation management tools will increase the ability to reduce brush density and ground cover, reducing the fuel load in the park, and minimizing impacts on archeological resources.

Mechanical and chemical fuels management under this alternative will beneficially affect cultural landscapes because trimming and removing vegetation will restore open areas and viewsheds. The use of proactive vegetation management tools will increase the ability and efficiency to reduce brush density and ground cover, thereby increasing the reduction of hazardous fuels and success rate of ecological restoration efforts to fire-adapted and other unique habitats.

Prescribed Fire— The use of prescribed fire could expose soils to the elements, which could lead to erosion, which could result in short-term negligible minor adverse impacts to soil, vegetation, and water quality. Prescribed fires could also temporarily displace wildlife.

Low intensity prescribed fires will, however, allow for long-term benefits to soils, water resources, and vegetation by restoring nutrients to the soils. Adverse impacts to air quality will be localized, short-term, and negligible to minor, due to smoke, dust, and particulate matter. Prescribed fires may also require temporary closings in areas of the park where burning is occurring, resulting in short-term, negligible to minor, adverse effects.

Prescribed burning would have short-term, negligible to minor; adverse impacts from additional demands on park staff and resources, and long-term, beneficial impacts will result from increased ease and efficiency of maintaining the cultural landscape and reduced frequency and intensity of unplanned wildland fires.

Similarly adverse effects on public health and safety are not expected; proper planning and preparation will occur, and appropriate practices will be followed to ensure effects are not significant. At the Deep Cut and Brawner Farm areas, where there is a possibility of Civil War UXO, archeological investigations to identify Civil War artifacts will occur prior to any use of prescribed fire to ensure that the prescribe fire will not inadvertently detonate a previously unknown UXO. Other previously described fuels management techniques will be used in these areas until prescribed fire can safely be used. The use of prescribed burns in the viewshed restoration units in their current state will therefore avoid the potential for moderate, adverse impacts to archeological sites and artifacts that could occur if fuels are not reduced ahead of time because fires could be hot, and heat could be introduced into subsurface contexts. These activities will have a minor impact on archeological resources provided that the park adheres to guidelines and mitigation measures that have been previously consulted upon with the State Historic Preservation Office through Section 106 compliance to avoid or minimize impacts. Prescribed burns under the selected alternative will likely be lower intensity ground fires, which are easier to manage or suppress, thus reducing the potential risk of damage to historic resources. Across most of the park, effects under alternative 2 on archeological sites and artifacts will be negligible and adverse.

Prescribed fire will allow for advance clearance and avoidance and mitigation activities in cultural landscapes. Prescribed burning combined with mechanical methods will be used to reduce the risk of brush encroachment and to enhance cultural resources important to the cultural landscapes (e.g., maintaining open fields and improving and creating defensible space around structures) and visual resources, thus decreasing the probability of severe wildland fires and enhancing the protection of cultural landscapes. Based upon current information, the impacts of the selected alternative on cultural landscapes will be long term and beneficial by helping to restore and maintain cultural landscapes and preventing damage to historic structures and features within the historic district. Short-term, minor to moderate, adverse impacts to cultural landscapes, historic structures, and districts could include unsightly burned and scorched vegetation and unvegetated areas from both prescribed burns and more intense unplanned wildland fires.

Degree of Effect on Human Health or Safety:

As discussed above, under the selected alternative, prescribed fire, mechanical and manual hazardous fuel reduction, and targeted herbicide use will be used in combination with wildland fire suppression to reduce hazardous fuels. Because these fuels management techniques will be strategically integrated into the fire management plan, they will involve more pre-planning and planned activities under defined conditions than under the current situation, thereby leading to better health and safety protections under more controlled conditions.

There is also the possibility that Civil War UXO may be located on the landscape at the Deep Cut and Brawner Farm areas. To minimize risk to human health and maximize safety, investigations will be conducted in these areas to identify artifacts, including UXO, prior to any prescribed burning, and mechanical or chemical fuels reduction or goat grazing will be implemented to reduce fuels so that prescribed fires will be fast burning, low intensity fires that are not likely to disturb UXO. Appropriate briefings will be held and fire management practices implemented to minimize risks to human health or reductions in safety.

Unique Characteristics of the Geographic Area Such as Proximity to Historic or Cultural Resources, Park Lands, Wetlands, Prime Farmlands, Wild and Scenic Rivers, or Ecologically Critical Areas:

The geography of the park is related to the rural Virginia setting of the Civil War battles the park commemorates. The selected alternative is intended to protect and enhance features of this geography and to protect park resources. Although the park contains wetlands, there are otherwise no designated wild and scenic rivers or ecologically critical areas within the project area to be affected.

The project area contains many historic and cultural resources, including archeological resources, cultural landscapes, and historic structures and districts because it was the site of two Civil War battles.

The intent of the fire management plan is to prevent or minimize harm to park resources by quickly suppressing unplanned fires using sound management practices and implementing appropriate mitigation in the instances that more assertive fire suppression activities that cause impacts are needed.

Degree to Which Effects on the Quality of the Human Environment are Likely to Be Highly Controversial:

No highly controversial effects in terms of scientific uncertainties under the selected alternative were identified during the preparation of the environmental assessment or during the public comment period.

Degree to which the Possible Effects on the Quality of the Human Environment are Highly Uncertain or Involve Unique or Unknown Risks: No highly uncertain, unique, or unknown risks were identified during either preparation of the environmental assessment or during the public comment period. As discussed above, there is some possibility that Civil War UXO may be located in the Deep Cut and Brawner Farm areas, which are designated as landscape restoration areas. The fire management plan will minimize the risks and uncertainty by requiring archeological investigations to identify artifacts, including Civil War

UXO, prior to any prescribed burns, and also will require fuels reduction using mechanical, chemical or goat grazing methods before burning occurs, to ensure the fires will be fast-burning, low intensity fires.

Degree To Which The Action May Establish A Precedent For Future Actions With Significant Effects Or Represents A Decision In Principle About A Future Consideration:

The selected alternative neither establishes a NPS precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the Action is Related to Other Actions with Individually Insignificant but Cumulatively Significant Impacts:

Implementation of the selected alternative will have no significant cumulative impacts. As described in the environmental assessment, past, present, and future actions and projects within the project area that could affect soils, vegetation, wildlife and wildlife habitat, water resources, cultural resources, public health and safety, park operations and management, and visitor use and experience include existing and ongoing development in the surrounding area, prescribed burning at Conway Robinson State Forest, implementation of the park's deer management plan, and construction of the Manassas National Battlefield Park bypass. Cumulative impacts conclusions were determined for the following resources:

Soils: Ongoing development has increased the amount of impervious surfaces in the region, and continued development is expected to contribute short-term, adverse impacts from construction and earth-moving activities and long-term, adverse impacts related to the further loss of productive soils and the addition of impervious surface. Construction of the bypass could contribute short-term, adverse impacts from construction and earth moving activities and long-term, adverse impacts related to the loss of productive soils and the addition of impervious surface. Fire management activities under alternative 2 would contribute short-term, minor, adverse impacts and long-term, beneficial impacts to soil resources. Overall, cumulative impacts to soil resources would be long term, minor, and adverse.

Vegetation: Ongoing and future projects that could affect vegetation include ongoing development in the region surrounding the park and the construction of the new bypass. Ongoing development in the region and the construction of the bypass would each contribute long-term, adverse impacts due to the permanent removal of vegetated area, the potential for spread of invasive species, and the addition of impervious surface. Alternative 2 would contribute short-term, minor, adverse impacts, and long-term, beneficial impacts to vegetation. Overall, cumulative impacts to vegetation will be long term, minor, and adverse.

Water Resources: Past, present, and reasonably foreseeable actions include ongoing development in the region surrounding the park, construction of the new bypass, and prescribed burns at Conway Robinson State Forest. Ongoing development has increased the amount of impervious surfaces in the region surrounding the park, and construction of the bypass will increase the amount of impervious surface within the park. The resulting increases runoff of stormwater and pollutants will result in long-term, minor to moderate, adverse impacts to water resources. Prescribed burns at Conway Robinson State Forest will result in short-term, minor, adverse impacts to water resources due to potential increased turbidity resulting from increased erosion following prescribed burns. The selected alternative will contribute short-term, negligible to minor, adverse impacts and long-term, beneficial impacts. Overall, cumulative impacts to water resources will be long term, minor, and adverse.

Wildlife and Wildlife Habitat: Past, present and reasonably foreseeable future projects that could affect wildlife and wildlife habitat include ongoing development surrounding the park, construction of the new bypass around the park, and prescribed burning at Conway Robinson State Forest. Ongoing development has encroached upon a substantial portion of the available habitat surrounding the park, and this trend can be expected to continue into the future. Ongoing and future prescribed burns at Conway Robinson State Forest could result in short-term, minor, adverse impacts outside the state forest if wildlife populations flee the area of prescribed burning to areas outside the state forest. Construction of the bypass would contribute long-term, moderate, adverse impacts due to the permanent removal of wildlife habitat and the addition of infrastructure that may act as barriers to mobility for some species of wildlife. Alternative 2 would contribute short-term, minor, adverse impacts and long-term, beneficial impacts to wildlife and

wildlife habitat. Overall, cumulative impacts to wildlife and wildlife habitat will be long term, minor, and adverse.

Air Quality: Ongoing and future projects that could affect air quality include the construction of the new bypass as well as prescribed burning at Conway Robinson State Forest. Prescribed burns at Conway Robinson State Forest will result in short-term, minor, adverse impacts to air quality from increased particulate matter and smoke generated during burning activities. Construction of the bypass will contribute short-term, adverse impacts from construction equipment and earth-moving activities. These impacts are minor and will only occur during construction. Fire management activities under the selected alternative will contribute short-term, negligible to minor, adverse impacts to air quality. Overall cumulative impacts to air quality will be minor and adverse.

Visitor Use and Experience: Ongoing projects that could affect visitor use and experience include prescribed burning at Conway Robinson State Forest. Future projects include the implementation of the deer management plan and construction of the new bypass. Prescribed burns at Conway Robinson would contribute short-term, negligible, adverse impacts to the visitor experience at the park due to potential for increased smoke in the park and reduced visibility during burning activities. Construction of the bypass would also contribute short-term, minor, adverse impacts during the construction period from increased noise from construction equipment, as well as any temporary road closures within the park and possible construction-related traffic delays adjacent to the park. Construction of the bypass would ultimately improve visitor use and experience in the long term because it would remove through traffic from U.S. Route 29, which bisects the park. The deer management plan is expected to cause long-term, minor, adverse impacts, as along with beneficial impacts, based on the personal preferences of each visitor. The selected alternative will have short-term, negligible, adverse impacts in the immediate area of treatment, and long-term, beneficial impacts by minimizing the potential for future severe wildland fires. Overall, cumulative impacts to visitor use and experience will be short term and long term, minor, and adverse, as well as long term and beneficial.

Park Operations and Management: Ongoing and future projects that could affect park management and operations include the implementation of deer management plan and construction of the new bypass. Construction of the bypass will contribute short-term, negligible, adverse impacts during the construction period from increased law enforcement staffing to ensure visitors stay out of active construction areas, as well as any administrative assistance needed to secure all appropriate permits. Implementation of the deer management plan will have long-term, moderate, adverse impacts at certain times of the year due to the increased staffing for monitoring, deer reduction, and coordinating activities. The selected alternative will have short-term, negligible to minor, adverse impacts and long-term, beneficial impacts. Overall, cumulative impacts to park management and operations will be long term, minor to moderate, and adverse.

Public Health and Safety: Ongoing and future projects that could affect public health and safety include the construction of the new bypass and prescribed burning at Conway Robinson State Forest. The bypass would result in long-term, beneficial impacts to public safety by eliminating vehicle traffic on a highway that currently bisects the park. Ongoing and future prescribed burns at Conway Robinson State Forest will result in short-term, minor, adverse impacts to public health and safety issues related to smoke. The selected alternative will contribute short-term, minor to moderate, adverse impacts and long-term, beneficial impacts to public health and safety. Overall, cumulative impacts to public health and safety will be short term, negligible to minor, and adverse.

Cultural Resources: The only past, present, or reasonably foreseeable future project that has the potential to affect archeological resources is the construction of the new bypass. However, the bypass received full study and evaluation under Section 106 of the Historic Preservation Act, which found that it would have no impact on archeological resources. Therefore, archeology will not be cumulatively affected.

Ongoing and future projects that could affect cultural landscapes include the implementation of deer management plan and construction of the new bypass. Construction of the bypass will contribute long-term, beneficial impacts by reducing traffic and modern intrusions, thereby improving views and vistas

within the cultural landscapes. Implementation of the deer management plan will also contribute long-term, beneficial impacts to cultural landscapes by decreasing possible damage to the integrity of resources. Under the selected alternative, impacts will be short term, minor to moderate, and adverse as well as long term and beneficial. Overall cumulative impacts to cultural landscapes will be long term and beneficial.

Similarly, ongoing and future projects that could affect historic structures and historic districts include the implementation of the deer management plan and construction of the new bypass. Construction of the bypass will contribute long-term, beneficial impacts by reducing traffic and modern intrusions in the historic district, thereby improving views and vistas throughout the district. Implementation of the deer management plan will also contribute long-term, beneficial impacts to cultural landscapes by decreasing possible damage to historic structures and contributing resources in the historic district. Under the selected alternative, impacts will be long term and beneficial. Overall cumulative impacts to historic structures and historic districts will be long term and beneficial.

Degree to which the Action may Adversely Affect Districts, Sites, Highways, Structures, or Objects Listed on the National Register of Historic Places or May Cause Loss or Destruction of Significant Scientific, Cultural, or Historical Resources:

State and federal agencies were consulted during the NEPA process to identify issues and/or concerns related to natural and cultural resources in the project area. All consultations with the Virginia State Historic Preservation Office, as mandated by Section 106 of the National Historic Preservation Act, occurred during the development of the environmental assessment. The selected alternative has the potential to affect archeological resources, cultural landscapes, and historic structures and districts.

An Assessment of Effects under Section 106 of the National Historic Preservation Act was submitted to the Virginia State Historic Preservation Office in coordination with the preparation of the environmental assessment. The Assessment of Effects is being used as a basis for consultation between the agencies concerning the possible effects of the proposed project on cultural resources.

The Assessment of Effects determined that the implementation of the selected alternative would result in *no adverse effects* on cultural resources. Although there is the potential for archeological resources in the Deep Cut and Brawner Farm areas to be damaged by prescribed burns, the burning methodology employed under this alternative would reduce the intensity and duration of these burns, limiting their impact on archeological resources. The combination of the proposed burning methodology with the mitigation measures described above (e.g., 100 percent archeological survey of burn areas) would allow the park to minimize or avoid impacts to these resources. A phased Section 106 compliance approach will be employed with the park completing surveys and State Historic Preservation Office consultation will occur prior to all prescribed burns.

In a letter dated January 26, 2015, the Virginia State Historic Preservation Officer concurred with the NPS finding of “*no adverse effect*” upon historic properties.

Degree to which the Action may Adversely Affect an Endangered or Threatened Species or its Critical Habitat:

No threatened or endangered species or critical habitat are known or expected to occur within the project area. The northern long-eared bat (*Myotis septentrionalis*) was listed as threatened under the Endangered Species Act in May 2015, after the EA was released to the public, but the species has not been found in the park in past surveys, has not been found in field work during an ongoing survey, and management activities would not affect its habitat (tall trees and snags), if it were to be found. Further, the fire management plan is preventative in nature, structured to prevent or minimize adverse effects to wildlife and wildlife habitat, including listed species and their habitat, and to use prescribed burning to improve habitat in a well thought-out manner.

The park is taking every precaution to assure the protection of northern long-eared bat. The Park understands from the federal register notice (April 2015) that “when using prescribed burning as a management tool, fire frequency, timing, location, and intensity should all be considered in relation to the

northern long-eared bat.” While preliminary results in 2015 indicate that northern long-eared bat is not present, USGS will continue surveying for northern long-eared bat (July through October 2016 and 2017) within the Park. Should the northern long-eared bat be found in the park, conservation measures would be followed to protect the bat and informal Section 7 consultation will be reinitiated.

In accordance with section 7 of the Endangered Species Act, the National Park Service sent a letter to the United States Fish and Wildlife Service on February 4, 2013 regarding the existence of threatened or endangered species in the project area. USFWS replied on March 11, 2013 with a request that an online search be conducted in the USFWS website. Based on the outcome of recent consultation from other studies, the park’s natural resource manager advised that no rare, threatened or endangered species were located in the park. Because there would be no effects to any federally listed species, no further consultation is required under Section 7 of the Endangered Species Act.

The National Park Service also sent a letter to the Virginia Department of Game and Inland Fisheries to request information on rare, threatened, and endangered species in the park (letter not dated; sent prior to November 20, 2014). No response was received to this letter specifically, but the park did receive a letter dated January 15, 2015, through the state clearinghouse that noted that the Department of Game and Inland Fisheries did not respond to the Virginia Department of Environmental Quality’s request for comments.

Whether the Action Threatens a Violation of Federal, State, or Local Environmental Protection Law:

The selected alternative violates no federal, state, or local environmental protection laws.

PUBLIC INVOLVEMENT

In addition to internal and agency scoping, which took place in November 2013, public scoping for the environmental assessment began with the issuance of a scoping letter on February 21, 2014, and concluded on March 24, 2014. A public scoping meeting was held at the Visitor Center at Manassas National Battlefield Park on March 4, 2014; from 6:00 p.m. to 8:00 p.m. Notice of the public scoping period was posted on the Planning, Environment, and Public Comment (PEPC) website and sent to the mailing list for the park. During the public scoping period, the National Park Service received five pieces of correspondence from the public; all were received by webmail through the PEPC system. Comments suggested adding language about the ecological purposes of prescribed fires to alternative 2 (see “Chapter 2: Alternatives”), identified areas that would benefit from mechanical fuel removal, and posed questions about forest management and what water sources would be used to suppress wildland fires. Concerns were expressed about additional fire hazards from the planned bypass road around the park related to cigarette littering. Some commenters expressed support for the use of prescribed burns to benefit native, warm season grasses and restore cultural landscapes.


The environmental assessment was made available for public review and comment on the NPS PEPC website from December 5, 2015, to January 19, 2015. During the public comment period on the environmental assessment, no public comments were received.

CONCLUSION

The National Park Service has selected alternative 2 for implementation. In light of the impacts described in the environmental assessment for the project and with guidance from NPS *Management Policies 2006*, natural and cultural resources information, professional judgment, and considering agency and public comments, the impacts that will result from the selected alternative will not impair any park resources and values (see attached Non-Impairment Determination). The selected alternative does not constitute an action that normally requires preparation of an environmental impact statement. The selected alternative will not have a significant effect on the human environment. Adverse environmental impacts that could occur to park natural and cultural resources are short-term and negligible to minor in intensity. Long-term impacts will be beneficial. The potential for more intense adverse impacts related to public health and safety will be minimized through advance archeological and other investigations to map the presence of civil war artifacts, and through the use of safety management planning. Soils, vegetation, wildlife and wildlife habitat, cultural resources, public health and safety, park operations and management, and visitor use and experience will not be significantly affected. 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, an environmental impact statement is not required for this action and will not be prepared. This is a finding of no significant impact.

Recommended:


Jon James
Superintendent
Manassas National Battlefield Park


Date

Approved:


as Deputy for
Bob Vogel
Regional Director
National Capital Region


Date

NON-IMPAIRMENT DETERMINATION

The National Park Service has determined that implementation of the selected alternative will not result in impairment of Manassas National Battlefield Park (park) resources and values. Pursuant to the NPS Guidance for Non-Impairment Determinations and the NPS National Environmental Policy Act process (October 31, 2011), a Non-Impairment Determination for the selected alternative is included here as an appendix to the Finding of No Significant Impact.

The prohibition against impairment originates in the NPS Organic Act, which directs that the National Park Service shall:

promote and regulate the use of the...national parks...which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

According to *NPS Management Policies 2006*, an action constitutes an impairment when its impact “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” (sec. 1.4.5). To determine impairment, the National Park Service 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” (sec. 1.4.5).

National Park System units vary based on enabling legislation, natural and cultural resources present, and mission. Likewise, the activities appropriate for each unit and for areas in each unit also vary. For example, an action appropriate in one unit could impair resources in another unit.

As stated in the *NPS Management Policies 2006* (sec. 1.4.5), an impact on any park resource or value may constitute an impairment, but an impact would be more likely to constitute an 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; or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park’s general management plan or other relevant NPS planning documents as being of significance.

The resource impact topics carried forward and analyzed for the NPS-selected alternative in the environmental assessment, and for which an impairment determination is contained in this appendix, are soils, vegetation, wildlife and wildlife habitat, and cultural resources. The following describes each resource or value for which impairment is assessed and the reasons why impairment will not occur.

Soils: The selected alternative will not result in impairment to soils. The soils at the park provide the foundation for the landscape and geography on which the battles of Manassas took place. Under the selected alternative of the fire management plan, unplanned fires will be suppressed, preventing damage from high intensity fires that could damage soils and preventing soil exposure that could result in erosion. In addition, the low intensity prescribed burns will also provide long-term benefits to soils. Fuels management activities will not largely affect soils, except short-term effects from compaction.

Fire management planning policies and the fire management plan associated with this environmental assessment lays out management practices for use in suppressing unplanned fires, implementing prescribed burnings, and removing fuels to minimize and avoid adverse effects on soils, so there will not be impairment to soils resources.

Vegetation: The selected alternative will not result in impairment to vegetation. The vegetation at the park is an assortment of open fields and forest in a range of successional stages, as well as some stream and wetland areas. Agricultural lease holders maintain the fields and grasslands.

Native vegetation and the open fields and forests at the park are necessary to fulfill the purposes for which the park was established and are key to the natural and cultural integrity and enjoyment of the park. Vegetation contributes to the cultural landscapes of the park that are to be preserved or restored in the battlefields. Park planning documents recognize natural resources of the park, including vegetation, as being important to the regional ecology and historic context of the park and promote protection of natural resources.

The selected alternative will result in the suppression of any unplanned fires and fuels management to reduce the potential for intense unplanned fires and will allow for prescribed burns in several areas where the vegetation will benefit from periodic fires. These actions will result in beneficial effects. Short-term, adverse effects will be minor and vegetation will recover quickly. The selected alternative will enhance the park's ability to protect natural resources and will help promote health of the vegetative communities in many parts of the park. Therefore, the selected alternative will not result in impairment.

Water Resources: The selected alternative will not result in impairment to water resources. The streams, ponds, wetlands, and groundwater at the park are important natural resources in the park, and they are also contributing resources to the battlefield landscapes for which the park is important.

The selected alternative will employ fuels management and fire suppression practices that will prevent and minimize impacts to water resources. Mechanical and chemical fuels removal will result in negligible, adverse effects related to the potential for localized erosion and migration of herbicides into the water bodies, and prescribed burns near streams could also have short-term, reversible, adverse effects on water resources from erosion, but buffers will be maintained to prevent and minimize those effects.

Adverse impacts to water quality due to chemical runoff and increased erosion and turbidity due to bank vegetation removal are possible but will be minimized by using strategic herbicide application and vegetation removal techniques. Therefore, impacts to water quality due to vegetation removal techniques will be negligible in the short and long term.

In wildland fire suppression efforts, minimum impact suppression techniques will be employed to mitigate adverse impacts to water resources. It is anticipated that existing roads and trails will be used as firebreaks to the greatest extent possible. Fire lines will consist only of raked up debris and avoid ground/soil disturbance. Water diversion devices may be used as applicable to reduce the risk of erosion and runoff into water bodies. Therefore, it is not anticipated that these actions will contribute to soil erosion and delivery of sediment into waterbodies. The adverse effect of fire suppression efforts will be negligible, unless water was pumped from the park's surface freshwater sources for firefighting, which is possible but not likely, because firefighters will rely first on hydrants in the area or on water tanks. If pumping from surface freshwater sources occurred, the adverse effects of reduced flow will be localized, short term (hours), and minor. Adverse effects could include destabilizing stream banks or pond shores due to shoreline trampling, equipment use, or nearby off-road travel with fire engines and other equipment. These impacts will be mitigated by minimizing off-road travel and prompt rehabilitation of any damaged shorelines or stream banks. The selected alternative will therefore not result in impairment to water resources.

Wildlife and Habitat: The selected alternative will not result in impairment to wildlife and wildlife habitat. The mix of fields and wooded areas at the park provides habitat for a variety of mammals, birds, reptiles, and amphibians that could be affected by actions taken for fire management. The park is a large open area surrounded by an increasing density of development and is therefore an important refuge for wildlife.

The selected alternative will result in the suppression of any unplanned fires and fuels management to reduce the potential for intense unplanned fires and will allow for prescribed burns in several areas where the vegetation will benefit from periodic fires. These actions will result in beneficial effects on wildlife and wildlife habitat, although short-term, adverse effects on wildlife are possible as unplanned fires are suppressed, brush is removed or prescribed burns take place. Prescribed burns could disturb ground dwelling birds and other wildlife, but burns will be planned to minimize effects on such species. Improvements in vegetation quality will ultimately be beneficial to wildlife and wildlife habitat.

The selected alternative will not inhibit the park's ability to protect natural resources and will help promote protection of wildlife. Therefore, the selected alternative will not result in impairment.

Cultural Resources: There will be no impairment to the park's cultural resources. The selected alternative will have a long-term, beneficial impact on archeological resources because it will reduce the chance of a destructive fire in the park. It will also lead to less impact over time from mechanical mowing. Across most unforested areas of the park, the use of prescribed fires will have a negligible impact on archeological sites because grass fires generally do not burn hot enough to damage subsurface artifacts or features. However, in the Deep Cut and Brawner Farm viewshed restoration units, where the fuel load is greater and some stumps are present, there is a danger that improperly managed fires could have moderate, adverse impacts on the archeological remains of the Second Battle of Manassas, although with archeological investigations, the adverse impacts will be minor.

The selected alternative will have a beneficial impact on the cultural landscapes. Prescribed burns and mechanical methods to manage fuels will have a short-term, minor to moderate, adverse impact by creating unsightly burned vegetation. The long-term impact, however, will be beneficial; use of these methods will decrease the likelihood of uncontrollable fire and restore historic landscapes.

The selected alternative will have beneficial impacts on historic structures by reducing the risk of fire. The reduction of wildland fire risk will be greater than under the no-action alternative. Impacts to historic structures associated with suppression of unplanned wildland fires will be the same as those described for the no-action alternative. Therefore, the selected alternative will not impair the park's cultural resources.

Summary

The National Park Service has determined that implementation of the NPS' selected alternative will not constitute an impairment of the resources or values of Manassas National Battlefield Park. As described above, adverse impacts anticipated as a result of implementing the selected alternative on 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 significant in the 2008 *Manassas National Battlefield Park General Management Plan/Environmental Impact Statement* or other relevant NPS planning documents, will not constitute impairment. This conclusion is based on consideration of the park's purpose and significance, a thorough analysis of the environmental impacts described in the environmental assessment, 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*.

MANASSAS NATIONAL BATTLEFIELD PARK FIRE MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

ERRATA AND RESPONSE TO COMMENTS

ERRATA

Addition to Impact Topics Dismissed from Further Analysis—Rare Threatened, or Endangered Species in “Chapter 1: Purpose and Need”

The northern long-eared bat (*Myotis septentrionalis*) was listed as threatened under the Endangered Species Act in May 2015, after the EA was published for public review. These bats have not been found in the park. A bat survey was conducted at the park in 2005 (Gates and Johnson 2005). At that time, no northern long-eared bats were found, although other species were found. The park is currently conducting a new survey, and preliminary field results indicate that the northern long-eared bat is not currently in the park. Additionally, long-eared bats roost in trees and snags with rough bark and a diameter of three-inches or greater when not hibernating in caves. During the maternity season, female bats move their young every 1.5 to 3 days.

No fire management activities are planned in areas with mature trees or snags, other than suppression of unplanned wildland fires, should they occur in these areas, so there would be no impacts to the northern long-eared bat, should they be found in the park. Suppression of unplanned wildland fires would prevent adverse effects on the bats. Therefore, “Rare, Threatened, and Endangered Species” continues to be dismissed from further analysis.

Gates, J. Edward, and Joshua B. Johnson

2005 Bat Inventories of the National Capital Region Parks. Submitted by the University of Maryland Center for Environmental Science Appalachian Laboratory to National Park Service, National Capital Region National Parks, Center for Urban Ecology. TIC#: D-59. June 2005.

RESPONSES TO COMMENTS

As required by the National Park Service (NPS) Director’s Order No. 12, the following are responses to all substantive comments submitted on the document entitled “Manassas National Battlefield Park Fire Management Plan Environmental Assessment.”

Substantive comments from various individuals and organizations have been consolidated in this document. Director’s Order No. 12 defines a “substantive” comment as one that does one or more of the following:

- Question, with reasonable basis, the accuracy of the information in the EA.
- Question, with reasonable basis, the adequacy of the environmental analysis in the EA.
- Present reasonable alternatives other than those presented in the EA.
- Cause changes or revisions in the proposal.

Although no comments were received from the public, the National Park Service received a set of Comments from the Virginia Department of Environmental Quality. For purposes of this document, the actual wording of the commenter has been used wherever feasible. Some comments have been paraphrased for brevity. Where the same or similar comment has been raised by multiple commenters, NPS has responded only once.

The comments, with the NPS response, are set forth below.

1. Manassas National Battlefield Park is known for its mix of open-space native plants. In general, herbicide use should be utilized only in areas where the use of fire or mechanical means are not possible, and only in a targeted way to control woody plants. The use of a large amount of herbicide could turn areas of dominant native perennial herbs or grasses to ones dominated by weedy non-native and native annuals. The rare species documented within the park are mostly those that occur in open, non-forested areas. These areas should not have herbicide treatment except in a restricted limited way to only target individual woody stems.

Therefore:

- Use herbicides in areas where the use of fire or mechanical means are not possible and only in a targeted way to control woody plants.
- Do not use herbicide treatment in areas with rare species, mostly in open, non-forested areas, except in a restricted way to only target individual woody stems.

Response: Herbicides will be used for fuels reduction purposes only in areas where use of fire or mechanical means are not feasible, and will not be used in areas with rare species. Chemical fuel removal is most useful in areas where non-native plants dominate, or along the park boundary near the wildland urban interface. Herbicides are to be used in a manner consistent with park integrated pest management practices.

2. The Elklick Woodlands Natural Area Preserve has been documented within the project site. Coordinate with OCR for more information about the Elklick Woodlands Natural Area Preserve and associated natural heritage resources.

Response: Elklick Woodlands Natural Area Preserve is near the park on land owned by Fairfax County Park Authority. It is not within the project site, which is within park boundaries. The proposed action will not affect Elklick Woodlands Natural Area Preserve.

3. Contact OCR ONH to re-submit project information and a map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized. Also, submit project location and management methods to OCR ONH to review for potential impacts to natural heritage resources as specific project areas are scheduled for treatment.

Response: Notification on natural resources and other issues will take place as prescribed burns are scheduled. Fuels reduction will take place mostly along trails and in Deep Cut and Brawner Farm, or along the park edge at the wildland-urban interface.

4. Do not use goats in areas containing rare plant populations to avoid negative impacts from this intense management method.

Response: Goats would not be used in any areas containing rare plant populations.

5. The National Park Service must submit a federal consistency determination (FC) pursuant to the Coastal Zone Management Act (CZMA) of 1972, as amended (16 USCA, CZMA § 307, § 1456(c)(3)(A)) and its implementing federal consistency regulations (15 CFR Part 930, subpart C) to DEQ OEIR.

Response: A federal consistency determination has been prepared and submitted. The proposed action is consistent with Virginia's Coastal Zone Management policies.