



National Park Service  
U.S. Department of the Interior

Mount Rushmore National Memorial  
South Dakota

**FINDING OF NO SIGNIFICANT IMPACT**  
**Mount Rushmore National Memorial**  
**Independence Day Holiday Fireworks Event**

Recommended:

**PATRICIA TRAP** Digitally signed by PATRICIA TRAP  
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Regional Director, National Park Service, Interior Regions 3,4,5

# **FINDING OF NO SIGNIFICANT IMPACT**

## **Mount Rushmore National Memorial**

### **Independence Day Holiday Fireworks Event**

#### **INTRODUCTION**

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) prepared an Environmental Assessment (EA) to examine alternative actions and environmental impacts associated with a proposed fireworks event (project) at Mount Rushmore National Memorial (Memorial).

The development of the EA was prompted by a 2019 Memorandum of Agreement (MOA) between the Secretary of the Interior and the Governor of South Dakota to explore resuming a fireworks event at the Memorial, by issuance of a special use permit by the NPS, for the purpose of celebrating the spirit of Independence Day and to provide for the enjoyment by the public in a manner that ensures safety and resource protection.

Two alternatives were analyzed in the EA. Under Alternative 1, the Memorial would permit and host an Independence Day celebration, including a fireworks display and other performances, on the evening of July 3, 2020, and could permit similar events in subsequent years. Under Alternative 2 (the no action alternative), a fireworks event would not be permitted, and activities similar to those the Memorial hosted from 2010 to 2018 would occur again in 2020. Three additional alternatives were considered, including hosting the event on July 4<sup>th</sup>, alternative launch sites, and a laser light show, but these alternatives were dismissed from detailed study.

The EA was made available to the public, agencies, and tribes for review and comment during a 30-day period from February 28, 2020 through March 30, 2020. The NPS received 707 separate public correspondences. Substantive comment focused on wildfire risk, environmental contaminants, and public safety, and are addressed in the responses to public comments (Appendix B to this FONSI). As a result of public comments, no substantive changes were made to the EA. Clarifications and minor corrections to the EA are noted in Appendix C to this FONSI.

The statements and conclusions reached in this finding of no significant impact (FONSI) are based on documentation and analysis provided in the EA and associated decision file. To the extent necessary, relevant sections of the EA are incorporated by reference below.

#### **SELECTED ALTERNATIVE**

The NPS has selected Alternative 1 – Issue a Special Use Permit (the selected alternative) to implement. Under the selected alternative, the Memorial will permit and host an Independence Day celebration, including a fireworks display and other entertainment, on the evening of July 3, 2020. Similar events could be permitted in subsequent years by the Memorial, assuming conditions and impacts remain as described in the EA.

The event will include 15 to 30 minutes of fireworks and proximate pyrotechnics displays (see page 6 of the EA regarding firework types) that will illuminate the sculpture's carved faces of Presidents Washington, Jefferson, Roosevelt, and Lincoln. Other types of performances will

occur before the fireworks, such as music, speeches, and reenactments. A military flyover, depending on aircraft availability, may also occur. The event may be filmed for viewing audiences and broadcast live or on delay.

Logistics for the event are described in the EA on page 5, and potential launch sites are described in the EA, Section 2.1.1 on pages 6 through 8.

Before the event, the NPS will work with partner agencies, including but not limited to the state of South Dakota, local communities, South Dakota Highway Patrol, as well as the fireworks contractor and staff, to develop the following:

- A plan for event staging, ignition, and demobilization. All launch locations will be closed to public access for a predetermined time before and after the event, as fireworks are staged and cleaned up. Fireworks contractor staff will monitor the event for any unexploded shells, spot fires, and other concerns.
- A wildland fire response plan. The NPS and fire officials will establish a quick response wildland fire team to respond to any unplanned ignitions.
- A plan to address event traffic control, visitor management, and emergency response. The Memorial will likely be closed to normal visitation for all or part of the day on July 3<sup>rd</sup>.
- A Unified Command incident management team and a Go/No-Go checklist. The event will be conditioned on appropriate weather, security and wildland fire conditions prior to the event.

The Memorial will protect fuel storage both from the fireworks displays and from any resulting wildfire by clearing and treating fuels in the immediate vicinity and stationing rapid response teams/assets in these locations (point protection and prepositioning resources). Additional conditions and mitigations may be required through the NPS permit issued for the event.

The NPS is currently working with the United States Geological Survey (USGS) to conduct water quality and soil monitoring at the Memorial, which will be increased under the selected alternative. Baseline data will be collected in spring or early summer 2020, prior to the fireworks event, and monitoring will continue after the event(s) on a schedule determined by USGS and NPS staff. Monitoring, which will supplement the current groundwater and drinking water testing program, will evaluate the event's impacts on levels of potassium perchlorate, and other chemicals or metals in soils and surface water and groundwater, which are typically present in fireworks. If monitoring shows that conditions have changed meaningfully from information presented in the EA, additional analysis may be necessary to evaluate future events.

A tribal cultural survey will be conducted in the future to document any unknown or additional tangible and intangible resources, and measures to protect any newly documented sites will be developed through consultation with tribes (see EA Section 4.2, Tribal Consultation, pages 40 through 42).

## **BASIS FOR THE DECISION**

Alternative 1 was selected because it best meets the project purpose and need to celebrate the spirit of Independence Day by hosting a fireworks event, while providing for the enjoyment of the public in a manner that ensures safety and resource protection.

The NPS also evaluated a No Action Alternative, which would involve an Independence Day celebration without fireworks, but this alternative was not selected for failing to meet the project purpose of resuming Independence Day fireworks. Alternative actions including hosting a laser light show as an alternative to fireworks, using alternative launch sites, and hosting the event on the 4<sup>th</sup> of July instead of the 3<sup>rd</sup> of July were considered but dismissed from full analysis. The reasons that these alternative elements were dismissed from full analysis are documented in the EA in Section 2.3.

## **SIGNIFICANCE CRITERIA REVIEW**

The selected action will not have a significant effect on the human environment. This conclusion is based on the following examination of the relevant significance criteria defined in 40 CFR Section 1508.27. The NPS reviewed each of these criteria given the environmental impacts described in the EA.

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

As described in the EA in Chapter 3, the selected alternative has the potential for adverse impacts associated with wildfire, environmental contaminants, and cultural resources. However, no potential for significant adverse impacts were identified.

#### Wildfire

The EA included an analysis of the potential for an accidental wildfire ignition to occur as a result of the fireworks discharge and the potential for any wildfire to spread. The NPS and a Unified Command incident management team will assess wildfire risk in the days leading up to the July 3<sup>rd</sup> event. A Go/No-go decision tree will be created and utilized to ensure conditions are appropriate for the event to proceed in terms of wildfire ignition. The analysis in the EA included information from the Wildland Fire Decision Support System (WFDSS), which is designed to predict how a fire will burn (direction, speed, spread, intensity) once ignited, under a set of weather conditions. The analysis simulated an average year and a dry year and found that in an average year any accidental ignitions are likely to be contained as small spot fires with only negligible environmental effects. This has been the experience of the Memorial during previous fireworks events from 1998 through 2009 (with no show happening in 2002 due to elevated fire risk). In a dry year there exists the possibility of a larger wildfire with observable impacts on vegetation, fish, aquatic invertebrates, wildlife, soils, water quality, and the surrounding landscape generally. The Black Hills are a fire adapted ecosystem, and the types of effects that could result in the unlikely event of an escaped wildfire are consistent with the effects associated with naturally occurring wildfire. Such effects, were they to occur, would not constitute a significant adverse effect on these types of environmental resources.

#### Environmental Contaminants

The EA included an analysis of the effects of environmental contaminants that are commonly contained in fireworks and could be distributed on the landscape during fireworks combustion. These include perchlorates, nitrates, thiocyanate, and various metals. Water quality analysis shows that past fireworks events have not contributed to thiocyanate contamination but have contributed to perchlorate contamination and may have contributed to nitrate contamination. Soil analysis shows that past fireworks events contributed to copper and lead contamination in the immediate area of the previous launch location and may have contributed to elevated levels of 20 additional metals in soils elsewhere in the Memorial. While monitored levels of nitrates in

surface and groundwater remain well below the EPA maximum contaminant level (MCL) for drinking water, and there is currently no enforceable drinking water standard MCL for perchlorate, measured levels of perchlorate have in the past exceeded the EPA Interim Drinking Water Health Advisory<sup>1</sup>.

Levels of perchlorate have attenuated over time since fireworks discharges were ceased in 2009. The analysis therefore concludes that future fireworks events are likely to have similar effects, with perchlorate levels gradually increasing in surface and groundwater after each event, then decreasing over time. Perchlorate exposure at sufficient concentrations can impair thyroid function, but these effects occur at concentrations considerably higher than those measured in the Memorial. In addition, perchlorate can be removed from drinking water with reverse osmosis systems, and these systems have been successfully employed at some residences in the Memorial where the water is used as a year-round drinking water source. Similar effects can occur to wildlife from ingestion of sufficient quantities of perchlorate and although some individual animals or plants may be affected, effects at the population level are unlikely. Although levels of copper and lead in soil exceeded the NPS ecological screening values for birds and mammals in previous USGS sampling results, these high levels were found only in a localized area, at the sample site closest to the former fireworks launch site.

Under the selected alternative, a monitoring program would be implemented to analyze water and soil samples before and after fireworks, to ensure that any increase in perchlorate, nitrate, thiocyanate, or metals contamination would be detected as early as possible. Additionally, the fireworks contractor would be required to thoroughly remove fireworks debris and unexploded ordnance, which would greatly reduce the introduction of contaminants in environmental media, and would be encouraged to use cleaner, more completely burning fireworks than those used in the past.

Given the proposed monitoring measures, limited and localized anticipated effects of some contaminants, ongoing and effective reverse osmosis treatment, current EPA drinking water standards, and measures to ensure cleanup and recovery of fireworks debris, human health and population-level ecological effects from perchlorate, nitrate, thiocyanate, and metals are not expected to occur. The effects of environmental contaminants therefore will not have a significant effect on the environment.

### Cultural Resources

The selected alternative has the potential to cause both direct and indirect impacts on contributing resources to the historic district, especially combustible resources such as buildings, and the cultural landscape, including vegetation, natural systems, views and vistas, and to traditional values of associated tribes. The few significant known tangible archeological resources within the Memorial would not likely be impacted by fireworks or wildfire directly because of their nature and location but could be affected by wildfire response. These resources would be avoidable using specific response measures (See EA Section 3.3, Wildfire for additional information on the impacts of wildfire).

During consultation, tribes questioned the adequacy and completeness of the existing park-wide archeological survey data (see EA Chapter 4). Tribes have stated that additional resources (both tangible and intangible) may be located in the Memorial that are not yet documented. To address this potential, a tribal cultural sites survey would be conducted in the future to document any unknown or additional tangible and intangible resources, and measures to

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<sup>1</sup> No MCL is currently established for perchlorate, although rulemaking to establish an MCL is currently underway.

protect any newly documented sites will be developed through consultation with tribes. Tribes have indicated that they consider fireworks an adverse effect to the traditional cultural property and traditional cultural landscape of the Black Hills, regardless of any survey results, but have not identified how the event would diminish the characteristics of the historic property that qualify it for inclusion in the National Register. Noise and light from fireworks discharge could disrupt individuals engaged in traditional cultural ceremonies at the time of the event. However, potential auditory and visual effects to tribal people conducting ceremonies after dark would be short term (15-30 minutes) and would be similar in duration and impact to other fireworks displays conducted in the local area during the same weekend.

A fireworks malfunction within the Hall of Records area could impact the walls or entrance to the Hall of Records. However, elevating a platform above the Hall of Records, as described in the selected alternative, or using different launch locations or other protective measures, would reduce the potential for these impacts. Additionally, the selected alternative does not allow for launching fireworks from the top of the sculpture itself, or from the Indian Camp cultural site, for protection of cultural resources and values.

Due to the short-term nature of the fireworks display, mitigating measures to protect resources from wildfire and wildfire response activities, efforts to conduct a tribal cultural survey and protect newly-documented sites, and selection of appropriate launch sites, the project will not have a significant effect on the environment.

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

The NPS, State of South Dakota, and local law enforcement and emergency response officials are developing a traffic and visitor management plan, which will include emergency egress procedures. There will be a Unified Command incident management team established prior to the event to ensure safety and security of visitors, Memorial staff and contractors, and emergency response personnel. Risks to visitors from fireworks themselves are very limited; event management will incorporate all emergency egress considerations.

The Go/No-go checklist will also be used to review and confirm any safety or security concerns on the day of the event. The types of criteria included in the Go/No-go checklist are expected to include:

- Public safety criteria, such as:
  - adequate egress is available;
  - visitors are in safe locations;
  - adequate resources are available for emergency response, if needed
- Fire condition criteria, such as:
  - fire preparedness level;
  - burning index;
  - fuels and moisture conditions;
  - wind and weather conditions
- Fireworks operator systems are functioning properly

A final Go/No-go checklist will be in place prior to the event and will be followed to maintain the security of the event and its attendees

Although there are potential adverse effects on human health and safety, the selected alternative includes mitigation measures to limit the potential and degree of these effects. The NPS, with its partners, will develop the following: a plan for event staging, ignition, and demobilization; a plan to address event traffic control, visitor management, and emergency response; and an incident management team and a Go/No-Go checklist.

Any human exposure to environmental contaminants from fireworks, including perchlorate, nitrate, thiocyanate, and metals, at the Memorial, is expected to be through the drinking water supply. The drinking water at the Memorial is monitored and treated for potential contaminants. Most visitors do not have regular and ongoing exposure to Memorial drinking water. The NPS has installed additional reverse osmosis filters in staff housing to further mitigate any potential exposure for year-round residents. Given the limited potential exposure for visitors, proposed monitoring measures, the absence of a drinking water standard MCL for perchlorate, and current treatment methods utilized at the Memorial, human health effects from environmental contaminants are not expected to occur.

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

Mount Rushmore was established as a national memorial to preserve, protect, and interpret the unique mountain sculpture of four presidents: George Washington, Thomas Jefferson, Theodore Roosevelt, and Abraham Lincoln. The entire Memorial (1,278 acres) is listed in the National Register of Historic Places as an Historic District, and several unique cultural features are considered contributing resources of the District. These include the sculpture itself, the Hall of Records, the talus slope beneath the sculpture, and several historic structures in the developed area of the Memorial. The Memorial's natural resources also contribute to its unique character. Its vast pine forest constitutes the second largest old growth ponderosa pine forest in the Black Hills, and the Memorial's wetlands and ephemeral streams create habitat for a variety of species. The Memorial is also surrounded by lands with unique designations, including the Black Elk Wilderness and Norbeck Wildlife Preserve.

Under the selected alternative, the unique characteristics of the Memorial would be protected. Fireworks would not be launched from the top of the sculpture (which could cause direct impacts to this unique resource), and fire-retardant material would be used at launch sites to protect the surfaces beneath. If the fireworks display were to ignite a wildfire, the most likely wildfire scenario (predicted by Wildland Fire Decision Support System modeling) would be small, easily controlled, and confined entirely to the Memorial. Additionally, effects from the release of environmental contaminants would be mitigated through measures to ensure cleanup and recovery of fireworks debris and monitoring to ensure early detection of any contamination. Impacts on unique resources of the Memorial, and on unique lands adjacent to the Memorial, therefore would not be significant.

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

In the context of determining significance, "controversial" refers to circumstances where a substantial dispute exists as to the environmental consequences of the proposed action and does not refer to the existence of opposition to a proposed action, the effect of which is relatively undisputed" (43 CFR 46.30). In the case of fireworks discharge in the Memorial, the EA relies on best available data regarding resource impacts augmented by knowledge of the

effects of hosting a similar event in the recent past. Comments received on the EA did not raise substantive objections to the methods of analysis, the data used in the analysis, or the conclusions reached in the analysis (see Appendix B numbers 4.1-7, 10.1-4, and 11.1-3). As such, the impacts of the project are not highly controversial.

**5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks.**

The EA relies on best available data regarding resource impacts augmented by knowledge of the effects of hosting a similar event in the recent past. The degree of uncertainty and risk associated with the selected alternative is low, as prior fireworks events have occurred at the park and resulting impacts are known and are not believed to cause significant impacts. The impacts of the selected alternative are anticipated to be similar to prior events.

In terms of the data used to complete the analysis, the EA uses a standardized model (WFDSS) to assess fire risk and examine potential wildfire scenarios. The purpose of the model is to reduce uncertainty surrounding prescribed fire outcomes. The model was used to assess the probability of potential wildfire effects, and the analysis found the risk of larger wildfire events to be both low and avoidable using the same decision framework used for prescribed fire activities.

The impacts of environmental contaminants are also well understood in terms of the nature of the effects, having been the subject of a USGS study (USGS 2016) that concluded that fireworks contributed to elevated perchlorate levels, and several years of monitoring also provide insight into the presence of other contaminants and the attenuation of perchlorate levels. Although some uncertainty exists in terms of the rate at which environmental contaminants will accumulate in environmental media, the nature of the effect is well understood. As such, the effects of the project on the human environment are not highly uncertain and do not involve unique or unknown risks.

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

Future fireworks events at the Memorial are anticipated in the EA, the impacts are included in the analysis, and are not expected to have significant effects. Future events are predicated on monitoring data collected as part of this project. If monitoring shows that conditions have changed meaningfully from information presented in the EA, additional analysis may be necessary to evaluate future events. In future years, individual events will be subject to permitting, visitor and traffic management planning, and utilization of a Go/No-go determination to ensure conditions are appropriate for the event and would not result in significant impacts.

**7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.**

The EA analyzed both direct and indirect impacts of the selected alternative in light of past, present and reasonably foreseeable future actions and found that the selected alternative would not contribute additional impacts such that they would lead to significant impacts either individually or cumulatively.

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

The Memorial is listed in the National Register of Historic Places as an Historic District, and contributing features include the sculpture itself, the Hall of Records, the talus slope beneath the sculpture, and several historic structures in the developed area of the Memorial. The cultural landscape of the Memorial is significant for its setting and feeling, including the preservation of natural resources, and for its deep significance to associated Northern Great Plains tribes.

The few significant known tangible archeological resources within the Memorial would not likely be impacted by fireworks or wildfire directly because of their nature and location but could be affected by wildfire response. These resources would be avoided using specific response measures (See EA Section 3.3, Wildfire for additional information on the impacts of wildfire). A tribal cultural sites survey would be conducted in the future to document any additional tangible and intangible resources which have not been previously documented, and measures to protect any newly documented sites would be developed through consultation with tribes. Tribes have indicated that they consider fireworks an adverse effect to the traditional cultural property and traditional cultural landscape of the Black Hills, regardless of any survey results, but have not identified how the event would diminish the characteristics of the historic property that qualify it for inclusion in the National Register.

Noise and light from fireworks discharge could disrupt individuals engaged in traditional cultural ceremonies at the time of the event. However, potential auditory and visual effects to tribal people conducting ceremonies after dark would be short term (15-30 minutes) and would be similar in duration and impact to other fireworks displays conducted in the local area during the same weekend. A fireworks malfunction within the Hall of Records area could impact the walls and the entrance to the Hall of Records. However, elevating a platform above the Hall of Records, as described in the selected alternative, would reduce the potential for these impacts. Additionally, the selected alternative does not allow for launching fireworks from the top of the sculpture itself, or from the Indian Camp cultural site, for protection of cultural resources and values.

Due to the limited size and duration of the event, mitigating measures to protect all known resources, the commitment to further consult with tribes, efforts to conduct a tribal cultural survey and protect any newly-documented sites, and selection of appropriate launch sites, the effects to cultural resources will not be significant. The integrity of National Register listed properties and other cultural resources would not be diminished by actions under the selected alternative, and the NPS has determined that the undertaking would have no adverse effect to historic properties under Section 106 of the National Historic Preservation Act. The South Dakota State Historic Preservation Office (SHPO) concurred with this assessment on January 30, 2020. Minor changes to the project proposal and an update on tribal consultation were sent to the SHPO on February 26, 2020 with an affirmation that the NPS's "no adverse effect" determination remains unchanged.

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

One federally threatened species, the northern long-eared bat, occurs at the Memorial. The NPS consulted with USFWS and received verification on December 4, 2019 that although the

fireworks event may affect the northern long eared bat, the activity described under the selected alternative is consistent with activities analyzed in the northern long-eared bat Programmatic Biological Opinion (USFWS 2016, 2019), and NPS has no additional Section 7(a)(2) consultation responsibility with respect to the northern long-eared bat. The USFWS response indicated that the event may affect the northern long-eared bat, but that any take that may occur as a result is not prohibited under the northern long-eared bat 4(d) rule (USFWS 2019). The project will be completed in accordance with the final 4(d) rule. Actions completed in accordance with the final 4(d) rule are not likely to jeopardize the continued existence of the species, and therefore the event is not likely to adversely affect the northern long-eared bat.

Four additional ESA-protected species could occur at the Memorial: the least tern (*Sterna antillarum*), the red knot (*Calidris canutus rufa*), the whooping crane (*Grus americana*), and Leedy's roseroot (*Rhodiola integrifolia* ssp. *Leedyi*). The Memorial does not contain habitat for these species, and/or they are not known to occur at the Memorial. The NPS has determined that the selected alternative would have no effect on these additional species.

Therefore, effects to threatened or endangered species or their habitat resulting from the selected alternative will not be significant.

#### **10. Whether the action threatens a violation of Federal, State, or local law or requirement imposed for the protection of the environment.**

Implementation of the NPS selected alternative would not violate any federal, state, or local environmental protection law. NPS has and continues to consult and coordinate with other federal, state, and local agencies as well as Tribal governments as event details are finalized and as described in other sections of this document.

#### **CONCLUSION**

Based on the review of the facts and analysis contained in the EA and associated decision file, the NPS has selected Alternative 1 for implementation. Based on the information in the EA and associated decision file, as discussed above, it is my determination that the selected alternative does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, in accordance with Section 102(2)(c) of NEPA, and the CEQ regulations at 40 CFR Parts 1500-08, an environmental impact statement is not required.

Appendix A: Non-Impairment Determination  
Appendix B: Response to Comments  
Appendix C: Errata

## APPENDIX A NON-IMPAIRMENT DETERMINATION

### INTRODUCTION

By enacting the NPS Organic Act of 1916 (Organic Act), Congress directed the U.S. Department of the Interior and the NPS to manage units “to conserve the scenery, natural and historic objects, and wildlife in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (54 United States Code 100101). NPS *Management Policies 2006*, Section 1.4.4 explains the prohibition on impairment of park resources and values:

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

An action constitutes impairment when its impacts “harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values” (NPS 2006, Section 1.4.5). To make an impairment determination, the NPS must evaluate the following:

An impact on any park resource or value may constitute impairment, but an impact will 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;
- 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 (NPS 2006, Section 1.4.5).

Resources and values subject to the non-impairment standard include (NPS 2006, Section 1.4.6):

- the park’s scenery, natural and historic objects, and wildlife, and the processes and conditions 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, structures, 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 (NPS 2006, Section 1.4.6).

Fundamental resources and values for the Memorial are identified in the Memorial's foundation document (NPS 2015):

1. **The Sculpture.** The sculpture on the face of Mount Rushmore is a unique work of art and impressive engineering achievement that communicates the story of the birth, growth, development, and preservation of our nation. It is a durable symbol of freedom and hope that commemorates the values of the country and the ideals of democracy through the visages of George Washington, Thomas Jefferson, Abraham Lincoln, and Theodore Roosevelt.
2. **The Natural Setting.** The Black Hills of South Dakota provide a dramatic natural setting for the sculpture at Mount Rushmore National Memorial. The pine forest, landscaping, natural soundscape, and night sky that comprise this setting are important not only for their aesthetic appeal, but also represent a place of great spiritual and cultural significance to the American Indian tribes who have connections to the land. The natural setting inspired sculptor Gutzon Borglum to select Mount Rushmore as the location for his monumental memorial to our national history and progress.
3. **Geology.** Mount Rushmore National Memorial is located along the northeast edge of what is known as the Harney Peak Granite Batholith, which is a unique geological feature that is conducive to detailed, durable carving. Harney Peak Granite was critical to the effective development of the sculpture, and the lack of Harney Peak Granite below the faces is the reason that the sculpture was never completed to Gutzon Borglum's original vision. The geology of the mountain also provides recreational opportunities at the Memorial as visitors are able to climb rock formations in designated areas.
4. **Museum Collection.** The museum collection at Mount Rushmore is a source of national and international interest and research. It is part of the natural and cultural heritage of the country and is collected, preserved, and interpreted for public benefit. The collection contains archeological objects, biological specimens, archives, art, and historical objects, including the tools and equipment used in carving the Memorial. The museum collections support production of research papers, articles, and journals that further public understanding and appreciation of the sculpture.
5. **Views of the Sculpture.** The views of the sculpture are critical to the experience at Mount Rushmore National Memorial. A variety of viewing opportunities are provided throughout the site, including the unimpeded views at Grand View Terrace, historic views from the sculptor's studio, and modern views from the Avenue of Flags and points along the highway. Visitors can gain an appreciation of the scale and setting of the sculpture as they move between these viewing opportunities.
6. **The Sculptor's Studio.** The Sculptor's Studio at Mount Rushmore National Memorial was built in 1939 and served as the second on-site studio for sculptor Gutzon Borglum. It was the final studio that Borglum worked in and contains the original plaster model for the sculpture as well as tools related to the sculpting process. The building served as the first museum for the site, as well as the administrative office. Today, it is an essential tool for interpretation and is important to telling the story of the sculpting process.

This determination has been prepared for the selected alternative, as described in the FONSI. While analyzed in detail in the EA, determinations are not necessary for visitor use and experience because impairment findings relate to park resources and values. Visitor use and experience are not generally considered park resources or values according to the Organic Act. The following resources or values were evaluated for the potential for impairment: vegetation, terrestrial wildlife, fish and aquatic invertebrates, water and soil quality, and cultural resources.

## **VEGETATION**

The 1,278-acre Memorial is surrounded by the Black Hills National Forest and is northeast of the USFS Black Elk Wilderness and Norbeck Wildlife Preserve (see Figure 1 in the EA). The Memorial and adjacent lands are in the Black Hills Plateau ecoregion, which consists of a mixture of warm, dry pine forest and mixed grasslands. Ponderosa pine, which dominates the forested area in and adjacent to the Memorial, is a fire-adapted species, meaning it depends on frequent low-intensity fires to control seedlings, reduce forest floor debris, and recycle forest nutrients. It also is highly flammable and burns with great intensity and severity in the summer season in a typical dry year (2000, 2002, 2007, and 2012 were considered to be dry years). General vegetation conditions at the Memorial are described in the EA on pages 13 and 14.

Impacts from a fireworks event on vegetation would be negligible, unless there is an escaped wildfire as a consequence of the event. For this reason, vegetation was dismissed as a stand-alone impact topic in the EA but was discussed in the wildfire analysis section. Impacts of an escaped fire on July 3<sup>rd</sup> on both the Memorial and adjacent landscapes, including the Black Elk Wilderness and Norbeck Wildlife Preserve, were evaluated for the selected alternative (EA pages 20, 21, 23, and 24) using a Wildland Fire Decision Support System model (WFDSS, described on EA page 18). The results of the model reveal a low probability of a high-consequence wildfire event and high probability of a low-consequence wildfire event. A fire occurring within the model parameters will have environmental consequences for the Memorial, but flora in general will recover well over several years. Even following a severe fire, the overall impacts will not be expected to cause a major change in vegetation communities, as evidenced following other fires in the Black Hills. The broken nature of the terrain and the resulting discrete islands of trees among the granite formations throughout the Memorial will ensure some continuity for seed sources following a fire. Following the analysis in the EA using the WFDSS models, the most likely wildfire scenario will be confined entirely to the Memorial and impacts on the Black Elk Wilderness and Norbeck Wildlife Preserve from wildfire are unlikely.

The natural setting, including the ponderosa pine community is a fundamental resource of the park. In summary, the selected alternative will not result in an impairment of this resource because even in the worst case scenario of a major high-consequence fire, impacts will not impede the natural function of these communities or result in a permanent loss of this natural setting at the Memorial; vegetation communities will recover and evidence of fire will become less noticeable over time.

## **WILDLIFE**

General information on wildlife species and their habitats in the Memorial are described in the EA on pages 14 and 15. Threatened, endangered, and sensitive species were dismissed from detailed analysis in the EA (see Section A.7 in EA Appendix A).

Impacts on wildlife as a result of wildfire were evaluated for the selected alternative in the EA (see pages 21 through 23). Fires affect wildlife mainly through impacts on their habitat. Fires often cause short-term increases in food (e.g., recovering grasses and forbs and downed wood) that contribute to increases in populations of some animals (e.g., ungulates and woodpeckers). Within forests, stand-replacement fires usually alter the wildlife community more dramatically than understory fires. A stand-replacement fire resulting from the actions in the selected alternative is unlikely.

Fires generally kill or injure a small proportion of wildlife populations. Mortality rates of mammals (small and larger) are low, and direct fire-caused mortality has little influence on populations of these species as a whole. Most small mammals would avoid fire by using underground tunnel systems, whereas large mammals would find a safe location in unburned patches or outside the burn. Fire-caused bird mortality depends on the season, uniformity, and severity of burning. Mortality of adult songbirds is rare, but mortality of nestlings and fledglings could occur. Fire-caused injury to herpetofauna would be low, even though many of these animals, particularly amphibians, have limited mobility. The vulnerability of snakes to fire may increase while they are in ecdysis (the process of shedding skin). Fires affect fish mainly through impacts on their habitat. Wildfire affects fish and aquatic invertebrates by altering water chemistry (decreases in dissolved oxygen and pH and elevated turbidity) and flow (increased runoff and increased sedimentation) (see EA page 29 for a discussion of these effects). The vulnerability of insects and other invertebrates to fire depends on their location at the time of the fire. While adults can burrow or fly to escape injury, species with immobile life stages that occur in surface litter or aboveground plants are more vulnerable (Wright and Bailey 1982; Arno 2000; Shepperd and Battaglia 2002; Graham et al. 2016).

In general, fire impacts on wildlife under any of the wildfire model scenarios (described in the EA on page 18) would involve limited changes in wildlife habitat in the analysis area with minimal direct mortality and no population level effects. A low-consequence wildfire (which is the most likely scenario) would have localized impacts on wildlife habitat and would not likely result in a reduction of the species' population at the Memorial despite occasional instances of individual wildlife mortality. A higher consequence fire would have greater habitat effects, but these effects are identical to naturally occurring wildfire effects in the Black Hills ecosystem. After a larger wildfire event, most wildlife species will occupy ample adjacent habitat and repopulate the fire area as plant regrowth occurs. For some species, the patches created by wildfire events improve habitat conditions. In conclusion, the selected alternative will not result in an impairment to wildlife populations and their habitats as a result of wildfire, because large stand-replacing fires and escaped fires are improbable and if they do occur, would likely impact individual organisms but not populations as a whole.

Impacts on wildlife, including mammals, birds, amphibians, fish, and invertebrates, as a result of environmental contaminants associated with fireworks were also evaluated for the selected alternative in the EA (see pages 32 through 35). A firework is the combination of a fuel (typically a metal or metalloid) and an oxidizer (typically perchlorate or nitrate salts) to enhance combustion along with binders, stabilizers, and anticaking agents. Environmental contaminants associated with fireworks include perchlorate, thiocyanate, and nitrate in addition to numerous other compounds that are released to the environment, partially due to the incomplete combustion of the fireworks and partially due to unexploded ordnance. Some contaminants, such as perchlorate and thiocyanate, can affect the metabolism, reproduction, and development of exposed individual organisms (wildlife and aquatic) and inhibit iodide uptake by the thyroid gland. Other contaminants, such as nitrates, can cause toxic algal blooms. Elevated metals exposure can cause reduced growth rate and development abnormalities in birds, and impact

the nervous system, kidneys, and other vital systems in mammals. Contamination from prior fireworks shows has likely caused elevated perchlorate concentrations in the Memorial's soil (Starling Gulch) and water (Grizzly Bear Creek), elevated nitrate levels in water (Lafferty Gulch), and elevated levels of copper and lead in soils sampled closest to the launch site in Lafferty Gulch. Limited sampling at the Memorial did not detect thiocyanate in the Memorial's finished drinking water (site L-7); however, surface water, groundwater, and soil at the Memorial have not been tested for thiocyanate or cyanide in the event thiocyanate is photochemically degraded.

It is assumed that the release of perchlorates, nitrates, thiocyanate, and metals to environmental media within the Memorial as a result of the selected alternative would be comparable to previous fireworks shows, and contamination levels observed in environmental media would gradually increase each year that fireworks events occur (impacts are described in the EA on pages 30 through 35). As discussed in the EA, adverse impacts on individual birds, mammals, amphibians, and invertebrates could result from increased environmental contaminants following future fireworks displays. However, any impacts on individual organisms would be expected to occur after the fireworks display and attenuate over time as contaminant levels dropped in surface water. No population level impacts are expected. Because previously measured levels were the result of 10 years of fireworks events, contaminant levels would not be expected to exceed levels measured previously for several years. A pre- and post-monitoring program of soil and water would also be in place to ensure that any increase in contamination (perchlorate, nitrate, thiocyanate, and metals) would be detected as early as possible (see EA Section 2.1.3 on page 8).

In summary, the selected alternative will not result in an impairment to wildlife populations, including mammals, birds, amphibians, fish, and invertebrates, and their habitats as a result of environmental contaminants because the release of contaminants will be comparable to previous fireworks shows, any impacts will occur to individual organisms, impacts would occur within hours after the fireworks display and attenuate over time, no population level impacts are expected, and monitoring will ensure that any increase in contamination will be detected as early as possible.

## **WATER AND SOIL QUALITY**

The Memorial is in the east-central region of the Black Hills and consists of Precambrian-age bedrock of granite, pegmatite sills and dikes, and schist. Major soils at the Memorial are Marshbrook and Cordston (NPS 2008). Marshbrook soils are subject to soil compaction and rutting from operation of heavy equipment. The very steep side slopes have a high erosion potential when disturbed. Area soils are dominated by decomposing granite. Hydrophobicity likely follows a wildfire in coarse soils. Soil hydrophobicity causes water to collect on the surface rather than being absorbed into the soil, causing more water runoff (see EA pages 15 and 25 through 27).

Three streams are present within the Memorial: Lafferty Gulch in the north, Starling Gulch in the southwest, and the Unnamed Tributary to Grizzly Bear Creek in the southeast (see EA Figure 8). Groundwater occurs in localized aquifers within the bedrock, and flow is controlled by secondary permeability caused by the fracturing and weathering of the bedrock. This combination of factors, along with surficial deposits of colluvium, can result in the rapid movement of large quantities of recharged groundwater. The groundwater system in the West

Fork Lafferty Gulch is isolated due to the prevention of downgradient movement by an igneous sill, which acts as a dam (see EA page 25).

Impacts on water quality and soils as a result of wildfire were evaluated for the selected alternative in the EA (see page 23). In general, these effects are identical to those associated with naturally occurring wildfire of similar scales. Wildfire can impact water quality through increased erosion from burned areas, which increases sediment delivery to streams and other water bodies. Small escaped wildfires would therefore not likely affect water quality in the drainage basins at the Memorial, or the larger watershed. A larger escaped fire with larger burned areas could increase sediment delivery to local water bodies and could affect the water quality of local water supplies and systems, including streams, local reservoirs, and treatment plants, due to elevated levels of metals and other contaminants, sediment and nutrient loading, debris, and increased turbidity. Short-term localized hydrophobicity in soil would also be expected from a severe wildfire. Long-term soil impacts, however, would be insignificant due to the dominance of the granitic soils and rock formations throughout much of the Memorial. In conclusion, the selected alternative will not result in an impairment of water quality or soils as a result of wildfire because large escaped fires and the resulting environmental effects are improbable, and because these types of effects are similar to naturally occurring wildfire effects in the Black Hills ecosystem.

Impacts on water and soil quality as a result of environmental contaminants associated with fireworks were also evaluated for the selected alternative in the EA (see pages 30 and 31). As described above for terrestrial wildlife, fireworks contain contaminants that are released to the environment when they are detonated or when unexploded ordnance that is not recovered degrades over time. Past fireworks displays are the most probable source of perchlorate contamination in soil, surface water, and groundwater at the Memorial. Additionally, the groundwater system at the Memorial is highly susceptible to contamination due to the hydrogeologic conditions present.

The total amount of environmental contaminants that would be released as a result of the preferred alternative is not quantifiable given its dependency on many different factors, including the number of fireworks launched, the efficiency of combustion, and the composition and quality of the fireworks used. It is assumed that the release of chemicals to water and soil within the Memorial would be comparable to previous fireworks shows, and contamination levels observed in water and soil would gradually increase each year that fireworks events occur. However, the amount of chemicals released per event is not expected to exceed the amount released in previous events. Because previously measured levels were the result of 10 years of fireworks events, contamination levels would not be expected to exceed levels measured previously for several years. A pre- and post-monitoring program of soil and water would also be in place to ensure that any increase in contamination (perchlorate, nitrate, thiocyanate, and metals) would be detected as early as possible (see EA Section 2.1.3 on page 8).

The selected alternative will not result in an impairment to water and soil quality as a result of environmental contaminants because the release of contaminants will be comparable to previous fireworks shows, and monitoring will ensure that any increase in contamination will be detected as early as possible.

## CULTURAL RESOURCES

A Cultural Landscape Inventory was conducted by the NPS in 2014, which identified Spatial Organization, Natural Systems and Features, Cultural Traditions, Circulation, Vegetation, Topography, Buildings & Structures, Small Scale Features, and Views & Vistas as contributing characteristics of the landscape (NPS 2014), which preserves natural resources and the natural setting of the Black Hills. The cultural landscape is significant for its association with Northern Great Plains tribes, and the importance of the Black Hills to these tribes cannot be overstated. The ownership of the Black Hills remains disputed by a number of tribes. The Six Grandfathers, a mountain of great significance to the Lakota, was called several different names by white settlers and explorers; the United States Board of Geographic Names officially recognized the name "Mount Rushmore" in 1930. In the early 1900s, the faces of four presidents were carved into the mountain, and this act is regarded by many tribes as a desecration.

The Memorial's historic district is also identified as a significant feature of the cultural landscape and was listed in the National Register of Historic Places on October 15, 1966 (NPS 1966). The historic district was updated in 2013 to encompass the entire Memorial (Historic Resources Group, Inc. 2013).

During consultation with Tribal Historic Preservation Officers, the adequacy and completeness of the existing archeological survey data were questioned (see EA Chapter 4), and additional resources (both tangible and intangible) may be located in the Memorial that are not yet documented. General conditions of the Memorial's historic district and cultural landscape are described in the EA on pages 36 and 37. General conditions of the Memorial's historic district and cultural landscape are described in the EA on pages 36 and 37.

Impacts on the historic district and cultural landscape, as well as to traditional values of associated tribes, were evaluated for the selected alternative in the EA (see page 37-39). The few archeological resources within the Memorial would not likely be impacted by fireworks or wildfire direction because of their nature and location but could be affected by wildfire response. Response measures would be designed to avoid impacting these sites.

All tribes consulted objected to the event and consider it to be an adverse effect to the traditional cultural property and traditional cultural landscape of the Black Hills, but have not identified how the event would diminish the characteristics of the property that qualify it for inclusion in the National Register of Historic Places. Potential auditory and visual impacts that may occur to tribal members conducting ceremonies after dark near the Memorial would be short-term and would be similar in duration and impact to other fireworks displays conducted in the local area during the same time frame. Tribes have stated that additional resources (both tangible and intangible) that are not yet documented may be located in the Memorial. To address this potential, a tribal cultural sites survey would be conducted in the future to document any tangible and intangible resources, and measures to protect any newly documented sites will be developed through consultation with tribes.

The Memorial's Foundation Document (NPS 2015) identified fireworks as a major threat to the sculpture, based on the nature of the fireworks program from 1998 to 2009 and its impacts on the cultural resources of the Memorial. Previous events were not adequately protective of the sculpture; mitigation measures included in 2020 and for any future events will include limitations on launch sites and requirements for protective materials to prevent scorching. If fireworks are launched from the Hall of Records area, short-term impacts would occur there from construction of a platform or other protective surface from which the fireworks mortars would be launched.

Deposition of unexploded ordnance and mortar debris could cause adverse impacts on the historic district and cultural landscape. A fireworks malfunction within the Hall of Records area could cause adverse impacts on the walls and the entrance to the Hall of Records; however, elevating a platform above the Hall of Records or utilizing alternate launch sites would reduce the potential for these impacts. Other potential adverse impacts on the historic district and cultural landscape could occur from unexploded ordnance fallout, the ignition of wildfires, and the subsequent response to contain and extinguish the wildfire, but for the reasons described in this document will be minimized by various measures to be implemented as part of the project.

NPS also considered, but dismissed, the potential for percussive impacts to occur to the sculpture, based on a report (Poluga et al, 2018) that found the rock comprising the sculpture to be stable and the percussion from fireworks discharge to be insufficient to harm the sculpture.

The selected alternative will not result in an impairment to the historic district and cultural landscape because the NPS will take specific actions to ensure the integrity of these fundamental resources are perpetuated for future generations and do not lose their integrity. Specifically, known archeological resources within the Memorial will not be directly affected by fireworks, indirect impacts on documented sites from wildlife responses will be avoidable using specific response measures, an additional tribal cultural sites survey will be conducted to identify other potential sites, site protection measures will be developed through consultation with tribes, any potential auditory and visual effects to tribal ceremonies will be short-term and similar in duration and impact to other fireworks displays, and historical resources will be protected from adverse impacts through avoidance measures, such as site selection and use of protective materials at launch locations. These actions all mitigate any potential for impairment to cultural resources.

## CONCLUSION

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, consultation with American Indian tribes, and the results of public review and comment, it is the superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the selected alternative. The NPS has determined that implementation of the selected alternative will not constitute an impairment of the resources or values of Mount Rushmore National Memorial. This conclusion is based on consideration of the Memorial's purpose and significance, a thorough analysis of the environmental impacts described in the EA (including measures to minimize and mitigate potential impacts), comments provided by the public and others, and the professional judgment of the decision maker guided by the direction of NPS *Management Policies 2006* and the NPS's 2011 Guidance for Non-Impairment Determinations and the NPS NEPA Process.

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## **APPENDIX B RESPONSES TO PUBLIC COMMENTS**

### **INTRODUCTION**

The EA was made available for public review, and comments were accepted by the NPS from February 28, 2020 through March 30, 2020.

During the public comment period, the NPS received 707 correspondences through the NPS's PEPC system.

Responses to public comments address substantive comments that were received during the public review period. According to NPS policy, substantive comments are those that (1) question the accuracy of the information in the EA, (2) question the adequacy of the environmental analysis, (3) present reasonable alternatives that were not presented in the EA, or (4) cause changes or revisions in the proposal.

Many comments addressed issues already adequately covered in the EA. No comments warranted development of an additional alternative or reconsideration of alternatives that were considered but dismissed. Therefore, the alternatives remain as described in the EA, and no changes were made in the assessment of environmental consequences.

### **COMMENTS AND RESPONSES**

The NPS grouped substantive public comments into several categories. Substantive comments and the NPS responses are provided in the matrix that follows.

Concern Statement Number	Concern Statement	Response
	<i>NPS Policies</i>	
1.1	<p><b>The proposal to return a fireworks display to the Memorial is contrary to the mandates of the Organic Act because it threatens the sculpture and surrounding landscape. The Memorial’s Foundation Document identified fireworks as "a major threat to the sculpture, based on the nature of the fireworks program from 1998 to 2009..."</b></p>	<p>There is no basis to conclude that the impacts disclosed in the EA would constitute impairment of park resources, which is prohibited under the Organic Act. The fundamental purpose of Mount Rushmore National Memorial is to commemorate the founding, expansion, preservation, and unification of the United States by preserving, protecting, and interpreting the mountain sculpture in its historic, cultural, and natural setting while providing for the education, enjoyment, and inspiration of the public. The Organic Act directs the NPS to promote and regulate the use of the parks by whatever means and measures conform to the fundamental purpose of the parks. These include, among others the NPS Management Policies, which provide guidance for park managers.</p> <p>Previous displays resulted in impacts to the Memorial’s natural and cultural resources, and the EA discloses that similar impacts are likely to occur for some resources as a result of future displays. Where feasible, mitigation measures to reduce impacts compared to previous displays will be developed and implemented. Some past fireworks events employed practices that were not adequately protective of resources, such as fireworks placed in a manner that resulted in burn marks on the sculpture. These effects will be avoided under the Preferred Alternative by protective measures such as selecting other launch positions, adequately securing all launch equipment, and using fire-retardant materials to prevent scorching.</p> <p>No information available suggests that past impacts rose to the level of significance, and the 2003 EA also found no potential for significant environmental impacts. The commenter provided no information to support the contention that past effects from fireworks impaired park resources or that future events with similar effects will impair park resources.</p> <p>The 2006 NPS Management Policies permit fireworks displays if they are conducted in compliance with the National Fire Protection Association Code (NFPA) for the display of fireworks and are approved by the superintendent and safety officer, unless they pose an unacceptable risk of wildland or structural fire, will cause unacceptable impacts on park resources or values, or jeopardize public safety.</p>

Concern Statement Number	Concern Statement	Response
		<ul style="list-style-type: none"> <li>• The NPS contracted a review of the Memorial to determine restrictions and parameters to ensure compliance with NFPA codes and will review the fireworks contractor’s submittal to ensure the same.</li> <li>• The fireworks display, if approved, will be signed off on by the Superintendent and Safety Officer during or prior to the Go/No-Go decision checklist signoff process.</li> <li>• The impact analysis in the EA evaluated fire risks and impacts to the Memorial’s resources and values and determined that they were acceptable and not significant (see the Finding of No Significant Impact for more details). The NPS has developed a Non-Impairment Determination to accompany the FONSI which details that there will be no impairment of any park resources.</li> <li>• The NPS and Unified Command emergency management partners will utilize a Go/No-Go Checklist to evaluate public safety concerns and to ensure conditions are appropriate to proceed at the time of the event.</li> </ul> <p>Together, these methods will ensure that all applicable requirements will be met.</p>
	<b>Alternatives</b>	
2.1	<b>The EA does not define the scope of the fireworks event in terms of firework number, type, size, and quality.</b>	The EA does discuss the chemical composition of fireworks, as well the types of fireworks that may be used, the size of fireworks most likely to be used at specific launch sites, and the duration of the event. Additional details would not meaningfully change the overall analysis of potential impacts to resources as identified in the EA. The precise details regarding the number, type, size, and quality of fireworks used under the Preferred Alternative will be further developed in coordination with the State of South Dakota and fireworks contractor; any impacts are expected to fall within the range described in the EA.
2.2	<b>The Project analysis area in the EA is not sufficient and should be expanded.</b>	Commenter provided no substantive information to support an expanded analysis area. The Project analysis area was developed cooperatively among Memorial staff, NPS policy and resource specialists, U.S. Forest Service staff, and contractors. The analysis area accounts for potentially affected watersheds, forests, wilderness areas, wildlife refuges, and cultural resources. NPS believes the analysis area is adequate for the purposes of the NEPA analysis and for decision makers to make an informed decision.

Concern Statement Number	Concern Statement	Response
<i>Cultural Resources/Tribal Concerns</i>		
3.1	<p>The EA does not detail how NPS will minimize or mitigate potential impacts to cultural resources, as expressed by the tribes. The EA also does not indicate how NPS will address the inadequate consultation process.</p>	<p>As described in the EA, the known archeological resources within the Memorial would not likely be impacted by fireworks or wildfire directly because of their nature and location but could be affected by wildfire response. These resources would be avoided using specific response measures, including building fire lines away from areas that contain sensitive resources.</p> <p>NPS solicited engagement of traditionally associated tribes several times during the development of the EA, as described in Section 4.2, Tribal Consultation, on pages 40-42. This section also describes additional measures that will be taken with tribes to identify resources and develop mitigation and avoidance strategies. Tribes have indicated that they consider fireworks an adverse effect to the traditional cultural property and traditional cultural landscape of the Black Hills but have not identified how the event would diminish the characteristics of the historic property that qualify it for inclusion in the National Register of Historic Places.</p>
<i>Environmental Contaminants</i>		
4.1	<p>The EA does not include adequate baseline data on monitored contaminants, within the Memorial, or provide details on the amounts and types of contaminants produced during previous fireworks displays as a reference.</p>	<p>All readily available and known information has been consulted in the preparation of the EA and is included in the description of the affected environment. Project area sampling efforts are described in Section 3.4.1, Current General Conditions – Environmental Contaminants. The data represents the aggregate effect of all previous fireworks displays including accumulation from all events and attenuation of contaminant levels over time. The specific amounts produced during individual previous displays is unknown due to the timing of sampling and the debris that remained in the project area following these displays. Ignition success, the percentage of fireworks consumed, and other details were not specifically tracked for previous events.</p> <p>The Memorial will require the fireworks operator to track ignition success and conduct sweeps for unexploded fireworks and remnant materials. In addition to the monitoring work planned in partnership with USGS (see 4.5a), the NPS will also collect dry debris from several locations immediately after the fireworks event, which will provide additional information about the type of contaminants falling to the ground at several spatially dispersed locations.</p>

Concern Statement Number	Concern Statement	Response
4.1a	<b>Any restrictions on Memorial drinking water should be included in the EA.</b>	<p>There have been no restrictions on drinking water at the Memorial due to groundwater contamination or drinking water contamination from past fireworks events. Arsenic is the only drinking water standard exceedance that the Memorial has had to post (2006-2012) under the Safe Drinking Water Act Public Notification Rule. Arsenic is naturally occurring in the Black Hills, and the arsenic exceedance was not due to past firework events. The EPA lowered the arsenic maximum contaminant level (MCL) from 50 parts per billion (ppb) to 10 ppb in 2006, which triggered the Memorial to post its arsenic levels. In the fall of 2011, a micro filtration and arsenic removal system was installed to remove arsenic from the drinking water at Mount Rushmore.</p> <p>There is currently no MCL for perchlorate. As stated in the EA, the NPS monitors water sources at the Memorial, treats it to all required standards, and uses additional treatment systems in residential housing units to remove any remaining perchlorate from the drinking water consumed by year-round residents.</p>
4.2	<b>The EA does not include details on all the possible contaminants that could impact the environment, surface waters, and groundwater in the Memorial from the Preferred Alternative.</b>	Chemical composition of fireworks was researched for the project and the typical compounds were disclosed in the EA. Likely impacts to water resources and organisms are discussed in the EA. See the response to concern statement 4.1 for additional detail.
4.3	<b>The EA does not adequately address the potential adverse impacts to the environment, human health, and biological effects of fireworks debris and the chemicals used in fireworks under the Preferred Alternative.</b>	All known environmental, human health, and biological effects of the proposed event were discussed in the document. Chemical composition of fireworks was researched for the project and the typical compounds were disclosed in the EA. Debris resulting from fireworks was discussed in the EA. Potential impacts to human health and the environment from compounds found in fireworks are addressed in the EA. Planned monitoring efforts will allow for early detection of any contaminants.
4.4	<b>The assumption that expected contaminant levels resulting from the Preferred Alternative and associated adverse impacts would be the same as previous events is incorrect.</b>	Contaminant levels correlate to the size and duration of an event. Under the Preferred Alternative, the size and duration of the fireworks display would be comparable to those previously conducted at the Memorial. In addition, because previously measured levels were the result of 10 years of fireworks events, contamination levels would not be expected to exceed levels measured previously for at least several years. NPS research has found that currently available commercial fireworks are similar in composition to what was used in the past; therefore, it is reasonable to assume similar impacts from events as described in the EA.

Concern Statement Number	Concern Statement	Response
4.5a	<b>The EA should include the monitoring of thiocyanate, nitrates, and all other pollutants commonly associated with fireworks in the environmental contaminant monitoring protocol.</b>	The NPS has developed a water quality and soil monitoring program, which will be implemented under an Interagency Agreement with the USGS. This monitoring program will evaluate levels of pollutants typically present in fireworks, including metals, nitrate, thiocyanate/cyanide, and perchlorate. Samples will be collected prior to and immediately following the fireworks display. Data collected through monitoring would be used to aid in decision making for future fireworks events at the Memorial. The park will develop any actionable criteria based on monitoring data, and the most recent regulatory standards.
4.5b	<b>The EA should include a comprehensive environmental contaminant monitoring protocol that includes the monitoring of all the chemicals to be analyzed, the monitoring schedule, the criteria and the thresholds that will result in the cessation of future fireworks events, require the reassessment of impacts, or require additional drinking water treatment processes at the Memorial. This protocol should also include a list of pollution prevention control measures.</b>	<p>Comment is noted. See response to 4.5a above. The NPS is developing a monitoring program in partnership with USGS, and parameters to be analyzed include perchlorate, thiocyanate/cyanide, nitrate, and metals. These parameters may be adjusted based on the composition of fireworks materials used for the event. Monitoring frequency and locations will also be included in the monitoring program. Monitoring for specific pollutants is discussed in the relevant subsections of Section 3.4.2 of the EA.</p> <p>In addition, the EA identifies numerous pollution prevention measures. The measures evaluated include selection of launch sites, requirements on the size and type of fireworks, the duration of the fireworks event, analysis of minimum separation distance, requirements for the fireworks contractor to monitor the event for any unexploded shells and retrieve unexploded shells and debris, and creation of a Go/No-Go checklist for the event to proceed.</p>
4.6	<b>NPS should perform aerial deposition monitoring to estimate the aerial extent and magnitude of firework particulate deposition under the Preferred Alternative.</b>	The NPS is developing a monitoring plan to evaluate the impacts of fireworks. This includes analysis of dry debris from deposition plates, which will provide data on particulate deposition of fireworks contaminants. Results of initial monitoring will be used to develop monitoring plans for future events. Additional details about dry debris monitoring are included in the response to concern statement 4.1.
4.7	<b>The claim that the reverse osmosis systems in staff residences is effective at removing perchlorate from drinking water is incorrect.</b>	The statement in the EA is correct. The reverse osmosis systems installed at the Memorial have been shown to successfully remove perchlorate from the drinking water consumed by year-round residents. After installation in 2013, the treated water was analyzed and found to contain <0.25 parts per billion (ppb) of perchlorate.

Concern Statement Number	Concern Statement	Response
	<i>Safety and Event Operations</i>	
5.1	<p><b>The EA does not describe how the Memorial would respond to an emergency or assess the safety and security of visitors, Memorial staff, and emergency personnel under the Preferred Alternative.</b></p>	<p>The NPS, State of South Dakota, and local law enforcement and emergency response officials are developing a traffic and visitor management plan, which will include emergency egress procedures. There will be a Unified Command incident management team established prior to the event to ensure safety and security of visitors, Memorial staff and contractors, and emergency response personnel. Risks to visitors from fireworks themselves are very limited; event management will incorporate emergency egress considerations.</p> <p>The Go/No-Go checklist will also be used to review and confirm any safety or security concerns on the day of the event. The types of criteria included in the Go/No-Go checklist are expected to include:</p> <ul style="list-style-type: none"> <li>• Public safety criteria, such as: <ul style="list-style-type: none"> <li>○ adequate egress is available</li> <li>○ visitors are in safe locations</li> <li>○ adequate resources are available for emergency response, if needed</li> </ul> </li> <li>• Fire condition criteria, such as: <ul style="list-style-type: none"> <li>○ fire preparedness level</li> <li>○ burning index</li> <li>○ fuels and moisture conditions</li> <li>○ wind and weather conditions</li> </ul> </li> <li>• Fireworks operator systems are functioning properly</li> </ul> <p>Additional Go/No-Go checklist criteria are not published for security purposes but will be established and followed to maintain the security of the event and safety of attendees.</p>

Concern Statement Number	Concern Statement	Response
5.2	<p>The EA does not address how traffic and visitors would be managed during the fireworks event under the Preferred Alternative.</p>	<p>A discussion on traffic and visitor management was not included in the EA as it would have no bearing on the environmental analysis and no impacts on resources are expected. A typical summer weekend at the Memorial would have more visitor and vehicle traffic than is proposed for the event. Any vegetation trampling by visitors or vehicles would be negligible and impacts to vegetation have been dismissed.</p> <p>Prior to the event, a traffic and visitor management plan will be developed by the incident management team, including the State of South Dakota, NPS Memorial staff, and local law enforcement and emergency response personnel. The plan will detail vehicle and pedestrian flow prior to, during, and after the event.</p> <p>The traffic and visitor management plan is expected to cover the following operational aspects:</p> <ul style="list-style-type: none"> <li>• Zones where visitors can be present during the event               <ul style="list-style-type: none"> <li>○ The NPS will use the fireworks contractor proposals and National Fire Protection Association code compliance to determine safe locations for visitors</li> <li>○ The NPS will use capacity figures from the State Fire Marshall in determining appropriate numbers of people in specific locations</li> <li>○ The NPS and security partners will determine ticketing and security needs for each zone</li> </ul> </li> <li>• Parking and transportation options for visitors in each zone               <ul style="list-style-type: none"> <li>○ The NPS will use existing transportation facilities and infrastructure to support parking operations</li> <li>○ Shuttle systems or other methods of increasing visitation may also be used</li> </ul> </li> <li>• Vehicle and pedestrian traffic flow patterns and emergency transportation routes               <ul style="list-style-type: none"> <li>○ The NPS will assure that emergency vehicle traffic is available at all times</li> <li>○ The NPS will assure that pedestrian traffic is separated from vehicle traffic to the greatest extent possible</li> </ul> </li> </ul>

Concern Statement Number	Concern Statement	Response
5.3	<b>The EA does not address potential issues surrounding the COVID-19 pandemic.</b>	The COVID-19 pandemic has no bearing on the environmental analysis for this project and, as such, was not included in the EA. The NPS will evaluate and assess operations in accordance with guidance from the Centers for Disease Control and Prevention and state and local public health authorities.
5.4	<b>The EA needs to include the specific monitoring protocol to be used by the fireworks contractor to observe the number of unexploded fireworks under the Preferred Alternative and ensure that subsequent searches for unexploded fireworks result in complete recovery and proper disposal.</b>	The Memorial will require the fireworks operator to track ignition success and conduct sweeps for unexploded fireworks and remnant materials. As part of their contracting request for proposals, the State solicited proposals from fireworks contractors for methods to track and recover materials. Once a method is developed and approved by the NPS, it will then be carried out by the contractor on the day of and following the event. The precise details would not alter the likely impacts of the event, which are stated in the EA.
<b>NEPA</b>		
6.1	<b>A full EIS is required for the Mount Rushmore Fireworks Event due to the risk of adverse environmental impacts to surface water, groundwater, and drinking water, and the corresponding risks to human and aquatic health.</b>	The NPS determined that the Preferred Alternative was not an action that normally requires preparation of an EIS as identified in the agency's NEPA Handbook, and that the anticipated impacts of the event will not rise to a level of significance, as discussed in the Finding of No Significant Impact. For these reasons, the NPS believes an EA is the appropriate level of environmental analysis for this project.
6.2	<b>The Memorandum of Agreement between the Department of the Interior and the State of South Dakota is in itself pre-decisional as it relates to the National Environmental Policy Act (NEPA).</b>	NEPA does not prevent agencies from creating statements of intent before developing concrete proposals for agency action. In fact, NEPA is triggered when an agency advances a proposal. Pre-decision occurs when an agency takes action in advance of completing NEPA or makes a commitment of resources towards a particular alternative in a NEPA analysis. Initiating NEPA on a proposal, such as hosting a holiday fireworks event, is the appropriate course of action and is not pre-decisional.
6.3	<b>Locals have been given no voice in the conversation. Park officials have silenced local commentary by holding open house-style meetings instead of a town hall meeting, meaning that people show up confused by the format and their comments do not go on public record.</b>	<p>The NPS and State of South Dakota are working with local public officials and agencies to discuss possible event logistics, and several local entities serve on the Unified Command for the event. Three public meetings were held in the local area and comments were accepted on the EA. Over 40% of all comments received were from South Dakota residents.</p> <p>There is no requirement to hold public meetings for an environmental assessment and no format requirements when meetings are held. Open house style meetings are the most common format when NPS elects to host public meetings. The open house meetings provided the public with opportunities to interact one-on-one</p>

Concern Statement Number	Concern Statement	Response
		with NPS staff and to submit comments on site if requested. All comments that are submitted during the formal comment period are entered into the project record, which is available to the public upon request.
	<b>Noise / Percussive Impacts</b>	
7.1	<b>Noise and percussive impacts on humans, wildlife, and the sculpture as a result of the Preferred Alternative were not adequately addressed in the EA.</b>	<p>Noise impacts on humans and wildlife could occur during implementation of the Preferred Alternative, but these impacts would be of short duration (15 to 30 minutes), occurring only during the fireworks display or military flyover. People who choose to participate in the event can self-manage noise concerns individually and mitigate any impacts by using earplugs or similar equipment. Wildlife may be disturbed, but the short duration would lead to negligible impacts.</p> <p>As stated in Appendix A.4, while historic structures are also susceptible to percussive effects, there has never been a known instance of effects on historic structures from fireworks. Based on this finding, the percussive impact of fireworks, and other noise-producing activities, such as a potential military overflight, are assumed to have no impact on the sculpture and other historic structures; therefore, this topic was dismissed from detailed analysis in the EA.</p>
	<b>Socioeconomics</b>	
8.1	<b>The socioeconomic impacts to concessioners and small businesses in the surrounding area as well as visitors, under the Preferred Alternative were not accurately addressed in the EA.</b>	<p>The commenter did not identify substantive flaws in the socioeconomic dismissal. This dismissal is discussed in Appendix A.1. The assessment in the dismissal concluded that the impacts on local communities, Memorial visitors, and Memorial concessioners were not meaningful in the context of the regional economy. The Preferred Alternative is not expected to conflict with the six nearby community fireworks celebrations, and the development of a traffic and visitor management plan would mitigate the effects of visitor influx on the day of the event. The Memorial concessioner will be open during the event and has been engaged in potential impact discussions. In addition, local and regional businesses were invited to comment on the Preferred Alternative with the general public during the public comment period.</p> <p>As stated in the EA, the NPS anticipates most visitors will adapt to the event by visiting the Memorial at a different time during their trip to the local area and, therefore the event could increase overall visitor spending at the Memorial in the days surrounding the event as well as increased spending in local communities on</p>

Concern Statement Number	Concern Statement	Response
		the day of the event, leading to a cumulatively minor overall impact. Therefore, concessioner and local business impacts are expected to be minimal.
	<i>Visitor Experience</i>	
9.1	<b>The EA did not accurately address impacts to visitors unable to visit the Memorial on July 3, 2020, under the Preferred Alternative.</b>	<p>As stated in the EA, the NPS anticipates most visitors will adapt to the event by visiting at a different time during their trip to the local area. The NPS would minimize potential adverse impacts on visitor experience by posting any closure in advance and messaging through multiple outlet.</p> <p>During implementation of the Preferred Alternative, some visitors may experience crowding and wait times during security screening and while entering and exiting the event, but these effects will be mitigated by the Memorial’s efforts to raise awareness about the nature of the event. Overall, these impacts do not constitute a significant impact and the topic is appropriately dismissed from detailed analysis.</p>
9.2	<b>The EA should clearly state the expected visitation for the event, address how those visitors will be chosen to attend, and if by a ticketing system how that process will work and the cost to attend.</b>	<p>Topics such as ticketing methods and costs do not have environmental impacts that need to be addressed in an EA. Total visitation will be determined by the NPS and the State, based on the location of safe zones for visitors during the event and spatial capacity determinations from the State Fire Marshall. The State of South Dakota has developed a website for the event, where they will share information regarding ticketing, attendance, parking, and more details.</p> <p>Prior to the event, a traffic and visitor management plan will be developed by the incident management team, including the State of South Dakota, NPS Memorial staff, and local law enforcement and emergency response personnel. See the response to concern statement 5.1 for additional details.</p>
	<i>Wildfire</i>	
10.1	<b>The EA does not adequately describe the existing wildfire potential and fuel conditions.</b>	<p>The EA includes a description of existing conditions for a period over two decades, which adequately characterizes that there is a wildfire concern in the project area. The risk of wildfire will be assessed based on conditions in the days leading up to and the day of the event. The risk of a fire start is most closely related to weather and conditions on the day of the event.</p> <p>A Go/No-Go decision tree will be created by the incident management team to ensure conditions are appropriate for the event to proceed.</p>

Concern Statement Number	Concern Statement	Response
		<p>The potential for a wildfire start has not changed significantly since 2010, based on Inventory &amp; Monitoring and Fire Effects plot data collected across 60 spatially balanced forest plots at the Memorial. Fuel conditions have changed in the Memorial since 2010 due to field work conducted on site, but the overall fuel load (tons of fuel per acre) has not decreased significantly. Fuel loading has both increased due to mountain pine beetle mortality and decreased due to natural recycling of fine and heavy fuels through the years. The litter and duff fuels have not changed significantly over the last 10-20 years. The likelihood of a wildfire starting depends more on weather conditions than on fuel loading.</p> <p>The likelihood of a crown fire is lower at the Memorial than in the past, while the likelihood of a surface fire may have increased somewhat. Crown fires are much more likely to result in wind-aided high-severity fire events; ground fires burn surface fuels but are less likely to result in major fires that spread rapidly. Surface fires are considered to be easier to fight and suppress than crown fires.</p> <p>Crown fire potential has decreased because MPB-killed trees have now lost their needles and are either standing snags or have fallen and are contributing to the fuel loading on the ground. NPS treatment activities have also decreased crown fire potential. In 2010 the NPS thinned and piled or chipped live trees and downed fuels up to 10” in diameter. These activities have essentially removed small trees in the Memorial, increased the crown base height, and lowered the tree density, decreasing active and passive crown fire potential. The mechanical thinning on the Memorial was designed to significantly reduce the smaller-diameter trees that could act as ladder fuels in the event of a wildfire. Current conditions, characterized by higher base crown height, help prevent surface fires from transitioning to crown fires.</p> <p>More recent work in 2019-2020 has included burning hundreds of piles of stacked fuels throughout the Memorial and preparation for prescribed burns in priority areas.</p>
10.2	<p><b>The EA does not include an assessment of firefighter safety and does not adequately assess the potential costs of a wildfire event under the Preferred Alternative.</b></p>	<p>The risks of wildfire will be assessed based on conditions present in the days leading up to and on the day of the event. A Go/No-Go decision tree will be created by the incident management team to ensure conditions are appropriate for the event to proceed. The NPS and other federal, state, and local agencies</p>

Concern Statement Number	Concern Statement	Response
		<p>have run simulations for fires in the Black Elk Wilderness area in the past and have created a plan for fighting a fire in the area. The coordinating agencies meet each year to validate the plan. These simulations and other training exercises carried out by fire crews guides safety measures implemented during any emergency response situation. All fire activities will follow standard NPS and NWCG standards and policies, as outlined in the Interagency Standards for Fire and Fire Aviation Operations (the “Red Book”).</p> <p>A discussion on the costs of a major wildfire event was not included in the EA as it would be speculative and would have no bearing on the environmental analysis. Resources will be made available through NPS, DOI, USFS, State of SD, Rapid City Fire, and other entities to support fire suppression on site. The EA adequately addresses the key components of the wildfire risk through the WFDSS model and assumptions.</p>
10.3	<p><b>The EA should include details regarding the Wildland Fire Decision Support System (WFDSS) model assumptions.</b></p>	<p>The EA includes summarized WFDSS model results in the impacts analysis and a reference for the model. The WFDSS model incorporates assumptions on many variables to simulate potential conditions on the day of the event, including historic and average weather conditions and potential fuel characteristics. The model results are summarized in the EA, per direction in the NPS NEPA Handbook Supplemental Guidance (2015) to use “incorporation by reference” techniques and minimize bulk in NEPA documents.</p> <p>WFDSS is designed to predict how a fire will burn (direction, speed, spread, intensity) once ignited, under a set of weather conditions (either forecast or climatological probabilities). It is not designed to assess wildfire risk, or the probability that a fire will start.</p>
10.4	<p><b>The EA does not describe the Preferred Alternative wildfire mitigations such as the Go/No-Go checklist or describe how the Memorial would assess wildfire risk prior to the Preferred Alternative.</b></p>	<p>A Go/No-Go decision tree will be created by the incident management team to ensure conditions are appropriate for the event to proceed and will be assessed during the days leading up to and on the day of the event. The NPS and other federal, state, and local agencies have developed simulations related to a wildfire incident in the Memorial and surrounding areas and will use this experience to guide development of the decision tree.</p> <p>Variables that are typically included in Go/No-Go decision trees for prescribed burn activities, and which may be considered for this event include: fine dead fuel</p>

Concern Statement Number	Concern Statement	Response
		<p>moisture percentages, probability of ignition, wind speed, predicted burning index (a measure of fire danger) for the event and following days, regional fire activity, and resource availability.</p> <p>The types of criteria included in the Go/No-Go checklist are expected to include:</p> <ul style="list-style-type: none"> <li>• Public safety, such as adequate egress is available; visitors are in safe locations; adequate resources are available for emergency response</li> <li>• Fire condition, such as those mentioned above and fire preparedness level; burning index; fuels and moisture conditions; wind and weather conditions</li> <li>• Fireworks operator systems are functioning properly</li> </ul> <p>Other Go/No-Go criteria will be developed and carried through for the event.</p>
	<i>Wildlife</i>	
11.1	<p><b>The EA does not adequately consider impacts to wildlife from the Preferred Alternative, including threatened and endangered species.</b></p>	<p>The EA does assess impacts to wildlife from implementation of the Preferred Alternative, and the NPS consulted with the USFWS (2019) regarding the threatened northern long eared bat, which is the only ESA-listed species known to occur in the Memorial. The NPS received a letter from the USFWS on December 4, 2019 indicating that the proposed fireworks event is consistent with activities analyzed in the northern long-eared bat Programmatic Biological Opinion (USFWS 2016, 2019) and that the NPS has no additional Section 7(a)(2) consultation responsibility with respect to the northern long-eared bat. As described in Appendix A of the EA, three additional ESA-protected wildlife species could occur at the Memorial. Suitable habitat for the red knot and least tern does not occur at the Memorial. The only known wild population of whooping cranes nests in Canada and winters in Texas. Their migration occurs in the fall several months after the proposed fireworks event, and their migration route is not known to include the Memorial. A comprehensive bird survey of the Memorial (Panjabi 2006) and subsequent bird monitoring by Bird Conservancy of the Rockies (NPS 2016) also did not find any evidence of these three species. The NPS has determined that the selected alternative would therefore have no effect on these additional species.</p> <p>See also responses to concern statements 7.1 and 11.2.</p>

Concern Statement Number	Concern Statement	Response
11.2	<p>While the EA cites the northern long-eared bat Programmatic Biological Opinion (USFWS 2016, 2019) and states that any take is not prohibited under the 4(d) rule, a recent court ruling overturned the decision by USFWS to protect northern long-eared bats as threatened rather than endangered under the ESA. While the threatened listing will stay in place while the USFWS reconsiders its decision, this ruling calls into question the status of the northern long-eared bat and applicability of the 4(d) rule (<i>See Ctr. for Biological Diversity v. Everson</i>, No. 15-CV-477, 2020 WL 437289 (D.D.C. Jan. 28, 2020)).</p>	<p>The threatened designation and 4(d) rule will remain in place until a new rule is published, so currently, the status of the bat is still threatened, and the 4(d) rule applies.</p>
11.3	<p>The EA incorrectly states that Leedy's roseroot is not known to occur at the Memorial.</p>	<p>The NPS further researched the occurrence of Leedy's roseroot, which is listed as threatened under the Endangered Species Act, and found that there is a recently-discovered isolated occurrence in the Black Hills, near Black Elk Peak (formerly Harney Peak). NPS mistakenly referenced older information when preparing the EA, which indicated that Leedy's roseroot occurred only in Minnesota and New York. Leedy's roseroot has not been found at the Memorial during general surveys, annual vegetation plot monitoring, in the targeted floristic inventory of Lafferty Gulch and Starling Basin, or in the 2004/2005 Comprehensive Vascular Plant Inventory of the entire Memorial. Information on Leedy's roseroot will be included in an errata, though no impacts to vegetation are expected as part of the event. The NPS has determined that the event would have no effect on Leedy's roseroot.</p>

## APPENDIX C: ERRATA

As a result of public comments, no substantive changes were made to the EA. The NPS is providing the following information as clarification to material presented in the EA.

- The EA correctly conveyed the event’s potential to impact bat species, including threatened and endangered species, but some readers believed the EA implied that bats would be hibernating at the time of the event. The event would occur in July, outside of the hibernation period, and bats would either be roosting or in flight during the event. Prohibited activities under the northern long eared bat 4(d) rule include: 1) removal of trees within 150 feet of a known, occupied maternity roost tree from June 1 to July 31, 2) removal of trees within ¼ mile of a known hibernaculum at any time of the year, and 3) activities that would cause take within a known hibernaculum. The references to tree removal and hibernating bats in the EA were intended to show that the proposed alternative would not include tree removal or affect hibernating bats (due to the timing of the event) and would therefore not represent prohibited or incidental take under the 4(d) rule.
  - Page 53 of the EA is revised, from “The bats are sensitive to acoustics, but are likely to be in roosts and remain sheltered during the event. Under the preferred alternative, no tree removal is planned during preparation of launch sites or during the proposed event, and hibernating bats would not be affected.”, to: “The bats are sensitive to acoustics, and are likely to either be in roosts and remain sheltered during the event, or be in flight, and could relocate to an area away from auditory disturbances. Under the preferred alternative, no activities that would represent prohibited take under the 4(d) rule would occur, including removal of trees or disturbance of hibernating bats. The proposed event would occur in July, outside of the hibernation period, and no tree removal is proposed.”
- The EA stated that Leedy’s roseroot was not known to occur in the Memorial. That statement is correct, but there is one known isolated occurrence of Leedy’s roseroot elsewhere in the Black Hills. The plant has not been found at the Memorial during general surveys cited in the EA, annual vegetation plot monitoring, in the targeted floristic inventory of Lafferty Gulch and Starling Basin, or in the 2004/2005 comprehensive vascular plant inventory of the entire Memorial. If Leedy’s roseroot is present and has not yet been discovered in the Memorial, no impacts to the plant would be expected as a result of the event. Impacts on vegetation as a whole were determined to be negligible, and were dismissed from detailed analysis in the EA. The NPS has determined that the event would have no effect on Leedy’s roseroot.
  - Page 53 of the EA is revised, from: “Leedy’s roseroot also is not known to occur at the Memorial (NPS 2002; Marriott and Mayer 2005) and is found only in Minnesota and New York.”, to: “Leedy’s roseroot is not known to occur at the Memorial (NPS 2002; Marriott and Mayer 2005), despite one isolated occurrence elsewhere in the Black Hills.”