



**National Park Service
U.S. Department of the Interior
Fort Davis National Historic Site
Fort Davis, Texas**

Finding Of No Significant Impact Fire Management Plan

Background

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) prepared an environment assessment (EA) to examine alternatives and environmental impacts associated with the proposed new Fire Management Plan (FMP) for Fort Davis National Historic Site. The proposed FMP includes prescribed burning, the use of manual and mechanical tools and equipment, and targeted herbicide application, as tools for fuels management and vegetation restoration. A new FMP is necessary to better protect Fort Davis National Historic Site's natural and cultural resources; to address changes in the vegetation resulting from land use changes since the historic periods, including fire suppression and drought events; and to address updates in national fire policy terminology. Additionally, a new FMP is necessary because the current FMP (2005) is supported by the Healthy Forest Initiative Categorical Exclusion (HFI CE; DO-12 Section 3.4, G. 1.), which will be discontinued after September 30, 2016.

Selected Action

Two alternatives were evaluated in the environmental assessment—No Action Alternative (1) and the Action Alternative (2). Alternative 2, the selected action, is the National Park Service's (NPS) preferred alternative because it best meets the purpose and need for the new FMP as well as the project objectives to 1) protect human life and safely conduct all wildland fire management activities; 2) conduct vegetation management activities including prescribed fire and manual and mechanical treatments to reduce hazardous fuels and restore cultural landscapes and natural resource processes; 3) consider targeted herbicide application as a limited vegetation management tool; 4) provide effective rehabilitation of burned areas; 5) continue and increase interagency cooperation and coordination, and public outreach about the Fort Davis National Historic Site fire management and restoration activities; 6) update fire policy and terminology language and discussions; and 7) continue active research and monitoring of fire program field actions, by supporting sound resource management and research science, and utilize adaptive management to improve the program.

The selected alternative will allow the use of prescribed burning, the use of manual and mechanical tools and equipment for hazardous fuel reduction activities, and targeted herbicides will be applied. These tools will more effectively protect and restore Fort Davis National Historic Site's cultural and natural resource values and fire-evolved ecosystems, increase success in creating and/or maintaining defensible space and fuel breaks by reducing hazardous fuels, and prevent encroachment of invasive and/or exotic plant species.

Wildfires occurring on Fort Davis National Historic Site will be aggressively suppressed at minimum cost, considering firefighter and public safety, and all values to be protected consistent with resource objectives. Suppression tactics that may be required to protect life and property include, but are not limited to, application of foam or retardant by ground equipment or aircraft, off-road use of wildland fire engines, hand crews constructing fire containment lines, and potential use of heavy equipment, such as bulldozers or masticators when approved by the Superintendent.

MITIGATION MEASURES

The Big Bend National Park fire management staff will work with Fort Davis National Historic Site resource specialists to ensure that cultural and natural resource issues and concerns are considered on all planned projects at Fort Davis National Historic Site. Resource specialists will also be consulted on all emergency wildfire suppression management actions.

The mitigation measures are attached to the end of this FONSI. Not all mitigation measures will be applied in all situations; the most appropriate mitigation measure to reduce or eliminate adverse impacts from fire management actions will be applied.

ALTERNATIVES CONSIDERED

Alternatives considered included the no action alternative and one action alternative—the Preferred Alternative. Under the No Action Alternative, the FODA fire management program will be limited to emergency wildfire suppression response strategies and tactics allowed under RM-18 and the Interagency Standards for Fire and Aviation Operations. FODA would not have a valid FMP, as the use of the Healthy Forest Initiative Categorical Exclusion, under which the current 2005 FMP was approved, will be discontinued after September 30, 2016. The preferred alternative includes suppression of wildfire as described in the no action alternative, along with planned fuel reduction activities including prescribed fire, manual and mechanical fuel reduction, and spot herbicide application.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

According to the Council on Environmental Quality regulations implementing NEPA (43 CFR 46.30), the environmentally preferable alternative is the alternative "that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of

long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative."

Alternative 2 is the environmentally preferable alternative for several reasons: 1) the new FMP increases successful protection and restoration of FODA natural and cultural values; 2) it increases the resilience of fire dependent ecosystems to future natural disturbances such as wildfire, drought, insect outbreaks, and wind events; 3) it allows restoration of fire-adapted and unique ecosystems and associated wildlife; 4) it reduces a significant fuel hazard posed by dense brush ground cover, making planned vegetation reduction techniques safer for employees, provide better defensible space for nearby residents, and make control of wildfire more successful; and 5) it maintains and preserves the historic scene, in accordance with the Historic Scene Management Plan (National Park Service 1983). For these reasons, the preferred alternative causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources, thereby making it the environmentally preferable alternative.

By contrast, Alternative 1 (No Action) is not the environmentally preferable alternative because the fire management program would continue to use the current nationally approved fire suppression tools related to fire suppression, however, due to lack of vegetation management, 1) it will increase the risk of future high, severity wildfires; 2) reduce the amount, extent, and effectiveness of successful historic landscape and ecological restoration; 3) continue to reduce resilience of FODA's ecosystem to drought, pest outbreaks, and wildfire; and 4) increase health and safety risks for visitors, adjacent landowners and residents, and NPS infrastructure due to increased wildfire risks.

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

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

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

The EA analyzed potential impacts of the actions on all topics identified during internal and public scoping. There were no major impacts, either beneficial or adverse. A new Fire Management Plan using prescribed fire, manual, mechanical, and targeted herbicide use will have adverse negligible to minor, short-term, localized impacts to air quality, soils, vegetation, wildlife, adjacent landowners, and human health and safety. Impacts to cultural resources may cause minor adverse impacts with implementation of mitigation measures. Inadvertent damage to contributing elements (archaeological sites and historic structures) or from trimming or vegetation removal (shrubs) may have minor adverse impacts to cultural landscapes. Mitigation measures will be implemented during fire management activities to prevent or minimize adverse impacts.

Overall, implementation of the Preferred Alternative will have beneficial, long-term impacts to natural and cultural resources. Implementing the Preferred Alternative will more effectively restore and protect FODA cultural and natural resource values and fire-dependent ecosystems, increase success in creating and/or maintaining defensible space and fuelbreaks by reducing hazardous fuels, and prevent encroachment of invasive and/or exotic plant species.

The degree to which the proposed action affects public health or safety

Public health and safety is a primary concern of the selected action. Implementing the Preferred Alternative will result in reducing hazardous fuel loads over time by reducing accumulated fuels (i.e., shrub and brush density and ground cover) and will create/maintain fuelbreaks and defensible space around structures. Fuel reduction can be accomplished by prescribed fire, manual and mechanical vegetation removal, and herbicide application (low-volume spot treatments). These actions will enhance the potential for lower intensity ground fires, with reduced flame lengths, and slower rates of spread. Less intense wildfires will likely be easier to suppress/manage, and thus less risk to human health and safety. This will provide better protection for firefighters, visitors and employees, as well as adjacent residents, and landowners.

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

Minor effects to cultural resources may occur from the Preferred Alternative. The possibility of disturbing unknown sites exists, but is highly unlikely. Should new archaeological resources be identified during project activities, all work will cease in the immediate vicinity of the discovery until the resource can be identified and documented and an appropriate mitigation strategy developed in consultation with the NPS cultural specialists and/or the State Historic Preservation Officer. The Preferred Alternative will cause no major impacts to historic or cultural resources or parklands. There are no prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas that will be affected.

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

The NPS selected action is consistent with accepted fire management strategies that are currently employed at other NPS units and adjacent State lands. Based upon public and agency involvement in the planning process and comments received during scoping efforts and on the EA, the effects of the selected action are not highly controversial, nor is it expected to have future controversial effects on the quality of the human environment.

The degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks

The risk to the quality of the human environment associated with the selected action will be adverse and beneficial. Planned projects and management responses to unplanned wildland fires pose some inherent risk to the human environment; although planned actions and management responses to wildfires are not unique, and are relatively certain, wildfire can change rapidly, due to the many variables associated with such events. No

additional unique or unknown risks to the quality of the human environment were identified.

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

The activities identified in the selected action are widely accepted under Federal fire management and NPS policies. Implementing the selected action neither establishes a NPS precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts

Cumulative effects were analyzed in the EA and no significant cumulative impacts were identified.

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources

Fort Davis National Historic Site is a National Historic Landmark, and is listed on the National Register of Historic Places (NRHP) as a Historic District. This NPS unit contains the remains of over 250 structures and ruins, of which 25 have been restored and 6 are refurbished to the time period of the 1880s. The unit also includes remnants of the associated fort roads and earthworks and a historic dike and ditch system used by the army for flood control.

One hundred percent of the Fort Davis National Historic Site has been surveyed for both historic and prehistoric archaeological resources; all sites identified have been documented. The Historic District also includes both surface structures and sites, and subsurface archaeological materials and features.

Fort Davis National Historic Site anticipates utilizing the streamlined review process described in the *Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act* (NPS 2008) on specific planned projects. Planned actions not eligible for this streamlined process will be subject to the standard review process described in this Programmatic Agreement. Emergencies such as responses to wildfire are subject to the emergency actions process described in this Programmatic Agreement.

The NPS found that over all, the preferred alternative will have "***no adverse effect on historic properties***" under Section 106 of the National Historic Preservation Act, and specific projects will be planned and implemented to comply with this determination. The Texas Historic Commission concurred with this determination in a letter dated July 14, 2014 (THC tracking #201410480).

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

Fort Davis National Historic Site prepared a list of federally listed species that may occur in the unit, via the U.S. Fish and Wildlife Service (FWS) website. There are no federally listed threatened, endangered, candidate species, or designated critical habitats known or likely to occur in Fort Davis National Historic Site. Therefore, the selected action will have "**no effect**" on federally listed species or critical habitat.

Two State listed species, the Trans-Pecos Black Headed snake, and the Texas horned lizard, are or are likely to occur in Fort Davis National Historic Site. The selected action will have short-term adverse impacts to these species due to temporary displacement within and near burn units from noise, smoke, and mechanical fuel reduction projects. The selected action will have beneficial, minor to moderate, long-term, localized impacts to these State listed species by creating resilient, fire-adapted habitats.

Whether the action threatens a violation of Federal, state, or local law or requirements imposed for protection of the environment

The selected action does not violate any federal, state, or local laws or environmental protection laws.

PUBLIC INVOLVEMENT

The EA was made available for public review and comment during a 30-day period ending April 23, 2014. To notify the public of this review period, a news release announcing public review of the EA was published in the local newspaper and on PEPC. A letter announcing the availability of the EA for review was mailed to the Fort Davis National Historic Site general mailing list. Copies of the document were made available in local repositories and posted on the NPS-PEPC website. All three comments received during this review period either supported the Fire Management Plan EA or simply acknowledged availability of the EA. No substantive comments were received and no text changes were made based on the comments.

NATIVE AMERICAN CONSULTATION

Twelve associated American Indian tribes (see list below) were contacted by scoping letter dated February 19, 2013 informing them of the proposed action and soliciting comments. Information from the tribes was also requested to determine if any ethnographic resources are in the project area and if the tribe wanted to be involved in the environmental compliance process. The White Mountain Apache Tribe (WMAT) stated the Proposed Action will not have an adverse impact on the WMAT's historic properties and/or traditional cultural resources and requested to be contacted immediately if Native American materials are discovered during fire management activities. San Carlos Apache Tribe stated they may visit FODA due to its rich historic resources. All twelve Native American tribes traditionally associated with the lands of Fort Davis National Historic Site include the following:

Apache Tribe of Oklahoma

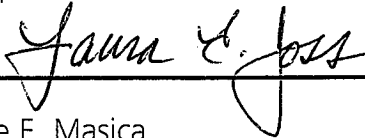
Comanche Nation
Fort Sill Apache Tribe of Oklahoma
Jicarilla Apache Nation
Kickapoo Traditional Tribe of Texas
Kiowa Indian Tribe of Oklahoma
Mescalero Apache Tribe
San Carlos Apache
Tonto Apache Tribe of Arizona
White Mountain Apache Tribe of the Fort Apache Reservation
Yavapai-Apache Nation
Ysleta Del Sur Pueblo of Texas

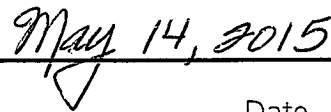
CONCLUSION

As described above, the selected alternative does not constitute an action meeting the criteria that normally requires preparation of an environmental impact statement (EIS). The Preferred Alternative will not have a significant effect on the human environment. Environmental impacts that could occur are limited in context and intensity, with generally adverse impacts that range from localized, short- to long-term, and negligible to minor. Numerous positive, long-term beneficial environmental effects were identified. There are no unmitigated adverse effects on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the preferred alternative will not violate any federal, state, or local environmental protection law.

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

Approved:





 Sue E. Masica
Regional Director, Intermountain Region, National Park Service

Date

Mitigation Measures

General Considerations

- All prescribed burns will have a written and approved prescribed fire burn plan, as required by NPS *Reference Manual-18* and the *Interagency Prescribed Fire Planning and Implementation Procedures Guide*.
- Firefighters will utilize Minimum Impact Suppression Tactics (MIST) to minimize impacts of fire response operations, when possible.
- Constructed firelines will be built to the minimum depth and width needed for safe control operations.
- Constructed firelines will be rehabilitated as soon as possible after fires are out, to prevent erosion, negative visual effects, and opportunities for invasive plant establishment.
- Natural, manmade features and/or vegetation change barriers will be utilized for firelines whenever possible to minimize the need for fireline construction. This helps minimize disturbance (e.g., soils, habitat, vegetation) by mechanical or hand line construction. Indirect/confine type strategies will often be the preferred strategy for most wildfires.
- Existing roads will be utilized by vehicles and equipment for travel as much as possible. Less sensitive travel routes will be utilized for firefighters, vehicles, and equipment whenever possible.
- After wildfires, Burned Area Emergency Rehabilitation (BAER) will be considered in consultation with regional office and resource specialists.
- Equipment operators will be trained or advised on how to minimize soil and vegetation disturbance, compaction, and displacement, which helps protect cultural resources and prevent establishment of invasive plants. Untrained or new operators will be accompanied by READ's to recommend low-impact operations and techniques.
- Equipment with fluid leaks will not be utilized. Refueling or filling or mixing of gas and other fluids will be avoided in the field when possible; when necessary, appropriate precautions will be taken to prevent spills. These actions will be taken away from streams and watercourses.
- Reasonable procedures will be followed to prevent unintended spills of foam and fire retardant chemicals.
- Herbicide will only be utilized after undergoing the NPS national and regional approval process and considering impacts to natural and cultural resources, and public health and safety. Herbicide will not be used during high winds. EPA instructions will be the primary direction that will be followed when applying herbicide.
- An herbicide application map and a record of treatment will be developed for each treatment area.

- Herbicide and application devices will be worked on, filled and mixed only utilizing approved leak prevention, and catchment systems. These sites should be away from streams or standing water.
- No visible leakage of chemicals will be allowed from equipment used for transporting, storing, mixing, or applying chemicals.
- Staff utilizing herbicide will be trained in approved procedures related to proper handling, storage, transportation, mixing, spill prevention, and application procedures.
- Prescribed fire will not occur sooner than 2 weeks after herbicide has been applied. Longer delays may be planned to allow target vegetation time to dry and burn better during prescribed burning. This delay time will also allow the herbicide to be absorbed into the target plant tissue and naturally decompose before burning.

Air Quality

- Fire/park staff will perform agency, public, and neighbor notification procedures for all FODA prescribed burns, focusing on residents and activities that might be impacted by smoke from the burns.
- Coordination with adjacent agencies will occur regarding the total number of prescribed burns simultaneously occurring in the area, to limit cumulative smoke impacts.
- FODA will follow any smoke regulations applicable by the State of Texas related to prescribed burns.
- Coordination with the Superintendent will occur in advance of prescribed fires to fully consider the effects of prescribed fire smoke on visitation during holidays or periods of heavy public use.
- When possible, prescribed burns will be conducted when fuel moistures are relatively low to provide better combustion, more transport and lofting of the smoke column, and less residual burning.
- Smoke transport winds will be assessed by prescribed fire managers to determine smoke impacts to sensitive receptors and populated areas.
- Timing and methods of ignition on prescribed burns will be constantly assessed and reviewed by fire managers to minimize smoke impacts.
- The Prescribed Fire Burn Boss will be trained in smoke reduction techniques.
- During FODA prescribed burns, smoke monitoring will occur throughout ignition and immediately after; data will be saved as part of the prescribed fire project records.
- On wildfires and prescribed burns, FODA assigned incident commanders/burn bosses will work with fire or public information officers to regularly update local residents on expected smoke impacts.

Soils

- Vegetation will be removed, cut or manipulated along firelines to the minimum width necessary for fire control and/or to protect human, natural or cultural values.
- Water diversion devices and/or brush and duff covering (after fire is out) will be considered on all sloping and bare soil firelines to prevent erosion.

- Berms will be removed, and natural ground contours restored during fireline rehabilitation.
- Firefighters will utilize Minimum Impact Suppression Tactics (MIST) to minimize soil related impacts of fire response operations whenever possible.
- Utilize water, pumps, and hose lays when available for wetlines or to back-up smaller firelines to minimize the amount of fireline construction and soil disturbance.
- Prescribed fire prescriptions will be utilized that minimize widespread intense and long duration-surface burning on soil surfaces to prevent soil sterilization.
- Equipment operators will be trained to minimize soil and vegetation disturbance, compaction, and displacement.
- Dozer and/or heavy equipment will seldom be used at FODA; consider only with consultation of resource specialists and specific permission of Superintendent. Ensure qualified Resource Advisors (READs) are available to accompany heavy equipment.
- Equipment operation will be avoided on steep slopes, fragile or highly erosive soils.
- When possible, mowing or mastication will be considered for firelines to avoid exposing mineral soils.
- Mop-up on fires will be done utilizing methods to minimize widespread soil disturbance.
- Use only NPS-approved types of herbicide that do not maintain long-term active residue in soils.

Vegetation

- Vegetation will be removed, cut or manipulated along firelines to the minimum amount necessary for fire control or to protect human, natural or cultural values. Avoid extensive falling and bucking of trees where they are present.
- Leftover vegetative fuels cut from firelines will be lopped and scattered, or, in structure areas, piled for later removal, or saved for replacement on firelines to prevent erosion and promote new growth.
- Water, pumps, and hose lays, when available, will be utilized to create wetlines or to back-up smaller firelines to minimize the amount of fireline construction and vegetation disturbance.
- Stream, arroyo, or water crossings by firelines should be avoided when possible to minimize riparian vegetation disturbance. If necessary, they should be carefully constructed to minimize disturbance to the banks and watercourse area. Crossings should promptly be restored and rehabilitated in consultation with resource specialists.
- Mastication should generally be avoided if project is located in a unique habitat area where cutting of some vegetation may be undesirable. Treatment/vegetation cutting plan may be more closely analyzed and modified in consultation with resource specialists to meet additional requirements.
- When possible, mowing or mastication will be utilized for firelines to avoid exposing mineral soils. When scraping is needed, it will be to the minimum depth and extent necessary for safe fire control operations. Minimizing soil exposure provides fewer

opportunities for establishment of new invasive plant species, and easier survival of native plants.

- Slash disposal areas, if needed, will be identified that have no sensitive natural or cultural resources, or sensitive vegetation habitats.
- Prescribed burning prescriptions will be developed that meet specific vegetation management objectives for each prescribed burn unit. These prescriptions will consider variables such as live and dead fuel loading and moisture, wind parameters, temperature, seasonal timing of burn, firing methods, and relative humidity. Excessive residual burning will be avoided for maximum survival of native plants.
- Rehabilitate constructed firelines after fires are out to prevent erosion and promote the re-establishment of native plants.
- Fire and resource specialists will discuss and design systematic monitoring systems related to specific FODA needs to measure the effects of fire related vegetation management activities such as mastication, herbicide use, and prescribed burning.
- Areas disturbed by suppression activities on wildfires or firelines for prescribed fires should be monitored for establishment of invasive plants.
- Incoming vehicles, engines, and equipment from outside the immediate area will be cleaned (including the undercarriage) before use in FODA to remove invasive weed seeds. They will also be cleaned immediately before/upon leaving the park before going to another assignment, or returning to home unit.

Wildlife/Wildlife Habitat

- Upon wildfire notification, resource specialists will examine maps and information resources to assess wildlife effects. READ(s) may be assigned to the incident management organization, depending on potential effects on wildlife, especially if sensitive species are involved.
- Utilize water, pumps, and hose lays when available for wetlines or to back-up smaller firelines to minimize the amount of fireline construction and habitat disturbance by firefighters.
- Stream, arroyo, or water crossings should be avoided when possible by firelines or equipment. Crossings should promptly be restored and rehabilitated in consultation with resource specialists.
- Utilize existing roads, and direct fire related travel onto travel routes that are less sensitive to wildlife disturbance, whenever possible for firefighters, vehicles, and equipment.
- Identify vegetation slash disposal areas, if needed, having no sensitive wildlife effects.
- Mastication and brush cutting equipment use will be curtailed during prime avian nesting season, or other sensitive wildlife activity periods.
- When planning and before initiating non-emergency field fire/fuels management activities, NPS resource specialists will be consulted to determine presence or effects on sensitive species. If present, mitigation actions will be developed to minimize impacts on species of concern.

- Wildlife effects will be fully considered when developing prescribed fire plans and prescriptions through consultation with resource/wildlife specialists.
- Chemical retardant, foam, and gasoline refueling will not occur within 200 feet of standing water or streams to protect aquatic species.
- Retardant or foam will not be dropped or applied within 300 feet of standing water to protect aquatic species.
- Helicopter bucket filling will only be allowed from approved water sources to help prevent wildlife disturbance.
- Helicopter use will be minimized when possible, and flight levels kept high in raptor and birding areas, to prevent collisions with aircraft.

Special Status Species

- Generally, the same mitigations for special status species will occur as listed above under "Wildlife/Wildlife Habitat".
- When sensitive species locations, seasons, unique habitat, nesting areas, or other parameters are involved with a fire management project or wildfire, additional consultation with resource specialists and/or specific wildlife experts will occur. Written directions specifying appropriate and reasonable actions and/or mitigations will then be utilized by the fire management staff to minimize disturbance effects or maximize benefits to those sensitive species.
- After or during the wildfire or other activity, resource specialists will direct formal or informal consultation with the US Fish and Wildlife Service and/or State of Texas depending on the status of the species, its recovery plan (if any), and previous agreements between the NPS and the agencies.

Archaeological Sites and Historic Structures

- FODA will follow the nationwide programmatic agreement (PA) guidelines for all fire management related activities before implementing any fuel reduction projects to ensure compliance with section 106 of the National Historic Preservation Act.
- Identify cultural sites in advance of wildfire, prescribed fire, or fuels treatment activities in order to consider potential affects, and develop a plan to avoid adverse effects to historic properties.
- If a wildfire or prescribed fire is likely to get into an area where historic structures such as buildings need to be protected, then fire management will consult with incident management, resource specialists, and guidelines from the FODA structural fire plan.
- Utilize water, pumps, and hose lays when available for wetlines or to back-up smaller firelines to minimize the amount of fireline construction and ground disturbance.
- Educate assigned fire personnel about the significance of cultural sites, how to identify and avoid those sites, and appropriate actions and notifications to be made if new sites are encountered.
- Remind assigned firefighters to never pick up or disturb artifacts or cultural resources.

- Avoid building firelines and doing any ground disturbance in dense cultural site areas.
- Utilize defensive, protection tactics and indirect attack tactics, and collaborate with cultural specialists, to prevent damage to historic, cultural, archaeological, ethnographic, or landscape sites.
- Collaborate and coordinate with FODA affiliated tribes to prevent damage to ethnographic resources, even if unrecorded, before planned projects or during wildfires.
- When possible, mowing or mastication will be utilized for firelines to avoid exposing mineral soils and buried cultural materials.
- Flush cut stumps in cultural sites rather than remove them. Avoid ground disturbance as much as possible in and around cultural sites.
- Identify slash disposal areas, if needed that have no cultural resources.
- During wildfires, fire managers will regularly update FODA cultural specialists on initial and extended attack response strategies, ground disturbance, and actual and predicted extent of fire area. This will help facilitate the focus on involved cultural resources.
- FODA cultural and historic site base maps will be immediately available to fire managers and incident commanders to allow them to avoid impacts to cultural sites.
- If heavy equipment is approved by the Superintendent for use, accompaniment by line qualified archeologists will occur to ensure avoidance of damage to archaeological or cultural sites.
- Special flagging will be utilized to identify archaeological and historic sites; flagging must be monitored as fire threat passes and may need early removal to prevent undue attention to cultural sites.
- After wildfires, Burned Area Emergency Rehabilitation (BAER) activities will be considered in consultation with regional office and resource specialists; cultural resource specialist(s) will be included on the BAER team as necessary.
- Mow grass around the fort grounds regularly enough to prevent the grass from carrying surface fire during dry periods.

Cultural Landscapes

- Many of the same mitigations outlined above in "Archaeological and Historic Resources" will be utilized to protect cultural landscapes, or elements of cultural landscapes.
- If fire or fire management activities are to occur in a National Register Cultural Landscape, it is critical to consult immediately with the cultural specialist with knowledge of that landscape to ensure that actions are compatible with the broader purpose of that specific landscape.
- Fire management staff will have access to maps showing FODA cultural landscapes, so that they know when and where to initiate cultural landscape consultation.
- With cultural landscapes, a wider perspective of any fire management ground or vegetation disturbing actions will be taken, with the goal of enhancing the cultural landscape for the long-term.

- After wildfires, Burned Area Emergency Rehabilitation (BAER) activities will be considered in consultation with regional office and resource specialists, and a cultural landscape specialist will likely need included on the BAER team.

Adjacent Landowners

- Continually emphasize the safety of fire staff, neighbors, and the public as the highest priority in all fire management activities.
- All fire management activities, including wildfires, will fully consider risk and effects to private property at and adjacent to FODA. This consideration will occur on an ongoing basis for the duration of the activity or incident.
- Herbicide will only be used after visitors were out of the immediate area, or informed in advance, and appropriate informational signing was placed at human entries to the spray area.
- FODA neighbors and visitors will be notified of all fire management activities that have the potential to impact them. FODA superintendent will assure that appropriate level/intensity of public information officers are present and informed to ensure a responsive level of public information occurs.
- Fire staff/superintendent will ensure adequate public notification procedures occur for all FODA prescribed burns.
- For wildfires, regular media releases will inform locals and visitors about the expected impacts of the fire, especially related to smoke, and closures or restrictions. Signs or notices may be posted at appropriate places to inform incoming visitors of the fire situation. Announcements will also occur during visitor center orientations.
- The superintendent may authorize temporary closure/restrictions in some areas to protect public, neighbors, and visitors.
- To prevent accidental exposure to hazards, neighbors and visitors will be kept out of the immediate vicinity of fire management activities such as mastication, tree falling, low level aviation operations, prescribed fire, and equipment use.
- FODA will monitor fuel, weather, and fire condition parameters and may limit public access and activities to FODA when extreme conditions develop, as designated in Preparedness Level planning, included in the FMP.
- Initial attack staff will determine the proximity of a new fire to visitors, adjacent landowners, and communities. They will coordinate with rangers and local agencies to inform them of the potential hazards and evacuate as necessary.
- As burned areas are opened to visitors after a fire, signs will be posted informing the public of potential hazards in the burned areas, (e.g., snags, stump holes).

Human Health and Safety

- Continually emphasize the safety of fire staff, neighbors, and the public as the highest priority in all fire management activities.
- The superintendent will establish appropriate and reasonable closure orders that will be managed by park rangers.

- Initial attack staff will determine the proximity of fires to visitors, adjacent landowners, and communities. They will coordinate with FODA Rangers and local agencies to inform them of the potential hazard and evacuate as necessary.
- FODA neighbors, visitors, and local residents will be notified/informed on all fire management activities that have the potential to impact them.
- FODA will monitor fuel, weather, and fire condition parameters and may limit public access and activities in FODA when extreme conditions develop, as delegated in Preparedness Level planning.
- Defensible space planning and hazardous fuel reduction will be an ongoing and continuous activity for FODA buildings and infrastructure.
- An herbicide application map and record of treatment will be developed for each treatment area and will be posted or distributed as necessary and helpful.
- Herbicide will only be used after visitors were out of the treatment area and appropriate informational signing was placed at human entries to the application area.
- Staff will perform other agency and public notification procedures for all FODA prescribed burns.
- Prescribed fire burn boss will work with local residents in close proximity to prescribed burns to ensure their safety, both in planning and during implementation.
- The fire management staff will work with ranger staff and local agencies on posting smoke hazard signs if necessary
- For longer duration fires, regular media releases will inform locals and visitors about the expected impacts of the fire, especially related to smoke and closures or restrictions. Signs or notices may be posted at appropriate places to inform incoming visitors of the fire situation. Announcements during visitor orientations at the visitor center will also occur.
- To prevent accidents, visitors will be kept out of the immediate vicinity when fire management activities such as mastication, tree falling, low-level aviation operations, prescribed fires, and equipment use occur.
- As burned areas are opened to visitors after a fire, signs will be posted informing the public of potential hazards in the burned areas.

APPENDIX A

Non-Impairment Finding

Non-Impairment Finding

National Park Service's *Management Policies, 2006* requires analysis of potential effects to determine whether or not actions will impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, will harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of these resources or values. An impact to any park resource or value may, but does not necessarily, constitute impairment, but an impact will be more likely to constitute impairment when there is a major or severe adverse effect upon 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
- identified as a goal in the park's general management plan or other relevant NPS planning documents.

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

The park resources and values that are subject to the no-impairment standard include:

- 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.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. The NPS's threshold for considering whether there could be impairment is based on whether an action will have major (or significant) effects.

Impairment findings are not necessary for visitor use and experience, socioeconomic, public health and safety, environmental justice, land use, and park operations, because impairment findings relates back to park resources and values, and these impact areas are not generally considered park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values. After dismissing the above topics, topics remaining to be evaluated for impairment include air quality, soils, vegetation, wildlife, special status species, archeological sites and historic structures, and cultural landscapes.

Fundamental resources and values for Fort Davis National Historic Site are identified in the *General Management Plan*. According to that document, of the impact topics carried forward in this environmental assessment, air quality, soils, vegetation, wildlife, special status species, archeological sites and historic structures, and cultural landscapes are considered necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; are key to the natural or cultural integrity of the park; and/or are identified as a goal in the park's General Management Plan or other relevant NPS planning document.

Air Quality

The Preferred Alternative will have negligible to minor, short-term, adverse impacts to air quality depending on the prescribed fire characteristics such as size, intensity, fuels, and burning conditions. Adverse impacts will be offset over the long-term by the moderate, beneficial impacts due to the potential for lower wildfire emissions from reduced fuel loading within treated areas. Therefore, the selected action will not result in impairment of air quality in Fort Davis National Historic Site.

Soils

The Preferred Alternative will have minor, short-term, adverse impacts to soil resources from prescribed fires and associated fuel reduction activities. In the long-term, prescribed fires, manual and mechanical fuel reduction activities will be beneficial to soils by increasing nutrient availability, stability of soil by altering ground cover to more grassy and small shrub conditions, and reducing the potential for intense wildfires and associated

suppression activities. Therefore, the selected action will not result in impairment of soil resources in Fort Davis National Historic Site.

Vegetation

The Preferred Alternative may result in minor, short-term, localized, adverse impacts from potential loss of individuals and communities of plants from prescribed fires. Mechanical, manual, and herbicide use will result in negligible, adverse impacts due to implementing mitigation measures. Overall, the Preferred Alternative will have minor to moderate, long-term, beneficial impacts to vegetation from restoring native vegetation structure, composition, diversity, and function of fire-adapted and fire-maintained plant communities. Therefore, the selected action will not result in impairment of vegetation resources in Fort Davis National Historic Site.

Wildlife

The Preferred Alternative may have negligible to minor, short-term, adverse impacts due to stress and disturbance of wildlife species within or near the treatment areas. The beneficial impacts from the Preferred Alternative will outweigh the adverse impacts by restoring the variety and diversity of native and fire-adapted vegetation communities and wildlife habitat present at FODA, which could increase wildlife habitat quality and forage availability. In addition, the risk for intense wildfires will decrease, as will associated wildfire suppression activities. Therefore, the selected action will not result in impairment of wildlife in Fort Davis National Historic Site.

Special Status Species

The Preferred Alternative will have no effect to the black bear, black-capped vireo, least tern, Northern aplomado falcon, yellow-billed cuckoo, Southwestern willow flycatcher, Mexican spotted owl, Comanche Springs pupfish, Pecos gambusia, diminutive amphipod, Phantom Lake cave snail, Phantom Spring snail, or little aguja pondweed because no populations or habitat occurs within FODA.

The Preferred Alternative will have beneficial, minor to moderate, long-term, localized impacts to the Trans-Pecos black-headed snake and Texas horned lizard from prescribed fires and associated fuel reduction activities due to habitat improvement. Adverse impacts to the Trans-Pecos black-headed snake and Texas horned lizard will be short-term and site specific due to temporary displacement within and near burn units from noise, smoke, and manual and mechanical fuel reduction associated with prescribed fires. Therefore, the selected action will not result in impairment of special status species in Fort Davis National Historic Site.

Archaeological Sites and Historic Structures

The Preferred Alternative may have minor adverse impacts to archaeological sites and/or historic structures with avoidance of known cultural resources and implementation of mitigation measures. The beneficial impacts will offset the adverse impacts by reducing hazardous fuel loads and maintaining/creating defensible space around archaeological sites and historic structures, thus, reducing the potential for intense wildfires and the potential for damage to archaeological sites and historic structures will decrease. Therefore, the

selected action will not result in impairment of archaeological sites and historic structures in Fort Davis National Historic Site.

Cultural Landscapes

The Preferred Alternative may have minor and localized adverse impacts due to inadvertent damage to contributing elements of the cultural landscape. Negligible to minor adverse effects on vegetation characteristics may result from minor trimming or vegetation removal to more intense thinning/removal of shrubs to reduce dense stands around archaeological sites and/or historic structures. However, beneficial impacts will outweigh the adverse impacts by restoring species composition, structure, and diversity of native plant communities, thus, maintaining and enhancing the quality of the cultural landscape. In addition, reducing hazardous fuel loads and maintaining/creating defensible space around archaeological sites and historic structures, thus, reducing the potential for intense wildfires and the potential for damage to contributing elements (e.g., archaeological sites and historic structures) will decrease. Therefore, the selected action will not result in impairment of cultural landscapes in Fort Davis National Historic Site.

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the Superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the preferred alternative.