

**National Park Service
U.S. Department of the Interior**

Devils Postpile National Monument



**FINDING OF NO SIGNIFICANT IMPACT
Fire Management Plan
DEPO
February 2019**

INTRODUCTION

This Finding of No Significant Impact (FONSI) documents the decision of the National Park Service (NPS) to select Alternative B as Devils Postpile National Monument Fire Management Plan. This FONSI, its appendices and the EA constitute the record of the environmental impact analysis and decision-making process, as required by National Environmental Policy Act (NEPA) (42 USC 4321 et seq.). The FONSI documents the conclusions reached in the EA that implementation of the Selected Alternative will have no significant impacts on the human environment. The statements and conclusions reached in this FONSI are based on documentation and analysis provided in the EA and associated decision file. The FONSI is available on the NPS Planning, Environment, and Public Comment (PEPC) website: <https://parkplanning.nps.gov/depofireplan>. Appendices to the FONSI are:

Appendix A: Mitigation Measures and MIST, Devils Postpile National Monument Fire Management Plan Environmental Assessment

Appendix B: Errata to the Devils Postpile National Monument Fire Management Plan Environmental Assessment

PURPOSE AND NEED

An update to the monument's 2005 FMP is needed to bring the monument's plan into conformance with current federal wildland fire management policies and operational standards and to address current monument resource conditions.

Since 2009, the primary tenet of federal wildland fire management policy has been to ensure "that the full range of strategic and tactical options are available and considered in the response to every wildland fire" (National Interagency Fire Center 2009). The management of wildfire for multiple objectives is not addressed in the 2005 FMP and is now an option used by firefighters in response to a naturally occurring unplanned ignition. Further, the 2005 FMP did not allow prescribed fire or manual fuels treatments in the vast majority of the monument; the 2005 FMP limited these management actions to the 15% of the monument not federally designated as wilderness.

Environmental conditions within the monument have significantly changed since the 2005 FMP was completed. The natural occurrence and influence of fire was disrupted as a result of nearly a century of fire exclusion. In the absence of frequent understory burns, surface fuels accumulated, and forest density increased significantly. As a result, fire behavior and fire effects shifted from low to high intensity and severity and vegetation species composition changed. The most dramatic illustration of this shift was the lightning-ignited 1992 Rainbow Fire which burned 84% of the monument -- more than 25% of the monument burned with high severity. The

Rainbow Fire was followed in 2011 by the Devils Windstorm. During this event, extremely high and prolonged winds uprooted thousands of live large-diameter mature trees, especially in those areas of the monument that had been unburned or burned with low-severity during the Rainbow Fire. These two events, following over a century of fire exclusion, have led to an increase in fuel loading, increase in the areal extent of shrublands, decrease in forest canopy density and alteration of the overall forest structure and composition.

An update to the 2005 FMP is needed not only to conform to current federal policy but importantly to reduce the risk of a high severity fire reoccurring in the monument, and allow for the restoration of a more natural fire regime. This will promote a more fire resilient ecosystem while protecting visitors and facilities in the monument, in the adjacent National Forest lands and in the communities and resorts to the east. The revised FMP will help guide fire and fuel management activities within the monument over the next 20 years.

SELECTED ALTERNATIVE

The NPS selects a modified Alternative B: Targeted Suppression with Limited Managed Wildfire and Monument-wide Fuels Treatments, for implementation.

The following modifications to Alternative B and FMP EA text in response to comments received during public review on the FMP EA and from staff consideration. These changes will not result in new impacts beyond those discussed in the FMP EA. All changes are listed in the Errata to the 2018 FMP EA, Appendix B to this FONSI.

Changes made to the FMP EA are:

1. Text addition to FMP EA Chapter 3, Section 3.3.2.2. In response to a comment requesting additional scientific information and examples of burns conducted in meadows similar to Soda Springs Meadow, additional information is provided summarizing relevant monitoring and research results. The new text is added to Chapter 3, Section 3.3.2.2, Impacts from Prescribed Fire and Pile Burning on Vegetation, Wetlands and Sensitive Plant Species between the second and third paragraphs of this section. The added text is in Appendix B, Errata.
2. Text addition to FMP EA, Appendix A. The references cited in the above text addition to Section 3.3.2.2 are added to FMP EA Appendix A, Literature Cited and are listed in Appendix B, Errata, to this FONSI.
3. Text edit to FMP EA, Appendix D, Mitigation Measures, Appendix G, Programmatic MRA and FONSI Appendix A. Mitigation Measure WLDF-2 is modified in response to a comment received during the public comment period recommending that the size of snags retained be reduced from 30 inches to 24 inches. The edit to the Mitigation Measure is shown in strikeout/underline and in Appendix B, Errata to this FONSI.

WLDF-2. Firefighter safety is priority, but whenever possible avoid cutting snags over ~~30~~ 24 inches in diameter at breast height and retain large woody debris for wildlife habitat.

4. Text edit to FMP EA, Appendix D and FONSI Appendix A. Mitigation Measure VIS-4 is clarified with the addition of the following underlined and italicized text. This modification is at the request of the Superintendent.

VIS-4: Prescribed burns and wildfire management for multiple objectives will be approved by the Superintendent, who will consider how the timing of these activities affects weekend, holiday and peak season visitor use in and around the monument.

Alternative B (Selected Alternative) conforms to federal and NPS wildland fire management policy allowing the full range of strategic and tactical options to be available and considered in the response to every wildland fire. This alternative allows for wildfire and fuels management throughout the monument, including the 85% of the monument designated as wilderness. The Selected Alternative includes strategies for the suppression of unwanted wildfires, the management of some wildfires for multiple objectives, including resource benefit, and

the implementation of prescribed fire and manual treatment projects to achieve protection and resource objectives.

The Selected Alternative allows for the use of strategies for managing natural ignitions to reduce hazardous fuels, restore fire in fire-adapted ecosystems, improve wildlife habitat, and restore native vegetation when appropriate conditions exist. All human-caused wildfires will be suppressed.

The Selected Alternative proposes to zone the monument into three strategic wildfire management zones based on the zoning designations in use by the U.S. Forest Service in the 2018 Land Management Plan for the surrounding Inyo National Forest (R5-MB-303, Chapter 3). Table 1 provides a summary of the objectives of each wildfire management zone.

Table 1: Selected Alternative: Summary of Wildfire Management Zoning

Zone Name	GOAL	MONUMENT RESOURCES AT RISK	WILDFIRE RESPONSE STRATEGY	FUELS MANAGEMENT STRATEGY
GENERAL WILDFIRE PROTECTION ZONE	Protect monument visitors and reduce the risk to natural and cultural resources from unwanted wildfire.	Majority of monument infrastructure, high visitor concentration, the access road, recreational resources, and natural and cultural resources.	Provide an aggressive initial suppression response to wildfire. Use wildfire on a limited basis to increase ecosystem resilience and provide ecological benefits when conditions allow.	Use manual treatment and/or prescribed fire to reduce hazardous fuel loads.
WILDFIRE RESTORATION ZONE	Promote a fire regime that results in a forest structure that increases the resilience of the monument's forests to the effects of wildfire and other stressors.	Wilderness and non-wilderness forests, wildlife habitats, watersheds, riparian corridors, meadows, ecological processes, nationally significant trails, cultural resources.	Suppress unwanted wildfire. Allow wildfires to spread under limited conditions that provide opportunities to increase ecosystem resilience and to provide ecological benefits.	Use manual treatments, combined with prescribed fire, to reduce fuel loads and restore a more natural fire regime, and for management of special resources, including Soda Springs and cultural resources.
WILDFIRE MAINTENANCE ZONE	Maintain ecosystem resilience and allow for the ecological benefits of wildfire.	Wilderness and non-wilderness forests, wildlife habitats, watersheds, riparian corridors, meadows, ecological processes, national significant trails, cultural resources	Suppress unwanted wildfire when conditions warrant. Use wildfire to maintain ecosystem resilience and provide ecological benefits when conditions allow.	Use manual treatment, combined with prescribed fire when necessary to reduce risk of damage from unwanted wildfires and/or maintain a more natural fire regime.

***Note:** At present, no monument lands are proposed for inclusion in the "Wildfire Maintenance Zone." However, over the life of the FMP, the intent is that some monument lands currently in the "Wildfire Restoration Zone" will, following fire management treatments, transition to the "Wildfire Maintenance Zone" as ecological conditions in these areas come into conformance with more natural fire regimes.

NPS staff also developed treatment units for the monument's fire management program based on current forest conditions, past disturbance history (fire, windstorm, and fire exclusion), past fuels treatments, resource and safety values at risk, and forest restoration objectives. The proposed treatment units are a planning tool to address current fuels and resource conditions and consider priorities and treatment strategies across the monument. Proposed actions in each treatment area will be developed into specific burn plans or manual treatment plans prior to implementation by teams of subject matter experts, which could include, based on the specifics of the treatment area involved, fuels specialists, fire ecologists, fire cultural resource specialists, plant ecologists, foresters, wildlife biologists, and monument and forest management. The specific boundaries of burn units for the prescribed fire will be developed from the site reconnaissance and may be smaller than the treatment units depicted in the EA and may not specifically follow the boundaries of the generalized treatment units.

Minimum Impact Strategies and Tactics

Per NPS Reference Manual 18, “fire management requires the fire manager and firefighter to select management tactics commensurate with the fire’s existing or potential behavior while causing the least possible impact on the resources being protected” (NPS 2014a:Chapter 2, pg. 1). Minimum Impact Strategies and Tactics (MIST) are methods that have been proven to reduce resource damage from fire management actions while minimizing costs, providing for firefighter and public safety and allowing for the management of the fire’s existing or potential behavior. The application of MIST, which are incorporated into the monument-specific mitigation measures for the FMP, will provide the necessary protection of monument resources from significant adverse impacts during the application of fire and fuel management actions. EA Mitigation measures, including MIST, for the monument’s FMP are Appendix A to this FONSI.

Fire Management Actions in Wilderness

The majority of the monument, 687 acres, is part of the 232,000-acre Ansel Adams Wilderness. Wildland fire operations within the proposed wilderness area will adhere to the requirements of the Wilderness Act, NPS Management Policies (2006), DO-18 *Wildland Fire Management*, and DO-41 *Wilderness Preservation and Management*.

In accordance with the Wilderness Act and policy, all fire management activities affecting designated and potential wilderness within the monument must be evaluated using the minimum requirements analysis (MRA). This planning tool and documentation process is used to determine whether the administrative activities which will affect wilderness resources or the visitor experience are necessary, and if so, what techniques and tools are needed to minimize impacts to the wilderness resource. The MRA is applied as a two-step process: 1) the NPS determines whether the proposed fire management action is necessary or appropriate for administration of the area as wilderness and does not cause a significant impact to wilderness resources and character; and 2) if the action is necessary/appropriate, the agency analyzes the techniques and types of equipment needed to ensure that impacts on wilderness resources and character are minimized.

To fulfill this requirement, a programmatic MRA was developed as part of the EA to guide and assess the effects of the range of initial actions that could occur when responding to a wildfire within the wilderness area of the monument. The MRA was also important in developing the EA Mitigation Measures to minimize undesirable impacts from fire management actions on wilderness character and values within the monument. The resultant programmatic MRA will guide fire management activities in wilderness though long-duration fires may require the development of a supplemental event-specific MRA (and additional environmental compliance as appropriate) to evaluate those tools and/or strategies not analyzed in the EA. In those exceptional cases, prior approval by the Superintendent will be required in the form of a signed MRA document specific to the event.

Wildfire Suppression and Wildfire Managed for Multiple Objectives

In accordance with NPS RM-18, the “initial actions on human-caused wildfires will be to suppress the fire at the lowest cost with the fewest negative consequences with respect to firefighter and public safety.” Under the Selected Alternative, suppression will occur on all human-caused wildfires; however, naturally caused wildfires may not be fully suppressed, but managed for multiple benefits.

Naturally ignited wildfires will be suppressed whenever there is a threat to life, public safety, property, significant cultural resources or if natural resource management objectives would not be met. Wildfire suppression strategies will be implemented to curtail fire spread and minimize threats. Depending on the location and nature of each fire, ground and/or aerial firefighting resources are used to contain a fire to the smallest possible size. Inyo National Forest (INF) fire crews would likely be the first responders to a wildfire in the monument, and the response determination would be based on the risk assessment of the initial responding crew in consultation with fire management specialists and the monument Superintendent. A range of fire suppression techniques would be used to break the continuity of forest fuels, cool the fire, and slow the advance of a flaming front. Actions may include construction of firelines; cutting of vegetation; application of water and

application of fire. In addition, suppression tactics will depend on whether the wildfire occurs in wilderness or non-wilderness and whether a wildfire in non-wilderness is in the relatively limited area that is accessible to vehicles.

Smaller wildfires would be suppressed using hand tools—sometimes supported with a chainsaw for cutting fuels, a portable pump for delivering water, and/or a helicopter to transport water, supplies, and firefighters. Helicopters will not be allowed to land within the monument without the Superintendent's approval. Fire engines and other vehicles will be restricted to the existing roads in the non-wilderness portion of the monument. Larger fires or fires with greater spread potential may require the use of extensive water drops or retardant-filled aircraft (with Superintendent's approval) to protect human life or high value resources. Mitigation Measure FMP-3 states "No fire chemicals, including retardant, foam or surfactants shall be used in the monument without prior approval from the Superintendent or designee." Staging areas for equipment, command centers, and larger crew camps will be established outside of the monument. Activities will provide for firefighter and public safety as the highest consideration, but would also consider the impacts to resource values, economic expenditures, and the use of critical firefighting resources.

Fire suppression repair is a series of immediate post-fire actions taken to repair damage and minimize potential soil erosion and impacts resulting from fire suppression activities and usually begins before the fire is contained and before the demobilization of an Incident Management Team. This work would include the repair of firelines, roads, trails, safety zones, and drop points used during fire suppression efforts. A Burned Area Emergency Response Team (BAER Team) may be called in during or after the suppression effort to develop a plan to rehabilitate monument resources impacted by wildfire. The BAER team would identify emergency threats to human life, property, and critical natural and cultural resources. Non-emergency, longer-term threats and damages to minor infrastructure would be addressed via BAR. BAER activities may require a standalone MRA.

Under the Selected Alternative, unplanned natural ignitions could be managed to accomplish specific resource management goals and objectives when appropriate conditions exist. In accordance with federal wildland fire management policy, part of a fire may be suppressed (e.g., approaching a community) while allowing another flank to burn (e.g., approaching wilderness). Wildfire could be managed to reduce hazardous fuels, restore fire in fire-adapted ecosystems, improve wildlife habitat, and restore native vegetation. The Selected Alternative addresses the need to promote a fire regime that results in a forest structure that increases the resilience of the monument's forests to the effects of wildfire and other stressors, while at the same time, protecting visitors and facilities in the monument, in the adjacent National Forest System lands, and in the communities and resorts to the east.

The decision to manage a wildfire, or part of a fire, for multiple objectives is dependent on assessing several factors, including location, fire behavior, fuels, human values at risk, risk to firefighters, cost, time of year, current and predicted weather, local/regional/national fire activity, resource availability, and potential resource benefits. The NPS and other federal land management agencies with wildland fire responsibility use the Wildland Fire Decision Support System (WFDSS) process and analytic tools to guide and document wildfire management decisions. The WFDSS process will rely, in part, on the goals and objectives of the FMP. The WFDSS process includes; situational assessment, hazard and risk analysis, and documentation of approved implementation actions. Approval of the decision to manage a wildfire for other than suppression is the responsibility of the monument superintendent and will be published in a WFDSS decision support document. Approval of each successive decision for managing the fire would be based on current approval requirement guidelines and thresholds as defined in the Interagency Standards for Fire and Fire Aviation Operations (NIFC 2018). When a wildfire is burning on NPS lands and adjoining jurisdictions, such as Inyo National Forest (INF), a single interagency decision support document is prepared with input from all jurisdictional agencies.

Upon deciding to manage an unplanned natural ignition for multiple objectives, the fire management staff will develop a monitoring and future containment plan for the wildfire, and ensure that the firefighting resources are in place for a successful outcome.

Suppression of fires resulting from natural ignitions is especially likely in the monument's General Wildfire Protection Zone, where the majority of visitors may be located. INF fire crews will likely be the first responders to a wildfire in the monument, and the response determination would be based on the risk assessment of the initial responding crew in consultation with fire management specialists and the Superintendent.

While many natural ignitions remain small and go out on their own due to surrounding rock or accompanying moisture, it is possible that managed fires of larger size would burn beyond the monument's boundaries. In these cases, and the inverse where a fire originates in the INF, the NPS and the INF will jointly decide on the management strategy.

Managing natural unplanned ignitions for multiple objectives will require monitoring, MIST, the placement of fire crews in the wilderness, the use of electronic communication and measuring devices, and the assignment of resource advisors to the incident management team to ensure that impacts to natural and cultural resources are avoided or minimized.

Manual Fuels Treatment

Manual fuels treatments using hand tools will be the primary method to thin vegetation in the monument or prepare an area for a subsequent prescribed fire. Manual fuels treatments will be used to cut, clear, or prune herbaceous and woody vegetation. A prescription for vegetation removal will be developed for each manual treatment and will use the standards (including size and number of trees) developed by Sequoia and Kings Canyon National Parks. Tools used include handsaws, axes, shovels, rakes, Pulaskis, McLeods, and hand clippers and power tools such as chainsaws and power brush saws and weed whips. Manual fuels treatments will be used to create defensible space around monument structures and to thin the forest surrounding the campground and administrative areas. Mechanical fuels treatment, which rely on wheeled or tracked heavy equipment with attached cutting or crushing implements, are not proposed and would not occur in the monument under the Selected Alternative.

Prescribed Fire

A prescribed fire (also referred to as a prescribed burn or broadcast burn) is any fire intentionally ignited by management under an approved plan to meet specific objectives. Prescribed fire is used to alter, maintain, or restore vegetative communities; restore or maintain ecosystem health; and protect life, property, and values that would be degraded or destroyed by wildfire. Prescribed fires focus on the consumption of surface fuels and dead, downed vegetation, and reduction of unnaturally high forest tree density, particularly small trees. In some cases, prescribed fire can be used to thin denser stands of smaller trees or reduce thickets of shrubs.

All prescribed fires require written burn plans that are peer-reviewed and then approved by the Superintendent. Prescribed fire plans follow a federally approved template (Product Management System [PMS] 484-1; NWCG 2017a) describing compliance with air quality regulations, permits needed, identification of smoke sensitive receptors, mitigation strategies to reduce impacts, and a smoke management plan. Burn Bosses meet federal requirements will conduct primarily moderate complexity (Type 2) prescribed burns. The smoke management plan for each burn is submitted to the San Joaquin Valley Air Pollution Control District (Air District) for review and approval. The Selected Alternative allows for the reintroduction of low- to moderate-intensity fire as a disturbance process through understory prescribed burning to mimic the past fire regime and reduce the likelihood of high-intensity fires. It is anticipated that under the Selected Alternative, less than 100 acres will be burned annually in the monument.

Pile Burning

Pile burning is a type of prescribed fire used to ignite piles of cured, cut vegetation resulting from fuel reduction projects or blow down accumulations. Pile burning requires an approved peer-reviewed prescribed burn plan; approval is also required from the Air District. Pile burning will be allowed throughout the monument. Pile burning in the Wildfire Restoration could be used to reduce large accumulations of dead and downed fuels that

could present control problems if ignited by a wildfire. In the monument, piles are generally burned during the winter with snow on the ground to reduce damage to surrounding vegetation, reduce the risk of fire spread, and minimize impacts to underlying soils by confining the impacts to the immediate footprint of the pile.

OTHER ALTERNATIVES CONSIDERED IN THE EA

Under Alternative A, identified as the No Action Alternative, the monument would continue with implementation of the FMP strategy adopted in 2005. All human and natural-caused unplanned ignitions would be suppressed throughout the 800-acre monument. Manual fuels treatments and prescribed fire could be implemented to reduce fuels in the northeastern 15% (approximately 113 acres) of the monument that is not wilderness. Furthermore, the monument would have less flexibility and fewer options that could be used to proactively respond to changes in environmental conditions within the monument. Other than the No Action Alternative, there were no preliminary options of concepts considered but dismissed from analysis in the EA.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is the alternative that will promote the national environmental policy expressed in NEPA (sec. 101 (b)). This includes alternatives that:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.

The environmentally preferred 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.”

The Selected Alternative, Alternative B: Targeted Suppression with Limited Managed Wildfire and Monument-wide Fuels Treatments, is the NPS environmentally preferred alternative. Alternative B allows for implementation of a full range of fire management activities, including wildfire suppression, the management of wildfire for multiple objectives, and fuels management (prescribed fire/manual treatments) within the entire monument. The Selected Alternative will provide a framework for the long-term use of fire in the monument, which would be effective in helping to achieve the monument’s stated resource management objectives:

- Reduce the risk to natural and cultural resources from unwanted wildfire and from fire suppression operations.
- Restore and maintain ecosystems, a more natural fire regime, and forest structure to increase resilience to the effects of wildfire and other stressors and preserve and enhance wilderness character.
- Minimize or avoid unacceptable environmental impacts to natural and cultural resources from fire management operations.
- Minimize the impacts of undesirable post-wildfire conditions on human safety, infrastructure, and natural, cultural, and wilderness values within the monument.

For these reasons, the Selected 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 preferred alternative.

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

Consideration of the effects described in the EA, and a finding that they are not significant, is a necessary and critical part of this FONSI, as required by 40 CFR 1508.13. As defined in 40 CFR 1508.27, significance is determined by examining the following criteria:

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.*

Based on the findings of the FMP EA, the NPS finds that implementation of the Selected Alternative will result in adverse impacts that are less than significant and many beneficial impacts. The EA analyzed potential impacts of the actions on all topics identified during internal and public scoping. There were no significant adverse impacts identified.

The potential to manage wildfire for multiple objectives and increased prescribed burning and pile burning under the Selected Alternative could result in more air emissions initially, especially during winter months. Ultimately, the goal of this alternative is to restore a more natural fire regime and reduce the risk of a high-severity wildfire. It is expected that this strategy would reduce emissions over time. These activities would result in either minimal impacts (suppression, manual treatments, and pile burning) or short-term adverse impacts (broadcast burning) to air quality corresponding to the duration of the event.

Under the Selected Alternative, disturbance associated with fire management activities and vegetation loss from fire will result in short-term adverse impacts to vegetation, sensitive plants, and wetlands. Long-term beneficial impacts to these resources are expected to occur as the result of improved ecosystem functioning and reduced potential for severe wildfire.

Impacts to wildlife and special-status species include direct mortality due to fire, crushing and trampling, and short-term loss of forage and cover. Some species that prefer dense vegetation or litter may be adversely impacted until vegetation cover is restored. Long-term impacts from managing wildfire for multiple objectives to wildlife include improved habitat quality and structure that will provide benefits to most species, including Yosemite toad habitat.

Depending on the extent, severity, and season of a wildfire, visitor use experience may be adversely impacted due to trail and area closures, noise impacts from suppression activities, visual impacts from smoke as well as charred and blackened landscapes, and public health and safety concerns from smoke. Most adverse impacts from wildfire would be short-term and coincide with the duration of the wildfire and post-fire rehabilitation activities; post-fire effects may have longer-term impacts on the monument viewshed. Scorching and charring of trees trunks may be evident for 1 to 2 years post-burn but are not uncommon or unexpected in forests and are part of the visitor experience in a natural environment. Planned management actions will have short- and long-term adverse impacts due to closures and area restrictions, noise impacts, and visual impacts, but long-term beneficial impacts by providing protection of values at risk within the monument, improved ecological functioning, which provides improved scenic quality within the viewshed, reduced wildfire risk, which would otherwise threaten public health and safety, and increased opportunities for scientific interpretation. Hazardous fuels treatments in wilderness and the use of wildfire for multiple objectives would reduce the risk of catastrophic fire throughout the monument and associated adverse impacts to visitor use and experience. Therefore, the Selected Alternative would result in long-term beneficial impacts to visitor use and experience in wilderness and non-wilderness areas.

Under the Selected Alternative, planned management actions could occur within the 687 acres of wilderness. Wilderness character would be impacted both directly and indirectly by suppression activities resulting from wildfire occurrence within the monument. Under the Selected Alternative, the monument would be able to manage wildfire for multiple objectives, which will help restore and maintain elements of wilderness character (especially the untrammeled and natural qualities). All actions within the wilderness portion of the monument

will require conformance with the Wilderness Act and adherence to the MRA (see Appendix G in the FMP EA) and Mitigation Measures and MIST (Appendix A). This would minimize degradation of the undeveloped quality of wilderness character by ensuring that appropriate tools and techniques are selected. Prescribed fire and manual treatments will generate short-term adverse impacts to all five qualities of wilderness character; however, these actions will create long-term beneficial impacts to wilderness quality by protecting natural resources from uncharacteristically severe wildfire and by allowing fire management activities to sustain fire-adapted vegetation in the wilderness.

After the Rainbow Fire of 1992, the entire monument was surveyed for exposed archeological resources. Now there are eleven sites documented in ASMIS. The potential exists for inadvertent discoveries and newly identified cultural resources. The 2013 DEPO Historic Resource Study, authored by PWR historian Christopher E. Johnson identified potential historic resources of the built environment. Subsequently two DOEs were developed and submitted to SHPO, and two sites were found eligible for listing in the National Register and listed in 2016: the Postpile Cabin Remains and the Historic Ranger Cabin. A funding proposal was developed and submitted in 2018 to NPS Cultural Resources to Produce Baseline DOE Documents and possible District Nomination for Archeological sites for the Mammoth Pass Trail. Within the HRS, potential Cultural Landscapes were described and a funding proposal for documentation and review by NPS Cultural Resources has been developed. During the implementation of this plan, the park will continue to identify and evaluate cultural resources.

Generally, cultural resources in the monument would be at risk from unplanned ignitions that could result in loss or damage to these resources, either directly or indirectly by the wildfire, or from suppression and/or mop-up activities. However, the eleven exposed archeological sites have been identified post Rainbow Fire, these resources are identified and will be appropriately addressed for treatment as a Cultural Resource in the Fire Management Plan. In the event of a wildland fire, measures will be taken to prevent and/or minimize damage to all identified cultural resources within the monument, and all fire suppression and mop-up operations will be performed in conformance with the adopted mitigation measures (Appendix A). Defensible space will be improved around historic structures, sensitive cultural sites, the Rainbow Falls viewshed, and the Postpile formation. For planned ignitions, all prescribed burn activities will be carefully managed under a prescribed burn plan, which includes coordination with cultural resource staff to identify sensitive cultural resource areas to avoid or treat to mitigate impacts. Section 106 compliance, including consultation with the State Historic Preservation Officer (SHPO) and tribes as appropriate, will be the primary regulatory mechanism to identify, assess potential effects, and address impacts to cultural resources in the monument in both emergency (wildfire, BAER) and non-emergency (planned treatment) situations. The use of prescribed burning and wildfire for multiple objectives under the Selected Alternative will reduce the risk of catastrophic fire throughout the monument, resulting in potentially fewer impacts to cultural resources either directly and/or indirectly in the event of a wildfire (due to lower fire intensity/severity) including wildfire-suppression activities. Therefore, the Selected Alternative would result in long-term beneficial impacts to all of the monument's cultural resources in both wilderness and non-wilderness areas.

Overall, implementation of the Selected Alternative will have beneficial, long-term impacts to natural and cultural resources. Implementation of the revised FMP will support resource management objectives in the monument.

2. The degree to which the selected action affects public health and safety.

In accordance with NPS Management Policies (2006), the NPS will seek to provide a safe and healthy environment for visitors and employees. Mitigation measures for the FMP require fire management staff to consider the safety of the public, personnel, and fire crews as the highest priority for all fire management activities. The monument will use media releases and signage to inform monument visitors about prescribed burns and wildland fire, potential smoke impacts, trail or area closures, or other restrictions. The monument will

install caution signs where smoke may impact transportation corridors inside and outside the monument. Fire staff will coordinate closely with rangers to determine the location of visitors and use road/trail closures and restrictions to ensure prescribed fire or wildfire operations do not put visitors at risk. The timing of prescribed burns will be approved by the Superintendent and special consideration will be given to limiting activities on weekends and holidays when fewer visitors are in the monument. Weather conditions will be closely monitored during the prescribed fire or wildfire managed for multiple objectives to ensure that any changing conditions do not suddenly put visitors at risk.

Mitigation Measures AIR-1 through AIR-5 and VIS-1 through VIS-5 address advance notification to the public for fire management actions, consideration of public safety and conformance with air quality regulations prior to and during prescribed fire and for managed wildfire. Due to the emphasis placed on safety in all federal fire management policies and the current park practice of using available resources to notify the public of prescribed burns and wildfire, the Selected Alternative is not anticipated to impact public health and safety.

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.*

Wildfires have the potential to adversely affect both recorded and unrecorded cultural resources within the monument. Prior to initiating a prescribed fire, the NPS will develop a prescribed burn plan, which will include advanced coordination with cultural resource staff to identify sensitive cultural locations and protocols for burning near cultural resources. If new cultural resources are identified during fire management activities, the monument's cultural resource specialist(s) will be contacted immediately, and the site(s) will be recorded, delineated, and protected, as necessary. Short-term adverse impacts to potential cultural landscapes will include burned and scorched vegetation and unvegetated areas from both prescribed burns and unplanned wildfires. The adverse impacts to vegetation are expected to be short-term.

Without proactive fire and fuels management, wetlands are more vulnerable to catastrophic wildfire. The Selected Alternative, which includes the management of wildland fire for multiple objectives, limits fire management activities in areas of the monument where wetlands occur. Direct disturbance within wetlands will be avoided to the extent possible with the exception of 1) emergency actions needed to manage a wildfire, or 2) short-term disturbances within wetlands that would be necessary to implement fire management activities intended to restore the wetland; both actions would require Superintendent approval. BMPs and other conditions specifically identified in the NPS Procedural Manual 77-1, Appendix 2, will be followed, as well as Mitigation Measure FMP-8, described in Appendix A. According to Mitigation Measure FMP-3, no retardant will be released within a 300-foot buffer zone surrounding wetlands, the San Joaquin River, Reds Creek and Boundary Creek, the cliffs surrounding Rainbow Falls or the Postpile formation and other areas identified by the Superintendent to minimize impacts to wetlands and riparian areas from retardant use. In addition, Mitigation Measure FMP-10 states that fire chemical use within the floodplain, wetlands, and other sensitive areas must adhere to the *Interagency Policy for Aerial and Ground Delivery of Wildland Fire Chemicals Near Waterways and Other Avoidance Areas* as described in Chapter 12 of the *Interagency Standards for Fire and Fire Aviation Operations* (U.S. Department of the Interior and U.S. Department of Agriculture 2018) or future revised version. Manual fuels treatments will not occur in wetlands. According to Mitigation Measure FMP-5, fireline construction within wetlands will be avoided for prescribed burns. The Selected Alternative will not result in new adverse impacts to wetlands regulated by Section 10 of the Rivers and Harbors Act, Section 404 of the Clean Water Act, Executive Order 11990 Protection of Wetlands, NPS DO 77-1 Wetland Protection and its accompanying Procedural Manual DO 77-1: Wetland Protection, and the NPS no net loss of wetlands goal.

An annual estimate of 6,000 backcountry hikers use the roughly two miles of the Pacific Crest National Scenic Trail (PCT) and the John Muir Trail within the monument. Where prescribed burns are conducted within the viewshed of the trails, there would be short-term, adverse visual impacts for the following one to two years in the form of added contrast in color between the burned and unburned areas as vegetation is blackened or scorched. These impacts would lessen as revegetation and green-up occurs. Scorching and charring on trees is

not uncommon or unexpected in forests and is part of the visitor experience in a natural environment. When prescribed burns are being conducted, smoke would obscure scenic views on the trails for the duration of the treatment, typically a few hours to a few days. Under the Selected Alternative, beneficial impacts including improved ecosystem resilience, reduced fuel loading, restoration of forest structure, and restoration of a more natural fire regime would have long-term benefits for the preservation of monument resources and opportunities for visitor use and experience.

The Selected Alternative will cause no significant impacts to historic or cultural resources, floodplains, wetlands, or ecologically critical areas. No prime farmlands occur within the monument. The Middle Fork of the San Joaquin River was found eligible in 1991 for designation under Section 5(d)(1) of the Wild and Scenic Rivers Act; this designation of eligibility was reaffirmed and updated in the Devils Postpile 2015 General Management Plan (GMP). The Selected Alternative will not significantly impact the free-flowing values and water quality of the San Joaquin River within the monument.

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

During the public scoping process for the Proposed Action, five scoping comment letters were received. All substantive scoping comments were addressed in the EA. Six comment letters were received during the FMP EA public review period. The NPS has determined that none of the comments provided during the public involvement process document a substantial dispute as to the environmental consequences of Alternative B, the Selected Alternative. The conclusions in the EA analysis were drawn from scientific data and professional judgment of NPS subject matter experts, as documented in Chapter 3 of the EA. These conclusions are also supported by the USFWS.

5. The degree to which the possible effects on 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 Alternative will be both adverse and beneficial. Planned projects and management responses to unplanned wildfires pose some inherent risk to the human environment. Although planned actions and management response to wildfire are not unique, and are predictable to a degree, wildfire can change rapidly due to changing conditions associated with such events.

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 condition.

The activities identified in the Selected Alternative are widely accepted under federal fire management and NPS policies. Implementing the Selected Alternative neither establishes a NPS precedent for future actions with significant effects nor represents a decision in principle about a future condition.

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

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

8. 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.

The development of the FMP will have no adverse impacts to cultural resources. During implementation, the NPS will complete Section 106 of the National Historic Preservation Act compliance, including consultation with the California SHPO and tribes as appropriate, for fire management activities that have the potential to affect historic properties and cultural resources. Each specific implementation project of this plan that has the potential to affect cultural resources will be presented to the consulting tribes for review and the opportunity to identify any specific historic properties of religious and cultural significance. Generally, routine hazardous fuel reductions in the administrative, day use, and campground areas and for defensible space are not considered as

a specific implementation plan, as these recurring activities as part of seasonal opening and closing operations. The plan's implementation requires conformance with the FMP Mitigation Measures in Appendix A.

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

There are five threatened, endangered, or candidate species listed under the Endangered Species Act for the FMP planning area: Sierra Nevada bighorn sheep (*Ovis canadensis sierra*), North American wolverine (*Gulo gulo luscus*) (proposed threatened), the Sierra Nevada yellow-legged frog (*Rana sierrae*) (endangered), Yosemite toad (*Anaxyrus canorus*) (threatened), and Owens tui chub (*Gila bicolor ssp. snyderii*) (endangered). There is no designated critical habitat for any of these species in the monument.

Only one of the listed species, a single male Yosemite toad, has been observed in the planning area in the last 40 years and no other individuals have been observed during surveys subsequent to this one 2013 sighting. The monument is not within proposed critical habitat for the Yosemite toad. The NPS has completed informal consultation with the U.S. Fish and Wildlife Service (USFWS) on the potential for FMP actions to affect the Yosemite toad.

Implementation of the Selected Alternative is not anticipated to have a direct impact on individual toads since no occupied breeding meadows are within 0.78 mile (maximum dispersal distance) of the project boundary, and it is unlikely that toads will be present within the perimeter. Adverse impacts to *potential* over-wintering habitat will be short term. FMP Mitigation Measures require surveys to be conducted annually for Yosemite toads in the two wetlands with suitable breeding habitat. If toads are found, that area will be excluded from any prescribed burns and will be protected as much as possible in the event of future wildland fire. Consultation with the USFWS was concluded on May 21, 2018, with a concurrence of may affect, not likely to adversely affect, the federally listed Yosemite toad.

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

The Selected Alternative violates no federal, state, or local environmental protection plans. Assessment of the proposed action has been performed pursuant to the National Environmental Policy Act, which requires consideration of environmental protection laws and regulations.

PUBLIC INVOLVEMENT/AGENCY CONSULTATION

Scoping

Internal scoping with monument staff, regional staff and subject matter experts from Sequoia Kings Canyon National Park and Yosemite National Park was conducted in November and December 2017.

Public scoping was conducted through the NPS Planning, Environment and Public Comment website where a scoping notice and brochure were posted on January 8, 2018, to inform the public of the proposed project. The scoping brochure describing the revised FMP alternatives and the range of opportunities for commenting during scoping was sent to the Devils Postpile National Monument's mailing list, elected officials, regulatory agency staffs, fire officials, and local organizations to solicit feedback for the scope of the EA. A press release was sent out by the NPS and newspaper articles and announcements were published by local media outlets notifying the public of the scoping meeting and public scoping comment period.

On January 2, 2018, the NPS sent a letter to the California State Historic Preservation Officer (SHPO), initiating the Section 106 of the National Historic Preservation Act consultation process, providing information on the project undertaking and soliciting comments. The SHPO acknowledged its receipt of the NPS letter in a letter dated January 11, 2018.

Letters for tribal consultations were sent to nine tribes on January 2, 2018. NPS staff presented FMP scoping information to a regularly scheduled tribal consultation meeting with the Big Pine Paiute of the Owens Valley and federal agencies at the Big Pine Tribal Headquarters in Big Pine, California and at the Tribal Council meeting

of the Bishop Paiute Tribe in February 2018. Formal comments were not received in writing; however, there is a summary of meeting notes in the administrative record.

The NPS hosted a public scoping open house at the Mammoth Lakes Public Library on January 17, 2018, on the proposed FMP update with assistance from fire management staff from INF. Attendees included representatives of the Big Pine Paiute Tribe, the Friends of Inyo, and a reporter from *The Sheet*, a local newspaper.

On January 25, 2018, NPS attended the Mono County Collaborative Planning meeting and made a presentation soliciting scoping input on the proposed FMP update. The monument Superintendent subsequently met with Chief Frievalt of the Mammoth Lakes Fire Protection District who expressed support for continued fuel reduction efforts by federal agencies and the need to begin a planning process to develop an emergency response plan for the Reds Meadow Valley in the event of a wildfire or other emergency.

On April 13, 2018, NPS submitted a draft Biological Assessment to the U.S. Fish and Wildlife Service identifying potential effects to the Yosemite toad. The U.S. Fish and Wildlife Service provided a concurrence letter, which ended the informal consultation period for the FMP revision on May 21, 2018.

The NPS sent a letter to the SHPO including a CD of the FMP EA on October 17, 2018. The NPS next contacted the SHPO on December 11, 2018. Subsequently, the SHPO and NPS communicated back and forth and between January 28 and February 1, 2019, the appropriate information needed to complete SHPO consultation was finalized. The NPS sent a letter with this information to SHPO on January 31, 2019. The SHPO completed their review and concurred with a “no adverse effect” determination for the FMP in their response letter dated February 1, 2019.

The NPS has taken several steps to coordinate and consult with local governments, federally recognized tribes, and state and federal agencies. Notifications of scoping and availability of the FMP EA were sent to the following tribes on October 17, 2018 to solicit input during the environmental compliance process. Then requested CDs were sent to tribes. The comment period was extended, and comments were received from the Bridgeport Indian Colony on December 3, 2018, and North Fork Rancheria of Mono of Mono Indians on November 30, 2018, and were included in the comment review.

- Big Pine Paiute Tribe of Owens Valley,
- Bishop Paiute Tribe,
- Bridgeport Indian Colony,
- Fort Independence Indian Community of Paiute Indians of Fort Independence,
- Lone Pine Paiute-Shoshone Tribe,
- Mono Lake Kutzadikaa Paiute Indian Community,
- North Fork Mono Tribe,
- North Fork Rancheria of Mono Indians of California, and the
- Utu Utu Gwaitue Paiute Tribe of the Benton Paiute Reservation of California.

PUBLIC COMMENT ON THE FMP EA

Information gained through public scoping assisted the NPS in developing objectives and sufficient detail on FMP alternatives, providing adequate map graphics, expanding the scope of the assessment of potential impacts to natural, recreational resources, aesthetic and wilderness resources in preparing the FMP EA. The EA was available for a 32-day public comment period from October 16, 2018 to November 16, 2018. A press release and an email notice were sent out to individuals, stakeholders and local, state and federal agencies. A printed copy of the EA was made available at the local library. Comments were received from a Tribal Historic Preservation Officer, a Tribal Chairperson, two organizations and three individuals.

One individual expressed overall support for the purpose and need for the FMP update and the proposed strategies. General concerns noted for cultural resources and special status species were adequately addressed in the FMP EA. One individual found the EA to be too brief without sufficient detail on how projects would be conducted. The details of the implementation process, such as the prescribed burn plan, will be included in the FMP which will be prepared as an implementation document based on the strategy adopted in the FMP EA. The FMP itself is not developed until the Selected Alternative is affirmed in the FONSI.

Consideration of Impacts to the Pacific Crest National Historic Trail. Comments submitted by the Pacific Crest Trail Association (PCTA) indicated the organization's support for purpose and need for the action. Though not developed specifically for the Pacific Crest National Historic Trail (PCT), the PCTA noted the viewshed analysis completed for the FMP EA and supported the Mitigation Measures and MIST developed for FMP implementation. PCTA noted that the measures would help minimize visual impacts. The PCTA requested that the EA reflect that the FMP be implemented with specific considerations for the PCT similar to the management approach of the US Forest Service which manages the adjacent trail segments in order to create a consistent trail experience. A stated goal of the FMP and a priority for the NPS is to "Collaborate with INF staff to develop interagency strategies, where appropriate, and to develop valley-wide wildland fire and fuels management activities" (FMP EA Goal 4).

The PCTA expressed concern regarding mechanical thinning as part of the FMP; however, no mechanical thinning is proposed as part of the Selected Alternative. The PCTA recommended specific mitigation measures for the EA addressing avoidance of adverse impacts along the PCT corridor from the use of equipment heavy enough to disturb soils. The Selected Alternative does not propose wheeled or tracked vehicle or equipment use in the wilderness and none would be allowed without the authorization of the Superintendent or designee (Appendix A, Mitigation Measures, FMP-7 and Appendix B, Steps 3 and 4).

To minimize and shorten visual impacts seen and experienced from the PCT, PCTA requested that burn piles constructed within 150 feet of the PCT be burned or removed within one year and that piles be constructed a minimum of 100 feet from the PCT. Under the FMP, burn piles in wilderness would be constructed near the PCT only if the PCT was used as part of the fire line. Depending on available resources, weather conditions and environmental conditions, piles would likely be burned within one year. While the NPS is sensitive to the visual effects of piles on PCT users, the locations of the burn piles will be dictated by terrain and conditions, and in some cases, it may not be feasible or cause more resource damage to site the piles a minimum of 100 feet from the PCT. As indicated in the MRA, large burn piles will not be constructed in the wilderness.

The PCTA requested that vegetation, where present, be left along the edge of trails and roads to act as a visual barrier and discourage unauthorized routes. The NPS would manually thin along fire lines prior to conducting prescribed burns if sections of the PCT are used for fire line. Otherwise, manually thinning is not proposed as a means of broader fuel reduction in the wilderness. The intent of managing fire for multiple objectives is to restore ecological function to the monument and there will be no special measures to retain vegetation. However, any trees fully removed would be flush cut to the ground surface and all cut ends of logs will be made inconspicuous to visitors and camouflaged where possible (Mitigation Measure VIS-6). The PCTA requested that the NPS work with the PCTA to alert trail users of project operations. The NPS recognizes the importance of collaboration and public outreach and will add the PCTA to the communication section of the monument's FMP.

The PCTA requests language be added to the FMP EA requiring project activities within the monument that could be viewed from the PCT meet specific Visual Resource Management Objectives as defined by the BLM Visual Resource Management System. The PCTA requested that the monument conduct a Visual Contrast Rating to ensure that project activities will meet the referenced VRM Class Objectives. The requested text addition is:

"As a Congressionally Designated Trail, the PCT is considered a high sensitivity travel-way and project activities viewed from the PCT should meet the following Visual Resource Management Objectives, as defined by the Bureau of Land Management Visual Resource Management System: Protect the Pacific Crest National Scenic Trail, from damage during implementation of the proposed activities.

- VRM Class I Objective: "To preserve the existing character of the landscape. Allowed Level of Change: This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention."
- VRM Class II Objective: "To retain the existing character of the landscape. Allowed Level of Change: The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape."

Typically, VRM objectives are used for the planning and designing of surface-disturbing development projects on federal lands. The VRM manual does not include any references to fire or fire management projects as suitable for this type of assessment. The NPS concluded that using the BLM VRM objectives would be a redundant exercise due to the National Monument and wilderness designations already in place, the visual assessment analysis using GIS conducted for the FMP EA, the programmatic MRA in place for initial response to wildland fire, mitigation measures already incorporated in the FMP EA and the requirement to conduct individual MRAs for individual prescribed burns. The NPS concluded that the Visual Contract Rating would not add new value to the Selected Alternative. In addition, a primary goal of the FMP is to restore the landscape and enhance wilderness character, not to preserve existing conditions and the text addition will not be made.

Retention of Smaller-sized Snags and Emphasis on Recurrent Fire Use. Friends of Inyo National Forest expressed support for the preferred alternative and requested minor modifications. The NPS accepts the argument made by the Friends and will incorporate their request to retain snags 24-inch dbh rather than the original recommendation in the FMP of a 30-inch dbh in Mitigation Measure WLDF 2 (See Appendix A, Mitigation Measures and Appendix B, Errata for the revised text). There is not enough ecosystem or elevational variation within the monument to further split dbh limits. The Friends of Inyo requested additional emphasis in FMP EA to the need for regular (following historical fire cycles) fire use as critical to maintain treatments that require fuel reduction. The NPS has identified repeated references to this concept in the FMP EA and the description of the Selected Alternative and will not be adding text.

Research Burning in Meadows. Friends of the Inyo asked for additional scientific information and examples from similar efforts in other areas in the FMP on the proposed research prescribed burning in meadows within the monument. This information along with references is added to Section 2.4.7, Appendix B, Errata.

Concern for Allowing Natural Fires to Burn Freely in the Monument. The THPO for the Bridgeport Indian Colony submitted a letter in support of prescribed burning in the wilderness in the monument but was concerned that "allowing natural fires to freely burn is not the best method to allow at this time" given the imbalanced conditions of the forest after years of suppression and until a more natural balance has been restored. The NPS appreciates the offer by the Tribe to consult on strategies to restore balance to the forest based in tribal ecological knowledge and cultural resource preservation. The FMP EA does propose the management of wildfire for multiple benefits when the broad range of factors allow. The NPS considers managed wildfire to be an important tool in restoring a more natural fire regime and reducing the risk of high severity wildfire. The decision to manage a wildfire, or part of a fire, for multiple objectives is dependent on assessing a range of factors, including location, fire behavior, fuels, human values at risk, risk to firefighters, cost, time of year, current and predicted weather, local/regional/national fire activity, resource availability, and potential resource benefits. The NPS and other federal land management agencies with wildland fire responsibility use the Wildland Fire Decision Support System (WFDSS) process and analytic tools to guide and document wildfire management decisions. NPS would work with the air districts during all prescribed fire and wildfire management for multiple objectives operations to minimize smoke impacts and ensure conformance with air quality regulations. Resource advisors will be involved during and after wildfire and during prescribed burn planning as dictated by values at risk, to ensure that prescriptions and burn objectives do not conflict with objectives for the protection of sensitive resources.

Continued Tribal Cooperation. The Tribal Chairperson of the North Fork Rancheria of Mono Indians of California submitted a letter identifying broad project concerns of disturbance to known archaeological and sacred sites, potential ground disturbance, plant resources, and welcomed further consultation on fire management projects. The NPS will continue consulting with the monument's traditionally associated tribes and groups during future FMP project planning. Appendix A includes Mitigation Measures CUL-1 through CUL-10 adopted to avoid adverse effects to cultural resources. Measures FMP 10 through 13 focus on minimizing or avoiding ground disturbance and Measures FMP 14 and VEG 1 through 4 focus on the protection of plant resources. NPS will continued engagement with the Tribes focuses on strategies to address potential archaeological and culturally sensitive sites in the monument.

CONCLUSION

Based on the planning and environmental impacts analysis documented in the EA, with due consideration of the nature of public comments and consultations with other agencies, and given the capability of MIST and the mitigation measures, the NPS has determined that the Selected Alternative does not constitute a federal action that normally requires preparation of an Environmental Impact Statement (EIS). Adverse environmental impacts that could occur are localized and limited in duration. The Selected Alternative will not have significant effects on the quality of the human environment or the monument's cultural or natural resources.

There are no unmitigated adverse impacts on public safety, sites or districts listed in or eligible to be listed in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects, or elements of precedence were identified. Implementation of the Selected Alternative will not violate and federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS will not be prepared and the Selected Alternative may be implemented as soon as practicable.

Recommended:

Deanna M. Dulen 8th February, 2019

Deanna M. Dulen

Date

Superintendent, Devils Postpile National Monument

Approved:

Stan Austin

2/14/19

Stan Austin

Date

Regional Director, Pacific West Region, National Park Service

APPENDIX A: MITIGATION MEASURES INCLUDING MINIMUM IMPACT STRATEGIES AND TACTICS (MIST)

The NPS places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse impacts. Mitigation measures adopted through the approval of the Finding of No Significant Impact (FONSI) for the Devils Postpile National Monument Fire Management Plan (FMP) incorporate the concept of Minimum Impact Strategies and Tactics (MIST). MIST are a compilation of best management practices and strategies developed by fire management professionals that effectively meet wildfire suppression and resource objectives with the least environmental, cultural and social impacts. The NPS will implement these mitigation measures to avoid or minimize potential adverse effects of the Selected Alternative and promote the protection of natural and cultural resources, firefighter and public safety and promote biodiversity and ecosystem health.

General FMP Mitigation Measures

- FMP-1** The monument Superintendent or designee will be notified of all planned and unplanned fire management activities with the potential to impact operations.
- FMP-2** Safety guidelines described in the current Wildland Fire Incident Management Field Guide and the Incident Response Pocket Guide will be employed on all fire management actions.
- FMP-3** No fire chemicals including retardant, foam, or surfactants shall be used in the monument without prior approval from the Superintendent or designee. To protect the scenic corridors in the event of an approaching fire, water drops should be used to minimize tree mortality and scorch in the forested areas surrounding Rainbow Falls and in the viewing area in front of the Postpile. If retardant or other fire chemical use is approved by the Superintendent or designee, no fire chemical use will be released within a 300-foot buffer zone surrounding wetlands, the San Joaquin River, Reds Creek and Boundary Creek, the cliffs surrounding Rainbow Falls, or the Postpile formation and other areas identified by the Superintendent and adhere to the Interagency Policy for Aerial and Ground Delivery of Wildland Fire Chemicals Near Waterways and Other Avoidance Areas as described in Chapter 12 of the *Interagency Standards for Fire and Fire Aviation Operations* (U.S. Department of the Interior and U.S. Department of Agriculture 2018) or future revised version.
- FMP-4** The monument's 100,000-gallon water tank will be used as the primary water source for structure protection whenever possible.
- FMP-5** The San Joaquin River within the monument will not be used as a water source for bucket drops. Water sources with potential to harbor invasive species will not be used as a water source for bucket drops in the monument.
- FMP-6** Low-pressure water application (sprinklers, backpack pumps, etc.) will be used to minimize hydraulic excavation and erosion.
- FMP-7** No motorized vehicles or heavy equipment (such as graders, bulldozers, or other tracked vehicles or earthmoving equipment) will be used off of established roads in the monument without the authorization of the Superintendent or designee.
- FMP-8** Within 30 feet of all wetlands, including the San Joaquin River, Reds Creek, and Boundary Creek, no burns will be ignited, though fires will be allowed to back into the buffer area. Minor soil disturbance and vegetation removal may occur within this buffer to allow a fireline to traverse the buffer and tie into an unburnable area.
- FMP-9** All handheld powered equipment, drip torches, and fuel storage containers will be regularly inspected for leaks and stored and refilled at least 100 feet (30 meters) from open water. Portable pumps will be placed within spill control structures.

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- FMP-10** Erosion control measures will be implemented near riparian corridors and wetlands to minimize discharge of sediments to aquatic habitats.
- FMP-11** On-the-ground suppression actions or fireline construction for prescribed burning involving ground disturbance or tree felling in wetlands or riparian corridors will require prior approval of the monument's Superintendent or designee. All fireline construction will conform to MIST.
- FMP-12** Natural barriers will be used as extensively as possible when constructing firelines for suppression or prescribed burning.
- FMP-13** Mop-up activities will be selected that minimize ground disturbance.
- FMP-14** READs will be involved during and after wildfire and during prescribed burn planning as dictated by values at risk, to ensure that prescriptions and burn objectives do not conflict with objectives for the protection of sensitive vegetation, wildlife, and important elements of wildlife habitat such as snags and woody debris.
- FMP-15** Historic structures, sensitive cultural sites, the Rainbow Falls viewshed, and the Postpile formation will be protected from fire by improving defensible space around them.
- FMP-16** Full implementation of fuel reduction projects will be phased across the monument over a minimum of 5 years. Implementation is dependent on weather conditions and the availability of funding and staffing.

Air Quality Mitigation Measures

- AIR-1** All wildland fire activities within the monument will comply with the San Joaquin Valley Air Pollution Control District's *Unified Guidelines and Procedures for Smoke Management* (Title 17 of the California Code of Regulations). The NPS will work with the San Joaquin Valley Air Pollution Control District to identify optimal windows for good smoke dispersion in conformance with the Guidelines.
- AIR-2** Prescribed burns will be timed to minimize smoke impacts on air quality and visibility utilizing favorable conditions of atmospheric stability, mixing height and transport winds.
- AIR-3** Timing of and ignition methods for prescribed burns will be reviewed by fire managers to minimize smoke impacts. Personnel will be trained in emission reduction techniques as outlined in the National Wildfire Coordinating Group Smoke Management Guide (Hardy et al. 2001) and continuous monitoring will be required throughout the burn.
- AIR-4** No prescribed burns will be ignited during San Joaquin Valley Air Pollution Control District burn bans. All prescribed burning, and managed natural wildfires will be coordinated with the Great Basin Unified Air Pollution Control District in order to address Mammoth Lakes and Great Basin air quality concerns. All monument prescribed burns will have a companion Smoke Management Plan entered into the Prescribed Fire Information Reporting System (PFIRS) and approved by the San Joaquin Valley Air Pollution Control District.
- AIR-5** The monument will notify the public by press release and signage of upcoming prescribed burns and wildfire managed for multiple objectives, and provide information on measures individuals can take to minimize their exposure to smoke.

Vegetation and Wetland Mitigation Measures

- VEG-1** Firelines will be located outside highly erosive areas, steep slopes, and other sensitive areas wherever possible. Following fire management activities, firelines will be rehabilitated and water barred, and
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litter and duff will be pulled back for use in rehabilitating firelines where mineral soil has been exposed. All cut trenches will be backfilled and all cut debris scattered.

- VEG-2** Wherever feasible, the NPS will exclude areas of known noxious weed infestations from fire management actions including fireline construction. Monument resource advisors will monitor wildfire locations for exotic plant species post-burn and manage as necessary. NPS will survey for noxious weeds in treatment units prior to ignition of prescribed fires.
- VEG-3** Heli-base operations outside of the monument shall ensure limited contamination of sling loads with exotic seed sources by using a base tarp and mowing when necessary at the remote location (if applicable to the site).
- VEG-4** All equipment, clothing, and gear must be cleaned prior to entering the monument to prevent the spread of exotic species. The Incident Action Plan will include measures to contain the spread of exotic species.

Wildlife Mitigation Measures

- WLDF-1** Fire management actions will normally be scheduled for August 1 through April 30 to avoid disturbance to nesting birds in conformance with the Migratory Bird Treaty Act unless a nesting bird survey is conducted by a qualified surveyor within 3 days prior to project initiation. If nesting activity is noted within the project area, the NPS biologist will determine if the project should be delayed until nesting is completed or if portions of the work site can be excluded and buffered from disturbance.
- WLDF-2** Firefighter safety is priority, but whenever possible avoid cutting snags over 24 inches in diameter at breast height and retain large woody debris for wildlife habitat.

Threatened and Endangered Species Mitigation Measures

- T&E-1** Surveys for Yosemite toads (*Anaxyrus canorus*) in suitable habitat will be conducted annually. If toads are found, that area will be excluded from future prescribed burns and will be protected as much as possible from future wildland fire.
- T&E-2** There are two wetlands in the monument identified as having suitable Yosemite toad breeding habitat. These wetlands will be excluded from prescribed burns and, if wildfire entry was expected, surveyed for Yosemite toads if during the breeding season.

Visitor Use and Experience Mitigation Measures

- VIS-1** Fire management staff will consider the safety of the public, personnel, and fire crews as the highest priority for all fire management activities.
- VIS-2** Media releases and signage will be used to inform monument visitors about prescribed burns and wildland fire, informing them about potential smoke impacts, trail or area closures, or other restrictions. Caution signs will be installed by the monument where smoke may impact transportation corridors inside and outside the monument.
- VIS-3** If necessary, the Superintendent will authorize temporary closure of some areas to the public and visitors. Prescribed fire notifications and fire information will be posted at public locations, such as trailheads, parking areas, and visitor centers. Fire staff will coordinate closely with rangers to determine the location of visitors and use road/trail closures and restrictions to ensure prescribed fire or wildfire operations do not put visitors at risk.
- VIS-4** Prescribed burns and wildfire management for multiple objectives will be approved by the Superintendent who will consider consideration will be given to limiting how the timing of these activities affects weekend, holiday and peak season visitor use in and around the monument.

- VIS-5** Weather conditions will be closely monitored during the prescribed fire or wildfire managed for multiple objectives to ensure that any changing conditions do not suddenly put visitors at risk.
- VIS-6** To protect visual resource values, all cut ends of logs will be made inconspicuous to visitors and camouflaged where possible. All stumps will be flush cut as close to the ground surface as possible.

Wilderness Character Mitigation Measures

- WIL-1** All planned fire management operations that involve a short-term use that is otherwise prohibited in wilderness will be conducted in accordance with an approved Minimum Requirements Analysis (MRA).
- WIL-2** Wilderness character must be fully considered during all fire management actions from planning through management of individual wildfires, implementation of fuels treatments, and post-fire rehabilitation actions. Fire management resources must be adequately briefed on the concepts of wilderness stewardship and be held accountable for preservation of wilderness character and made aware of specific protections and constraints contained in the monument's Fire Management Plan (FMP).
- WIL-3** Heavy earthmoving equipment such as graders, bulldozers, or other tracked vehicles will not be used in wilderness. The Superintendent can authorize the use of heavy earthmoving equipment and mechanized vehicle use in extreme circumstances in the face of loss of human life and/or property.
- WIL-4** When necessary for effective firefighting, use of motorized equipment in the wilderness such as chainsaw and portable pumps is allowed. Use of helicopters for water drops and sling loads of equipment is approved. All low-level aircraft overflights will be minimized. Except in life/safety emergency, Superintendent approval is required for landings.
- WIL-5** To reduce impacts to wilderness character from unmanned aircraft systems, all drones used in fire operations at the monument shall be used in conformity with general aviation regulations for parks and wilderness (Policy Memorandum 14-05, Unmanned Aircraft – Interim Policy) and the Superintendent compendium for the monument, which includes no take-off, landings, or operation within monument boundaries without Superintendent approval, and the aircraft maintaining the Federal Aviation Administration-requested minimum elevation above ground level of 2,000 feet. Additionally, the drone operator needs to be located outside the wilderness boundary.
- WIL-6** No ground disturbance, beyond minimal firelines, will be permitted without express permission of the Superintendent or designee and consultation with monument resource staff.
- WIL-7** In the event of a wildfire, fireline rehabilitation will be completed before the incident management team and fire resources leave the monument. All flagging and other temporary evidence will be removed prior to release of fire resources.
- WIL-8** A Rehabilitation Plan and Minimum Requirements Analysis will be developed whenever there is a Burned Area Emergency Response (BAER) and/or Burned Area Rehabilitation (BAR) request.
- WIL-9** Project work, including burn operations, shall be conducted during the shoulder season (Labor Day to mid-June of the following year) whenever possible to minimize disturbance to wilderness character and visitor use.
- WIL-10** When available, crews trained in the use of primitive tools will be used for work within the wilderness.
- WIL-11** Plot markers, used in fire effects monitoring projects, will be installed away from trails and areas of visitor use.
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Cultural Resource Mitigation Measures

- CUL-1** Prior to all fire management activities, cultural resources in treatment areas will be identified. The cultural resource specialist(s) will provide recommendations on how to mitigate adverse effects on these resources during fire management activities and will coordinate compliance with Section 106 of the National Historic Preservation Act. The cultural resource specialist(s) must be contacted immediately if previously unrecorded cultural resources are discovered during any wildland fire operations; in the event that cultural resources are discovered, they will be recorded, delineated, and protected.
- CUL-2** In the event that a wildfire cannot be managed to avoid cultural resources, suppression lines and ground-disturbing activities exposing mineral soil will avoid cultural sites to the greatest extent feasible.
- CUL-3** If National Register of Historic Places–eligible or –listed cultural resources cannot be avoided, an appropriate mitigation strategy will be developed in consultation with the State Historic Preservation Officer (SHPO) and associated tribes.
- CUL-4** Consultations with Native Americans linked by ties of kinship, culture, or history to monument lands will be initiated in the event of the inadvertent discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony, and all provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 will be followed.
- CUL-5** Historic structures that have been included within wilderness will be protected and maintained in accordance with the pertinent laws and policies governing cultural resources using management methods that are consistent with the preservation of wilderness character and values. Laws pertaining to historic preservation remain applicable within wilderness but must generally be administered to preserve the area’s wilderness character (16 USC 1133(a)(3)). The responsible decision-maker will include appropriate consideration of the application of the provisions of the Wilderness Act in analyses and decision-making concerning cultural resources.
- CUL-6** All project work relating to potential cultural landscapes will be conducted in accordance with the guidelines and recommendations of the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes (36 CFR Part 68).
- CUL-7** The monument will provide the INF with a prioritization list for structure protection identifying the historic Ranger Cabin as the highest priority.
- CUL-8** The NPS will work with the INF to develop a Structure Protection Implementation Plan for the monument that will become an appendix to the FMP and be incorporated into the annual letter of delegation and WFDSS.
- CUL-9** Staging areas for equipment, command centers, and crew camps shall avoid known archeological resources.
- CUL-10** Prior to initiating a prescribed fire, the NPS will coordinate the development of the prescribed burn plan with cultural resource staff input to identify sensitive cultural locations and protocols for burning near archeological sites. Section 106 compliance will be completed for prescribed burn plans and included consultation with the California SHPO and associated tribes, and identified cultural resources will be either avoided in the burn unit or prepped prior to the burn in order to mitigate impacts. Preparations may include manually removing fuels on or around the archeological resource; removing heavy logs and fuels from vulnerable areas; and removing or covering stumps with dirt or foam where burnout could affect subsurface cultural deposits. Piles to be burned will not be placed in or near sensitive archeological resources.

APPENDIX B: FMP EA ERRATA

The following substantive changes are made to the Environmental Assessment, Devils Postpile National Monument Fire Management Plan in response to public comments and internal discussion. Text additions are shown in underlined italics for clarity. Deleted text is struck-out.

1. Text additions to FMP EA Section 3.3.2.2, Vegetation, Wetlands and Sensitive Plant Species, Impacts from Prescribed Fire and Pile Burning. In response to a comment requesting additional information and examples from other projects of prescribed burns conducted in meadows similar to Soda Springs Meadow, additional information is provided on relevant monitoring and research results. The following text is added to the FMP EA after the second paragraph of Section 3.3.2.2, subsection Impacts Prescribed Fire and Pile Burning.

Current research and monitoring on the effects of fire on high elevation meadows, such as the monument's Soda Springs Meadow (7500 feet altitude), is limited and further research is needed to determine if burning is an effective management tool to prevent conifer encroachment in this environment and would benefit native herbaceous plant cover and diversity.

- *Native Americans regularly burned meadows in Yosemite Valley to maintain meadow extent and open up black oak and conifer forests until fire suppression in the mid-1800's (NPS 2004). The Yosemite National Park fire program has been burning meadows since the 1970's and has found that it can reduce some conifer encroachment, help to reduce thatch, and possibly increase plant diversity (NPS 2004). Although these meadows are lower elevation than Soda Springs Meadow, information from these burns could be helpful in developing prescriptions.*
- *Examination of charcoal stratigraphy in sediment cores from seven upper montane meadows was used to establish a regional long-term fire history in relation to climate for the Sierra Nevada (Anderson and Smith 1997). The abundance of charcoal in some of these cores suggests that the surrounding forests, if not the meadows themselves, burned frequently particularly during periods of drought over the millennia prior to fire exclusion.*
- *Frenzel (2012) assessed the effects of 21 late season prescribed fires on conifer establishment in seven different meadows in the Lake Tahoe basin (similar elevation to Soda Springs Meadow). The study found that fires reduced lodgepole abundance at some sites, but only for smaller trees. Researchers found no significant changes in understory vegetation due to fire and no evidence that burning increased or maintained further invasion by conifers or non-native species (Frenzel 2012).*
- *Debendenetti et al. 1984 assessed a subalpine meadow after wildfire burned through with varying degrees of severity and found that herbaceous plant cover increased from 2.3% immediately after the fire to 123% four years postfire. This indicates good plant recovery and that bare ground only persists for a short time. The fire also appeared to slow conifer establishment in the four years after fire (Debendenetti et al. 1984).*

Land managers are concerned about conifer establishment in meadow sites because woody plant establishment in meadows may have impacts on landscape structure, wildlife and plant habitat and hydrologic processes (Frenzel 2012). Changes to soils, vegetation and seed banks caused by tree establishment may perpetuate tree dominance and limit a return to meadow conditions (Griffiths et al., 2005; Haugo & Halpern, 2007; Lang & Halpern, 2007). While conifer establishment in meadows is closely tied to climate (Millar et al. 2004), fire may provide a natural disturbance process to reduce the density and slow encroachment.

In the monument, low intensity prescribed fire could be used in sections of the meadow to reduce smaller conifer density. It is possible to conduct limited research burns in small sections by using wetline. Effects on conifer density and herbaceous plant cover and diversity would be closely monitored as outlined in Goal 8. A

broader literature review would be conducted prior to developing a prescribed burning prescription for a research burn in the meadow.

2. Text additions to FMP EA, Section 3.7.2.3 to clarify the NPS commitment stated in Mitigation Measure CUL-10 for Section 106 consultation with the SHPO in the future as specific prescribed burn plans are developed. Text on FMP EA page 71 is amended to:

For planned ignitions, all prescribed burn activities would be carefully managed under a prescribed burn plan, which would include coordination with cultural resource staff and consultation under Section 106 of the NHPA with the SHPO and associated tribes to identify sensitive cultural resource areas to avoid or treat to mitigate impacts (Mitigation Measures CUL-10). Section 106 compliance, including consultation with the State Historic Preservation Officer (SHPO) and tribes as appropriate, would be the primary regulatory mechanism to address impacts to cultural resources in the monument in both emergency (wildlife, BAER) and non-emergency (planned treatment) situations.

3. Text Additions to FMP EA Appendix A, References Cited. References cited in the text addition to Section 3.3.2.2 are added to Appendix A, Literature Cited.

Anderson R.S. and S. J. Smith. 1997. The sedimentary record of fire in montane meadows, Sierra Nevada, California, USA: a Preliminary Assessment. In: Clark J.S., Cachier H., Goldammer J.G., Stocks B. (eds) Sediment Records of Biomass Burning and Global Change. NATO ASI Series (Series I: Global Environmental Change), vol 51.

Debenedetti, S. H., and D. J. Parsons 1984. Post fire succession in a Sierran subalpine meadow. American Midland Naturalist 111:118-125.

Frenzel, Erik. 2012. Using prescribed fire to restore tree-invaded mountain meadows: a case study from the Lake Tahoe Basin, California and Nevada USA. Master's Thesis
<https://www.researchgate.net/publication/280732321>

Griffiths, R., M. Madritch, and A. Swanson 2005. Conifer invasion of forest meadows transforms soil characteristics in the Pacific Northwest. Forest Ecology and Management 208:347-358.

Haugo, R. D., and C. B. Halpern 2007. Vegetation responses to conifer encroachment in a western Cascade meadow: a chronosequence approach. Canadian Journal of Botany 85:285-298.

Lang, N. L., and C. B. Halpern. 2007. The soil seed bank of a montane meadow: consequences of conifer encroachment and implications for restoration. Canadian Journal of Botany 85:557-569.

Millar, C. I., R. D. Westfall, D.L. Delany, J. C. King and L. J. Graumlich. 2004. Response of subalpine conifers in the Sierra Nevada, California, U.S.A., to 10th-century warming and decadal climate variability. Arctic, Antarctic, and Alpine Research, Vol. 36, No. 2, 2004, pp. 181–200

National Park Service. 2004. Final Yosemite Fire Management Plan and Environmental impact statement. Yosemite National Park, U.S. Department of Interior.

Pyke, D. A., M.L. Brooks, and C.M. D'Antonio. 2010. Fire as a restoration tool: A decision framework for predicting the control or enhancement of plants using fire. Restoration Ecology. 18:pp. 274-284.

4. Text edits to FMP EA Appendix D, Mitigation Measures, page D-3:
WLDf-2 Firefighter safety is priority, but whenever possible avoid cutting snags over 24 30 inches in diameter at breast height and retain large woody debris for wildlife habitat.
5. Text edits to FMP EA Appendix G, Programmatic MRA, page G-18:
 - Firefighter safety is a priority but when possible, avoid cutting snags over 24 30" diameter to retain for wildlife habitat.

6. FMP EA, Appendix D, Mitigation Measures and Appendix G, Programmatic MRA and FONSI, Appendix A. Mitigation Measure WLDF-2 is modified in response to a comment received during the public comment period with the effect of reducing the size of snags retained from 30 inches to 24 inches.

WLDF-2. Firefighter safety is priority, but whenever possible avoid cutting snags over ~~30~~ 24 inches in diameter at breast height and retain large woody debris for wildlife habitat.

7. FMP EA, Appendix D and FONSI Appendix A. Mitigation Measure VIS-4 is clarified with the addition of the following underlined and italicized text. This modification is at the request of the Superintendent.

VIS-4: Prescribed burns *and wildfire management for multiple objectives* will be approved by the Superintendent who will consider ~~consideration will be given to limiting~~ how the timing of these activities affects weekend, holiday *and peak season visitor use in and around the monument*.

8. FMP EA, Appendix D, Mitigation Measures, Appendix G, Programmatic MRA and FONSI Appendix A. Mitigation Measure CUL-10 in these three locations of the FMP EA is modified in response to comments from internal NPS review. The edit to the Mitigation Measure is shown in italicized and underlined text.

CUL-10: Prior to initiating a prescribed fire, the NPS will coordinate the development of the prescribed burn plan with cultural resource staff input to identify sensitive cultural locations and protocols for burning near archeological sites. Section 106 compliance will be completed for prescribed burn plans and include consultation with the California SHPO and associated tribes, and identified cultural resources will be either avoided in the burn unit or prepped prior to the burn in order to mitigate impacts. Preparations may include manually removing fuels on or around the archeological resource; removing heavy logs and fuels from vulnerable areas; and removing or covering stumps with dirt or foam where burnout could affect subsurface cultural deposits. Piles to be burned will not be placed in or near sensitive archeological resources.

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