

Casa Grande Ruins National Monument

National Park Service
U.S. Department of the Interior



Fire Management Plan Environmental Assessment



January 2013

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Fire Management Plan

Environmental Assessment

Casa Grande Ruins National Monument • Arizona

Summary

Casa Grande Ruins National Monument currently follows the 2004 *Casa Grande Ruins National Monument Fire Management Plan* to guide its fire program. In the past, national park system units could use the 2003 Healthy Forest Initiative Categorical Exclusion (HFI CE) to be in compliance with National Environmental Policy Act (NEPA) requirements. National Park Service (NPS) issued guidance in 2008, directing park units in the Ninth Circuit Court of Appeals to discontinue the use of the 2003 HFI CE. New NEPA documentation is required in support of the *Casa Grande Ruins National Monument Fire Management Plan*. This Environmental Assessment (EA) satisfies the NEPA requirement in support of the *Casa Grande National Monument Fire Management Plan*. Analysis of impacts topics under Alternative 1, the no-action and preferred alternative, and under Alternative 2, the planned fire management activities alternative, includes soils, vegetation, archeological resources, historic structures and cultural landscapes were assessed.

Alternative 1, the no-action and preferred alternative, would not allow for implementation of any planned fire management activities. Alternative 2 would allow for implementation of a range of planned fire management activities; these activities would be part of potential planned events such as mechanical (tracked and wheeled vehicles) or manual (hand held tools) fuel reduction. Given the nature of the monument's sparse vegetation and the very low risk of fire there is no anticipated need for any planned activities (no action alternative). Under both alternatives unplanned fires would be suppressed.

Public Comment

If you wish to comment on this environmental assessment, you may mail comments to the name and address below or post comments online at <http://parkplanning.nps.gov/cagr>. This environmental assessment will be formally available for public review for 30 days. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. Although you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Superintendent
Karl P. Cordova
Casa Grande Ruins National Monument
Arizona

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CHAPTER 1: PURPOSE AND NEED

INTRODUCTION

Casa Grande Ruins National Monument is located in Pinal County, Arizona, just north of the town of Coolidge, and approximately 15 miles northeast of the city of Casa Grande. It comprises 472.5 acres, all in federal ownership.

The remains of prehistoric structures of Casa Grande Ruins National Monument were constructed by the Ancient Sonoran people who farmed the valley in the early 13th century and were able to adapt to the Sonoran desert environment. The construction was well planned and organized, requiring tons of material and a cooperative effort on the part of many people. The physical presence, construction, and architecture of the Casa Grande made it a major landmark in early European exploration and western migration (NPS 2007a).

Casa Grande Ruins Reservation was set aside by President Benjamin Harrison on June 22, 1892, to protect the “Casa Grande” or Great House, a multistoried, earthen-walled structure surrounded by the remains of smaller buildings, a compound wall, and other prehistoric objects. Casa Grande Ruins Reservation was both the first prehistoric site and the first cultural site to be set aside by the United States government. The site became a national monument on August 3, 1918, under the authority of the Antiquities Act and management was transferred to the National Park Service, on that date, for the preservation and interpretation of Casa Grande and sixty other archeological sites (NPS 2007a).

BACKGROUND

Very little is known about historical fire occurrence and the natural fire cycle in the Sonoran Desert. The natural frequency of lightning fires is estimated to be once every 250-300 years. Only a few, small grass fires have been reported on monument grounds since 1978, including one each in 1978, 1991, and 1992. In general, the monument is very sparsely vegetated and the likelihood of a wildfire is low.

Casa Grande Ruins National Monument's climate is steppe-desert, and experiences moderate weather patterns typical of southwestern Arizona, with hot summers and mild winters with cold periods. Temperatures range from 20 to 110°F. From May through September, the daily high temperatures range from the low 70s to around 110°F. Annual precipitation averages about eight inches with extremes ranging from a low of three inches in 1956 to a high of nineteen inches in 1941. Moisture is received in two distinct rainy seasons, during the summer monsoon season in July and August and again in early winter to late spring from November to April. In April, winter precipitation ends and drought persists through May and June. In July, moist air from the Gulf of Mexico or the Gulf of California flows into southern Arizona due to dissemination of the high pressure system present in May and June. Locally heavy summer monsoon thunderstorms or longer-lasting widespread winter frontal systems can cause sheet flooding or flash flooding.

Currently there is inadequate historical fire activity data in the monument to establish a fire season. The monument's fire season tends to match the Southwest's average fire season, which is approximately May through September. These dates may be modified to adjust to early or late spring and winter depending on the overall Southwest weather patterns.

PURPOSE AND NEED

Casa Grande Ruins National Monument currently follows the 2004 *Casa Grande Ruins National Monument Fire Management Plan* (NPS 2004a) to guide its wildland fire program. In the past, national park system units could use the 2003 Healthy Forest Initiative Categorical Exclusion to be in compliance with National Environmental Policy Act requirements. The 2003 Healthy Forest Initiative Categorical Exclusion was codified in “Interim Guidance Director’s Order 12 Categorical Exclusions” on May 22, 2009 (NPS 2009). The reference for this categorical exclusion under Director’s Order #12 guidance is 3.4 G, 1. However, based on recent review and in response to recent case law, the National Park Service (NPS) issued guidance to discontinue use of the 2003 Healthy Forest Initiative Categorical Exclusion (NPS 2008a) for compliance with the National Environmental Policy Act within the jurisdiction of the Ninth Circuit Court of Appeals.

This environmental assessment for the fire management plan would bring the monument into compliance with NPS Reference Manual 18: Wildland Fire Management (NPS 2008b) and National Environmental Policy Act requirements and allow Casa Grande Ruins National Monument to continue implementing a fire program. Potential impacts of alternative 1, the no-action (preferred) alternative and alternative 2, the planned fire management activities alternative, on park resources are described in Chapter 3.

National Park Service *Management Policies 2006* and Director’s Order #18 require that “each park with vegetation capable of burning would prepare a fire management plan to guide a fire management program that is responsive to the park’s natural and cultural resource objectives and to safety considerations for park visitors, employees, and developed facilities” (NPS 2006). Parks with an approved fire management plan and accompanying National Environmental Policy Act compliance may use wildfire to achieve resource benefits in predetermined fire management units; however, as Casa Grande Ruins National Monument is within the Sonoran Desert, where vegetation is sensitive to fire, managed fire use will not be considered.

The 2012 Interagency Standards for Fire and Fire Aviation Operations (Red Book) states that the Park Superintendent will “identify resource management objectives in a current fire management plan.” The activities defined in the fire management plan will be implemented in accordance with agency and departmental policy, including procedural updates contained in the following (but not limited to) documents:

- Interagency Standards for Fire and Fire Aviation Operations (2012)
- Direction to Leaders – 2008 Action Plan
- “Guidance for Implementation of Federal Wildland Fire Management Policy” (February 2009).

This environmental assessment has been prepared in accordance with the National Environmental Policy Act and its implementing regulations, 40 Code of Federal Regulations Parts 1500-1508; National Park Service Director’s Order #12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*; and Section 106 of the National Historic Preservation Act of 1966 as amended, and implementing regulations, 36 Code of Federal Regulations Part 800.

GENERAL MANAGEMENT CONSIDERATIONS

All wildland fires will be aggressively suppressed in a prompt, safe, and cost-effective manner to produce a fast, efficient action with minimum damage to resources. The Fire Management Plan does not differentiate between human- and lightning-caused fire; all ignitions will be suppressed using the appropriate suppression response. The overall goals for wildland fire management are to promote a

fire prevention program and to ensure suppression response capable of meeting expected wildland fire complexity. Specific monument fire management goals are as follows:

1. Protect human life and property within the park.
2. Employ strategies to suppress all wildland fires within park boundaries that minimize costs and resource damage consistent with values at risk.

The wildland fire management program for Casa Grande Ruins National Monument is to suppress all fires. Because of the lack of Sonoran desert fire history information and lack of fuels accumulations, monument managers will not utilize fire as a fuels management or restoration agent at this time. No hazardous fuels treatments are planned. Because all wildland fires that occur in the monument will be suppressed, no separate fire management units have been established. Allowing wildland fires to burn in the park for resource objectives is not a viable option due to the cultural preservation mandate of the park, valuable archeological resources, and the small size of the monument. Aggressive fire-fighting techniques will be used to suppress wildland fires at a minimum size using the appropriate suppression response that reduces impacts to natural and cultural resources, while ensuring the safety of firefighters, monument staff, visitors, and neighbors.

MANAGEMENT OBJECTIVES

- a. Suppress all fires regardless of whether they are human- or lightning-caused.

MANAGEMENT CONSIDERATIONS

- a. No lives will be lost; no major injuries will occur.
- b. No unacceptable impacts will occur to cultural resources. The location of these sites will be included in documents such as line officers briefing statements and pre-attack plans. A resource advisor from the monument must be attached to any incident management organizations.
- c. No structures will be lost or substantially destroyed.
- d. Chemical retardants will not be routinely used. Chemical agents may be utilized with the Superintendent's approval (or their designated official).
- e. Heavy equipment may be used only if approved by the superintendent or designated official, the fire is life threatening, and a designated resource advisor accompanies the equipment.
- f. Sensitive areas or species will be protected from suppression activities. These areas will be included in documents such as line officers briefing statements and pre-attack plans. A resource advisor from the monument must be attached to the incident management organizations.
- g. Only a small percentage of the monument is accessible to vehicles. Off road vehicle use may be permitted on a case-by-case basis and must be approved by the Superintendent or their designated official.

RELATIONSHIP OF THE PROPOSED ACTION TO PREVIOUS PLANNING EFFORTS

The Resource Protection Study Environmental Assessment (NPS 2003) was completed to analyze the environmental impacts associated with the proposal to acquire land and expand the monument boundaries to protect additional archeological resources. Acquiring additional land would protect

lands that have significant cultural resources which are thematically related to the Casa Grande and the Hohokam culture. This fire management plan environmental assessment is consistent with the Resource Protection Study Environmental Assessment in that all wildland fire suppression activities would avoid and protect all known archeological sites and features, and planning strategies would ensure that adequate firefighting resources are available and positioned to safeguard them. If the additional land is acquired, it would be managed under the existing fire management plan.

The *Foundation Statement for Planning and Management* provides a common set of definitions for the national monument's purpose, significance, primary interpretive themes, and fundamental resources and values (NPS 2007a). The statement identifies the constraints to planning and management and also ensures that planning and management stay focused on what is most important. Fundamental resources that require protection are identified and the management actions that are necessary to protect them. This fire management plan environmental assessment is consistent with the Foundation Statement for Planning and Management in that all wildfire fire suppression activities would avoid and protect all known fundamental resources and planning strategies would ensure that adequate firefighting resources are available and positioned to safeguard them.

SCOPING

On November 9, 2010, an internal scoping meeting was convened with interdisciplinary team members to discuss an environmental document in support of the fire management plan. Monument significance, legislative intent, monument purpose and mission statement were discussed in the meeting. At that time, the interdisciplinary team developed the purpose and need statement, goals and objectives, draft issues, and draft proposed alternatives related to the fire management plan.

Public scoping efforts were completed via surface mailing and the use of the Planning, Environment, and Public Comment (PEPC) website (<http://www.parkplanning.nps.gov/cagr>). Public comments were considered and incorporated into the development of the analyzed alternatives, and impact topics analyzed.

IMPACT TOPICS

Impact topics are the resources and identified values that may be impacted by implementing either of the alternatives. These impact topics are:

- Soils
- Vegetation
- Archeological resources
- Historic structures
- Cultural landscapes

TOPICS DISMISSED FROM FURTHER CONSIDERATION

The National Park Service defines "measureable" impacts as minor or greater effects. It equates "no measurable effects" as negligible or less effects. "No measureable effect" is used by the National Park Service in determining if a categorical exclusion applies or if impact topics may be dismissed from further evaluation in the environmental assessment. The use of "no measureable effects" in this environmental assessment pertains to whether the National Park Service dismisses an impact topic

from further detailed evaluation in this environmental assessment. The reason the National Park Service uses “no measurable effects” to determine whether impact topics are dismissed from further evaluation is to concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail in accordance with Council on Environmental Quality regulations at 1500.1(b).

Some impact topics were dismissed from further evaluation in this environmental assessment if:

- They do not exist in the analysis area, or
- They would not be affected by the proposal, or the likelihood of impacts are not reasonably expected, or
- Through the application of mitigation measures, there would be negligible or less effects (i.e., no measurable effects) from the proposal, and there is little controversy on the subject or reasons to otherwise include the topic.

The impact topics to be dismissed, include: wetlands and floodplains, water quality, wildlife, special status species, museum collections, ethnographic resources, visitor use and experience, scenic resources, night sky, transportation, wilderness, prime and unique farmlands, socioeconomics, environmental justice, air quality, soundscape, and geology.

WETLANDS AND FLOODPLAINS

There are no wetlands or 100-year floodplains within the monument, therefore wetlands and floodplains were dismissed as impact topics.

WATER QUALITY

Groundwater does not occur near the surface, and there are no principal streams, lakes, or impoundments of water within the monument boundaries. Therefore, this topic was dismissed from further analysis.

WILDLIFE

Impacts to wildlife species from unplanned fire events would have a negligible to minor adverse impact to wildlife species in the short term from displacement and temporary loss of habitat. Wildlife species would re-colonize the site and habitat would recover soon after the fire, long term impacts would be negligible.

Potential impacts from planned fuels projects would only be implemented if adverse impacts would be mitigated to the level of “minor” or less. Therefore, this impact topic was dismissed from further analysis.

SPECIAL STATUS SPECIES

There are no known federally listed threatened or endangered wildlife species as designated by the U.S. Fish and Wildlife Service (USFWS 2010a) or sensitive species as designated by the Arizona Game and Fish Department in Casa Grande Ruins National Monument. The monument supports a small population of Western burrowing owls (*Athene cunicularia*), an Arizona Game and Fish Department species of special concern Arizona Game and Fish Department, 2009), in the relatively undisturbed portions of the monument. Burrowing owls are also found in agricultural areas

surrounding the monument. There are approximately 137 Burrowing owl nest burrows located throughout the monument (Ogonowski 2007).

The Tucson shovel-nosed snake is currently a candidate species under the Endangered Species Act. This species has been proposed for listing as a threatened or endangered species with critical habitat in 2008 and in 2010. Tucson shovel-nosed snakes are found in creosote-mesquite floodplain areas and associates with soft sandy loam soils with sparse gravel (USFWS 2010b). According to Klauber (1951), sand hummocks with desert shrubs are the preferred habitat for shovel-nosed snakes.

Impacts from unplanned wildland fires would have a negligible to minor adverse impact to special status species in the short term from displacement and temporary loss of habitat, due to the small and very infrequent occurrence of wildland fire in the Monument.

Casa Grande Ruins National Monument staff completed informal Section 7- Endangered Species Act consultation with U.S. Fish and Wildlife Service (USFWS). The USFWS sent an e-mail to the monument on 4/11/2011, including a statement that “we [USFWS] agree with your [Casa Grande Ruins National Monument] assessment that Casa Grande Ruins National Monument does not support any listed species or their habitats.” The USFWS e-mail continues to include support of efforts to consider effects to the western burrowing owl, and the Tucson shovel-nosed snake.

Potential impacts from planned fuels projects (Alternative 2) would only be implemented if adverse impacts could be mitigated to the level of “minor” or less. Therefore, this impact topic was dismissed from further analysis.

MUSEUM COLLECTIONS

Activities during planned and unplanned events would not affect museum collections as they would occur entirely outdoors. Vegetation around existing buildings is very sparse, and will not carry fire to the buildings. Therefore, this topic was dismissed from further consideration.

ETHNOGRAPHIC RESOURCES

There has been no formal ethnographic study and though there may be ethnographic resources located in Casa Grande Ruins National Monument their nature and extent is not currently known. Scoping efforts revealed no ethnographic resources. It is possible that tribes may have concerns or opportunities on the project-specific level; any potential projects would be consulted with affiliated tribes, and no adverse impacts to identified ethnographic resources would be permitted. Therefore, this topic was dismissed from further analysis.

VISITOR USE AND EXPERIENCE

Visitors could be denied access to the monument during planned fuel reduction projects and wildland fire suppression activities. Although visitors would not be able to experience all of the monument resources, visitor health and safety would be protected. Since these impacts would be temporary, and very infrequent, they are considered negligible and are not addressed.

SCENIC RESOURCES

For all alternatives, wildfire would be suppressed, so long-term impacts to the landform, vegetation, and cultural components of scenery would be negligible. Fire suppression activities would temporarily dominate views; however, this would be very localized, and very infrequent. Planned fuel

reduction projects would be planned and implemented for no adverse effect to scenic resources. Impacts to scenic resources would be negligible so they are dismissed from further analysis.

NIGHT SKY

The monument is usually open for day use only, so the impacts of light, smoke, and particulates from temporary wildland fire or planned fuel reduction projects are expected to be negligible, thus this impact is not addressed.

TRANSPORTATION

There may be temporary closure of adjacent roads during fire suppression activities, however, such closures would be very infrequent and would not substantially impinge on local transportation. Planned fuel reduction projects would not impact use of Monument and adjacent roads. Therefore, this impact topic is dismissed from further analysis.

WILDERNESS

Neither Casa Grande Ruins National Monument nor adjacent lands are proposed or designated as wilderness; therefore this impact topic is dismissed from further analysis.

PRIME AND UNIQUE FARMLANDS

According to U.S. Department of Agriculture's Natural Resources Conservation Service, no soils in the monument are classified as prime and unique farmlands. Thus, this impact topic of prime and unique farmland is dismissed from further analysis.

SOCIOECONOMICS

Potential planned fuel reduction projects or wildland fire suppression actions would neither change local and regional land use nor appreciably impact local businesses or other agencies, due to the small size and infrequent occurrence. Therefore, this topic is dismissed from further analysis.

ENVIRONMENTAL JUSTICE

The proposed action would not disproportionately affect low-income or minority communities; therefore, this impact topic is dismissed from further analysis.

AIR QUALITY

Wildland fire suppression actions may increase smoke and particulate matter. Based on existing sparse vegetation, and fire history, fire suppression actions would be small and infrequent. Planned fuel reduction projects might including the use of line trimmers, which could temporarily negligibly affect local air quality. The alternatives would not result in appreciable effects to air quality and any effects would be short-term and negligible; therefore, this impact topic is dismissed from further analysis.

SOUNDSCAPE

Wildland fire suppression actions may temporarily affect local soundscape; this occurrence would be short in duration, and infrequent. Planned fuel reduction projects may impact soundscape on a very

local and temporary scale. The alternatives would not result in appreciable effects to soundscapes and any effects would be short term and negligible; therefore, this impact topic is dismissed from further analysis.

Geology

Wildland fire suppression actions may include construction of fire containment lines to remove vegetation to stop the fire. Planned fuel reduction projects may include hand cutting or removal of vegetation to reduce potential fire behavior during wildland fires. None of these described activities would affect geological resources; therefore, this impact topic is dismissed from further analysis.

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CHAPTER 2: ALTERNATIVES

Alternative 1: No-action (Preferred) and Alternative 2: Planned Fire Management Activities, were developed through discussions among Casa Grande Ruins National Monument, the Fire Management Office at Saguaro National Park, and the National Park Service Intermountain Region, and in consideration of public scoping comments. Each alternative addresses specific management objectives and is feasible for local implementation. Alternatives that did not meet these criteria were eliminated from further analysis. In compliance with the National Environmental Policy Act, this environmental assessment evaluates the potential effects of alternative fire management strategies at Casa Grande Ruins National Monument.

COMMON TO BOTH ALTERNATIVES

Under both alternatives, the entire monument would be considered as a single fire management unit. Within this fire management unit, fire management actions described in Alternative 2 may occur throughout the monument or be concentrated in areas with vegetation. Fuels at the monument are minimal due to historic grazing and may be in fact decreasing over time due to groundwater withdrawal.

Under both alternatives, all wildfires will be suppressed in a prompt, safe, and cost-effective manner to protect firefighter, staff, and visitor safety, and to minimize damage to resources. The fire management plan does not differentiate between human- and lightning-caused fires; all ignitions would be suppressed. Due to the monument's small size, high historic value, and very limited fire history data, achieving resource benefits from wildfire is prohibited in the fire management plan.

Minimum Impact Suppression Tactics (MIST) guides the selection of fire management actions monument staff would implement to manage wildfires in ways that minimize unnecessary impacts to resources and convey the importance of this strategy to all fire management forces. MIST strives to minimize landscape alteration and disturbance to natural and cultural resources while safeguarding human lives and accomplishing resource-related objectives. Without compromising safety, lines would be located where they would do the least damage, minimize ground disturbance, and use natural firebreaks when possible. Staging areas would be placed with care. Agency resource advisors would be consulted prior to implementing management tactics. Although these strategies will be employed to the extent possible, NPS managers recognize that the sparse but flashy fuels, and small size of the monument may impact the effectiveness of MIST.

Despite the best intentions of MIST, wildland fire actions often create the need for short-term or long-term rehabilitation. Staff would consult with specialists (archeologists, plant ecologists, and wildlife biologists, for example) to determine short-term and long-term needs and evaluate the need to write rehabilitation plans for each fire.

ALTERNATIVE 1: NO-ACTION (PREFERRED) ALTERNATIVE

Under alternative 1, the no-action and preferred alternative, the monument would respond to wildland fires as described in the Common to Both Alternatives sub-section, above. This strategy is the same as suppression strategies found in the 2004 *Casa Grande Ruins National Monument Fire Management Plan*. Under this alternative, response to all wildland fires would be a suppression strategy commensurate with values to be protected and human safety. Initial fire response is provided by local fire department, and firefighters would be rapidly assigned to suppress all fires. The fire suppression strategy could include hand tools including chainsaws, and fire engines with water and hose lines. Vehicles will be restricted to existing roads; any off road vehicle travel must

be approved by the Superintendent or their designated official. The use of chemical retardants would also require the superintendent's (or designated official) approval.

Under the no-action (preferred) alternative, there would be no planned fuel reduction (manual or mechanical vegetation reduction, prescribed burns, or pile burns) or ecosystem restoration projects.

ALTERNATIVE 2: PLANNED FIRE MANAGEMENT ACTIVITIES

Under alternative 2, the National Park Service would respond to wildland fire in the same way described in the Common to Both Alternatives sub-section, and in the Alternative 1 description, above.

Alternative 2 includes a range of fuel management activities. These activities and treatments would be centered on public and firefighter safety, communities identified as at risk from wildfires (wildland-urban interface), and collaboration with other agencies and stakeholders. These planned projects may include work designed to reduce fuel loads in order to protect sensitive resources (developed areas, infrastructure, natural and cultural resources). Examples may include manual (hand tools including chainsaws) or mechanical (tracked or wheeled vehicles) fuel reduction or removal. No prescribed fire is considered under this alternative.

THE PREFERRED ALTERNATIVE AND ENVIRONMENTALLY PREFERABLE ALTERNATIVE

THE ALTERNATIVE PREFERRED BY THE NATIONAL PARK SERVICE

Alternative 1, the no action alternative, and Alternative 2, the planned fire management alternative, both address fire suppression actions in the same way. Planned fuel reduction projects are described in Alternative 2, but is not included in Alternative 1. NPS has determined that planned fuel reduction projects are unnecessary for protection to developed areas, infrastructure, human life, and monument resources, because of the sparse nature of vegetation, and the very infrequent occurrences of wildland fire in the monument. Therefore, the Alternative 1, the no action alternative, is the NPS' preferred alternative.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is determined by applying the criteria suggested in the National Environmental Policy Act, which guides the Council on Environmental Quality. The Council on Environmental Quality provides direction that "The environmentally preferable alternative is the alternative that would promote the national environmental policy as expressed in NEPA's Section 101. In order to carry out the policy set forth in this Act, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate federal plans, functions, programs, and resources to the end that the nation may:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

3. Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. 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;
5. Achieve a balance between population and resource use which would permit high standards of living and a wide sharing of life's amenities; and
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Only number four, above, differs between the two alternatives. If Alternative 2 is implemented, a slight potential to adversely affect monument resources, such as cultural resources might occur. Although mitigation measures would be applied to projects identified in Alternative 2, there would be a slight risk that mitigation measures would not be successful. Alternative 1, the no action alternative, would not impact monument resources. Therefore, Alternative 1, the no action alternative, is the Environmentally Preferable Alternative.

MITIGATION MEASURES

Identified mitigation measures would be implemented before planned actions (alternative 2), and where appropriate, during wildland fire suppression actions (alternatives 1 and 2). Mitigation measures identified in this EA are representative, and additional measures may be developed.

A. NATURAL RESOURCES

Soils: During any fire management activity, impacts to soils will be minimized and areas with a high probability of erosion will be stabilized by utilizing the best available technology and rehabilitation methods while maintaining fiscal responsibility. These methods will be determined by monument fire and resource management staff. For any method where digging is involved, site specific archeological compliance will be conducted to avoid impacts to cultural resources.

Invasive species and fire management activities: Recognizing that fire management activities cause disturbance, opportunities exist for invasive plant species colonization. For example, in some areas fire suppression has contributed to the invasion of non- native plant species. If invasive plants are found, natural resources staff will develop appropriate mitigation measures (i.e., cutting seed heads and manually removing plants). Additionally, staff will modify their planned management activities if certain activities are determined to contribute to establishment of invasive plants.

B. CULTURAL RESOURCES

Pre-incident planning

- Planning for fire management actions will include protection of known cultural resources using various measures as recommended by cultural resource staff.
- Cultural resource inventories will be completed for each fire management project area to identify resources that may be important and are susceptible to adverse impacts from fire or fire management actions.

- Known cultural resources will be evaluated for hazardous fuels, and those fuels may be reduced.

Incident response

- Fire management teams will solicit the advice of archeologists, cultural resource specialists, and/or other resource management staff on cultural resource issues and concerns to avoid impacts to cultural resources.
- Archeologists, cultural resource specialists, and/or other resource management staff will be assigned as resource advisors to fire management teams to advise of known important cultural resources in areas where potential impacts of fire could be reduced or avoided through emergency fuel reduction.

The possible impacts of fire and fire management activities on cultural resources will be mitigated by the following actions:

- Prior to the start of work, archeologists, cultural resource specialists, or other resource management staff will instruct crews in identification of cultural materials and review federal and state laws protecting archeological sites and artifacts.
- All cultural sites within the project area will be identified and located by an archeologist, cultural resource specialist, or other resource management staff member. These sites may be avoided during fire management activities.
- An archeologist, cultural resource specialist, or resource management staff member will be present on site during fire management treatments to identify structural elements, supervise directional tree felling, and placement of slash.
- Crews will avoid or minimize walking over structural elements.
- Following each project or treatment, a report will be sent to the State Historic Preservation Office.

Archeological sites will be treated under the same conditions as prescribed for the surrounding vegetation with the following modifications:

- Dead trees, regardless of species, will be evaluated for removal from structural elements of sites. Non-structural elements of sites will be treated using the same prescription as for the surrounding landscape.
- Three inch diameter and smaller trees will be evaluated for removal. Cactus and other non-tree vegetation will be retained.

C. FIRE RETARDANT

To minimize impacts to natural and cultural resources, application of fire retardant requires approval from the Superintendent or their designated official.

D. AIR QUALITY

Monument staff will monitor air quality adjacent to project areas and within developed areas of the monument. Unhealthy or hazardous accumulations of smoke will trigger an aggressive suppression action that will continue until the air quality attains acceptable levels. When adjacent land management agencies are managing prescribed fires or wildland fires or when nearby agricultural

fields are being burned, cooperation and coordination will be initiated to minimize cumulative smoke impacts.

E. WILDLAND FIRE

In the case of unplanned fire events, Monument resource advisors will immediately be notified of the fire ignition location and of the intent to manage the fire within a maximum manageable area. If necessary, efforts will be made to send resource specialists into the area to perform basic inventory work. If resource advisors locate features or resources that require mitigation, action points (geographic locations at which mitigation actions are triggered if fire reaches the point) will be established and mitigation plans developed. If the fire reaches an action point, the mitigation plan will be implemented. It may take several days to weeks before this occurs, or it is also possible that the fire may not reach the identified action point.

Table 1 describes how each fire management objective will be met. Table 2 compares fire management options between the two alternatives. Table 3 compares impacts between the two alternatives.

Table 1. Methods Each Alternative Uses to Ensure Each Objective Is Met

Objective	Alternative 1: No-action (Preferred)	Alternative 2: Planned Fire Management Activities
Suppress all fires regardless of whether they are human- or lightning-caused	<p>Suppression actions can include hand crews cutting a line around the fire perimeter to remove live and dead vegetation; water and retardant drops from aircraft; manual and mechanical thinning; “burn out” situations in which fire is used to remove live and dead vegetation in an effort to stop the fire; and “cold trailing” in areas of low fuel loads, where crews physically feel the ground and put out “hot spots.”</p> <p>In areas with sensitive natural or cultural resources, Minimum Impact Suppression Tactics are used and/or resource advisors are consulted.</p>	<p>Suppression actions can include hand crews cutting a line around the fire perimeter to remove live and dead vegetation; water and retardant drops from aircraft; manual and mechanical thinning; “burn out” situations in which fire is used to remove live and dead vegetation in an effort to stop the fire; and “cold trailing” in areas of low fuel loads, where crews physically feel the ground and put out “hot spots.”</p> <p>In areas with sensitive natural or cultural resources, Minimum Impact Suppression Tactics are used and/or resource advisors are consulted.</p>

Table 2. Comparison of Alternatives

Alternative 1: No-action (Preferred)	Alternative 2: Planned Fire Management Activities
<p><u>Planned Actions:</u> Under the no-action (preferred) alternative there would be no planned fire management actions, such as thinning activities, prescribed fire, and pile burning. Chemical applications would be allowed under the Integrated Pest Management Plan.</p> <p><u>Wildland Fire:</u> Suppression actions can include construction of a fire containment line around the fire perimeter to mineral soil; water and retardant drops (if approved by Superintendent) from aircraft; “burn out” situations in which fire is used to remove live and dead vegetation in an effort to stop the fire.</p> <p>Minimum Impact Suppression Tactics are used and/or resource advisors are consulted.</p>	<p><u>Planned Actions:</u> Mechanical and manual fuel reduction treatments could occur. No prescribed burning or pile burning is considered. Chemical applications would be allowed under the Integrated Pest Management Plan.</p> <p><u>Wildland Fire:</u> Wildland fires are the same as Alternative 1.</p>

Table 3. Summary of Impacts by Alternative

Impact Topic	Alternative 1: No-action (Preferred)	Alternative 2: Planned Fire Management Activities
Soils	<p><u>Planned Actions:</u> There would be no impact on geology and soils under alternative 1.</p> <p><u>Wildland Fire:</u> Ground disturbance associated with fire suppression activities could have direct, site-specific, short-term, minor, adverse effects on soils due to compaction and potential erosion and could disturb cryptobiotic soil crusts. Geologic resources would not be impacted as a result of wildfire or fire suppression activities.</p>	<p><u>Planned Actions:</u> Mechanical and manual fuel reduction treatments such as slashing and the removal of dead shrubs, and pile burning would initially result in ground disturbance and direct, site-specific, minor, short-term, adverse impacts on soils. There would be no impact on geology.</p> <p><u>Wildland Fire:</u> wildland fires are the same as Alternative 1.</p>
Vegetation	<p><u>Planned Actions:</u> There would be no impact on vegetation under alternative 1.</p> <p><u>Wildland Fire:</u> Wildfire and fire suppression activities could result in direct, site-specific, short- and long-term, minor adverse impacts.</p>	<p><u>Planned Actions:</u> Impacts could be direct, site-specific, long-term, minor, and adverse fuels treatments.</p> <p><u>Wildland Fire:</u> wildland fires are the same as Alternative 1.</p>
Archeological Resources	<p><u>Planned Actions:</u> Under the no-action (preferred) alternative there would be no planned fuel reduction projects, such as vegetation thinning, prescribed fire, and pile burning increasing the minimal risk of an unplanned wildfire. There would be no impact on archeological resources under alternative 1.</p> <p><u>Wildland Fire:</u> The no-action (preferred) alternative would have the potential to affect archeological resources. Mitigation measures would be applied, but may or may not be successful during a wildland fire. Impacts on archeological resources could be direct, site-specific, adverse, minor, and short to long-term.</p>	<p><u>Planned Actions:</u> Mechanical and manual fuel reduction treatments can directly impact archeological resources depending upon their location and type. Ground-disturbing treatments could directly result in adverse impacts on surface and subsurface scatter. Mitigation measures would be applied, and would be very successful in reducing or removing adverse impacts. Impacts would be direct, site-specific, short to long-term, minor, and adverse.</p> <p><u>Wildland Fire:</u> wildland fires are the same as Alternative 1.</p>
Historic Structures	<p><u>Planned Actions:</u> Under the no-action (preferred) alternative there would be no planned fire management actions, such as thinning activities, prescribed fire, and pile burning. There would be no impact on historic structures under the preferred alternative.</p> <p><u>Wildland Fire:</u> The no-action alternative would have the potential to affect historic structures. Mitigation measures would be applied, but may or may not be successful during a wildland fire. Impacts to historic structures could be short- or long-term depending on the intensity or context of the fire management activity, and could be direct, site-specific, minor and adverse.</p>	<p><u>Planned Actions:</u> Mechanical and manual fuel reduction treatments can directly impact historic structures, depending upon their location and type. Mitigation measures would be applied, and would be very successful in reducing or removing adverse impacts. Impacts would be direct, site-specific, minor, short- or long-term, and beneficial.</p> <p><u>Wildland Fire:</u> wildland fires are the same as Alternative 1.</p>

Impact Topic	Alternative 1: No-action (Preferred)	Alternative 2: Planned Fire Management Activities
Cultural Landscapes	<p><u>Planned Actions:</u> There would be no impact on cultural landscapes under this alternative as no planned activities would be implemented.</p> <p><u>Wildland Fire:</u> All cultural landscapes that are located throughout the monument could be at risk from wildfire, though the risk is minimal due to sparse vegetation, and the infrequent occurrence of wildland fire in the monument. Mitigation measures would be applied, but may or may not be successful during a wildland fire. Effects could be short- or long-term, and depending on the intensity or context of the fire management activity.</p>	<p><u>Planned Actions:</u> Mechanical and manual fuel reduction treatments can directly impact cultural landscapes, depending upon their location and type. Mitigation measures would be applied, and would be very successful in reducing or removing adverse impacts. Impacts would be direct, site-specific, minor, short- or long-term, and adverse.</p> <p><u>Wildland Fire:</u> Wildland fires are the same as Alternative 1.</p>

CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The National Park Service evaluates all potential impacts, including the type, context, duration, and intensity level. Type describes beneficial or adverse effects to the resource, including direct and indirect effects. Context describes the geographical location of the impact, such as site-specific, local, regional, or broader. Duration describes the length of time of the effect to the resource. Either short-term, or long-term is determined. Intensity describes the degree, level, or strength of the impact. Determination of intensity will be categorized by negligible, minor, moderate, and major. The National Park Service equates “major” impacts as “significant” impacts.

This Environmental Assessment evaluates potential impacts of Alternative 1, the no action alternative, and alternative 2, the Action Alternative, which includes planned fire management actions.

METHODOLOGY

The analysis of each resource includes a description of the affected environment and evaluation of potential impacts. Impact topics that would be subject to only a negligible impact under all alternatives were not analyzed in detail; impact topics dismissed from analysis are described in Chapter 1.

Impacts are defined in terms of type, context, duration, and intensity. Intensity and the duration timeline vary by resource. The following definitions are consistent for all resources:

Type

Adverse: An effect that detracts from its condition or appearance or moves the resource away from a desired condition.

Beneficial: A positive effect in the condition or appearance of the resource or an effect that moves the resource toward a desired condition or accomplishes stated objectives.

Direct: Impacts caused by an action that occur at the same time and place as the impact.

Indirect: Impacts that occur later in time or farther removed from the resource, but are reasonably foreseeable.

Cumulative: Impacts that result from incremental actions when added to past, present, and reasonably foreseeable future actions.

Context

Site-specific: Influences the location of the resource.

Local: Influences adjacent and nearby areas.

Regional: Influences an area that may span several counties up to several states.

National/International: Influences most of the country/Influences adjacent countries or areas worldwide.

Duration

Short-term: An effect that would no longer be detectable after a relatively brief period of time (i.e., days to months) as the resource is returned to its pre-disturbance condition or appearance.

Long-term: An effect that does not return the resource to a pre-disturbance condition or appearance and can last from several years to decades.

Intensity

Intensity levels of Negligible, Minor, Moderate, and Major, are identified for each impact topic. These impact topic-specific intensity levels are presented at the beginning of each impact topic analysis section.

CUMULATIVE IMPACT PROJECTS

Current projects include the Integrated Pest Management Plan, Oral Rabies Vaccine Program, and Replacement of the Visitor Center Theatre and Multipurpose Room. Past projects included the *Resource Protection Study Environmental Assessment/Assessment of Effect* and a cultural landscape inventory completed in 1998, revised in 2003, and revised again in 2011, the *Vascular Plant and Vertebrate Inventory of Casa Grande Ruins National Monument* prepared in 2006 (Powell et al. 2006), and *A Vegetation Classification, Distribution, and Mapping Report* completed in 2009 (Buckley et al 2009).

SOILS

AFFECTED ENVIRONMENT

Monument soils are largely derived from Quaternary age alluvial fans and terraces. They are moderately coarse to medium textured loamy soils that are well-drained to excessively well-drained (Soil Conservation Service 1991). The development of more agricultural fields combined with the approval of the Coolidge Dam to store Gila River water in the late nineteenth century resulted in a drop in the water table. Irrigated agricultural fields combined with increasing urban development, has increased the amount of groundwater pumping. The soil moisture properties have been affected by a drop in water table levels due most likely to groundwater pumping. They have been disturbed by human activity including agriculture since prehistoric times (NPS 2003).

REGULATIONS AND POLICIES

According to National Park Service *Management Policies 2006* (NPS 2006), all units in the national park system are to preserve and protect soil resources. They are to strive to understand soil resources, and to the extent possible, prevent their unnatural erosion, physical removal, or contamination and their contamination of other resources. Table 4 presents impact intensity thresholds.

Table 4. Soils Intensity Threshold Levels

Impact Topic	Negligible	Minor	Moderate	Major	Duration of Impact
Soils	Impacts to soils would not be measureable or of perceptible consequence.	Changes are detectable but local. Mitigation to offset adverse effects would be standard, noncomplex, and effective.	Effects are apparent over a large portion of the monument. Necessary measures to mitigate adverse effects would be likely successful.	Impacts are severe or of exceptional benefit over a wide area. Mitigation to offset adverse effects would be needed, but success not assured.	Short-term refers to durations of less than 5 years. Long-term refers to durations in excess of 5 years.

IMPACTS UNDER ALTERNATIVE 1: NO-ACTION (PREFERRED)

Planned Actions: Under the no-action (preferred) alternative there would be no planned fuel management actions, such as thinning projects, prescribed fire, and pile burning. There would be no impact on soils under alternative 1.

Wildland Fires: Wildfire and fire suppression activities could result in direct, site-specific, minor, short-term adverse impacts on soils. Loss of vegetative cover due to wildfire could indirectly affect soil quality through the loss of soil structure and temporary reduced porosity of soils in these impacted areas. The direct effects of wildfire on soil properties may include changes in soil chemistry (e.g., loss of nitrogen), and a reduction in porosity and organic matter (USFS 2005). Ground disturbance associated with fire suppression activities could have direct site-specific, short-term, minor, adverse effects on soils due to compaction and potential erosion and could disturb cryptobiotic soil crusts (NPS 2004b). Geologic resources would not be impacted as a result of wildfire or fire suppression activities.

Fires would be suppressed using preexisting natural and artificial barriers. Fires beyond the capacity of hand tools would be managed using engines, and may require other heavy equipment, where existing road access is available. Off road use of heavy equipment would require approval by the superintendent and accompaniment by a designated resource advisor. The use of hand tools and heavy machinery could result in ground disturbance and compaction and erosion locally. Due to the sparse nature of existing vegetation, and the low fire frequency, impacts to soils will be minor. Minimum impact fire suppression tactics would reduce the amount and extent of ground disturbance and impacts on soil resources.

Cumulative Impacts

Implementing ongoing integrated pest management treatments could help reduce damage to cryptobiotic soils, and result in cumulative and beneficial impacts on vegetation.

Conclusion

Under the no-action (preferred) alternative, direct, minor, site-specific, short-term, adverse effects on soil resources could occur due to ground disturbance and loss of vegetation cover from wildfire and fire suppression activities.

IMPACTS UNDER ALTERNATIVE 2: PLANNED FIRE MANAGEMENT ACTIVITIES

Planned Actions: Mechanical and manual fuel reduction activities would be implemented to protect human life and property. They would also be implemented to prevent damage to cultural and natural resources and physical facilities. Mechanical and manual fuel reduction treatments such as the removal of live or dead vegetation could initially result in ground disturbance and direct, site-specific, short-term, minor adverse impacts on soils. These treatments might reduce fuel loads and may help protect existing vegetation from the threat of future wildfires and indirectly protect existing soil resources in the long term.

Wildland Fire: Unplanned events would be the same as Alternative 1.

Cumulative Impacts

Implementing ongoing integrated pest management treatments could help reduce damage to cryptobiotic soils, and result in cumulative and beneficial impacts on vegetation.

Conclusion

Overall, adverse effects of alternative 2 on soil resources would result from ground disturbance caused by mechanical and manual fuel reduction treatments. Impacts would be direct, local, short-term, minor, and adverse.

VEGETATION

AFFECTED ENVIRONMENT

The monument's sparse vegetation is part of the Sonoran Desert, Lower Colorado River Valley subdivision (Buckley et al. 2009; Turner and Brown 1994). The vegetation is Sonoran Desertscrub and Mesquite Woodland (Hubbard et al. 2003), which is dominated by plants such as creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), saltbush (*Atriplex* spp.), mesquite (*Prosopis* spp.), and various cacti including saguaro (*Carnegiea gigantea*). The fuels and fire risk at the monument are minimal. In the latter half of the nineteenth century, human activity began to alter the Gila Valley landscape with an outcome that left Casa Grande Ruins National Monument as a desert island of natural desert growth surrounded by the development of irrigated agricultural fields. The development of more agricultural fields combined with the approval of the Coolidge Dam to store Gila River water causing the water table to drop resulted in the death of many mesquite trees and made the trees susceptible to disease (NPS 1992). The lowering water table may have simplified the plant communities over time, an example being the loss of mesquite as compared to vegetation at the monument 50 years ago (NPS 2003). Agriculture has potentially had other effects upon the monument vegetation from spraying fields with herbicides and pesticides by airplanes.

Figure 1 depicts vegetation types in the monument:

- Creosote bush (*Larrea tridentata*) and Fremont's wolfberry (*Lycium fremontii*) Shrubland Alliance 415 acres (162 hectares)
- Creosote bush (*Larrea tridentata*)/Mixed Annual Sparse Shrubland Alliance 32 acres (13 hectares)
- Horticulture (developed and maintained area of horticultural plants) (3 hectares) (Buckley et al. 2009)

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The current number of nonnative plant species is approximately 12, and their distribution and number appears to be increasing. The nonnative plants in the monument include Johnsongrass (*Sorghum halepense* (L.) Pers.), buffelgrass (*Pennisetum ciliare* (L.) Link), Lehmann lovegrass (*Eragrostis lehmanniana* Nees), red brome (*Bromus rubens* L.), and prickly Russian thistle (*Salsola tragus* L.) (Powell et al. 2006). Nonnative grasses and other plants prosper in disturbed areas. Other sources of invasive plants are the surrounding agricultural fields and developed urban lands.

There are no known plant species federally listed as threatened or endangered at Casa Grande Ruins National Monument.

REGULATIONS AND POLICIES

According to National Park Service *Management Policies 2006* (NPS 2006), national park system units are to maintain the components and processes of naturally evolving ecosystems, which include the natural abundance, diversity, and ecological integrity of plants. In addition, *Management Policies 2006*, Director's Order #12 – *Conservation Planning, Environmental Impact Analysis, and Decision-making*, and Director's Order #77 – *Integrated Pest Management* require that all national park system units use integrated pest management to address invasive plants and other pest issues. Table 5 presents impact intensity thresholds.

Table 5. Vegetation Intensity Threshold Levels

Impact Topic	Negligible	Minor	Moderate	Major	Duration of Impact
Vegetation	Vegetation would not be affected; effects limited to small areas.	Effects would be local on one or more species or populations. Response to fire and/or other treatments would be within the range of fire effects. Any adverse effects can be effectively mitigated.	A large segment of one or more species populations show effects that are of importance, but relatively local. Response to fire and/or other treatments would be within the expected range of fire effects. Mitigation could be extensive, but likely effective.	Considerable effects on populations over large areas. Impact is severe or of exceptional benefit to native species. Response to fire and/or other treatments would be outside the range of expected fire effects. Extensive mitigation required offsetting adverse effects to native species, but success not assured.	Short-term refers to a period of 1-3 years. Long-term refers to a period longer than 3 years.

IMPACTS UNDER ALTERNATIVE 1: NO-ACTION (PREFERRED)

Planned Actions: Under the no-action (preferred) alternative there would be no planned fuel management actions, such as thinning projects, prescribed fire, and pile burning. There would be no impact on vegetation.

Wildland Fire: The direct impacts of wildfire could include the removal and loss of vegetation. Depending on the timing and intensity, wildfire could change species composition; although different vegetation communities would experience varying impacts. The expected degree of change is minor.

Fire suppression activities could include the use of heavy equipment or vehicles but only on existing roads. Off road use of heavy equipment would require approval by the superintendent and their designated official. Increased disturbance from burned areas may lead to an increase in invasive plants. Some mortality in individuals could occur. Invasive species could continue to increase in

number and out-compete the favorable native species. However, rehabilitation efforts and monitoring for invasive species would mitigate these concerns. Impacts on vegetation from wildfire and fire suppression activities would be direct, site-specific, short- to long-term, minor, and adverse.

Cumulative Impacts

Implementing ongoing integrated pest management treatments could help retain existing vegetation and result in cumulative and beneficial impacts on vegetation.

Conclusion

Wildfire and fire suppression activities could result in direct, site-specific, short- and long-term, minor adverse impacts from the loss or damage of vegetation.

IMPACTS UNDER ALTERNATIVE 2: PLANNED FIRE MANAGEMENT ACTIVITIES

Planned Actions: Mechanical and manual fuel reduction treatments could be implemented to reduce hazardous fuels and protect human life and property and prevent damage to cultural and natural resources and physical facilities. Mechanical and manual fuel reduction treatments such as the removal of live or dead vegetation could initially result in minor short-term ground disturbance and loss or damage to vegetation locally. The establishment of invasive species could occur in the disturbed areas. In the long term, mechanical and manual fuel reduction treatments would reduce fuel loads, which could preserve native species that are sensitive to fire and help protect existing vegetation from the threat of future unplanned wildfires. Impacts would be direct, site-specific, short- and long-term, minor, and potentially beneficial.

Wildland Fire: Unplanned events would be the same as Alternative 1.

Cumulative Impacts

Mechanical and manual fuel reduction treatments to reduce fuel loads combined with mechanical integrated pest management treatments could result in minor local cumulative adverse impacts from ground disturbance. In the long term, these treatments could reduce fuel loads which could preserve native species and result in beneficial cumulative impacts on vegetation.

Conclusion

Direct, minor, short- and long-term, adverse impacts would result from ground disturbance and damage to vegetation as a result of implementing mechanical and manual fuel reduction treatments. However, implementing these treatments would reduce fuel loads and the threat, though minimal, of future fires.

ARCHEOLOGICAL RESOURCES

AFFECTED ENVIRONMENT

Casa Grande Ruin Reservation was set aside on March 2, 1889, proclaimed as the nation's first archeological preserve and cultural site on June 22, 1892, and redesignated as Casa Grande Ruins National Monument on August 3, 1918. The monument was created to protect its nonrenewable and irreplaceable cultural resources that include sixty archeological sites listed or potentially eligible for listing on the National Register of Historic Places. The dry climate has helped to preserve large numbers of artifacts such as pottery, trade items, and tools (NPS 2004). The monument is named for

the Casa Grande (Great House), a four-story prehistoric structure constructed by the ancient Sonoran Desert people who inhabited the area from 500 to 1400 A.D. Casa Grande Ruins National Monument is the finest architectural example of 14th Century Hohokam culture and archeology in the American Southwest. The monument is unique in its mission to preserve and interpret the Hohokam culture, one of the major prehistoric cultures of the Southwest.

The Great House is one aspect of a much more extensive, prehistoric irrigation community that existed along a man-made canal during the Hohokam Pre-Classic and Classic periods, nearly 1000 years of continuous human occupation. These irrigation canals rival those developed in the great irrigation civilizations of the world. Many of these sites have been impacted or destroyed by agricultural or residential development outside the monument's boundaries.

The monument was 100% surveyed in 1994. During this survey 66 sites were recorded or re-recorded. Sites located within the monument boundary are associated with the Hohokam culture. This culture occupied the area for at least 800 years. Their occupation is represented by remnants of walled structures, pit houses, mound clusters, enclosed compounds, a ball court, borrow pits, or depressions, agricultural fields, and irrigation canals.

Contemporary Native American groups that are culturally affiliated with Casa Grande Ruins National Monument and the Hohokam include the Gila River Indian Community, Tohono O'odham Nation, Salt River Pima-Maricopa Indian Community, Ak-Chin Indian Community, Pueblo of Zuni, and Hopi Tribe.

REGULATIONS AND POLICIES

Section 106 of the National Historic Preservation Act (16 United States Code 470 *et seq.*), requires the consideration of impacts on historic properties that are listed, or eligible to be listed, in the National Register of Historic Places. Federal agencies are required to coordinate consultation with State Historic Preservation Officers regarding the potential effects to the properties.

According to the National Park Service *Management Policies 2006* (USDI NPS 2006), Director's Order #28A – *Archeology*, and the mission of the National Park Service, the national park system units are charged with preserving archeological resources as elements of our national heritage for the benefit and enjoyment of present and future generations.

Table 6. Archeological Resources Intensity Threshold Levels

Impact Topic	Negligible	Minor	Moderate	Major	Duration of Impact
Archeological Resources	Impact is the lowest levels of detection – barely measurable with no perceptible consequences, either adverse or beneficial, to archeological resources. For the purpose of Section 106, the determination of effect would be “no adverse effect”.	Adverse impact would result in disturbance of a site(s), but result in little, if any, loss of significance or integrity and the National Register eligibility of the site(s) is unaffected. Beneficial impacts would result from maintenance preservation of a	Adverse impacts disturb site(s) to the extent that they do not diminish the significance or integrity of the site(s) to the extent that its National Register eligibility is jeopardized. For the purposes of Section 106, then determination of effect would be “adverse effect”.	Adverse impacts are disturbance of a site(s) which diminishes the significance and integrity of the site(s) to the extent that it is no longer eligible to be listed in the National Register. For the purpose of Section 106, the determination of effect would be “adverse effect”. Beneficial impacts result from active intervention to	Short-term refers to a period of less than 5 years. Long-term refers to a period longer than 5 years.

		site(s). For the purpose of Section 106, the determination of effect would be "no adverse effect".	Beneficial impacts result from stabilization of the site(s). For the purpose of Section 106, the determination of effect would be "no adverse effect".	preserve the site(s). For purposes of Section 106, the determination of effect would be "no adverse effect".	
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IMPACTS UNDER ALTERNATIVE 1: NO-ACTION (PREFERRED)

Planned Actions: Under the no-action (preferred) alternative there would be no planned fuel management actions, such as thinning projects, prescribed fire, and pile burning increasing the minimal risk of an unplanned wildfire. There would be no impact on archeological resources under alternative 1.

Wildland Fire: The no-action (preferred) alternative could have the potential to affect archeological resources. Fire effects on archeological resources vary depending on temperature and duration of exposure to heat. Although the vegetation available to carry a wildland fire is very sparse, archeological resources that are scattered throughout the monument could be at risk from wildfires. Potential impacts on archeological resources from wildfire could include cracking, charring, sooting, combustive residue, fracture, scorching, and melting (Sturtevant 2011).

During fire suppression activities, known archeological sites, and features, such as Casa Grande ruins, walls, and artifact scatter, would be avoided and protected; and fire qualified archeologists would monitor any ground disturbing activities. Protection of these areas is of paramount importance in the event of a fire. Planning strategies would ensure that adequate firefighting resources are available to safeguard archeological sites while firefighting tactics are performed to prevent additional resource damage.

Due to the sparse nature of vegetation in the monument, and because of the infrequent occurrence of wildland fire in the monument, Impacts on archeological resources would be site-specific, adverse, minor, and short- or long-term.

Cumulative Impacts

Integrated pest management treatments could occur within archeological sites but would not result in cumulative adverse impacts. Treatments could be beneficial for the preservation and protection of archeological sites.

Conclusion

The no-action (preferred) alternative could result in direct, minor, site-specific, short- or long-term adverse impacts on archaeological resources resulting from wildfires and fire suppression activities.

IMPACTS UNDER ALTERNATIVE 2: PLANNED FIRE MANAGEMENT ACTIVITIES

Planned Actions: Mechanical and manual fuel reduction treatments can directly impact archeological resources depending upon their location and type. Ground-disturbing treatments could directly result in adverse impacts on surface and subsurface scatter (Winthrop 2004).

During all mechanical and manual fuel reduction treatments, known archeological sites, and features, such as Casa Grande ruins, walls, and artifact scatter, would be avoided and protected; qualified archeologists would monitor any ground disturbing activities.

Impacts to archeological resources from planned fuel reduction projects would be site-specific, long-term, minor, and adverse.

Wildland Fire: Wildland fires would be the same as Alternative 1.

Cumulative Impacts

Integrated pest management treatments that remove ground disturbing pests combined with mechanical and manual fuel reduction treatments may reduce the threat of fires and reduce ground disturbance near archeological sites. These treatments could result in direct, site-specific, short- to long-term, beneficial impacts from the protection and preservation of archeological sites.

Conclusion

Fuels reduction treatments and fire suppression activities could result in short- and long-term, minor, direct, adverse impacts from disturbance of stabilizing soils which surrounds some cultural artifacts.

HISTORIC STRUCTURES

AFFECTED ENVIRONMENT

There are fifteen prehistoric and historic sites in the monument and all are on the List of Classified Structures. The Great House ("Casa Grande") is the only example of a Hohokam (1100s to 1400s) Great House still remaining in the United States. Many of the historic buildings were constructed by the Civilian Conservation Corps (1930s), some of which have been converted to the library and administrative space. Portions of the visitor center, along with other improvements, was constructed during the Mission 66-era (1960s) (NPS 1998, 2004). Table 8 is the monument's List of Classified Structures.

Table 7. Casa Grande Ruins National Monument List of Classified Structures

Structure Number	Preferred Structure Name	Significance
BLD01	Superintendent's Residence	Local
BLD04	Employee Residence	Local
BLD06	Employee Residence	Local
BLD08	Oil House	Local
BLD09	Warehouse	Local
BLD10	Equipment Building	Local
BLD11	Shop and Blacksmith Shop	Local
BLD12	Visitor Center	Local
BLD14	Ruin Shelter	Local
BLD15	Storage Building	Local
BLD16	Pumphouse	Local
BLD17	Electrical Transformer Enclosure	Local
GRD02	Compound A	Contributing
GRD03	Compound B	Contributing
GRD15	Maintenance Compound Walls	Local
GRD24	Hohokam Ballcourt	Contributing
GRD25	Residential Compound Walls	Local

Structure Number	Preferred Structure Name	Significance
MKR01	Copper Entrance Marker	Local
MRK02	Visitor Center Mather Plaque	Not Significant

REGULATIONS AND POLICIES

Section 106 of the National Historic Preservation Act (16 United States Code 470 *et seq.*), requires the consideration of impacts on historic properties that are listed, or eligible to be listed, in the National Register of Historic Places. Federal agencies are required to coordinate consultation with State Historic Preservation Officers regarding the potential effects to the properties (USDI NPS 2006).

According to the National Park Service Management Policies 2006 (USDI NPS 2006) Director's Order #28 – Cultural Resource Management Guidelines, and the mission of the National Park Service, the park system units are charged with preserving cultural resources as elements of our national heritage for the benefit and enjoyment of present and future generations.

Current laws and policies require that the following conditions be achieved in the monument regarding historic structures (Table 9):

Table 8. Historic Structure Intensity Threshold Levels

Impact Topic	Negligible	Minor	Moderate	Major	Duration of Impact
Historic Structures	Impact(s) is at the lowest levels of detection – barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be no adverse effect.	Adverse: impact would not affect the character defining features of a National Register of Historic Places eligible or listed structure or building. For purposes of Section 106, the determination of effect would be no adverse effect. Beneficial: stabilization/preservation of character defining features in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. For purposes of Section 106, the determination of effect would be no adverse	Adverse: impact would alter a character defining feature(s) of the structure or building but would not diminish the integrity of the resource to the extent that its National Register eligibility is jeopardized. For purposes of Section 106, the determination of effect would be adverse effect. Beneficial: rehabilitation of a structure or building in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. For purposes of Section 106, the determination of	Adverse: impact would alter a character defining feature(s) of the structure or building, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be adverse effect. Beneficial: restoration of a structure or building in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. For purposes of Section 106, the determination of effect would be no adverse effect	Short-term refers to a period of less than 5 years. Long-term refers to a period longer than 5 years.

		effect.	effect would be no adverse effect.		
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IMPACTS UNDER ALTERNATIVE 1: NO-ACTION (PREFERRED)

Impact Analysis

Planned Actions: Under the no-action (preferred) alternative there would be no planned fuel management actions, such as thinning projects, prescribed fire, and pile burning. There would be no impact on historic structures under the preferred alternative.

Wildland Fire: The no-action (preferred) alternative could have the potential to adversely affect historic structures. Fire effects on these resources would vary depending on temperature and duration of exposure to heat. Fire suppression activities (e.g., establishment of firelines, safety zones, and fire camps) may be ground-disturbing and could destroy artifacts and the integrity of historic structures (Winthrop 2004). Water, foam detergents, and fire retardants could damage historic structures and features by causing swelling and subsequent contraction. Other potential short-term impacts would include rapid cooling and subsequent damage (e.g., breakage, spalling, corrosion, staining, rusting) of historical and archaeological materials (Winthrop 2004). Discoloration or warping of metallic surfaces could also occur. However, the risk of a fire that would require the use of the aforementioned tactics is extremely low given the sparse vegetation at the monument. Effects could be short- or long-term depending on the intensity or context of the fire management activity. Impacts would be direct, site-specific, minor, short- or long-term, and adverse.

During fire suppression activities, historic structures would be avoided and protected; and fire qualified archeologists would monitor any ground disturbing activities. Protection of these areas is of paramount importance in the event of a fire. Planning strategies would ensure that adequate firefighting resources are available to safeguard historic structures while firefighting tactics are performed to prevent additional resource damage.

Cumulative Impacts

Mechanical integrated pest management treatments, wildfire, and fire suppression activities could result in incrementally minor adverse cumulative impacts on historic structures.

Conclusion

Historic structures could potentially be damaged from wildfire and fire suppression activities, though the fire risk is very low due to sparse vegetation and low fire frequency. Impacts on historic structures would be direct, site-specific, minor, short- to long-term, and adverse.

IMPACTS UNDER ALTERNATIVE 2: PLANNED FIRE MANAGEMENT ACTIVITIES

Planned Actions: Mechanical and manual fuel reduction treatments can directly impact historic structures, depending upon their location and type. Identified mitigation measures would reduce any potential adverse effects to historic structures. Impacts would be direct, site-specific, minor, short- or long-term, and beneficial.

During all mechanical and manual fuels reduction activities, known historic sites and features, such as Casa Grande ruins, walls, and artifact scatter, would be avoided and protected, and qualified archeologists would monitor any ground disturbing activities.

Wildland Fire: Wildland fires would be the same as Alternative 1.

Cumulative Impacts

Integrated pest management treatments that remove ground disturbing pests combined with mechanical and manual fuel reduction treatments could reduce the threat of fires and reduce ground disturbance near historic structures. These treatments could result in local, short- to long-term, beneficial impacts from the protection and preservation of historic structures.

Conclusion

Historic structures could potentially be damaged from wildfire and fire suppression activities, though the fire risk is very low due to sparse vegetation and low fire frequency. Historic structures could benefit from implementation of mechanical and manual fuel reduction treatments that would lessen the potential for wildfires that can damage or destroy fire-susceptible sites.

Impacts on historic structures would be direct, site-specific, minor, short- to long-term, and beneficial and potentially, adverse.

CULTURAL LANDSCAPES

AFFECTED ENVIRONMENT

Cultural landscapes are the result of human adaptation and use of natural resources and may be expressed in land organization and division, settlement and circulation patterns, and types of structures. The cultural landscape of the monument has been developed by various cultures including the Hohokam, historic explorers and settlers, the National Park Service, and Depression-era work program enrollees. Besides structures and their village arrangement, Hohokam landscape elements include borrow pits, irrigation canals, trash mounds, a ball court, and agricultural features. Historic landscape elements include remnants of roads including a stage road, can dump, maintenance and residential compound walls, and a copper entrance marker. Some of cultural landscape elements are on the monument's List of Classified Structures (Table 9). The cultural landscape at the monument is eligible for the National Register of Historic Places (NPS 1998).

REGULATIONS AND POLICIES

Section 106 of the National Historic Preservation Act (16 United States Code 470 *et seq.*), requires the consideration of impacts on historic properties that are listed, or eligible to be listed, in the National Register of Historic Places. Federal agencies are required to coordinate consultation with State Historic Preservation Officers regarding the potential effects to the properties (USDI NPS 2006).

According to the National Park Service Management Policies 2006 (USDI NPS 2006) Director's Order #28 – Cultural Resource Management Guidelines, and the mission of the National Park Service, the park system units are charged with preserving cultural resources as elements of our national heritage for the benefit and enjoyment of present and future generations.

Current laws and policies require that the following conditions be achieved in the park monument regarding cultural landscapes (Table 10):

Table 9. Cultural Landscape Intensity Threshold Level

Impact Topic	Negligible	Minor	Moderate	Major	Duration of
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					Impact
Historic Structures	Impact(s) is at the lowest levels of detection – barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be no adverse effect.	Adverse: impact would not affect the character defining patterns or features of a National Register of Historic Places eligible or listed cultural landscape. For purposes of Section 106, the determination of effect would be no adverse effect. Beneficial: preservation of character defining patterns and features in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes. For purposes of Section 106, the determination of effect would be no adverse effect.	Adverse: impact would alter a character defining patterns or feature(s) of the cultural landscape but would not diminish the integrity of the resource to the extent that its National Register eligibility is jeopardized. For purposes of Section 106, the determination of effect would be adverse effect. Beneficial: rehabilitation of a landscape or its patterns and features in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes. For purposes of Section 106, the determination of effect would be no adverse effect.	Adverse: impact would alter a character defining patterns or features of the cultural landscape to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be adverse effect. Beneficial: restoration of a landscape or its patterns and features in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes. For purposes of Section 106, the determination of effect would be no adverse effect	Short-term refers to a period of less than 5 years. Long-term refers to a period longer than 5 years.

IMPACTS UNDER ALTERNATIVE 1: NO-ACTION (PREFERRED)

Planned Actions: Under the no-action (preferred) alternative there would be no planned fuel management actions, such as thinning projects, prescribed fire, and pile burning. There would be no impact on cultural landscapes under this alternative as no planned activities would be implemented.

Wildland Fire: The no-action (preferred) alternative would have the potential to adversely affect cultural landscapes. Fire effects on cultural landscapes would vary depending on temperature and duration of exposure to heat. Fire suppression activities (e.g., establishment of firelines, safety zones, and fire camps) may be ground-disturbing and could destroy artifacts and the integrity of cultural landscapes (Winthrop 2004). Water, foam detergents, and fire retardants could damage historic landscape features by causing swelling and subsequent contraction. All cultural landscapes that are located throughout the monument would be at risk from wildfire. Wildland fire risk would be minimal due to the presence of sparse vegetation, and low frequency of fire return. Effects could be short- or long-term depending on the intensity or context of the fire management activity. Impacts would be direct, site-specific, minor, short- or long-term, and adverse.

During fire suppression activities, cultural landscapes would be avoided and protected; and fire qualified archeologists would monitor any ground disturbing activities. Protection of these areas is of paramount importance in the event of a fire. Planning strategies would ensure that adequate firefighting resources are available to safeguard cultural landscapes while firefighting tactics are performed to prevent additional resource damage.

Cumulative Impacts

Mechanical integrated pest management treatments, wildfire, and fire suppression activities that result in ground disturbance would result in direct, site-specific, minor, short- or long-term adverse impacts on cultural landscapes.

Conclusion

Cultural landscapes could potentially be damaged by wildfire and fire suppression activities. Impacts on cultural landscapes would be direct, site-specific, minor, short-term to direct long-term, and adverse.

IMPACTS UNDER ALTERNATIVE 2: PLANNED FIRE MANAGEMENT ACTIVITIES

Planned Actions: Mechanical and manual fuel reduction treatments can directly impact cultural landscapes, depending upon their location and type. Effects would be direct, site-specific, minor, short- or long-term, and adverse.

During all mechanical and manual fuel reduction treatments, known landscape features would be avoided and protected, and qualified archeologists would monitor any ground disturbing activities.

Unplanned Events: Unplanned events would be the same as Alternative 1.

Cumulative Impacts

Mechanical integrated pest management treatments and mechanical and manual fuel reduction treatments could result in ground disturbance and local, minor, short-term adverse impacts on cultural landscapes.

Conclusion

Mechanical and manual fuel reduction treatments could decrease the threat of future wildland fires which could result in minor long-term and beneficial impacts on cultural landscapes. Ground disturbing mechanical and manual fuel reduction treatments could result in direct, site-specific, minor, short-term adverse impacts on cultural landscapes.

CHAPTER 4: CONSULTATION/COORDINATION

AGENCIES, TRIBES, ORGANIZATIONS, AND INDIVIDUALS CONTACTED

Public notification and scoping included the March 2011 distribution of a scoping letter mailed to approximately 14 individuals, organizations, government agencies, and tribes. The Arizona State Historic Preservation Office, U.S. Fish and Wildlife Service, and Arizona Game and Fish Department received this notice. The scoping letter outlined the environmental assessment purpose, fire management goals and objectives, and solicited public input on issues, concerns, and potential alternatives. The issues and concerns raised by this process are summarized in the Public Scoping Report (Appendix A). The National Park Service has consulted the U.S. Fish and Wildlife Service to satisfy ESA Section 7 requirements (Chapter 1, page 5). The preferred alternative is the no action alternative, with no planned actions. Responses to unplanned ignitions is described in Alternative 1 in Chapter 2. A letter including the description of Alternative 1 and that the NPS has selected the alternative with no actions, will be sent to the Arizona SHPO to satisfy NHPA Section 106 requirements. Table 11 lists document preparers and reviewers.

Table 10. Document Preparers and Reviewers

Name	Role on Project	Title
National Park Service		
Kevin Parrish	Project Coordinator	Project Leader, and fire/fuels management subject matter expert
Karl Cordova	Monument Information	Superintendent, Casa Grande Ruins National Monument
Sheldon Baker	Cultural Resource Consultation	NHPA Specialist
Derek Toms	NEPA Consultation Cultural Resources Consultation	NEPA Specialist NHPA Specialist
Michele Girard	Technical Reviewer	Ecologist
URS Corporation		
Leslie Watson	Co-Project Manager	Project Manager
Keith Pohs	Co-Project Manager, Technical Writer-Editor, Resources, Contributing Author	Senior Environmental Planner
David Konopka	Resources, Contributing Author	Environmental Planner
Allison Getty	Resources, Contributing Author	Environmental Planner

LIST OF RECIPIENTS

FEDERAL AGENCIES

U.S. Fish and Wildlife Service
U.S. Bureau of Land Management
U.S. Bureau of Indian Affairs

TRIBAL GOVERNMENTS

Ak-Chin Indian Community
Gila River Indian Community

The Hopi Tribe

Salt River Pima-Maricopa Indian Community

Tohono O'odham Nation

The Zuni Tribe

ARIZONA STATE AGENCIES

Arizona Game and Fish Department

Arizona State Historic Preservation Office

Arizona State Parks

LOCAL AGENCIES

City of Coolidge

ORGANIZATIONS

The Archeological Conservancy

CHAPTER 5: REFERENCES

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APPENDIX A: SCOPING REPORT

CASA GRANDE RUINS NATIONAL MONUMENT FIRE MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

SCOPING SUMMARY REPORT

Prepared for:
National Park Service
Casa Grande Ruins National Monument, Arizona

May 2011

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LIST OF ABBREVIATIONS AND ACRONYMS

EA	Environmental Assessment
NEPA	National Environmental Policy Act
PEPC	Planning, Environment and Public Comment

INTRODUCTION

OVERVIEW

National Park Service 2008 *Management Policies* and Director's Order 18 require that "each park with vegetation capable of burning will prepare a Fire Management Plan to guide a fire management program that is responsive to the park's natural and cultural resource objectives and to safety considerations for park visitors, employees, and developed facilities. Parks with an approved Fire Management Plan and accompanying National Environment Policy Act compliance may utilize wildland fire to achieve resource benefits in pre-determined fire management units. Parks lacking an approved Fire Management Plan may not use resource benefits as a primary consideration influencing the selection of a suppression strategy, but they must consider the resource impacts of suppression alternatives in their decisions."

Casa Grande Ruins National Monument currently follows a 2004 *Fire Management Plan* to guide its wildland fire program. In the past, parks could use the 2003 Healthy Forest Initiative Categorical Exclusion to be in compliance with National Environmental Policy Act (NEPA) requirements. However, based on recent case law, the decision was made to not rely on the 2003 Healthy Forest Initiative Categorical Exclusion (NPS 2008).

An environmental assessment (EA) for the fire management plan is being prepared to bring the monument into compliance with Director's Order 18 and NEPA requirements and allow them to continue implementing the existing fire management plan and applicable fire management programs. The EA analyzes the environmental consequences of implementing the existing fire management plan. The EA impact analysis is based on whether the no-action alternative and the action alternative could impact resources and management actions at Casa Grande Ruins National Monument.

One of the first steps of the NEPA process for the assessment was scoping, which is "an early and open process for determining the issues to be addressed and for identifying the significant issues related to proposed action" (Title 40 Code of Federal Regulations Part 1501.7). During scoping, Casa Grande Ruins National Monument actively sought to engage potentially affected or interested federal, state, and local agencies; tribal entities; and the public. Scoping for the EA commenced on March 15, 2011, and concluded on April 10, 2011. This report is a summary of the scoping process and results.

PRELIMINARY ALTERNATIVES

The no-action alternative and the action alternative were developed through discussions among Casa

Grande Ruins National Monument, the Fire Management Office at Saguaro National Park, and the National Park Service Intermountain Region. Each alternative addresses specific management objectives and are feasible for local implementation.

The no action alternative would continue to manage wildland fires consistent with the existing Fire Management Plan. Under this alternative, all wildland fires would receive full suppression commensurate with values to be protected and human safety. Firefighters with hand tools, and in some situations with mechanized equipment, would be rapidly assigned to suppress all fires. The full suppression strategy could include fire line construction using hand tools, chainsaws, and water hose lines. The use of chemical retardants would require the superintendent's approval. Off road vehicle use could be permitted on a case-by-case basis and would be pre-approved by the Superintendent. Under the no-action alternative, there would be no fire management projects implemented such as the reduction of hazardous fuels or prescribed fire. If fuel reduction projects are proposed, these management activities could be conducted only after completing additional NEPA compliance for individual projects.

The action alternative would allow for implementation of a range of fire management activities. These activities and treatments would be centered on public and firefighter safety, communities identified as at risk from wildland fires (wildland-urban interface), historic fire regimes, current condition class, and collaboration with other agencies and stakeholders. Wildland fire management actions could include suppression, and the use of fuel reduction projects.

SCOPING PROCESS

This section provides a summary of the objectives of scoping and a description of the scoping process and agency coordination for the EA.

OBJECTIVES

The objectives of the scoping process include the following:

- Coordinate with affected federal, state, and local agencies, affected tribal entities and other interested parties.
- Determine the scope of analysis, significant issues to be analyzed in detail in the EA, insignificant issues for which detailed analysis is not warranted, and the range of alternatives and impacts.
- Identify
 - Issues that have been covered by prior environmental review and can be eliminated from detailed study
 - Cumulative actions and environmental assessments or environmental impact statements that are being or will be prepared that are related to but are not part of the scope of the EA under consideration
 - Other environmental review and consultation requirements (e.g., Endangered Species Act, National Historic Preservation Act) so the required analyses and studies can be prepared and integrated with the EA

DESCRIPTION OF THE SCOPING PROCESS

Methods used to involve the public and facilitate exchange of updated project information throughout the planning process have included various types of announcements, and agency and tribal coordination.

Announcements

Letter

An announcement letter was distributed to approximately 14 entities or persons on March 10, 2011 to notify government agencies, nongovernmental organizations, and other interested parties of the intent to prepare an EA and the scoping process (Appendix A.1). The mailing list included local elected or municipal officials; federal and state agencies, tribal entities; and other interested parties.

The mailing list for future notices will be supplemented throughout the process as people notify the monuments of their interest in the project through direct requests, participation in the public meeting, or submission of comments.

Planning, Environment and Public Comment (PEPC) Website

The public website for the project, located at <http://parkplanning.nps.gov/projectHome.cfm?projectID=34465>, offers interested parties online information pertaining to the project. This website is designed to encourage participation by offering online comment submissions and the option to be added to the mailing list.

Agency and Tribal Coordination and Consultation

Notification letters were mailed to Federal and State agencies and Native American Tribes expected to have an interest in fire management or a regulatory review responsibility. The letter invited scoping comments and provided information on who to contact to request additional information.

Samples of the coordination letters are included in Appendix A.2.

SUMMARY OF SCOPING COMMENTS

INTRODUCTION

This section provides a summary of the method used to organize and analyze comments, a quantification of how many comments were received and issues identified, and the nature of the issues identified during scoping. Although the National Park Service will continue to consider comments throughout the EA process, the scoping comments documented in this report were received during the formal scoping period that ended April 15, 2011.

Comments regarding the proposed action alternatives will be considered by the National Park Service in refining the project description and alternatives that will serve as the basis for the impact assessment. Council on Environmental Quality regulations implementing NEPA requires agencies to identify alternative ways of meeting their need for the action. Council on Environmental Quality regulations also requires an analysis of the impacts of a proposed action on the environment. These impacts include effects on natural, human, and cultural resources. Discussions with affected public or agencies, such as those that have occurred through this scoping effort, help to define and evaluate effects of the different alternatives on the environment. Comments relating to environmental impacts were considered by the National Park Service in developing the scope of the EA. The affected environment and impacts of the alternatives in the environmental consequences section of the EA address the resource issues identified during scoping. Concerns about the EA and decision-making processes were considered in refining and modifying these processes throughout the remainder of the EA preparation.

Some public comments may be considered outside the scope of this EA if the issue does not pertain to this project, is not within the jurisdiction of the National Park Service to resolve, cannot be reasonably addressed within the scope of this process, is being addressed through a separate NEPA process, or does not satisfy the project's purpose and need. Those issues that are considered to be outside the scope of the EA are identified by issue or resource under Section 3.5.

COMMENT ORGANIZATION

Mailed letters and e-mail messages were reviewed, documented, and entered into a database to facilitate organization, sorting, analytical review, and management of the comments in several different ways. The database is structured to organize comments into separate issue categories, identify the type (e.g., letter, e-mail, comment form), and source of submittal (e.g., agency, special interest group, citizen), and tally the number of comments using various combinations of identifiers.

Using the experience and professional judgment of the study team, the comments were organized into one major issue category; on a broad scale, the category pertains to environmental impacts.

Environmental Impacts: Comments addressed the need to evaluate the potential impacts of fire management on natural resources. Topic categories include the following:

- Biological Resources

SUMMARY OF PUBLIC COMMENTS

One comment submission was received from one agency and entered into the project database. Comments were parsed from the e-mail into one main issue category and two concern statements. The comments and issues are summarized in Section 3.4 along with a sample of representative quotations.

Although quantifying comments and issues is helpful in summarizing comments for public review and helping to guide future EA studies, it is important to note that the level of importance of comments to the decision-making process is not influenced by the frequency of a specific issue. In some cases, for example, a person may have submitted more than one letter or mentioned the same issue several times in their letter; therefore, his or her issues may have been recorded several times. In contrast, if only one comment was made about a certain issue, it will have the same level of importance as any other comment.

ISSUES IDENTIFIED DURING SCOPING

The National Environmental Policy Act requires Federal agencies to focus their analysis and documentation on the important issues related to a proposed action. These issues serve as the basis for developing and comparing alternatives. The following section provides a summary of the key issues identified during scoping, including a sample of representative quotations from the comment submissions. These issues will be considered and analyzed in the EA. Those issues that will not be addressed in the EA are identified under Section 3.5.

Biological Resources

Concern #1: Potential impacts on wildlife species including threatened and endangered species and their habitats.

Representative Quotations

- “Species potentially impacted could be ground nesting birds such as quail and burrowing owls; reptiles such as Tucson shovel-nosed snakes (a potential species for ESA listing, and perhaps on the monument), tortoise, Gila monster and many other species and rodents.”
- “In general, treatments during winter months such as October to February would likely have least impacts since birds would not be nesting and most reptiles would likely be in burrows where they would probably be protected from low-intensity fire.”

Concern #2: Surface disturbing activities could potentially result in the establishment of non-native species.

Representative Quotation

- “Non-native grasses and other non-native vegetation prosper in disturbed areas, thus, if any clearing is being considered within the alternatives, there is potential to create an opening for invasive species and actually increase the potential for fire in the future.”

ISSUES OUTSIDE THE SCOPE OF THE EA

The scoping comments were not considered outside the scope of the EA.

SUMMARY OF FUTURE STEPS IN THE EA PROCESS

The EA process requires a team of interdisciplinary resource specialists to prepare and review the analysis combined with additional opportunities for public input. An important part of the National Park Service planning process is engaging the public and relevant agencies from the earliest stages of and throughout the planning process to address issues, comments, and concerns. The steps of the planning process and agency authority and decisions to be made are:

- Distribute the public review EA
- Analyze and incorporate public and agency comments
- Prepare a decision document; a Finding of No Significant Impact, if appropriate, and EA errata, if appropriate

PUBLIC REVIEW OF EA

A summary of the scoping process, methodology, and the findings of the impact assessment will be documented in the EA. The EA will be made available for public review, which is currently expected to be in December 2012. The availability of the EA will be announced on the PEPC website, and letters of availability will be mailed to those on the public scoping mailing list. Public comments will be accepted for a minimum of 30 days during this review period.

APPENDIX A.1 ANNOUNCEMENTS



United States Department of the Interior
NATIONAL PARK SERVICE

Casa Grande Ruins National Monument
1100 W. Ruins Drive
Coolidge, Arizona, 85128



In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Dear Friends and Neighbors:

The National Park Service (NPS) has initiated an environmental assessment (EA) for Casa Grande Ruins National Monument regarding the management of fire and hazardous fuel reductions within the national monument boundaries. We are seeking public comment for this project during the public scoping period.

Why an assessment is needed

The park has an existing Fire Management Plan however, the level of environmental analysis completed for the plan, called the Healthy Forest Initiative Categorical Exclusion, is no longer considered adequate to meet NPS policy. Therefore a more detailed assessment needs to be conducted. Decisions reached in the EA will be used to revise the current plan, if necessary.

How you can help

We would like to hear your ideas and concerns about fire management including fire suppression, the use of prescribed fire to protect cultural and natural resources, and the use of physical treatment methods to reduce hazardous fuel loads and protect structures.

Plan alternatives

Currently there are two proposed alternatives. The proposed action alternative would allow for implementation of a full range of fire management activities. Wildland fire management actions could include suppression, the use of prescribed fire for resource benefit, physical treatments, and herbicide treatments. The main focus of these activities and treatments is centered on public and firefighter safety, communities identified as at risk from wildland fires (Wildland Urban Interface), historic fire regimes, current condition class, and collaboration with other agencies and stakeholders.

The no action alternative would continue to manage wildland fires consistent with the existing Fire Management Plan and Categorical Exclusion. Fire management activities would be in response to emergencies and to protect people and park resources.



What's next?

At this time, the Superintendent is announcing a 30-day public scoping period to solicit public comments on this proposal. During this scoping period, the public is invited to identify any issues or concerns they might have with the proposed project so that the National Park Service can appropriately consider them in the preparation of the Environmental Assessment. You may submit suggestions, comments, and concerns electronically (the NPS's preferred method of receiving comments) at the NPS's Planning, Environment, and Public Comment (PEPC) website at:

<http://parkplanning.nps.gov/> and select Casa Grande Ruins National Monument

Written comments may be sent to:

Superintendent:

Karl Cordova

Park Address:

1100 West Ruins Drive

Coolidge, AZ 85128

Please submit your scoping comments by Close of Business, April 10, 2011. Once the draft EA is completed, it will be made available for public review for a 30-day period. If you wish to be added to the park's mailing list for this or other announcements, please be sure to indicate that in your response.

Sincerely,



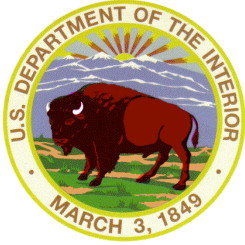
Karl P. Cordova
Superintendent

bcc:

IMDE
Central Files



APPENDIX A.2
AGENCY AND TRIBAL COORDINATION AND CONSULTATION



UNITED STATES DEPARTMENT OF THE
INTERIOR
NATIONAL PARK SERVICE

Casa Grande Ruins National Monument
1100 W. Ruins Drive
Coolidge, Arizona, 85128



In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Steve Spangle, Field Supervisor
U.S. Fish and Wildlife Service
2321 W. Royal Palm Road, Suite 103
Phoenix, AZ 85021

Subject: Request for Input with ESA Species List and Notice of Proposed Environmental
Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Mr. Spangle:

In accordance with the provisions of the National Environmental Policy Act (NEPA), the Casa Grande Ruins National Monument has initiated a NEPA analysis (an Environmental Assessment) on how the National Park Service (NPS) should manage wildland fire and hazard fuel reduction within the park. NPS Policy, which adheres to the federal policy, recognizes the need for wildland fire to be managed in order to fulfill the agency's goals to protect, perpetuate or recreate natural environments and historic scenes/landscapes. In addition, NPS policy specifies that every NPS unit with burnable vegetation will have an updated Fire Management Plan. Due to NPS direction dated May 28, 2008, NPS units located in the Supreme Court 9th Circuit Court of Appeals jurisdiction may no longer use the Healthy Forest Initiative (HFI) Categorical Exclusion. The National Park Service will use the decisions reached through the NEPA process for the corresponding fire management plans.

There are two proposed alternatives. **Alternative A (No Action)** would continue to manage wildland fires consistent with the existing Fire Management Plan and the HFI. Fire management activities would be in response to emergencies and to protect people and park resources. **Alternative B (Proposed Action/NPS Preferred Alternative)** allows for implementation of a full range of fire management activities, including wildland fire and fuels management. Wildland fire activities could include suppression and wildland fire use for resource benefit. Additional fuels management activities could include prescribed fire, mechanical, and herbicide treatments. The main focus of these activities and treatments is centered on public and firefighter safety, communities identified as at risk from wildland fires (wildland urban interface), historic fire regimes, current condition class, and collaboration with other agencies and stakeholders.

Based on current threatened and endangered species and critical habitat information from surveys and from the U.S. Fish and Wildlife Service's list, within the Casa Grande Ruins National Monument boundaries we have identified that listed species or their habitats are not present. However, as the park does contain burrowing owl habitat, NPS is considering potential effects on this species from fire management activities.

To facilitate our compliance with NEPA for this proposed federal action, we request your input. For your records, the title of this project is Fire Management Plan Environmental Assessment/Assessment of Effect, Casa Grande Ruins National Monument, January 2011. Your reply will be most appreciated and helpful if we receive it by April 10, 2011. Should you have any questions or need additional information at this time, you can contact Karl Cordova at 520-723-3172 x21 or Karl_Cordova@nps.gov.

Sincerely,

Karl P. Cordova
Superintendent

bcc:

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Casa Grande Ruins National Monument**Biological Assessment – Fire Management Plan Environmental Assessment/Assessment of Effect**

3/2/12 – Michele Girard, Ecologist, National Park Service, Southern Arizona Office, Phoenix, AZ

Background

Casa Grande Ruins National Monument (CAGR) is in the process of completing a Fire Management Plan Environmental Assessment to guide fire management and fuels reduction projects at the monument. Vegetation density at the monument has been decreasing at the monument for several decades which is attributed to the drop in the water table throughout the area. Due to the lack of accumulation of fuels, there is no need for fuels reduction or prescribed fire. We are recommending the No Action Alternative for CAGR. There are no known Threatened or Endangered species known to occur at the monument. The Tucson shovel-nosed snake is a Candidate for listing. There is one 'special status species', the western burrowing owl.

Tucson Shovel-Nose Snake*Candidate - No Effect*

The Tucson shovel-nosed snake (*Chionactis occipitalis klauberi*) is not known to be present in the monument but suitable habitat exists. The monument was surveyed by FWS as part of their determination on listing the species, and no snakes were detected. The species preferred habitat is creosote-mesquite floodplain environments in associated soils that are soft, sandy loams, with sparse gravel. The historic range is roughly 35 mile-wide swath running along the Phoenix-Tucson corridor in northeastern Pima, southwestern Pinal and eastern Maricopa counties. Historically found in Pima County in the Avra and Santa Cruz valleys and in western Pinal and a portion of eastern Maricopa Counties. The current range is similar to its historical range, but the snake has apparently disappeared from some areas. The last verifiable record of the subspecies in Pima County was in 1979 in the Avra Valley. Populations appear to be persisting in areas dominated by creosote flats along State Route 79, north of Florence and south of Florence Junction; along Maricopa Road (including State Route 238) between Maricopa and Gila Bend (likely including much of the Rainbow Valley and lower Vekol Wash); east of the San Tan Mountains; along State Route 349 between Maricopa and Casa Grande; south of Interstate 8 near the northern boundary of the Tohono O'odham Reservation; and in the vicinity of the Santa Cruz Flats near Eloy and Picacho. (Information source (3/2/12):

<http://www.fws.gov/southwest/es/arizona/Documents/Redbook/Tucson%20Shovelnosed%20Snake%20RB.pdf>

There would be no effect to the Tucson shovel-nosed snake from the selection of the No Action alternative.

Western Burrowing Owl*Bird of Conservation Concern - No Effect*

The Western Burrowing Owl (*Athene cunicularia hypugaea*) is a grassland specialist distributed throughout w. North America, primarily in open areas with short vegetation and bare ground in desert, grassland, and shrub-steppe environments. Burrowing Owls are dependent on the presence of burrowing mammals (primarily prairie dogs and ground squirrels), whose burrows are used for nesting and roosting. Burrowing Owls are protected by the Migratory Bird Treaty Act in the United States and Mexico. They are listed as Endangered in Canada and Threatened in Mexico. They are considered by the U.S. Fish and Wildlife Service (USFWS) to be a *Bird of Conservation Concern* at the national level. (Information source: Klute, D. S., L. W. Ayers, M. T. Green, W. H. Howe, S. L. Jones, J. A. Shaffer, S. R. Sheffield, and T. S. Zimmerman. 2003. Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R6001-2003, Washington, D.C.)

Western Burrowing Owls are known to inhabit the monument. Because we are selecting the No Action alternative, there would be no effect to this population.

SUBMITTED BY EMAIL

scott_richardson@fws.gov

To Karl_Cordova@nps.gov

04/11/2011 12:40 PM MST

cc

Subject

Fire Management Plan EA/Assessment of Effects, Casa Grande Ruins National Monument

Dear Mr. Cordova:

Thank you for your letter of March 10, 2011, requesting our input on your Notice of Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument. Due to workload issues, we have not been able to thoroughly assess the proposed alternatives for the fire management plan. We have generally reviewed your correspondence and we agree with your assessment that Casa Grande Ruins National Monument does not support any listed species or their habitats. We are supportive of your efforts to consider effects to the western burrowing owl (*Athene cunicularia hypugaea*), a sensitive species proposed for coverage under three local habitat conservation plans in adjacent Pima County. In addition, we have recently completed our finding on a petition to list the Tucson shovel-nosed snake (*Chionactis occipitalis klauberi*). Our finding is that this snake warrants protection under the Endangered Species Act, but that action is currently precluded by higher priority listing actions under review by our agency. As a result, the Tucson shovel-nosed snake has been placed on the list of candidate species whose listing actions will be completed as resources become available. We believe that Casa Grande Ruins National Monument potentially supports Tucson shovel-nosed snake habitat. If possible, surveys should be conducted to determine if the Tucson shovel-nosed snake occupies any of the areas proposed for fire management. We also recommend that, to the extent possible, fire management actions limit soil compaction over wide areas. This will reduce impacts to soil conditions that are favorable to the shovel-nosed snake, and reduce the potential for direct mortality.

We appreciate the opportunity to provide input on this action. Please contact us if we can be of further assistance or if you have any questions regarding our comments.

Sincerely,

Scott Richardson
U.S. Fish and Wildlife Service
Tucson Suboffice
(520) 670-6150 x 242



United States Department of the Interior
NATIONAL PARK SERVICE

Casa Grande Ruins National Monument
1100 W. Ruins Drive
Coolidge, Arizona, 85128



In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Mr. Jim Garrison & Staff
AZ State Parks/SHPO
1300 West Washington
Phoenix, AZ 85007

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Mr. Garrison & Staff:

Casa Grande Ruins National Monument has an existing Fire Management Plan (FMP) however, the level of environmental analysis completed for the plan, called the Healthy Forest Initiative Categorical Exclusion, is no longer considered adequate to meet National Park Service (NPS) policy. Therefore a more detailed assessment needs to be conducted. Decisions reached in the Environmental Assessment (EA) will be used to revise the current plan, if necessary.

There are two proposed alternatives. **Alternative A (No Action)** would continue to manage wildland fires consistent with the existing Fire Management Plan and the Healthy Forest Initiative. Fire management activities would be in response to emergencies and to protect people and park resources. **Alternative B (Proposed Action/NPS Preferred Alternative)** allows for implementation of a full range of fire management activities, including wildland fire and fuels management.

The National Park Service will work collaboratively with agencies, tribes, communities, organizations, and other public interested in participating in the EA process. With this letter, we would like to ask that you be a cooperating agency by requesting your early and continued input in the EA process. NPS will post a Scoping Announcement at the NPS's Planning, Environment, and Public Comment (PEPC) website at: <http://parkplanning.nps.gov/> and select Casa Grande Ruins National Monument. The Public Announcement will provide an introduction to the FMP EA, which begins the scoping process for this effort.


To assist in the preparation of the EA, the National Park Service has contracted with a consultant, URS Corporation, which has a goal of completing the EA by October 2011. NPS resource specialists and their counterparts at URS Corporation may contact you if necessary to discuss the preliminary fire management planning criteria, planning process, and/or issues associated with the plan.

For your records, the title of this project is Fire Management Plan Environmental Assessment/Assessment of Effect, Casa Grande Ruins National Monument, January 2011. Your reply will be most appreciated and

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IN AMERICA 

helpful if we receive it by April 10, 2011. Should you have any questions or need additional information at this time, you can contact Karl Cordova at 520-723-3172 x21 or via email at Karl_Cordova@nps.gov.

Sincerely,

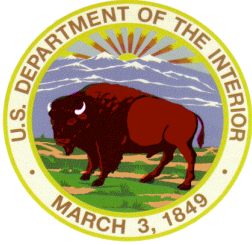


Karl P. Cordova
Superintendent

bcc:

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UNITED STATES DEPARTMENT OF THE
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Casa Grande Ruins National Monument
1100 W. Ruins Drive
COOLIDGE, ARIZONA, 85128

In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Carmen Narcia
Ak-Chin Indian Community
42507 W. Peters and Nall Road
Maricopa, AZ 85239

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Ms. Narcia:

In accordance with the provisions of the National Environmental Policy Act (NEPA), Casa Grande Ruins National Monument has initiated a NEPA analysis (an Environmental Assessment 'EA') on how the National Park Service (NPS) should manage wildland fire and hazard fuel reduction within the parks. NPS Policy, which adheres to the federal policy, recognizes the need for wildland fire to be managed in order to fulfill the agency's goals to protect, perpetuate or recreate natural environments and historic scenes/landscapes. In addition, NPS policy specifies that every NPS unit with burnable vegetation will have an updated Fire Management Plan. Due to NPS direction dated May 28, 2008, NPS units located in the Supreme Court 9th Circuit Court of Appeals jurisdiction may no longer use the Healthy Forest Initiative (HFI) Categorical Exclusion. The National Park Service will use the decisions reached through the NEPA process to prepare the corresponding fire management plans.

There are two proposed alternatives. **Alternative A (No Action)** would continue to manage wildland fires consistent with the existing Fire Management Plan and the HFI. Fire management activities would be in response to emergencies and to protect people and park resources.

Alternative B (Proposed Action/NPS Preferred Alternative) allows for implementation of a full range of fire management activities, including wildland fire and fuels management. Wildland fire activities could include suppression and wildland fire use for resource benefit. Additional fuels management activities could include prescribed fire, mechanical, and herbicide treatments. The main focus of these activities and treatments is centered on public and firefighter safety, communities identified as at risk from wildland fires (wildland urban interface), historic fire regimes, current condition class, and collaboration with other agencies and stakeholders.

Section 106 consultation as defined in the National Historic Preservation Act of 1966 will be completed by NPS cultural resource specialists prior to the implementation of the updated Fire Management Plan. Although general guidelines for the treatment of cultural resources will be

discussed in the EA, the level of documentation required to satisfy the Arizona State Historic Preservation Office requires site location maps and site forms. Because this information cannot be included in the EA, a public document, we will prepare compliance documents associated with Section 106 consultation in addition to preparation of the EA.

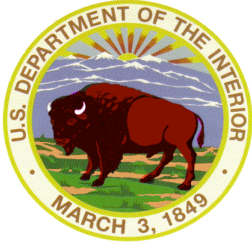
For your records, the title of this project is Fire Management Plan Environmental Assessment/Assessment of Effect, Casa Grande Ruins National Monument, January 2011. Your reply will be most appreciated and helpful if we receive it by April 10, 2011. Should you have any questions or need additional information at this time, you can contact Karl Cordova at 520-723-3172 x21 or Karl_Cordova@nps.gov.

Sincerely,

Karl P. Cordova
Superintendent

bcc:

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UNITED STATES DEPARTMENT OF THE
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Casa Grande Ruins National Monument
1100 W. Ruins Drive
COOLIDGE, ARIZONA, 85128

In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Barnaby Lewis
Gila River Indian Community
P. O. Box 2140
Sacaton, AZ 85247

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Mr. Lewis:

In accordance with the provisions of the National Environmental Policy Act (NEPA), Casa Grande Ruins National Monument has initiated a NEPA analysis (an Environmental Assessment 'EA') on how the National Park Service (NPS) should manage wildland fire and hazard fuel reduction within the parks. NPS Policy, which adheres to the federal policy, recognizes the need for wildland fire to be managed in order to fulfill the agency's goals to protect, perpetuate or recreate natural environments and historic scenes/landscapes. In addition, NPS policy specifies that every NPS unit with burnable vegetation will have an updated Fire Management Plan. Due to NPS direction dated May 28, 2008, NPS units located in the Supreme Court 9th Circuit Court of Appeals jurisdiction may no longer use the Healthy Forest Initiative (HFI) Categorical Exclusion. The National Park Service will use the decisions reached through the NEPA process to prepare the corresponding fire management plans.

There are two proposed alternatives. **Alternative A (No Action)** would continue to manage wildland fires consistent with the existing Fire Management Plan and the HFI. Fire management activities would be in response to emergencies and to protect people and park resources. **Alternative B (Proposed Action/NPS Preferred Alternative)** allows for implementation of a full range of fire management activities, including wildland fire and fuels management. Wildland fire activities could include suppression and wildland fire use for resource benefit. Additional fuels management activities could include prescribed fire, mechanical, and herbicide treatments. The main focus of these activities and treatments is centered on public and firefighter safety, communities identified as at risk from wildland fires (wildland urban interface), historic fire regimes, current condition class, and collaboration with other agencies and stakeholders.

Section 106 consultation as defined in the National Historic Preservation Act of 1966 will be completed by NPS cultural resource specialists prior to the implementation of the updated Fire

Management Plan. Although general guidelines for the treatment of cultural resources will be discussed in the EA, the level of documentation required to satisfy the Arizona State Historic Preservation Office requires site location maps and site forms. Because this information cannot be included in the EA, a public document, we will prepare compliance documents associated with Section 106 consultation in addition to preparation of the EA.

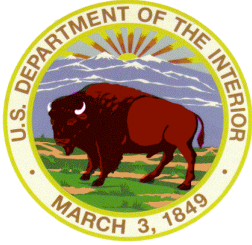
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Sincerely,

Karl P. Cordova
Superintendent

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Casa Grande Ruins National Monument
1100 W. Ruins Drive
COOLIDGE, ARIZONA, 85128

In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Leigh Kuwanwisiwma, Director
The Hopi Tribe, Office of Cultural Preservation
P.O. Box 123
Kykotsmovi, AZ 86039

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Director Kuwanwisiwma:

In accordance with the provisions of the National Environmental Policy Act (NEPA), Casa Grande Ruins National Monument has initiated a NEPA analysis (an Environmental Assessment 'EA') on how the National Park Service (NPS) should manage wildland fire and hazard fuel reduction within the parks. NPS Policy, which adheres to the federal policy, recognizes the need for wildland fire to be managed in order to fulfill the agency's goals to protect, perpetuate or recreate natural environments and historic scenes/landscapes. In addition, NPS policy specifies that every NPS unit with burnable vegetation will have an updated Fire Management Plan. Due to NPS direction dated May 28, 2008, NPS units located in the Supreme Court 9th Circuit Court of Appeals jurisdiction may no longer use the Healthy Forest Initiative (HFI) Categorical Exclusion. The National Park Service will use the decisions reached through the NEPA process to prepare the corresponding fire management plans.

There are two proposed alternatives. **Alternative A (No Action)** would continue to manage wildland fires consistent with the existing Fire Management Plan and the HFI. Fire management activities would be in response to emergencies and to protect people and park resources.

Alternative B (Proposed Action/NPS Preferred Alternative) allows for implementation of a full range of fire management activities, including wildland fire and fuels management. Wildland fire activities could include suppression and wildland fire use for resource benefit. Additional fuels management activities could include prescribed fire, mechanical, and herbicide treatments. The main focus of these activities and treatments is centered on public and firefighter safety, communities identified as at risk from wildland fires (wildland urban interface), historic fire regimes, current condition class, and collaboration with other agencies and stakeholders.

Section 106 consultation as defined in the National Historic Preservation Act of 1966 will be completed by NPS cultural resource specialists prior to the implementation of the updated Fire Management Plan. Although general guidelines for the treatment of cultural resources will be

discussed in the EA, the level of documentation required to satisfy the Arizona State Historic Preservation Office requires site location maps and site forms. Because this information cannot be included in the EA, a public document, we will prepare compliance documents associated with Section 106 consultation in addition to preparation of the EA.

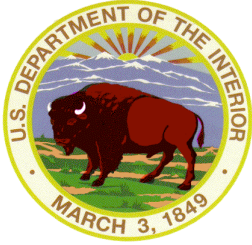
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Sincerely,

Karl P. Cordova
Superintendent

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Casa Grande Ruins National Monument
1100 W. Ruins Drive
COOLIDGE, ARIZONA, 85128

In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Shane Antone
Salt River Pima-Maricopa Indian Community
Route 1, Box 216, 10005 E. Osborn Rd.
Scottsdale, AZ 85256

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Mr. Antone:

In accordance with the provisions of the National Environmental Policy Act (NEPA), Casa Grande Ruins National Monument has initiated a NEPA analysis (an Environmental Assessment 'EA') on how the National Park Service (NPS) should manage wildland fire and hazard fuel reduction within the parks. NPS Policy, which adheres to the federal policy, recognizes the need for wildland fire to be managed in order to fulfill the agency's goals to protect, perpetuate or recreate natural environments and historic scenes/landscapes. In addition, NPS policy specifies that every NPS unit with burnable vegetation will have an updated Fire Management Plan. Due to NPS direction dated May 28, 2008, NPS units located in the Supreme Court 9th Circuit Court of Appeals jurisdiction may no longer use the Healthy Forest Initiative (HFI) Categorical Exclusion. The National Park Service will use the decisions reached through the NEPA process to prepare the corresponding fire management plans.

There are two proposed alternatives. **Alternative A (No Action)** would continue to manage wildland fires consistent with the existing Fire Management Plan and the HFI. Fire management activities would be in response to emergencies and to protect people and park resources. **Alternative B (Proposed Action/NPS Preferred Alternative)** allows for implementation of a full range of fire management activities, including wildland fire and fuels management. Wildland fire activities could include suppression and wildland fire use for resource benefit. Additional fuels management activities could include prescribed fire, mechanical, and herbicide treatments. The main focus of these activities and treatments is centered on public and firefighter safety, communities identified as at risk from wildland fires (wildland urban interface), historic fire regimes, current condition class, and collaboration with other agencies and stakeholders.

Section 106 consultation as defined in the National Historic Preservation Act of 1966 will be completed by NPS cultural resource specialists prior to the implementation of the updated Fire

Management Plan. Although general guidelines for the treatment of cultural resources will be discussed in the EA, the level of documentation required to satisfy the Arizona State Historic Preservation Office requires site location maps and site forms. Because this information cannot be included in the EA, a public document, we will prepare compliance documents associated with Section 106 consultation in addition to preparation of the EA.

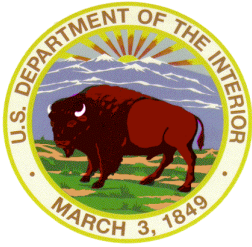
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Sincerely,

Karl P. Cordova
Superintendent

bcc:

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NATIONAL PARK SERVICE



Casa Grande Ruins National Monument
1100 W. Ruins Drive
COOLIDGE, ARIZONA, 85128

In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Joseph Joaquin
Tohono O'odham Nation
P. O. Box 837
Sells, AZ 85634

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Mr. Joaquin:

In accordance with the provisions of the National Environmental Policy Act (NEPA), Casa Grande Ruins National Monument has initiated a NEPA analysis (an Environmental Assessment 'EA') on how the National Park Service (NPS) should manage wildland fire and hazard fuel reduction within the parks. NPS Policy, which adheres to the federal policy, recognizes the need for wildland fire to be managed in order to fulfill the agency's goals to protect, perpetuate or recreate natural environments and historic scenes/landscapes. In addition, NPS policy specifies that every NPS unit with burnable vegetation will have an updated Fire Management Plan. Due to NPS direction dated May 28, 2008, NPS units located in the Supreme Court 9th Circuit Court of Appeals jurisdiction may no longer use the Healthy Forest Initiative (HFI) Categorical Exclusion. The National Park Service will use the decisions reached through the NEPA process to prepare the corresponding fire management plans.

There are two proposed alternatives. **Alternative A (No Action)** would continue to manage wildland fires consistent with the existing Fire Management Plan and the HFI. Fire management activities would be in response to emergencies and to protect people and park resources. **Alternative B (Proposed Action/NPS Preferred Alternative)** allows for implementation of a full range of fire management activities, including wildland fire and fuels management. Wildland fire activities could include suppression and wildland fire use for resource benefit. Additional fuels management activities could include prescribed fire, mechanical, and herbicide treatments. The main focus of these activities and treatments is centered on public and firefighter safety, communities identified as at risk from wildland fires (wildland urban interface), historic fire regimes, current condition class, and collaboration with other agencies and stakeholders.

Section 106 consultation as defined in the National Historic Preservation Act of 1966 will be completed by NPS cultural resource specialists prior to the implementation of the updated Fire

Management Plan. Although general guidelines for the treatment of cultural resources will be discussed in the EA, the level of documentation required to satisfy the Arizona State Historic Preservation Office requires site location maps and site forms. Because this information cannot be included in the EA, a public document, we will prepare compliance documents associated with Section 106 consultation in addition to preparation of the EA.

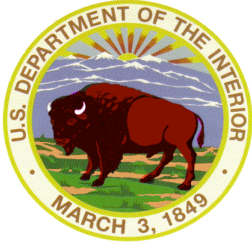
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Sincerely,

Karl P. Cordova
Superintendent

bcc:

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UNITED STATES DEPARTMENT OF THE
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Casa Grande Ruins National Monument
1100 W. Ruins Drive
COOLIDGE, ARIZONA, 85128

In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Kurt Dongoske
Zuni Heritage and Historic Preservation Office
P.O. Box 1149
Zuni, NM 87327

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Mr. Dongoske:

In accordance with the provisions of the National Environmental Policy Act (NEPA), Casa Grande Ruins National Monument has initiated a NEPA analysis (an Environmental Assessment 'EA') on how the National Park Service (NPS) should manage wildland fire and hazard fuel reduction within the parks. NPS Policy, which adheres to the federal policy, recognizes the need for wildland fire to be managed in order to fulfill the agency's goals to protect, perpetuate or recreate natural environments and historic scenes/landscapes. In addition, NPS policy specifies that every NPS unit with burnable vegetation will have an updated Fire Management Plan. Due to NPS direction dated May 28, 2008, NPS units located in the Supreme Court 9th Circuit Court of Appeals jurisdiction may no longer use the Healthy Forest Initiative (HFI) Categorical Exclusion. The National Park Service will use the decisions reached through the NEPA process to prepare the corresponding fire management plans.

There are two proposed alternatives. **Alternative A (No Action)** would continue to manage wildland fires consistent with the existing Fire Management Plan and the HFI. Fire management activities would be in response to emergencies and to protect people and park resources.

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Section 106 consultation as defined in the National Historic Preservation Act of 1966 will be completed by NPS cultural resource specialists prior to the implementation of the updated Fire Management Plan. Although general guidelines for the treatment of cultural resources will be

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Sincerely,

Karl P. Cordova
Superintendent

bcc:

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United States Department of the Interior
NATIONAL PARK SERVICE

Casa Grande Ruins National Monument
1100 W. Ruins Drive
Coolidge, Arizona, 85128



In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Ed Begay
Acting Project Manager
San Carlos Irrigation Project
Bureau of Indian Affairs
13805 N. Arizona Blvd.
Coolidge, AZ 85228

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Mr. Begay:

Casa Grande Ruins National Monument has an existing Fire Management Plan (FMP) however, the level of environmental analysis completed for the plan, called the Healthy Forest Initiative Categorical Exclusion, is no longer considered adequate to meet National Park Service (NPS) policy. Therefore a more detailed assessment needs to be conducted. Decisions reached in the Environmental Assessment (EA) will be used to revise the current plan, if necessary.

There are two proposed alternatives. **Alternative A (No Action)** would continue to manage wildland fires consistent with the existing Fire Management Plan and the Healthy Forest Initiative. Fire management activities would be in response to emergencies and to protect people and park resources. **Alternative B (Proposed Action/NPS Preferred Alternative)** allows for implementation of a full range of fire management activities, including wildland fire and fuels management.

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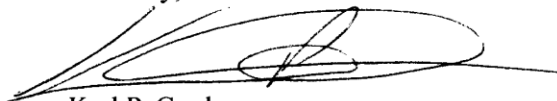
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For your records, the title of this project is Fire Management Plan Environmental Assessment/Assessment of Effect, Casa Grande Ruins National Monument, January 2011. Your reply will be most appreciated and



helpful if we receive it by April 10, 2011. Should you have any questions or need additional information at this time, you can contact Karl Cordova at 520-723-3172 x21 or via email at Karl_Cordova@nps.gov.

Sincerely,

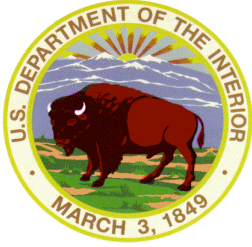


Karl P. Cordova
Superintendent

bcc:

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UNITED STATES DEPARTMENT OF THE
INTERIOR
NATIONAL PARK SERVICE



Casa Grande Ruins National Monument
1100 W. Ruins Drive
Coolidge, Arizona, 85128

In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Mr. Jim Walker
The Archaeological Conservancy
5301 Central Avenue N.E., Suite 1218
Albuquerque, NM 87108-1517

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Mr. Walker:

Casa Grande Ruins National Monument has an existing Fire Management Plan (FMP) however, the level of environmental analysis completed for the plan, called the Healthy Forest Initiative Categorical Exclusion, is no longer considered adequate to meet National Park Service (NPS) policy. Therefore a more detailed assessment needs to be conducted. Decisions reached in the Environmental Assessment (EA) will be used to revise the current plan, if necessary.

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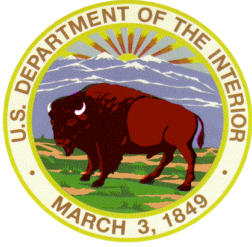
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Karl P. Cordova
Superintendent

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UNITED STATES DEPARTMENT OF THE
INTERIOR
NATIONAL PARK SERVICE



Casa Grande Ruins National Monument
1100 W. Ruins Drive
Coolidge, Arizona, 85128

In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

Mr. Robert Flatley
City of Coolidge
130 W. Central Avenue
Coolidge, AZ 85228

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Mr. Flatley:

Casa Grande Ruins National Monument has an existing Fire Management Plan (FMP) however, the level of environmental analysis completed for the plan, called the Healthy Forest Initiative Categorical Exclusion, is no longer considered adequate to meet National Park Service (NPS) policy. Therefore a more detailed assessment needs to be conducted. Decisions reached in the Environmental Assessment (EA) will be used to revise the current plan, if necessary.

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The National Park Service will work collaboratively with agencies, tribes, communities, organizations, and other public interested in participating in the EA process. With this letter, we would like to ask that you be a cooperating agency by requesting your early and continued input in the EA process. NPS will post a Scoping Announcement at the NPS's Planning, Environment, and Public Comment (PEPC) website at: <http://parkplanning.nps.gov/> and select Casa Grande Ruins National Monument. The Public Announcement will provide an introduction to the FMP EA, which begins the scoping process for this effort.

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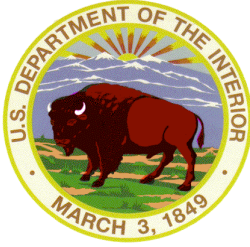
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Sincerely,

Karl P. Cordova
Superintendent

bcc:

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UNITED STATES DEPARTMENT OF THE
INTERIOR
NATIONAL PARK SERVICE



Casa Grande Ruins National Monument
1100 W. Ruins Drive
Coolidge, Arizona, 85128

In reply refer to:
NFPORS 3069623
CAGR

March 10, 2011

U.S. Bureau of Land Management
Tucson Field Office
12661 East Broadway
Tucson, AZ 85748-7208

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Bureau of Land Management:

Casa Grande Ruins National Monument has an existing Fire Management Plan (FMP) however, the level of environmental analysis completed for the plan, called the Healthy Forest Initiative Categorical Exclusion, is no longer considered adequate to meet National Park Service (NPS) policy. Therefore a more detailed assessment needs to be conducted. Decisions reached in the Environmental Assessment (EA) will be used to revise the current plan, if necessary.

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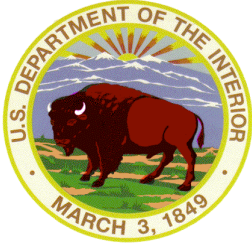
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Casa Grande Ruins National Monument
1100 W. Ruins Drive
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In reply refer to:
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March 10, 2011

Gary Hovatter
Deputy Director
Arizona Game and Fish Department
5000 W. Carefree Highway
Phoenix, Arizona 85086-5000

Subject: Notice of drafting Proposed Environmental Assessment for the Fire Management Plan for Casa Grande Ruins National Monument

Dear Mr. Hovatter:

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associated with the plan. We would like to discuss agency coordination regarding Arizona's Species of Concern and address these in the EA.

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