

HOMESTEAD NATIONAL HISTORICAL PARK

FIRE MANAGEMENT PLAN

2021



Page left blank intentionally.

SIGNATURE PAGE

Prepared by: _____
Resource Management Specialist
Homestead National Historical Park
Date _____

Reviewed by: _____
Fire Ecologist & Planner
Department of Interior Regions 3, 4, and 5
Date _____

Concurred by: _____
Fire Management Officer
Department of Interior Regions 3, 4, and 5
Date _____

Approved by: _____
Superintendent
Homestead National Historical Park
Date _____

TABLE OF CONTENTS

SIGNATURE PAGE.....	i
TABLE OF CONTENTS	ii
1.0 INTRODUCTION, LAND MANAGEMENT PLANNING, and COMMUNICATION.....	5
1.1 Program Elements.....	10
1.1.1 Wildland Fire Suppression	10
1.1.2 Prescribed Fire	10
1.1.3 Non-fire Treatments	10
1.2 Program Organization	10
1.3 Environmental Compliance	12
1.4 Park Unit/Resource Management Planning	12
1.4.1 General Management Plan (NPS, 1999)	13
1.4.2 Cultural Landscape Report (Quinn Evans/Architects; Land and Community Associates, 2000)	13
1.4.3 Resource Management Plan (2000)	13
1.4.4 Vegetation Management Action Plan (NPS, 2006)	13
1.4.5 Foundation Document (NPS, 2015)	13
1.4.6 Natural Resource Condition Assessment (Jones, et al., 2019)	13
1.4.7 Bur Oak Forest Restoration Plan: Reference Condition and Management Considerations (Rolfsmeier, 2007)	14
1.4.8 Vegetation Monitoring 1998-2017 (Leis S. A., 2019)	14
1.5 Collaborative Planning	14
1.5.1 Beatrice Rural Volunteer Fire Department (BRVFD) and Beatrice City Fire Department	14
1.5.2 3&33 Mutual Aid Association	14
1.5.3 Homestead Local Emergency Planning Committee (LEPC).....	14
1.5.4 Nebraska Game and Parks Commission	15
1.5.5 Other Partnerships Relating to Collaborative Planning	15
1.6 Communication and Education.....	15
2.0 WILDLAND FIRE MANAGEMENT GOALS, OBJECTIVES, and MANAGEMENT ACTIONS	16
2.1 Goals	16

2.2	Objectives.....	17
2.3	Approved Wildland Fire Management Actions	17
2.3.1	Management of Wildfires.....	17
2.3.2	Management of Fuel Treatments	18
2.3.3	Defensible Space (see RM 18 - Chapter 7 (NPS, 2019)).....	18
3.0	WILDLAND FIRE OPERATIONAL GUIDANCE.....	19
3.1	Response to Wildfire.....	19
3.1.1	Wildfire Response Planning.....	19
3.1.2	Wildfire Response Objectives	21
3.1.3	Wildfire Response Procedures	22
3.2	Fuel Treatments.....	23
3.2.1	Fuels Planning.....	23
3.2.2	Fuels Management Goals and Objectives.....	25
3.3	Preparedness.....	26
3.3.1	Preparedness Activities	1
3.4	Post-Fire Programs and Response.....	2
3.5	Air Quality/Smoke Management	3
3.5.1	Air quality issues.....	3
3.5.2	Smoke Management Activities	3
3.6	Data and Records Management	4
4.0	PROGRAM MONITORING AND EVALUATION.....	5
4.1	Monitoring	5
4.2	Science and Climate Change	5
4.3	Annual Program Evaluation and Fire Management Plan Review Process.....	5
	Appendix A – References Cited	7
	Appendix B – Definitions	9
	Appendix C – Compliance for FMP	10
	Appendix D – Multi-Year Fuels Treatment Plan	40
	Appendix E – Fire Monitoring Plan.....	42
	Appendix F – Preparedness Planning Documents.....	43

Appendix J – Cooperative and Interagency Agreements	47
Appendix K – WFDSS Objectives and Requirements.....	55
Appendix L – Serious Injury or Death Procedure	56
Appendix M – Safety Program/Plan.....	57
Appendix N – Maps	58

LIST OF FIGURES

Figure 1 Map of prescribed fire treatment units at HOME. (map also included in Appendix)	9
Figure 2 Acreage of Burn Units	9
Figure 3 Organization Chart.....	11
Figure 4. Flame length with moderately dry dead fuels, partially cured live fuels, and gentle slopes. GR3, GR6, GR7, GR8, TL2, and TL6 are included on the graph.	20
Figure 5. Rate of spread with moderately dry dead fuels, partially cured live fuels, and gentle slopes. GR3, GR6, GR7, GR8, TL2, and TL6 are included on the graph.	21

1.0 INTRODUCTION, LAND MANAGEMENT PLANNING, and COMMUNICATION

Homestead National Monument of America was established by congress and signed into being by President Franklin Roosevelt in 1936. Legislation passed in 2021 (H.R.1472) renamed it to Homestead National Historical Park. The park was created to “retain for posterity a proper memorial emblematical of the hardships and the pioneer life through which the early settlers passed in the, erection of buildings, cultivation and civilization of the great West.” (74th Congress, 1936). The park would be located on the Daniel Freeman Homestead Claim, as he was the first, or one of the first to file for land under the law. The land was still being farmed when it became a monument, however early managers recognized that to properly tell the story of the impacts of the 1862 Homestead Act visitors would need to be able to experience the landscape that the first homesteaders encountered. The NPS began the prairie restoration in 1939 and the woodland restoration shortly thereafter. Today’s land managers are guided by the Desired Future Condition outlined in the park’s Vegetation Management Action Plan which states:

The monument’s natural resources are managed in such a way as to maintain a heterogeneous landscape composed of a mosaic of high quality remnant and restored tallgrass prairie, lowland bur oak forest and associated ecotones, as well as prairie streams and their hydrologic processes; that reflect the value of the site as a homestead, represents as accurately as possible the environment encountered by early settlers, and preserves native biodiversity. (NPS, 2006)

This plan is guided by Director’s Order-18 (DO-18) which requires that all park units with vegetation capable of sustaining fire develop an FMP.

“Each park unit with burnable vegetation must have an approved Fire Management Plan that will address the need for adequate funding and staffing to support the fire management program.” (NPS, 2008)

This is further refined in NPS Management Policies.

“Park units with vegetation capable of burning will prepare a fire management plan that is consistent with federal law and departmental fire management policies, and that includes addressing the need for adequate funding and staffing to support the planned fire management program.” (NPS, 2006)

Since 1970, HOME has worked to build and maintain its wildland fire program, using prescribed fire to enhance the vegetation of the park and using those fires to educate the general public about the benefits of prescribed fire and wildland fire safety. That outreach both locally and statewide through press coverage has helped the park to recognized as a source of knowledge for people wanting to perform their own prescribed fires.

The Homestead National Historical Park (HOME) Fire Management Plan (FMP) is a strategic plan that defines a program to manage wildland fire and non-fire fuel treatments and is based on direction contained in existing park unit planning documents. This FMP provides for firefighter and public safety, addresses values to be protected, and includes strategies for managing wildland fire. It is consistent with HOME resource management objectives and environmental laws and regulations such as the National Environmental Policy Act, the National and State Historic Preservation Acts, the Clean Air Act, etc. The plan will examine techniques for minimal impact

suppression efforts which should result in reduced impacts upon natural and cultural resources in the event of a wildfire incident.

HOME contains two broad areas of vegetation: approximately 114 acres of prairie and 60 acres of riparian woodlands. There are 304 different vascular plants that have been identified within the park (NPS, 2020).

The prairie area includes about 100 acres of restored tallgrass prairie with intermixed shrub thickets. Replanting Freeman's croplands to native tallgrass prairie began in 1939 (Stubbendieck & Willson, 1987) with the seeding and sodding. Since the restoration the main focuses have been on maintaining species diversity, removal of exotic species and management of woody shrubs. HOME has had an active and successful prescribed fire program since the early 1970's, which has resulted in successful management and continued health of the restored prairie. In addition to the main restored prairie there are the native prairie at the Freeman School house, which is about an acre in size, and the area to the east of the Heritage Center, which was landscaped with a mixture of native grasses and forbs.

The woodland is located along Cub Creek as it flows through HOME. The woodland can be broken into two units based on past use/current vegetation. When Daniel Freeman choose his homestead claim he was able to choose four forty-acre squares to make his 160-acre claim. He chose a "T" shape with three of the forties forming the southern boundary of his property and the fourth forty attached to the middle forty going to the north. The woodland in Freeman's north forty appears to have not been as heavily harvested by the Freeman's as the woodland in the west and middle forties. Today the north forty is classified a lowland bur oak woodland. While the woodland in the west and middle forties is classified as a successional woodland dominated by hackberry trees. Fire has been excluded from the woodland since the park service started managing the site in 1939 (Mlekush & DeBacker, 2003). Rolfsmeier (2007) states that there is evidence from the current vegetation, historical accounts, and considerations of the changes to environmental conditions at HOME to suggest that at the time of European settlement in the 1860's, the lowland bur oak forest currently along Cub Creek was an oak gallery forest consisting of three contiguous and somewhat intergrading vegetative zones: (1) An open riparian woodland with abundant shrubs that covered the banks of the stream and extended a short distance onto the floodplain of the stream. (2) Patches of bur oak - American elm - black walnut dominated woodland that were relatively open along the outer edges and more densely shaded within, with an understory of tall-shrubs, grasses and forbs in the openings, and short shrubs and shade-tolerant plants in the interior. (3) A shrubby transition zone dominated by wild plum and vines, fringing the wooded communities and varying in extent and composition in response to fire.

Private land will be included in the woodland units through an agreement with the landowner. The land is being included to increase the efficiency of burning the units. Including the private land will make it possible to use the creek as the fire break greatly reducing the amount of fire-line that will need to be built. Landownership is currently indistinguishable based on dominate vegetation.

A 141-acres of tallgrass prairie (Shum Unit) directly south of the park, owned by the Friends of Homestead (Friends) tax-exempt 501c3 nonprofit organization that supports HOME, will also be included in the Fire Management Plan (FMP). The land was purchased by the Friends group

through grants and an Opal Shum bequest¹. This additional tallgrass prairie: provides a landscape buffer for the historic Osage orange hedgerow listed on the National Register of Historic Landmarks; reduces agricultural runoff into Cub Creek; provides a buffer for the park's woodland; and provides additional recreational and educational opportunities to visitors by establishing walking trails in the area.

Topics considered and stipulations in the development of this plan include:

- Cultural resources including but not limited to:
 - Historic Osage Orange Hedgerow on southern boundary of park. Prescribed fire should be excluded from within 20 feet of the dripline of these historic trees.
 - Historic road and fence traces. Remnants of the fence and road are visible, especially after a burn. Special care should be taken when using equipment to ensure that soil is not disturbed in those areas.
 - Buried archeological sites both discovered and unknown must be considered before activities that include soil disturbance are undertaken. Care should be taken not only during fire activities but also during the installation of mow line and other mechanical fuel reduction activities. Special care should be taken to reduce the possibilities of creating ruts.
 - Several trees within the prairie and woodland are recognized for their size or their importance in demarcating historical features. The park should actively protect the cottonwoods along the old state highway 4, the large bur oak trees within the northern 40, and the large cottonwood tree at the edge of the woodland in the northeastern corner of the west 40.
- Natural resources including but not limited to:
 - Management of exotic species and biodiversity of native plants. Late spring prescribed fire has been shown to reduce the dominance of cool season grasses. Spring burns can also make treatments of invasive thickets more effective. Summer burns can reduce the dominance of grasses and promote forb diversity.
 - Nesting season of birds. While it is impossible to ensure that there are no nesting birds, most of the nesting occurs from May 15 to July 15. Prescribed fire and mowing of prairie should not occur during this time period.
 - Prairie insects. An article by Ann Swengel in the American Butterflies magazine produced by North American Butterfly Association titled "Tallgrass Prairie Tragedies" discusses how reliance on prescribed fire can have a negative impact on prairie butterflies, especially the Regal Fritillary. (Swengel, 2013) We can assume that other invertebrate populations also decline after prescribed fires. Prescribed fire should not be used on more than half of the prairie at one time.
 - Reptiles: In Fogell, 2004, *A Herpetofaunal Inventory of Homestead National Monument of America* it was recommended, after Fogell surveyed the May 22, 2003

¹ Opal Shum willed \$124,000 from her estate to the Friends group to be used for the benefit and support of Homestead National Monument of America.

burn area and found several burned snakes, frogs and toads, that prescribed burns should occur earlier in the season before the herptofauna has emerged.

- Threatened and endangered species. Currently the only known threatened and endangered species inhabiting the park is the northern long-eared bat. Northern long-eared bats are known to roost and most likely have maternity colonies within the woodland. Therefore, fuel management activities will not occur within the woodland, with the exception of hand pulling herbaceous exotic species, between May 1 and July 31.
- The park's woodlands often sustain damage throughout the year as a result of storms (ice, snow, strong winds, and tornadoes). In addition, much of the south woodland area adjoins croplands and the northern woodlands are adjacent to the Pioneer Acres housing development. The proximity of the woodlands to the housing development presents a definite urban/wildland interface. This plan will set a strategy for hazard fuel reduction and the measure which will be used for this type of treatment.

This plan will set a strategy to ensure that the biodiversity of the fire adapted tallgrass prairie and riparian woodland is maintained, while ensuring that the safety of the staff, public and property is never compromised.



Homestead NM Treatment Units

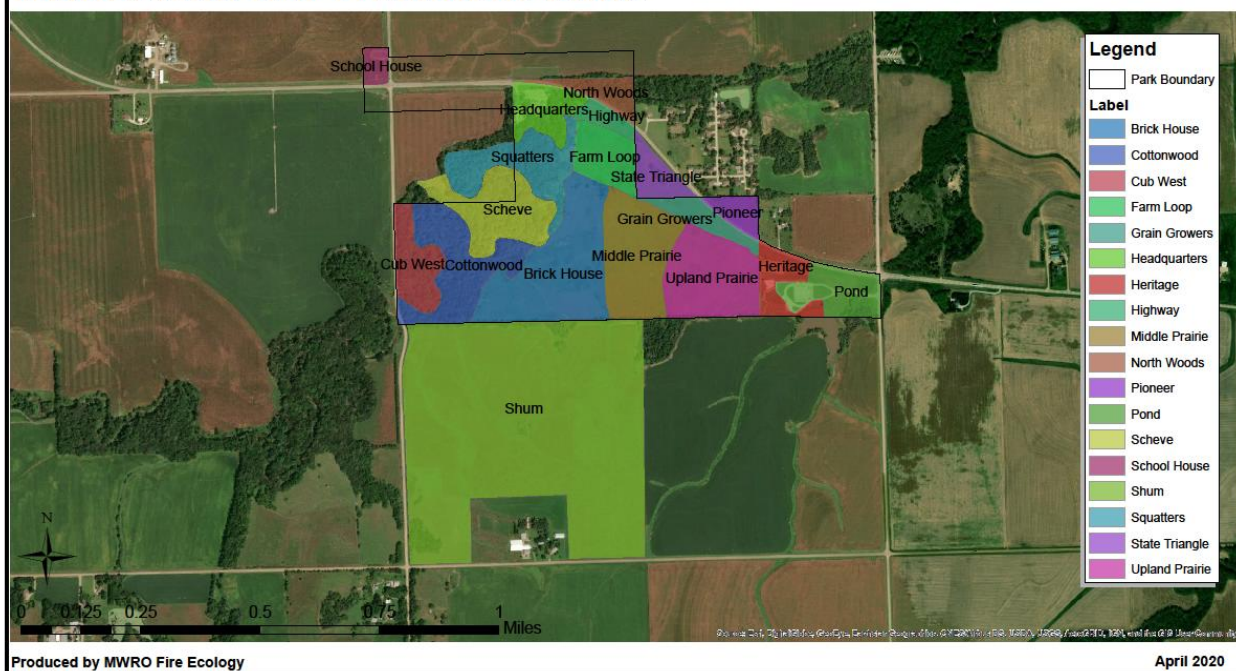


Figure 1. Map of prescribed fire treatment units at HOME. (map also included in Appendix N)

Prescribed Fire Unit	Acres
Brick House	31.4
Cottonwood	20.1
Cub West	9.9
Farm Loop	9.6
Grain Growers	5.7
Headquarters	9.0
Heritage	7.7
Highway	3.2
Middle Prairie	21.9
North Woods	5.6
Pioneer	4.1
Pond	11.2
Scheve	16.2
School House	2.6
Shum	141.1
Squatters	16.5
State Triangle	5.7
Upland Prairie	20.7

Figure 2. Acreage of Burn Units

1.1 Program Elements

Homestead is included in a single Fire Management Unit (FMU), the Homestead FMU.

1.1.1 Wildland Fire Suppression

All unplanned ignitions, regardless of source, will be suppressed while considering firefighter and public safety, cost, potential suppression damage, and values at risk. A full suppression strategy is recommended, although the selection of suppression strategies is at the discretion of the Incident Commander (IC) in consultation with the park superintendent. Minimum Impact Strategy and Tactics (MIST) should be utilized to the extent possible on all suppression actions. Resource benefit objectives may not be included during the suppression of any unplanned ignitions.

1.1.2 Prescribed Fire

Prescribed fire may be used for the protection of cultural resources, restoration and maintenance of cultural landscapes, reduction and maintenance of hazard fuels, and achievement of natural resource objectives. Prescribed fire may also be used to dispose of land management debris. All prescription parameters, acceptable ranges, and objectives will be clearly state in a Prescribed Fire Burn Plan for each prescribed fire implemented.

1.1.3 Non-fire Treatments

The reduction or removal of fuels by mechanical or chemical methods (also referred to as non-fire fuels treatments) are options that may be used for objectives such as protection of resources, private property, historic scene restoration and maintenance, invasive species control, or meeting other natural resource objectives. Manual treatments use hand-held tools (such as an ax, Pulaski, cross-cut saw, pruner, shovel) and hand-held power tools (chainsaws, weed eaters, hand-held brush cutters, leaf blowers, and other specialty equipment) to cut, clear, or prune herbaceous and woody species. Mechanical treatments may use equipment (such as mowers, chippers, and mulchers) to mow fields, remove fuels, create and maintain fuel breaks by removing fuel concentrations, mow “green” fuel breaks, and remove single or small groups of trees. Roads can be used as fuel breaks so vegetation adjacent to roads may be removed or reduced to lessen fire threat.

1.2 Program Organization

Homestead is part of the Midwest Fire Management Zone. The Zone Fire Management Officer (FMO) is currently duty stationed at the Department of Interior Regions 3, 4, and 5 Office located in Omaha (Regional Office). Other fire management support personnel are also located at the Regional Office. Ultimately, the fire program at HOME is the responsibility of the park superintendent and the assigned park fire coordinator, but technical oversight and support is provided by zone fire management staff.

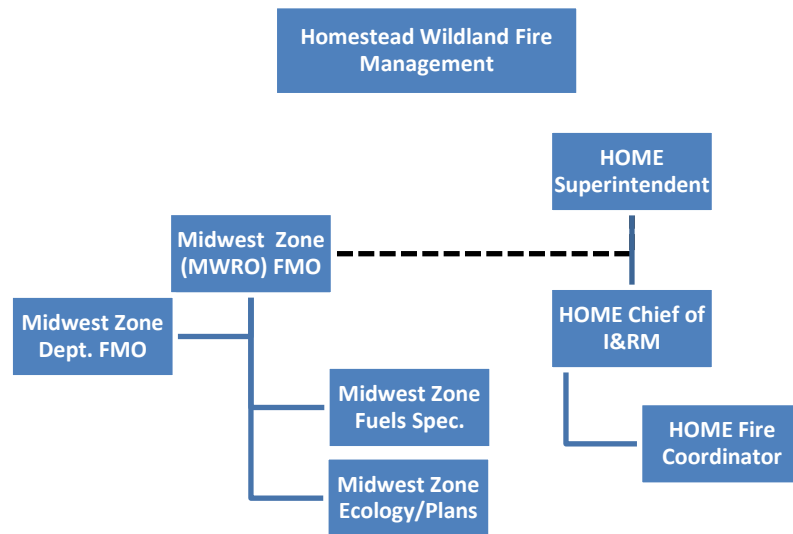


Figure 3. Organization Chart

The following identifies the primary responsibilities of park staff related to wildland fire activities at Homestead:

Superintendent - The Park Superintendent is responsible to the Regional Director for the safe and efficient implementation of fire management activities within their unit, including cooperative activities with other agencies or landowners, in accordance with delegations of authorities. The Park Superintendent or principal acting will meet the required elements outlined in the Management Performance Requirements for Fire Operations (NIFC, 2020). The superintendent has overall management authority over all aspects of the fire management program. The superintendent delegates authority to the Incident Commander under the Incident Command System during wildland fire incidents. The superintendent maintains relationships with park neighbors and news media and Memorandum of Understandings (MOU) and communications with the Beatrice Rural Fire District and Beatrice Fire and Rescue Department.

Chief of Interpretation and Resource Management - Coordinates work activities of all division staff in support of fire management operations.

Resource Management Specialist - Serves as the Park's Fire Coordinator. Provides planning for fire management operations, procures fire equipment, initiates planning for prescribed fire activities, formulates compliance clearance documents, maintains staff fire qualification records, and serves as liaison with fire management personnel from the Midwest Regional Office, National Park Service. Drafts the Memorandum of Understanding with the Beatrice Rural Fire District and Beatrice Fire and Rescue Department. Serves as liaison with the District Fire Chief. Makes recommendations to management regarding fire activities.

Park Ranger (Interpretation) - Participate in fire operations as qualified. Coordinate an educational curriculum outlining the significance of prescribed fire for visitors and students.

Facility Manager - Ensures that maintenance is conducted in support of the fire management program. Assist as support staff during fire operations by providing traffic control, smoke monitoring, logistics, engine operations in safe zones, and water-tending.

Maintenance Workers - Assist as support staff during fire operations by providing traffic control, smoke monitoring, logistics, engine operations in safe zones, and water-tending.

Administrative Officer and Administrative Clerk - Provide support services in terms of procurement, travel, and fiscal matters. Also assist in media and park neighbor notifications.

The Heartland Inventory and Monitoring Network - assists the park through their monitoring of vegetation and fire effects.

The implementation of the Fire Management Plan relies heavily on interagency collaboration. The park maintains the ability to respond to fire incidents that threaten or happen on the park through Memoranda of Understanding with Beatrice Rural Fire District and the Beatrice Fire Department. The park also works with other Federal and local fire management agencies to ensure that prescribed fires are safely implemented.

1.3 Environmental Compliance

An updated Environmental Assessment will be completed to assess the impacts of including the riparian woodland in the prescribed burn portion of the FMP, prior to its implementation. The FMP will implement activities in accordance with the regulations and directions governing the protection of historic and cultural properties as outlined in the Department of Interior Manual, Part 519 (519 DM), and Code of Federal Regulations (36 CFR 800). The National Historic Preservation Act of 1966 (NHPA), as amended, Section 106, sets the requirements for the protection of the cultural resources found in the park.

The northern long-eared bat is the only known threatened or endangered species found at Homestead National Historical Park. The northern long-eared bat is a federally listed threatened species under the Endangered Species Act. They are known to inhabit the park during the summer months. During the winter months they hibernate in caves and mines. During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds.

Threats to the northern long-eared bat include loss or degradation of summer habitat. It is important that the timing of forest management takes the bats into consideration. All prescribed fires will occur outside of pup season June 1 through July 31 as recommended in by the United States Fish and Wildlife Service in their "Optional Framework to Streamline Sections 7 Consultation for the Northern Long Eared Bat". (USFWS, 2016) Where possible and not a safety hazard, dead or dying trees will be left in place to provide habitat to northern long-eared bats and many other animals that use these trees (USFWS, 2015)

1.4 Park Unit/Resource Management Planning

Fire can be used to promote a natural vegetative setting for the park. Fuels management, using both mechanical and prescribed fire treatments, can reduce the risk to cultural and historic resources, and NPS infrastructure on the park. By incorporating information developed in ongoing research, implementation of the FMP will assist in achieving the General and Resource Management Plan objectives.

1.4.1 General Management Plan (NPS, 1999)

The General Management Plan gives the specific management prescription that the Prairie Restoration Purpose is: “The reconstructed tallgrass prairie is recognized as one valuable tool for interpreting the homesteading story. Resource management practices work to support the Park’s legislated purpose while protecting and preserving the reconstructed tallgrass prairie’s significant scientific and historic values.” The accompanying Abbreviated Final Environmental Impact Statement does not address the use of prescribed fire or any other natural resource management.

1.4.2 Cultural Landscape Report (Quinn Evans/Architects; Land and Community Associates, 2000)

The report is a history of the area that is now HOME. In the report it identifies “Treatment Recommendations” and has several recommendations for both the prairie and the woodland including to continue the use of annual prescribed fires in the prairie. The report does not have any accompanying NEPA or NHPA documentation. The treatment recommendations would need to undergo a separate evaluation before being acted upon.

1.4.3 Resource Management Plan (2000)

The park’s Resource Management Plan addresses the General Management Plan’s prescription with specific goals that relate to fire management. The goals include the restoration and maintenance of natural resource values, using the best available science for management decisions, and providing visitor safety.

1.4.4 Vegetation Management Action Plan (NPS, 2006)

This plan identifies the desired future condition of the natural resources of the park, mainly focused on the vegetation. The Plan gives direction on how to go about achieving the desired condition. The plan has specific guidance on using prescribed fire and managing woody debris in the prairie and woodland to achieve resource goals. Because there were no significant changes from the 1993-2002 Prairie Management Action Plan it was decided that the compliance for that plan was adequate. The 1993-2002 plan referenced the FONSI from the 1989 Resource Management Plan.

1.4.5 Foundation Document (NPS, 2015)

The Foundation Document identifies the tallgrass prairie restoration as a significant feature of the park, one of the values that are important enough to merit a designation as a unit of the national park system. It goes on to identify the rest of the natural resources as fundamental resources and values, specifically highlighting the rare lowland bur oak forest. The document identifies data needs, threats and opportunities for each fundamental resource of value. The Foundation Document does not have NEPA documentation associated with it.

1.4.6 Natural Resource Condition Assessment (Jones, et al., 2019)

This study employed a scoping process involving Colorado State University, Park and NPS staffs to discuss the Natural Resource Condition Assessment framework, identify important park resources, and gather existing information and data. Indicators and measures for each resource were then identified and evaluated. Data and information

were analyzed and synthesized to provide summaries and address condition, trend and confidence using a standardized but flexible framework. A total of 19 focal resources were examined: six addressing landscape context – system and human dimensions, three addressing chemical and physical attributes, nine addressing biological attributes, and one addressing integrated natural/cultural resources.

1.4.7 Bur Oak Forest Restoration Plan: Reference Condition and Management Considerations (Rolfsmeier, 2007)

This document was prepared by noted Nebraska botanical consultant and collections manager Steven Rolfsmeier. In the document he identifies reference conditions and sites in which to compare HOME's woodlands. He also outlines how he would manage HOME's woodland in order to reach the desired future condition as outlined in the Vegetation Management Action Plan (NPS, 2006).

1.4.8 Vegetation Monitoring 1998-2017 (Leis S. A., 2019)

This report serves as a summary of the grassland and woodland monitoring data collected by the Heartland Inventory and Monitoring Network.

1.5 Collaborative Planning

The NPS Wildland Fire Strategic Plan (2020) identifies three goals, two of which apply to the fire program at HOME: Goal 2, Protect Communities and Assets; and Goal 3, Conserve Natural Resources. The challenges are vegetation and fuels management; homes, communities, and values at risk management; effective and efficient wildfire response and recognizing that landscapes shape our economies, our culture and our way of life.

HOME works with many partners to meet the goals and challenges outlined in the strategy. Some of those ways that HOME meets the challenges are:

1.5.1 Beatrice Rural Volunteer Fire Department (BRVFD) and Beatrice City Fire Department

These two departments are responsible for responding to emergency situations at HOME. BRVFD partners with HOME to house one of their grass rigs (Type 7) at the park and have it accessible to the department members 24/7. The MOU with the department outlines the partnership and fire response. See Appendix J for details. HOME presents an annual wildland fire safety refresher for Beatrice Rural Fire Department and other local fire department members that want to maintain their National Wildfire Coordinating Group (NWCG) qualification cards through the Incident Qualifications and Certification System (IQCS).

1.5.2 3&33 Mutual Aid Association

HOME is a member of the mutual aid association that includes Gage, Jefferson and Saline counties. Mutual aid associations are formal groups of fire and emergency medical departments that meet on a regular basis to help coordinate response to large incidents where it may be necessary to call on other departments for assistance.

1.5.3 Homestead Local Emergency Planning Committee (LEPC)

The LEPC is composed of various agencies and businesses that like hospitals, emergency medical services, and manufacturing plants. This group helps with

networking, preplanning and coordinating for emergencies. HOME is a member of this group meets at the park on a quarterly basis.

1.5.4 Nebraska Game and Parks Commission

Established by the Legislature in 1901, the Nebraska Game and Parks Commission works to conserve Nebraska's natural resources. Among the many duties of the Commission and staff are establishing hunting seasons and regulations for game species; managing Nebraska's state parks, state recreation areas and other public lands; managing the fisheries at numerous public lakes across the state; helping landowners establish good conservation practices on their land; working to conserve Nebraska's threatened and endangered species; and providing hunter and boater education, as well as other resources for those who wish to learn to enjoy the outdoors. The commission is committed to the idea that time spent outdoors, whether it be hunting, fishing, hiking, biking, bird-watching, canoeing, camping or one of the many other outdoor activities Nebraska has to offer, is time well spent.

The Commission has an active prescribed fire program, and much is to be learned by sharing information between the agencies. As they manage the species listed under the Nongame and Endangered Species Act (Neb. Rev. Stat. 37-801 to 37-811) it is imperative that the National Park Service consults with the service so we can ensure that our actions will not impact state listed threatened and endangered or state listed species of concern.

1.5.5 Other Partnerships Relating to Collaborative Planning

HOME has also served as the meeting place for several meetings hosted by Pheasants Forever, the Natural Resource Conservation Service (NRCS) and Farm Services Agency (FSA) where landowners are invited to learn about habitat management and enhancement. A big part of those meetings is on prescribed fire management.

1.6 Communication and Education

Communication and education are key parts of the fire program at HOME. An effective communication plan is required in order to achieve the highest priority of protecting firefighter and public safety.

Timely and accurate information will be provided to the media, park neighbors, and visitors regarding the status of fire actions and suppression efforts. They will be made aware of wildfires and prescribed fire activities through interpretive brochures, press releases, social media, and personal contact. Letters of intent to burn will be sent to adjacent residents and landowners and other interested parties at least a week before commencing a prescribed fire. Social media will be used to keep the public up to date with any fire operations as well as provide a platform to educate visitors about prescribed fire use.

Because of HOME's close location to major population centers in Nebraska we often have both local and regional press covering our prescribed burns. The press will be outfitted in the proper Personal Protective Equipment (PPE) and led by a public information officer (PIO). The PIO will be responsible for working with the Incident Commander before and during the burn to determine where the PIO can safely lead the press.

Education is a key component to maintaining a successful fire management program therefore HOME staff will work to education visitors, school groups and the general public about wildfire safety and prescribed fire and its role.

- Staff will offer educational/visitor information opportunities at the Homestead Heritage Center on the day of the prescribed fire. This visitor contact point will offer visual connections to fire activities.
- Park staff will conduct, or arrange for, training sessions for the Beatrice Rural Fire District. This training exposes district volunteer personnel to wildland firefighting techniques, equipment, and procedures.
- Utilize Distance Learning technology to safely let students experience prescribed fire.

To keep the public and the firefighter's safe on the day of the burn:

- Safety briefings will be conducted for National Park Service personnel prior to any participation in wildland or prescribed fires.
- The general public will not be allowed access to any areas affected by fire until it has been determined to be safe by park managers. Areas that are to be ignited will be cleared of any visitors prior to ignition.
- Appropriate regulatory and enforcement agencies will be notified prior to any prescribed fire activity. This includes Beatrice Rural Volunteer Fire Department (getting burn permit), Nebraska Department of Road (letting them know that there may be smoke over the road, information they can place on their Nebraska 511-Traveler Information Site) and Southeast Communication (when the burning begins and when it ends).
- Staff will be placed on the road ready to stop traffic if the highway becomes unsafe to travel on.
- Signs warning travelers of smoke and or congestion will be placed at appropriate sites.

2.0 WILDLAND FIRE MANAGEMENT GOALS, OBJECTIVES, and MANAGEMENT ACTIONS

The goals of this plan are primarily to permit the use of prescribed fire in support of resource management goals, to comply with DO #18, and to provide the park with the capability to protect human life, structures and resources from wildland fires. A single fire management unit (FMU) has been identified for Homestead.

2.1 Goals

Homestead National Historical Park fire management goals:

- Firefighter and public safety is the highest priority of every fire management activity.
- Protect human life and property both within and adjacent to park areas.
- Apply prescribed fire to achieve specific resource management goals.
- Protect natural and cultural resources from adverse effects of fire and fire management activities.

- Provide opportunities for scientific study of ecosystem components and processes, including human influences and use, and share the findings with the public
- Minimize unplanned human-caused ignitions.
- Maintain or improve the quality of the native fire-dependent and fire-maintained vegetation communities that occur within the park and adjacent to it.
- Facilitate reciprocal fire management activities through the development, collaboration and maintenance of cooperative agreements and working relationships with adjacent fire management entities.
- Provide educational opportunities to learn about natural area management and how prescribed and wildland fire are an important management tool. The Heritage Center overlook provides a great location for visitors to watch the fire in progress and learn more about fire ecology through interpretive programs.

2.2 Objectives

- Be proactive in reducing the risk of wildfire by protecting park values, resources, and adjacent properties through periodic hazard fuel management activities as conditions warrant.
- Coordinate with NPS Cultural Specialist, and State and Tribal Historic Preservation Offices to insure that there are not adverse impacts to cultural resource from the fire or fire management activities.
- Utilize fire and other treatments to restore and maintain the setting of historic properties and maintain the integrity of cultural resources. Maintain light fuel loads on and adjacent to sensitive cultural resources.
- Continue to use prescribed fire to maintain or increase native plant species diversity and meet desired future conditions in the fire-dependent tallgrass prairie and riparian woodland.
- Minimize the growth and spread of exotic and invasive vegetation species such as smooth brome.
- Use prescribed fire to help reducing woody vegetation encroachment into the tallgrass prairie and forested areas.
- Suppress all unplanned ignition within park boundaries.

2.3 Approved Wildland Fire Management Actions

The fire management program of Homestead National Historical Park consists of suppression of all unplanned ignitions, and the use of prescribed fire to manage the tallgrass prairie and woodland vegetation. The proximity of Pioneer Acres subdivision makes HOME a Wildland Urban Interface.

2.3.1 Management of Wildfires

All unplanned ignitions will be suppressed using a full suppression strategy. Tactical responses to specific wildland fires will be determined through evaluation of public and firefighter safety, fire behavior, values at risk, potential suppression damage, and

availability of fire suppression resources. All available park and local firefighting resources will be utilized, as necessary and qualified, to limit damage to values at risk, and provide for the health and safety of firefighters and the public.

2.3.2 Management of Fuel Treatments

The intent of this strategy is to meet resource management objectives and to reduce hazardous wildland fuels to ensure protection of life, property, cultural values, and natural resources. Methods for accomplishing hazardous fuels reduction include prescribed fire, mechanical and chemical treatments.

Prescribed Fire: Prescribed fires are intentionally ignited under predetermined weather and fuel-moisture conditions, allowing managers to exert substantial influence over the spread and intensity of the fire. All prescription parameters, acceptable ranges, and objectives are clearly stated in a prescribed fire plan for each prescribed fire conducted. All prescribed fires will be planned and managed in compliance with NPS policy and other local, state and federal laws and regulations.

Managers may use fire to meet objectives for hazard fuel management activities outside of developed areas, while maintaining the fire dependency of the ecosystem treated. Prescribed fire will be used in support of prairie and woodland ecosystem management to maintain and restore plant communities, increase plant diversity, provide for wildlife habitat, recycle nutrients, reduce or remove exotic species, and reduce hazard fuels.

Managers must time prescribed fire with care to meet the objectives of the prescribed fire whether it is decreasing invasive or exotic plant species or promoting biodiversity. Similarly, managers must consider the needs of wildlife, such as herpetofauna, birds and butterflies that may be impacted by prescribed fire. In addition, the threatened northern long-eared bat requires special consideration: “Conduct prescribed burns outside of the pup season (June 1 to July 31) and/or the active season (April 1 to October 31). Avoid high-intensity burns (causing tree scorch higher than northern long-eared bat roosting heights) during the summer maternity season to minimize direct impacts to northern long-eared bat.” (USFWS, 2016)

Non-fire Treatments: Mechanical and chemical treatments can be used to reduce hazard fuels, to reduce exotic vegetation and to help achieve resource/plant diversity goals. These treatments can be conducted by themselves, or in conjunction with prescribed fire. Mechanical treatments may consist of manual removal, cutting, and mowing. Use of mechanical equipment must be approved by the Superintendent. Vegetation will be removed from the immediate vicinity of park structures and sensitive resources as needed to protect them or when such vegetation poses a safety risk.

2.3.3 Defensible Space (see RM 18 - Chapter 7 (NPS, 2019))

The NPS has adopted the International Code Council’s (ICC’s) International Urban-Wildland Interface Code (ICC, 2015) that contains descriptions of defensible space and maintenance requirements for urban wildland interface areas. Maintenance of the defensible space includes modifying or removing fire prone vegetation and keeping needles, leaves, and other dead vegetative material regularly removed from around structures and roofs.

At HOME, the buildings at the Heritage Center, Freeman School and the houses in Pioneer Acres are in the greatest danger from wildland fire. A 30-foot strip should be mowed around structures where possible to provide a buffer against wildfires. During periods of increased fire risk that buffer may need to be increased.

3.0 WILDLAND FIRE OPERATIONAL GUIDANCE

National Park Service wildland fire management activities are essential to the protection of human life, personal property and irreplaceable natural and cultural resources, and to the accomplishment of the NPS mission. High potential risks and expenses associated with fire management activities require exceptional skill and attention to detail when planning and implementing these activities. The following sections identify and summarize the wildland fire management strategies that will be implemented over the life of the plan.

3.1 Response to Wildfire

Because of the small size of the park and proximity to private structures outside the park, full suppression strategies and protection objectives are the only option when responding to unplanned ignitions. See Values at Risk Map Sheet.

3.1.1 Wildfire Response Planning

- **Expected Fire Behavior**

Fuel models at HOME are primarily grass and timber litter. Fuel model descriptions refer to Standard Fire Behavior Fuel Models (Scott & Burgan, 2005). The figures indicate anticipated fire behavior (flame length and rate of spread) under partially--cured conditions within Homestead National Historical Park.

Fuel Model GR3 (103): Low Load, Very Coarse, Humid Climate Grass (Dynamic)

The primary carrier of fire in GR3 is continuous, coarse, humid-climate grass. Grass and herb fuel load is relatively light; fuelbed depth is about 2 feet. Shrubs are not present in significant quantity to affect fire behavior.

Fuel Model GR6 (106): Moderate Load, Humid Climate Grass (Dynamic)

The primary carrier of fire in GR6 is continuous humid-climate grass. Load is 3-4 tons/acre and depth is 1-2 feet.

Fuel Model GR7 (107): High Load, Dry Climate Grass (Dynamic)

The primary carrier of fire in GR7 is continuous dry-climate grass. Load and depth are greater than GR4. Grass is about 3 feet tall.

Fuel Model GR8 (108): High Load, Very Coarse, Humid Climate Grass (Dynamic)

The primary carrier of fire in GR8 is continuous, very coarse, humid-climate grass. Load is 7-8 tons/acre and depth is 3-5 feet. Spread rate and flame length can be extreme if grass is fully cured.

Fuel Model TL2 (182): Low Load Broadleaf Litter

The primary carrier of fire in TL2 is broadleaf (hardwood) litter. Low load, compact broadleaf litter. Spread rate is very low; flame length very low.

Fuel Model TL6 (186): Moderate Load Broadleaf Litter

The primary carrier of fire in TL6 is moderate load broadleaf litter, less compact than TL2. Spread rate is moderate; flame length low.

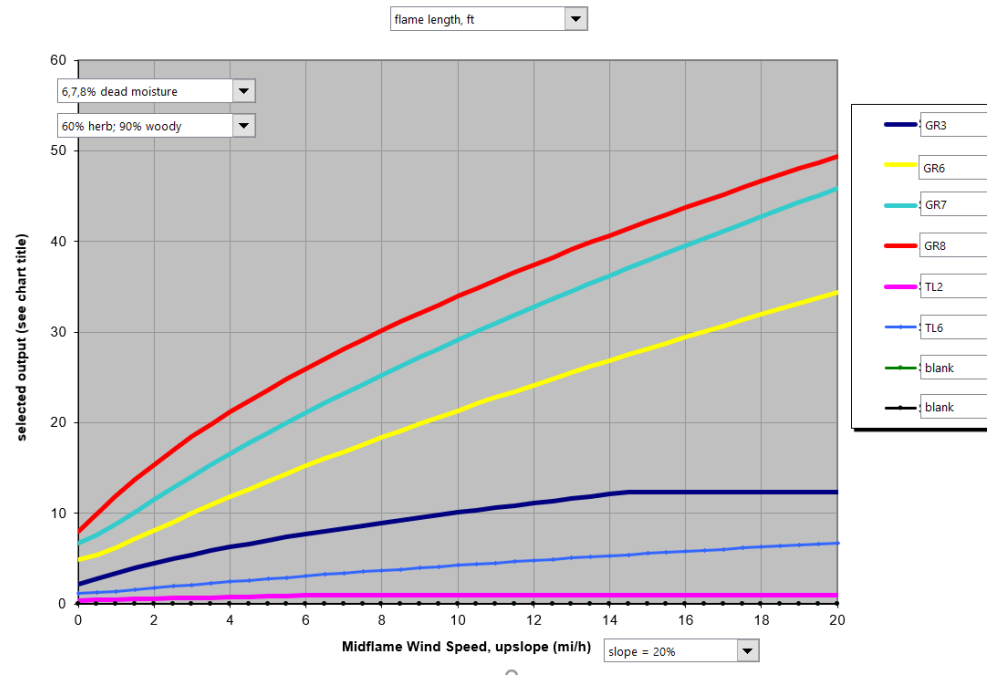


Figure 4. Flame length with moderately dry dead fuels, partially cured live fuels, and gentle slopes. GR3, GR6, GR7, GR8, TL2, and TL6 are included on the graph.

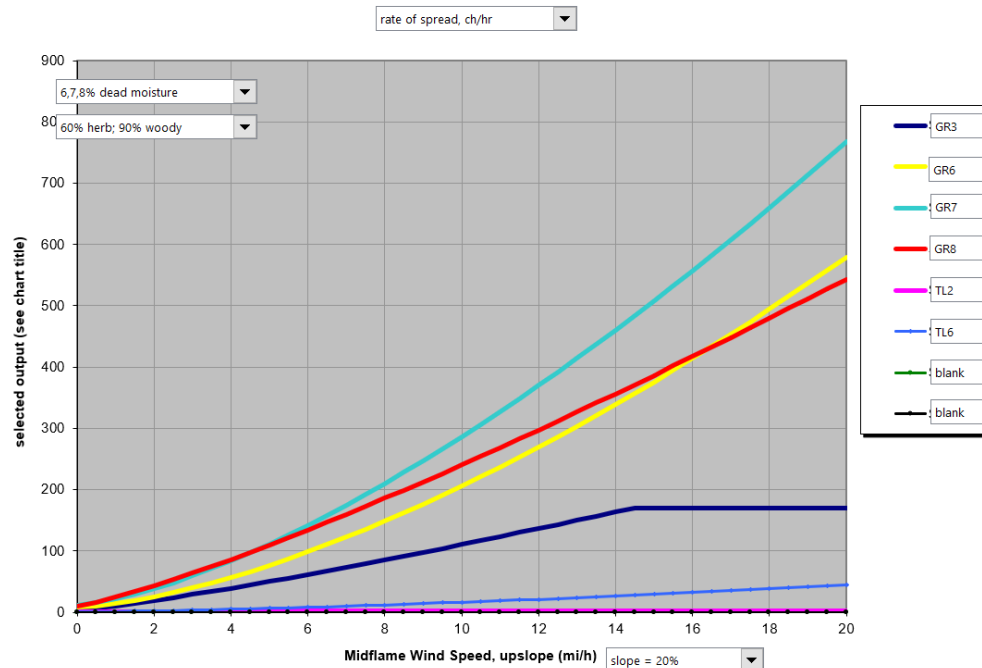


Figure 5. Rate of spread with moderately dry dead fuels, partially cured live fuels, and gentle slopes. GR3, GR6, GR7, GR8, TL2, and TL6 are included on the graph.

- **Minimum Impact Strategy and Tactics**

Utilization of Minimum Impact Strategy and Tactics (MIST) is the policy of the National Park Service. Fire management activities within the park will be carried out in a manner that minimizes impacts to Homestead's natural and cultural resources. Of primary importance is the need to emphasize a minimum impact fire suppression philosophy. Suppression forces will choose methods and equipment commensurate with suppression needs and the appropriate management response strategy which least alters the landscape or disturbs park natural and cultural resources. At HOME, most fire will be controlled by using water, fire swatters, or rakes. Ground disturbance should rarely be needed. Vehicle usage has the most potential to result in a negative impact. To minimize the potential for negative impact vehicle usage should be confined to walking paths when possible and heavy vehicles that break through the sod or leave ruts should not be used on the prairie. Utility Task Vehicles (UTV's) outfitted with sprayers or slip in fire units are the preferred vehicle for fire response. Fire breaks which will be created at needed for prescribed fires or structure protection are best created by mowing (or swathing) and baling the vegetation.

When using class A foam special care must be taken to ensure that it is not entering streams or ponds as it is toxic to fish and other aquatic organisms.

See RM-18, Chapter 2, Exhibit 1 for additional details (NPS, 2019).

3.1.2 Wildfire Response Objectives

- Conduct all fire management activities in a manner that maintains the safety of firefighters and the public.

- Protect human life and property both within and adjacent to park areas.
- Protect natural and cultural resources from adverse effects of fire and fire management activities.

Incident-specific objectives will be developed by the Incident Commander and approved at the appropriate level for implementation.

3.1.3 Wildfire Response Procedures

- **Decision Support**

Current direction on Decision Support information pertaining to the NPS can be found in the Interagency Standards for Fire and Fire Aviation Operations (Red Book) in Chapters 3 and 11.

- **Wildland Fire Decision Support System (WFDSS)**

Unplanned ignitions are required to have a Published Decision within WFDSS when they: 1) Escape initial attack, 2) Exceed initial response, or 3) Include objectives with both protection and resource benefit elements. Since this will rarely happen at HOME, it is unlikely that WFDSS will be utilized at HOME. Even so, basic Strategic Objectives and Management Requirements have been loaded into WFDSS and can be found in Appendix K.

- **Initial Response Procedures**

Initial response to wildfires will be completed by the Beatrice Rural Volunteer and Beatrice City Fire Departments with guidance from park managers and assistance from any trained and qualified NPS firefighters. Usually there are only two collateral duty firefighters on staff at HOME. Beatrice Rural Volunteer Fire Department is dispatched by Southeast Communication which is located in Beatrice. Southeast Communications can be contacted by dialing 911 or 402-223-4080. Non-fire employees will be utilized as needed to facilitate response efforts such as directing traffic and maintaining fire hydrants.

If additional resources are needed, Great Plains Interagency Dispatch Center (GPC) can be contacted. Initial contact of this resource should be through the NPS Fire Management Office in Omaha. However, if fire management officials in Omaha cannot be reached, HOME should contact GPC directly to communicate their needs.

If the fire demands that priorities need to be set, those priorities in order of precedence are:

1. The Education Center and Heritage Center which contain the curatorial storage, interpretive displays and offices.
2. The Freeman School House.
3. All other historic structures, including the Palmer-Epard Cabin, Coal Shed and privies.
4. The maintenance and housing buildings.

- **Response times**

Typical fire response times will vary depending on the staffing at the park, fire management activity in the local area, and time of day. During fire season when no other fire activity is occurring and staffing is available, park personnel can respond to the closest road access to fires within 10 minutes. Reinforcements from other agencies within the Homestead area can respond to the closest road access to a fire within 20 minutes.

- **Transition to Extended Response**

Due to the size of the park, and the predominant grass fuel types, extended response is unlikely. In the event that a fire exceeds the initial decisions and actions taken:

- HOME superintendent will notify the Regional Duty Officer as soon as possible.
- The Incident Commander (IC), park superintendent, and Regional Duty Officer will determine the appropriate fire response and order additional resources. A complexity analysis may be utilized to provide guidance to assigning the proper incident command organization (see Redbook Chapter 11, appendix E and F; or WFDSS).
- Regional fire personnel will advise and/or respond as requested. If a Published Decision is required in WFDSS, Regional personnel will assist to prepare the document for signature by the superintendent.
- HOME staff will be in a support role only, unless staff possesses the appropriate level of fire qualifications to assist.

3.2 Fuel Treatments

HOME will utilize prescribed fire, manual and mechanical treatments, and targeted herbicide use in a planned program to modify fuels, to restore and maintain native vegetation, historic landscapes, and provide defensible space around structures within and adjacent to the park.

3.2.1 Fuels Planning

The HOME fuels management program is designed to achieve the program goals and objectives, as well as help achieve resource management and fire management goals as defined in NPS policy. Fuels projects and mitigation priorities are selected based on thatch/litter build up, number of years since last prescribed fire, species and quantity of invasive species, and the ability to help implement invasive species control (removing vegetation so woody species can be treated with chemicals in a more efficient manner).

The Park's woodlands often sustain damage throughout the year as a result of storms (ice, snow, strong winds, and tornadoes). In addition, much of the south woodland area adjoins croplands and the northern woodlands are adjacent to the Pioneer Acres housing development. The proximity of the woodlands to the housing development presents a definite urban/wildland interface. This plan will set a strategy for hazard fuel reduction and the measure which will be used for this type of treatment.

3.2.1.1 General Fuels Management Implementation Procedures

The activities proposed in the Fire Management Plan will be planned and implemented in accordance with Reference Manual 18 - Fuels Management (NPS, 2019), the Interagency Prescribed Fire Implementation Guide (NWCG, 2017), and the Interagency Standards for Fire and Fire Aviation Operations (NIFC, 2020).

- **Prescribed Fire**

Prescribed fire is an important tool to manage vegetation communities and to achieve resource management objectives of the park. The prescribed fire management program was implemented in 1970 at Homestead. Different tactics were used ranging from the burning of the entire prairie to portions of the prairie. Today, basic prescribed fire strategies are derived from the Vegetation Management Action Plan (NPS, 2006). In the past, prescribed fire has been used solely within the prairie to maintain the restoration efforts. Prescribed fire will also be utilized in the woodlands to reduce hazardous fuels and reintroduce fire as a natural process.

Research in to how the hydrology has changed within the woodland by Rodney Chimner and Sigrid Resh (2010) suggested that prescribed fire should not have a detrimental impact on the woodland based on where bur oak trees obtain their water and should be used as a management tool. Rolfsmeier (2007) viewed fire as an important historical condition and recommended a fire interval two years until regeneration of desirable oaks and other trees is greater than the regeneration of hackberries and other undesirable tree. Once the regeneration goal is reached a 3-5-year interval should be utilized. In addition, he states that exotic plant control (mainly white mulberry and garlic mustard), deer control, and thinning of hackberry trees will be necessary to help restore the woodland to something that more closely resembles what Daniel Freeman would have encountered when he first arrived.

An implementation plan (Burn Plan) will be written for each prescribed fire. This is the responsibility of the MWRO Fuels Management Specialist. The assigned Burn Boss will be responsible for the pre-burn preparations, burn-day implementation, and post-burn follow up.

- **Non-Fire Fuel Treatments**

At HOME, non-fire treatments include chemical, mechanical, and manual removal of invasive or undesirable species. Species currently treated with non-fire fuels treatments include garlic mustard, wild plum, smooth sumac, dogwood, reed canary grass, and various tree species invading the prairie.

The NPS has adopted the International Code Council's (ICC's) International Urban-Wildland Interface Code (ICC, 2015). Contained in the ICC's code (sections 603 and 604) are descriptions of defensible space and maintenance requirements for urban wildland interface areas.

Maintenance of the defensible space includes modifying or removing non fire-resistant vegetation and keeping needles, leaves, and other dead vegetative material regularly removed from around structures and roofs. Refer to RM 18 Chapter 7 for current direction (NPS, 2019).

- Mechanical Treatments are needed to create fire-lines for prescribed fires and to reduce fuel loads to create buffers near structures. Fire-lines are most secure when they are hayed.
- Chemical Treatments are needed to manage thickets and other perennial invasive species that are expanding their range. Treatment of thickets when possible should be timed with prescribed fire to maximize effectiveness.

3.2.1.2 Multi-year Fuels Treatment Plan

Specific fuels management goals and objectives will be in each prescribed burn plan. Prescribed fires should be scheduled on a 2 to 5-year interval. This long-term management strategy will be assessed yearly and updated as required. See Treatment Unit map sheet and Appendix D for Fuels Treatment Plan.

3.2.2 Fuels Management Goals and Objectives

The goals and objectives are derived from the Vegetation Management Action Plan (NPS, 2006) and Rolfsmeier (2007).

3.2.2.1 Woodland Goal

Protect the current native biodiversity of the woodland while striving to increase biological diversity through a gradual process of modifying the community to a more heterogeneous condition that may better approximate what Daniel Freeman may have encountered when he first laid eyes on what was to become his homestead claim.

- Maintain woodland (successional and bur oak) native plant species richness (gamma diversity) at approximately 20 species or more. Baseline gamma diversity for the bur oak woodland ranged from 10 to 24 species and in the successional sites, gamma ranged from 23-29 species (Leis S. A., 2019).
- Utilize prescribed fires to remove undesired hackberries and other fire intolerant tree species in the subcanopy by >20% (+/- 1 SD) while encouraging regeneration of desired tree species such as bur oak, American elm, and walnut.
- Over 15-20 years, reduce woodland canopy cover to 40-50% (+/-SD) across the woodland. Edges may be more variable than interior oak dominated areas. (measured by HTLN vegetation or habitat projects). A combination of prescribed fire and selective thinning treatments will be used. Thinning should target hackberry, honey locust and all introduced

tree species. Because of the threat of the emerald ash borer, green ash trees may be considered as a target species. Thinning operations should limit disruption to desirable tree species such as bur oak, elms, and walnuts. Reduce wildland fuel accumulation which reduces the risk of wildfire occurrence.

- Reduce woodland fuel (litter, 1-hr, and 10-hr fuels) from pre-burn levels to reduce the risk of a wildfire occurring.
- Decrease invasive plant species. Particularly limit Osage orange and white mulberry to 25% or less of invasive monitoring search units. Invasive species found in 2017 included: common mullein, dames rocket, garlic mustard, Kentucky bluegrass, Morrow's honeysuckle, Oriental bittersweet, Osage orange, reed canarygrass, Siberian elm, smooth brome, yellow sweet clover and white mulberry (Young, Haack, Morrison, & DeBacker, 2007).

3.2.2.2 *Prairie Goal*

Protect biodiversity of the prairie. Murie, (1940) states "... It would seem desirable to make an effort early in the program to restore some of the more prominent spring, summer and fall flowers to show a part of Nature which no doubt gave some cheer to the first settlers." Our goal is to ensure that through our management actions those flowers (vegetative biodiversity) can express themselves.

- Maintain the diversity of native plant species at levels measured over the baseline period 1998-2002. Average Shannon diversity of native species over the baseline period was 2.3 (+/- 0.2 SD) and prairie-wide native plant species richness (gamma diversity) should be maintained above the minimum of 83 species (Leis 2019).
- Maintain shrubs and vines in the prairie at or near the minimum value recorded by the bird habitat data. Structural diversity index should also be <20%.
- Reduce 1 - hour and 10 - hour fuel accumulation from pre-burn levels to reduce the risk of wildfire occurrence.
- If cool season exotic grasses exceed abundance thresholds, apply fire in the late spring, otherwise vary season. (Cool season exotics should be <10 % of prairie area (as measured by HTLN invasive project)

3.3 Preparedness

Fire preparedness is the state of being ready to provide an appropriate response to wildland fires based on identified objectives. Preparedness is the result of activities that are planned and implemented prior to fire ignitions. Preparedness requires identifying necessary firefighting capabilities and implementing coordinated programs to develop those capabilities.

Preparedness requires a continuous process of developing and maintaining firefighting infrastructure, predicting fire activity, implementing prevention activities, identifying values to be protected, hiring, training, equipping, pre-positioning, and deploying firefighters and equipment, evaluating performance, correcting deficiencies, and improving operations. All preparedness activities should be focused on developing fire operations capabilities and on performing successful fire operations.

3.3.1 Preparedness Activities

- **Prevention**

The objectives of the park's fire prevention program are to prevent human caused wildland fires and to incorporate prevention messages into interpretive programs. The Fire Prevention Plan is found in Appendix H.

- **Annual Training**

Annual refresher training emphasizing safety will be required for park staff. Minimum training will include Lookouts, Communication, Escape Routes and Safety Zone (LCES), Standards for Survival, fire shelter training and other updates as appropriate. Requirements for annual firefighter refreshers are listed in DO-18 (NPS, 2008).

In addition, each year the Zone Fire Management Officer, Chief of Resource Management and Interpretation and Park Fire Coordinator will assess the current qualifications of the park's fire qualified personnel. From this assessment, current and future training needs for both the park and individuals will be determined. Training will be obtained in the most cost-effective manner through services of the Zone Fire Management Office or through interagency training courses. Qualified instructors will be utilized for all courses.

- **Readiness**

Each year prior to and after the fire season, the Park Fire Coordinator will conduct an inventory of the fire cache. Any needed supplies or equipment will be requested through the Zone Fire Management office. The Fire Coordinator will also be responsible for ensuring that park fire tools and equipment are maintained in a state of readiness, especially during the fire season.

- **Coordination and Dispatching**

Regarding initial attack, all dispatching will be completed through Southeast Communication. They will be responsible for contacting Beatrice Rural and City

Fire Departments and mutual aid as needed. The first Beatrice Rural Volunteer Firefighter on scene will serve as IC until a more experienced firefighter arrives.

Memorandums of Understanding are signed with Beatrice Rural Fire District, Beatrice City Fire Department and membership with the local 3 & 33 Mutual Aid Association is maintained.

- **Duty Officer**

The superintendent or the designee is responsible for providing duty officer (DO) coverage during any period of predicted incident activities. DO's responsibilities may be performed by any individual with a signed Delegation of Authority from the Superintendent. The required duties for all DOs:

- Monitor unit incident activities for compliance with NPS safety policies.
- Coordinate and set priorities for unit suppression actions and resource allocation.
- Keep Agency Administrators, suppression resources and Information Officers informed of the current and expected situation.
- Plan for and implement actions required for future needs.
- Document all decisions and actions.

DOs will provide operational oversight of these requirements as well as any specific duties assigned by fire managers through the fire operating plan. DOs will not fill any Incident Command System (ICS) functions connected to any incident. If the DO is required to accept an incident assignment, the Superintendent will ensure that another authorized DO is in place prior to the departure of the outgoing DO.

3.4 Post-Fire Programs and Response

At HOME, rehabilitation needs anticipated are those associated with fireline construction and mop-up activities. Proper placement of hand constructed firelines should reduce the need for major work. Areas with handlines will be restored to their pre-fire condition as soon as possible. The nature of fires on the park indicates that long term rehabilitation should rarely be necessary. Should a Burned Area Emergency Rehabilitation Team (BAER) be required on the park an archeologist or cultural resource specialist should be part of the team.

In the event of suppression activities that require emergency stabilization or repair, the park will take prompt action after a wildfire to minimize threats to life or property, and to prevent unacceptable degradation to natural and cultural resources. Damages resulting from wildfires and suppression activities are addressed through four activities (see Reference Manual (RM) 18, chapter 19 (NPS, 2019) and Red Book (NIFC, 2020)).

Suppression Repair: Planned actions taken to repair the damages to resources, lands, and facilities resulting from wildfire suppression actions and documented in the Incident Action Plan. These actions are usually implemented prior to, or immediately after containment of the wildfire by the incident management organization. Repairs under this activity may be completed to return the value to pre-wildfire management activity condition as practical but may not improve the condition beyond what was existing prior to the incident.

Emergency Stabilization: Planned actions to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize threats to life or property resulting from the effects of a wildfire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources. Emergency stabilization actions must be taken within one year plus twenty-one days after the ignition date of a wildfire and documented in a Burned Area Emergency Response Plan or an agency specific plan. Within the Department of Interior, the Bureau Director may approve an extension beyond the one-year plus twenty-one days to accommodate circumstances related to climatic conditions or other significant events.

Rehabilitation: Efforts taken within five years following 21 days after the ignition date of a wildfire to repair or improve wildfire-damaged lands unlikely to recover naturally to management approved conditions, or to repair or replace minor assets damaged by wildfire. These efforts are documented in a separate Burned Area Rehabilitation Plan (BAR) or in combination with Burned Area Emergency Response Plan (BAER).

Restoration: Continuing the rehabilitation beyond the initial five years or the repair or replacement of major assets damaged by the wildfire. This activity is paid for from regular non-fire program funds.

3.5 Air Quality/Smoke Management

National Park Service wildland fire activities resulting in the emission of air pollutants are subject to all local, state, and federal air pollution control requirements. Federal requirements are outlined in Section 118 of the Clean Air Act (42 USC 7418). As smoke is a natural and inevitable byproduct of fire, a prescribed burn or wildfire are not considered to be point sources of air pollutants. Impacts are temporary and are expected as part of the burn process – therefore, mitigation efforts take place to lessen impacts on air quality and visibility due to smoke.

Ensure visibility is not severely reduced along Highway 4 due to fire use activities.

3.5.1 Air quality issues

Homestead National Historical Park is designated as a Class II air quality area.

3.5.2 Smoke Management Activities

A key consideration in the entire fire management program, including prescribed fire activities and wildland fire, is smoke management. HOME is situated approximately 4 miles west of Beatrice, Nebraska on State Highway 4. Approximately 2,600 vehicles travel on Highway 4 on a daily basis and is a major artery for commercial truck traffic from the industrial plants north of the park.

A residential development, Pioneer Acres, is located along the northeast boundary of the park. Approximately 25 single-family dwellings, along with an apartment building, are located in Pioneer Acres. With the residential area, and the very significant highway traffic, smoke management is a primary concern. However, the areas to the north, west, and south of the park are sparsely populated.

Burn permits for prescribed fire activities will be secured from the Beatrice Rural Fire District prior to ignition. The following management guidelines will be adhered to during all phases of the fire management program.

- No prescribed fires will be ignited during air pollution alerts, temperature inversions, or when a burn ban has been established by local government agencies.
- Fire weather forecasts will be used to predict smoke dispersal.
- Prescribed fires will only be conducted when conditions permit rapid smoke dispersal.
- Prescribed fire prescriptions will be developed, and firing techniques utilized that minimize smoke production and mitigate smoke impacts on highways and areas of human activity.
- Ignitions may occur as soon as one hour after sunrise to as late as two hours before sunset.
- Firing operations may have to cease or be adjusted to prevent smoke from entering the Pioneer Acres housing area.
- Local fire and police agencies will be notified of any prescribed fire activities so they may provide any needed assistance with traffic flow if any problems with smoke dispersal occurs.
- Smoke advisory signs will be placed on Highway 4, approximately ¼ mile east and west of the park boundary.
- Smoke monitors (usually park staff) will be posted to observe direction of smoke movement, column heights, and the effect of smoke upon area highways.
- If conditions become hazardous because of visibility, traffic will be stopped until the smoke has lifted from the highway.

3.6 Data and Records Management

HOME in conjunction with the regional fire management staff and Heartland Network staff will ensure that wildland fire data and records are maintained.

- Reporting in current NPS fire reporting system will be completed by regional fire management staff.
- Firefighter qualifications for HOME staff and administratively determined (AD) firefighters will be maintained by regional staff.
- Geospatial data and other fire ecology parameter such as burn severity will be collected by HTLN staff as outlined in the HTLN Fire Ecology Protocol (Leis, Morrison, Haack, & Gaetani, 2011).
- Digital copies of burn plans, fire management plans, trainings etc... will be maintained on the park's public drive.

The Superintendent is ultimately responsible for fire reporting and fiscal accounting. Individual report assignments may be made by the Superintendent. The table below is a checklist of possible wildland fire documents and the individual usually responsible for completing them.

Time and filing deadlines are associated with each of these reports and will control scheduling and response times.

4.0 PROGRAM MONITORING AND EVALUATION

4.1 Monitoring

All NPS units applying prescribed fire, using wildfire for resource objectives, or altering the arrangement of wildland fuels for the purpose of modifying fire behavior beyond defensible space building codes must prepare a fire monitoring plan. Monitoring is the primary means of assessing whether the fire program is meeting management goals and objectives. HOME utilizes the HTLN fire monitoring plan.

All wildland fires will be monitored. Information gathered during fire monitoring is needed to keep fires within predetermined criteria, to help identify trigger points for initiating holding and suppression actions, and to protect human life and property. On any fire that exceeds the initial response, monitoring will be initiated to observe the fire, assess its potential and provide a historical record. Monitoring will include documenting the fire environment (such as weather, fuels, and topography), fire behavior (such as manner and rate of spread, and flame length), and fire effects (such as percent of fuels consumed and changes in plant and animal community composition and structure). Photographs may be taken. Weather readings will be made periodically, those records will be given to the IC to become part of the official record stored in the park's central files.

4.2 Science and Climate Change

Research needed includes specific conditions where fire causes mortality or top killing of shrubs (e.g., heat dosage, frequency, fuel loads, effects of clump (motte) size).

Management of the woodlands will increase resiliency through increased diversity of the over and understory layers. Diverse prairie communities are better adapted to survive expected climate change.

4.3 Annual Program Evaluation and Fire Management Plan Review Process

This plan will be reviewed annually in accordance with RM 18 - Chapter 4 (NPS, 2019) in order to incorporate new knowledge, program adjustments/refinements and updates as needed. This review requires Superintendent approval and will follow the Annual Update Checklist found on the IRMA Data Store (<https://irma.nps.gov/DataStore/Collection/Profile/3868>). After the Annual Update Checklist is completed and all suggested changes have been vetted through the appropriate fire management and park staff, the Superintendent must sign the FMP Annual Update Checklist. All approved changes must then be incorporated in the FMP and the Annual Update Checklist must be added to the FMP immediately following the cover-page. The revised FMP, including the signed Annual Update Checklist, must be uploaded to IRMA in a 508 compliant format.

All wildland fires and fire-related incidents must also be reviewed at some scale, whether it is a tailgate after-action-review or at the other end of the spectrum, a formal review conducted by a team. This includes all prescribed fires, which will also be reviewed as appropriate. Reviews are conducted for one or more of the following purposes:

- To examine the progress of an on-going fire incident and to confirm effective decisions or to correct deficiencies.

- To identify new or improved procedures, techniques, or tactics.
- To compile consistent and complete information to improve or refine park, regional, or national fire management programs.
- To examine anomalous fire-related incidents in order to determine cause(s), contributing factors, and where applicable, to recommend corrective actions; if negligence is indicated, the circumstances will be reported and investigated in accordance with applicable regulations, policies, or guidelines.
- To determine the cost effectiveness of a fire operation.

Appendix A – References Cited

- 74th Congress. (1936, March 19). An Act to establish The Homestead National Monument of America in Gage County, Nebraska. Retrieved from <https://www.loc.gov/law/help/statutes-at-large/74th-congress/session-2/c74s2ch157.pdf>
- Chimner, R. A., & Resh, S. C. (2010). *Analyzing Water Isotopes in Mesic Bur Oak Forest, Homestead National Monument, Nebraska*. Michigan Technological University; School of Forest and Environmental Sciences, Houghton, Michigan.
- DOI. (2014). *The National Strategy*. Retrieved from Department of Interior: https://www.doi.gov/sites/doi.gov/files/migrated/news/upload/20140328_CSPhaseIIINationalStrategy_SurnameCopy_execSec_FINAL_v3.pdf
- Fogell, D. D. (2004). *A Herpetofaunal Inventory of Homestead National Monument of America*. National Park Service.
- Haack, J. L. (2012). *Thicket Monitoring at Homestead National Monument of America of 2000 - 2010*. Fort Collins, Colorado: National Park Service.
- HTLN. (2004). *Summary of plant community monitoring data for the tallgrass prairie restoration at Homestead National Monument of America 1998-2002*. The Prairie Cluster & Inventory Monitoring Network.
- ICC. (2015). *International Code Council*. Retrieved from 2015 International Wildland-Urban Interface Code: <https://codes.iccsafe.org/content/IWUIC2015/chapter-6-fire-protection-requirements>
- Jones, D. S., Cook, R., Sovell, J., Herron, C., Benner, J., Decker, K., . . . Weinzimmer, D. (2019). *Natural Resource Condition Assessment: Homestead National Monument of America*. Fort Collins, Colorado: National Park Service.
- Leis, S. A. (2019). *Vegetation Monitoring at Homestead National Monument of America, Nebraska:1998-2017*. Fort Collins, Colorado: National Park Service.
- Leis, S. A., Morrison, L. W., Haack, J. L., & Gaetani, M. S. (2011). *Fire ecology monitoring protocol for the Heartland Inventory and Monitoring Network*. Fort Collins, Colorado: National Park Service.
- Mlekush, K. E., & DeBacker, M. D. (2003). *Forest Inventory of Vascular Plants at Homestead National Monument of America*. National Park Service.
- Murie, A. (1940). *Restoration of native grassland at Homestead National Monument*. National Park Service.
- NIFC. (2020). *Redbook 2020 Interagency Standards for Fire and Fire Aviation Operations 2020*. Retrieved from National Interagency Fire Center: https://www.nifc.gov/policies/pol_ref_redbook.html
- NPS. (1999). *General Management Plan for Homestead National Monument of America*. National Park Service.
- NPS. (2006). *Homestead National Monument of America: Vegetation Management Action Plan 2004-2014*. Beatrice: National Park Service.
- NPS. (2006). *Management Policies 2006*. Retrieved from https://www.nps.gov/policy/MP_2006.pdf
- NPS. (2008, 1 16). *Director's order #18: wildland fire management*. Retrieved from https://www.nps.gov/policy/DOrders/DO_18.pdf

- NPS. (2015). *Foundation Document Homestead National Monument of America, Nebraska*. National Park Service.
- NPS. (2019, April). *NPS Reference Manual 18*. Retrieved from National Park Service:
<https://www.nps.gov/subjects/fire/upload/nps-reference-manual-18.pdf>
- NPS. (2020, January 20). *Species Checklist for Homestead National Monument of America*. Retrieved from NPSpecies-The National Park Service biodiversity database:
<https://irma.nps.gov/NPSpecies/Reports/SpeciesList/Species%20Checklist/HOME/11/false>
- NWCG. (2017, July). *National Wildfire Coordinating Group*. Retrieved from Interagency Prescribed Fire Planning and Implementation Procedures Guide:
<https://www.nwcg.gov/sites/default/files/publications/pms484.pdf>
- Quinn Evans/Architects; Land and Community Associates. (2000). *Homestead National Monument of America, Beatrice, Nebraska: Cultural Landscape Report*. National Park Service.
- Rolfsmeier, S. B. (2007). *Homestead National Monument of America Bur Oak Forest Restoration Plan: Reference Condition and Management Considerations*.
- Scott, J. H., & Burgan, R. E. (2005). *Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model*. Rocky Mountain Research Station.: U.S. Department of Agriculture, Forest Service.
- Stubbendieck, J., & Willson, G. D. (1987). Prairie restoration/management at Homestead: A History. *Park Science*, 7(4, Summer), 21.
- Swengel, A. B. (2013). Tallgrass Praire Traedies. *American Butterflies*. Retrieved from
https://www.naba.org/pubs/ab213_4/ab213_4_Tallgrass_Prairie_Tragedies.pdf
- USFWS. (2015, April). *Northern Long-Eared Bat Fact Sheet*. Retrieved from United States Fish and Wildlife Service:
<https://www.fws.gov/midwest/endangered/mammals/nleb/pdf/NLEBFactSheet01April2015.pdf>
- USFWS. (2016, January 13). *Key to the Northern Long-Eared Bat 4(d) Rule for Federal Actions that May Affect Northern Long-Eared Bats*. Retrieved from United States Fish and Wildlife Service:
https://www.fws.gov/Midwest/endangered/mammals/nleb/pdf/KeyFinal4dNLEB_FedAgencies17Feb2016.pdf
- Young, C. C., Haack, J. L., Morrison, W., & DeBacker, M. D. (2007). *Invasive exotic plant monitoring protocol for the*. Fort Collins, Colorado: National Park Service.

Appendix B – Definitions

The list of pertinent fire management definitions may change over time as new definitions are added and obsolete definitions are replaced, therefore a list of current definitions are found using the following link: <https://www.nwcg.gov/glossary/a-z>.

Appendix C – Compliance for FMP

List individuals and organizations consulted during plan development.

- U.S. Fish and Wildlife Service
- Nebraska Game and Parks Commission
- Northern Prairies Land Trust – Kent Pfeiffer
- Nebraska Department of Environmental Quality
- Nebraska State Historic Preservation Office
- Nebraska Forest Service
- Ponca Tribe of Nebraska
- Ponca Tribe of Indians of Oklahoma
- Otoe-Missouria Tribe of Oklahoma
- Pawnee Nation of Oklahoma
- Friends of Homestead
- Beatrice Fire and Rescue Department
- Beatrice Rural Fire District
- Richard Scheve

List contributors (authors) and reviewers of the plan; identify their role in the Fire Management Plan.

- Cody Wienk, Co-Author
- Jesse Bolli, Co-Author
- Sherry Leis, Plant Ecologist, Heartland Inventory and Monitoring Network. Developed monitoring protocols and metrics and recommendations for goals related to vegetation
- Amy Genke, Chief of Interpretation and Resource Management at Homestead.
- Shannon Sjolie, Environmental Analyst Supervisor at Nebraska Game and Parks. Solicited and presented recommendations from Game and Parks specialist.
- Kent Pfeiffer, Northern Prairie Land Trust, presentation and recommendation on oak woodland management

Endangered Species Act: Section 7 consultation with U.S. Fish and Wildlife Service Executive Orders 11988 and 11990: Floodplain management

- Included in Environmental Assessment and FONSI, See link below

National Historic Preservation Act (Section 106): Provide for review by the Advisory Council on Historic Preservation

- Included in Environmental Assessment and FONSI, See link below

Environmental Assessment & FONSI

Add Link

Appendix D – Multi-Year Fuels Treatment Plan

	Brick House Prairie Unit	Farm Loop Prairie Unit	Freeman School Prairie Unit	Grain Growers Prairie Unit	Highway Prairie Unit	Middle Prairie Unit	Pond Prairie Unit	Upland Prairie Unit	Cottonwood Woodland Unit	Cub West Woodland Unit	Scheve Woodland Unit	Squatters Woodland Unit	Head-quarters Woodland Unit	North Woods Woodland Unit	Pioneer Prairie Unit	Heritage Prairie Unit
2000				X	X											
2001						X										
2002			X					X								
2003	X	X														
2004																
2005						X										
2006				X				X								
2007	X	X														
2008				X	X											
2009						X		X								
2010	X		X													
2011				X				X								
2012																
2013																
2014	X	X				X										
2015				X				X								
2016	X															
2017																
2018		X	X			X										
2019				X				X								

	Brick House Prairie Unit	Farm Loop Prairie Unit	Freeman School Prairie Unit	Grain Growers Prairie Unit	Highway Prairie Unit	Middle Prairie Unit	Pond Prairie Unit	Upland Prairie Unit	Cottonwood Woodland Unit	Cub West Woodland Unit	Scheve Woodland Unit	Squatters Woodland Unit	Head-quarters Woodland Unit	North Woods Woodland Unit	Pioneer Prairie Unit	Heritage Prairie Unit
2020																
2021	X						X		X							
2022		X	X		X					X	X					
2023	X			X		X		X	X			X				
2024							X			X	X					
2025	X		X						X			X				
2026		X		X	X					X	X					
2027						X	X	X	X			X				
2028										X	X					
2029	X		X	X					X			X				
2030		X			X		X			X	X					
2031	X					X		X	X			X				

Appendix E – Fire Monitoring Plan

The Heartland Inventory and Monitoring Network provides vegetation monitoring support for Homestead. In addition to the protocols described in the two cited documents, shrub motte abundance and density in the prairie is monitored every five years.

James, K. M., M. D. DeBacker, G. A. Rowell, J. L. Haack and L. W. Morrison. 2009. Vegetation community monitoring protocol for the Heartland Inventory and Monitoring Network. Natural Resource Report NPS/HTLN/NRR — 2009/141. NPS, Fort Collins, CO.

Leis S.A., Morrison L.W., Haack J.L. & Gaetani M.S. Fire ecology monitoring protocol for the Heartland Inventory and Monitoring Network. NPS/HTLN/NRR--2011/294, ii-117. 2011. Fort Collins, Colorado, National Park Service. Natural Resource Report.

Young CC and Others. 2007. [Invasive Exotic Plant Monitoring Protocol for the Heartland Network Inventory and Monitoring Program](#). Natural Resource Report. NPS/MWR/HTLN/NRR—2007/018. National Park Service.

Appendix F – Preparedness Planning Documents

Initial Response Plan

This plan is intended to serve as a quick reference that can be used in the event of a wildland fire suppression incident for finding basic information that may likely be useful in suppression efforts. This document is broken down into four general areas of operations: Command, Operations, Logistics, and Planning. Due to the document containing sensitive information concerning archeological sites, the plan is exempt from the Freedom of Information Act and is not available for general dissemination to the public.

COMMAND

- *Interagency agreement:* In place with Beatrice Rural Fire District.
- *Draft delegation of authority:* attached.
- *Evacuation procedures:* In Emergency Operations Plan.
- *Structural protection needs:* The following structures must be considered for structure protection in the event of a wildland fire - Visitor Center, maintenance shop, Palmer-Epard Cabin, Quarters #3 and 6, Freeman School, three outbuildings at Freeman School.
- *Closure procedures:* In Emergency Operations Plan.
- *Management constraints:* In the prairie, no hand lines may be dug because of archeological sites within the farm loop area. Other cultural features such as old fence rows and house sites occur within the prairie area. No hand lines may be dug within the Woodlands Loop Trail area due to the probable, although unknown, location of the pre-Freeman squatter's cabin site.

OPERATIONS

- *Staging areas:* Heritage and Education Centers parking areas, Freeman School parking area, maintenance area.
- *Water sources:* Water hydrant at the Visitor Center, front lawn of Quarters #3. Also, Cub Creek is a possible source, however, due to the steep high banks, friction loss during draft operations may make the creek an unfeasible option (dependent upon strength of pump).
- *Control lines (prairie):* trails, Highway 4, Cub Creek, mow lines in prairie during Staffing Class V.
- *Control lines (woodlands):* Cub Creek, Blakely Township Road. trails.
- *Safety zones:* Roads, parking areas, creek channel, plowed agricultural lands adjacent to the boundary.

LOGISTICS

- *Roads:* Highway 4 bisects the park in two locations, running from east to west. The Blakely Township Road passes to the west of the park. A service road travels through the woodlands to the prairie from the service gate at the southwest corner of the park.

- *Trails:* 2.5-mile trail system - main portions circumnavigates the main perimeter of the prairie.
- *Utilities:* Electric - Norris Public Power (402-223-4087); Water - Lower Big Blue Natural Resource District (402-228-3402); Telephone - Windstream (402-228-1366)
- *Medical facilities:* Beatrice Community Hospital (402-228-3344)
- *Stores:* Super Wal Mart, Russ's Market, and Sunmart
- *Restaurants:* Many fast food restaurants; some "sit-down" restaurants
- *Gas stations:* Casey's, Cenex, Homestead Plaza Truckstop and Nick's Shell. Diesel is available at Cenex and the truck stop. E-85 at the Cenex.
- *Construction contractors:* Lineweber Trenching (402-223-4011)
- *Police departments:* Gage County Sheriff's Office (402-223-5221), Nebraska State Patrol (471-4545), Beatrice Police Department (223-4080)
- *Fire departments:* Beatrice Rural Fire District (Fire Chief Matt Langley 402-806-2747), Beatrice Fire Department (402-228-5246)
- *Communications:* Beatrice Communications, non-emergency (402-223-5221); emergency for any of the above agencies (911)
- *Communications (commercial):* Windstream Communications (402-228-7566)
- *Maintenance facilities:* Nebraska Department of Roads (402-223-6605)

PLANNING

Step-up Plan

Fire weather data is no longer gathered at Homestead. Indices can be obtained by visiting <https://www.wfas.net/index.php/fire-danger-rating-fire-potential--danger-32>

STAFFING CLASS I

Burning Index: 0-9

Actions:

- Normal operations
- If KBDI is equal to, or greater than 300, increase Staffing Class to SC II.

STAFFING CLASS II

Burning Index: 10-18

Actions:

- Normal operations
- If KBDI is equal to, or greater than 400, increase Staffing Class to SC III.

STAFFING CLASS III

Burning Index: 19-36

Actions:

- Park's Fire Coordinator will know the location and availability of all red-carded personnel. Fire truck will be equipped with tools; pumper checks will be made.
- If KBDI is equal to, or greater than 500, increase Staffing Class to SC IV.

STAFFING CLASS IV

Burning Index: 37-45

Actions:

- Park's Fire Coordinator will provide updates to the Regional FMO as requested. Implement parts of the fire prevention plan. Increase pumper readiness checks to daily.
- If KBDI is equal to, or greater than 600, increase Staffing Class to SC V.

STAFFING CLASS V

Burning Index: 46+

Actions:

- Park's Fire Coordinator will continue updates to Regional FMO as requested. If the park remains in SC V for more than one week, Park's Fire Coordinator will request severity funding for increased patrols and other preparedness activities. Mow lines may be installed along the south and east park boundaries and along the prairie/woodland edge. Mow lines will also be installed around historic structures in and near the prairie units at the Freeman School.
- The Superintendent may close park trails. Local print and broadcast media will be notified of any closures. The Beatrice Rural Fire District will be notified of the entry into Staffing Level V. Pumper readiness checks will continue daily. Fire weather readings will continue on a daily basis. Red-carded personnel will pre-position PPE in fire truck.

Delegation of Authority

Homestead National Historical Park, Beatrice, NE

Delegation of Authority

_____ is assigned as the Incident Commander of the _____ Fire. You have full authority and responsibility for completing the planning efforts within the framework of law, National Park Service policy and direction provided in the Decision Document published in WFDSS, and this Delegation.

Specific direction includes:

- _____, Zone Fire Management Officer will be assigned as the Agency Representative.
- _____, Chief, Interpretation and Natural Resource Management, will be assigned as the Resource Advisor.
- The Park will retain initial attack and suppression responsibilities.
- Firefighter and public safety is the priority and should be included in all planning actions.
- Facility and development protection areas are:
 - Cultural sites as identified by the park Cultural Resource Specialist
 - Park developed areas
- MIST tactics and minimal tool requirements will be a consideration.
- The Team is responsible for understanding local aviation protocols and coordinating aviation activities with the Agency Representative.
- Release of the Team will occur when agreed to by the Agency Representative and Incident Commander.
- Completed Long Term Assessment Plans and any related documentation will be provided to Homestead National Historical Park upon release.

Superintendent, Homestead National Historical Park

Date

Incident Commander

Date

Appendix J – Cooperative and Interagency Agreements

Memorandum of Understandings are maintained with the Beatrice Rural Volunteer Fire Department and the Beatrice City Fire Department. The most current copies are maintained in the parks central file system that is administered by the Administrative Officer.

**GRANT OF PERMISSION TO BURN LANDS NOT ADMINISTERED BY THE NATIONAL PARK
SERVICE**

Land Owner/Authorized Representative:

Richard Scheve,
9570 West State Highway 4
Beatrice, NE 68310

Agency Requesting Permission to Burn:

National Park Service -
Homestead National Historical Park
8523 West State Highway 4
Beatrice, NE 68310

Legal description of land to be burned:

T04N, R05E, NW1/4, Sec 26 wooded areas along creek, see attached map

Description of Owner's/Government's Lands to be burned:

The properties are surrounded by Cub Creek on three sides. Including the Scheve's land in the Squatters and Scheve units will enhance the health of the properties and make it safer for the firefighters to ignite and hold the prescribed burns. Both properties are within the viewshed of the park. Scheve's property is outlined in yellow on the attached map. Scheve's land will be included when burning the Squatters, Scheve, and Cottonwood Units.

PERMISSION IS HEREBY GRANTED by the landowner (Owner) whose signature appears below to the U.S. Department of the Interior, National Park Service (NPS) , and its authorized agents, to enter onto the lands as described above and identified in the attached Prescribed Fire Plan, which is made part of this document, and burn the vegetation in order to obtain benefits in the public interest such as improved wildlife habitat, restoration and maintenance of valued ecosystems, control of pests and diseases, wildfire hazard reduction and other public interest benefits.

Owner gives permission on the following conditions:

1. NPS will burn only in accordance with NPS's Interagency Prescribed Fire Plan.
2. NPS shall not charge Owner for the cost of burning Owner's Lands.
3. Owner certifies that Owner has inspected the above described lands and that there are no buildings or personal property on these lands which the Owner does not desire to be burned.
4. Any claim for personal injury or property damage proximately caused by the negligence of NPS employees may be filed in accordance with the Federal Tort Claims Act, 28 U.S.C. §§2671-2680.
5. Except as noted in paragraph 4, Owner agrees to hold the NPS harmless to the extent authorized by Nebraska law for any damage to any persons or property resulting from the prescribed burning of Owner's lands. This term does not extend to any lands not described above.
6. Other condition:_____ (Enter "None" if none)

NPS

1. Prescribed burns will be planned in conjunction with landowner
2. Owner will be debriefed after any burn activities.

National Park Service officials with authority to enter into agreement

Recommended for approval by Mark Engler
Superintendent Homestead NM of America

Date

Recommendation Concurred by Jim Loach
Associate Regional Director, Operations & Education, Region 3,4 and 5

Date

Approved by Herbert C. Frost, Ph. D.
Regional Director, Region 3,4 and 5

Date

OWNER GRANTS PERMISSION BEING FULLY ADVISED BY NPS OF THE RISKS OF BURNING

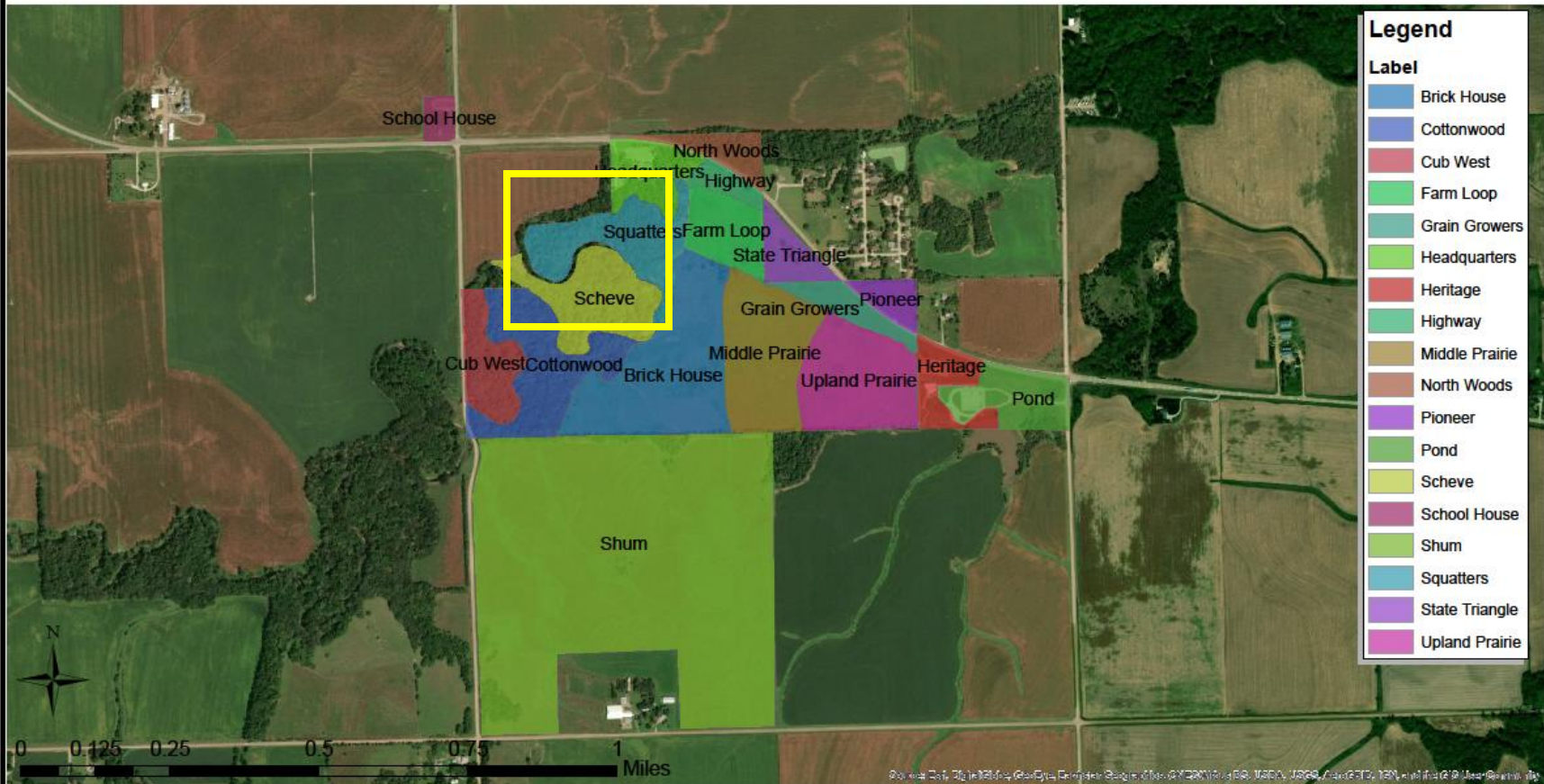
Signature of Owner or authorized individual

Date

IMPORTANT: PRESCRIBED FIRE PLAN MUST BE ATTACHED



Homestead NM Treatment Units



Produced by MWRO Fire Ecology

April 2020

FILE: home_trt_units.mxd

GRANT OF PERMISSION TO BURN LANDS NOT ADMINISTERED BY THE NATIONAL PARK SERVICE

Land Owner/Authorized Representative:

Don Ferneding,
President, Friends of Homestead,
8523 West State Highway 4,
Beatrice, NE 68310

Agency Requesting Permission to Burn:

Homestead National Historical Park,
8523 West State Highway 4
Beatrice, NE 68310

Legal description of land to be burned:

T04N, R05E, SW1/4, Sec 26

Description of Owner's/Government's Lands to be burned:

This property includes all of the southwest quarter of section 26 except a 20 acre house site on the middle of the southern boundary. This property will be treated as a separate prescribed fire unit denoted as the Shum unit on the map and burned by request of the Friend's in conjunction with other burn activities at the park. The vegetation is dominated by grasses such as Indian Grass, Big Bluestem and Switchgrass.

PERMISSION IS HEREBY GRANTED by the landowner (Owner) whose signature appears below to the U.S. Department of the Interior, National Park Service (NPS), and its authorized agents, to enter onto the lands as described above and identified in the attached Prescribed Fire Plan, which is made part of this document, and burn the vegetation in order to obtain benefits in the public interest such as improved wildlife habitat, restoration and maintenance of valued ecosystems, control of pests and diseases, wildfire hazard reduction and other public interest benefits.

Owner gives permission on the following conditions:

7. NPS will burn only in accordance with NPS's Interagency Prescribed Fire Plan.
8. NPS shall not charge Owner for the cost of burning Owner's Lands.
9. Owner certifies that Owner has inspected the above described lands and that there are no buildings or personal property on these lands which the Owner does not desire to be burned.
10. Any claim for personal injury or property damage proximately caused by the negligence of NPS employees may be filed in accordance with the Federal Tort Claims Act, 28 U.S.C. §§2671-2680.
11. Except as noted in paragraph 4, Owner agrees to hold the NPS harmless to the extent authorized by Nebraska law for any damage to any persons or property resulting from the prescribed burning of Owner's lands. This term does not extend to any lands not described above.
- ★ 12. Other condition: _____ (Enter "None" if none)

NPS

3. Prescribed burns will be planned in conjunction with landowner
4. Owner will be debriefed after any burn activities

National Park Service officials with authority to enter into agreement

Recommended for approval by Mark Engler Superintendent Homestead NM of America, Beatrice, Nebraska	Date
---	------

Recommendation Concurred by Jim Loach Associate Regional Director, Operations & Education, Region 3,4 and 5	Date
--	------

Approved by Herbert C. Frost, Ph. D. Regional Director, Region 3,4 and 5	Date
---	------

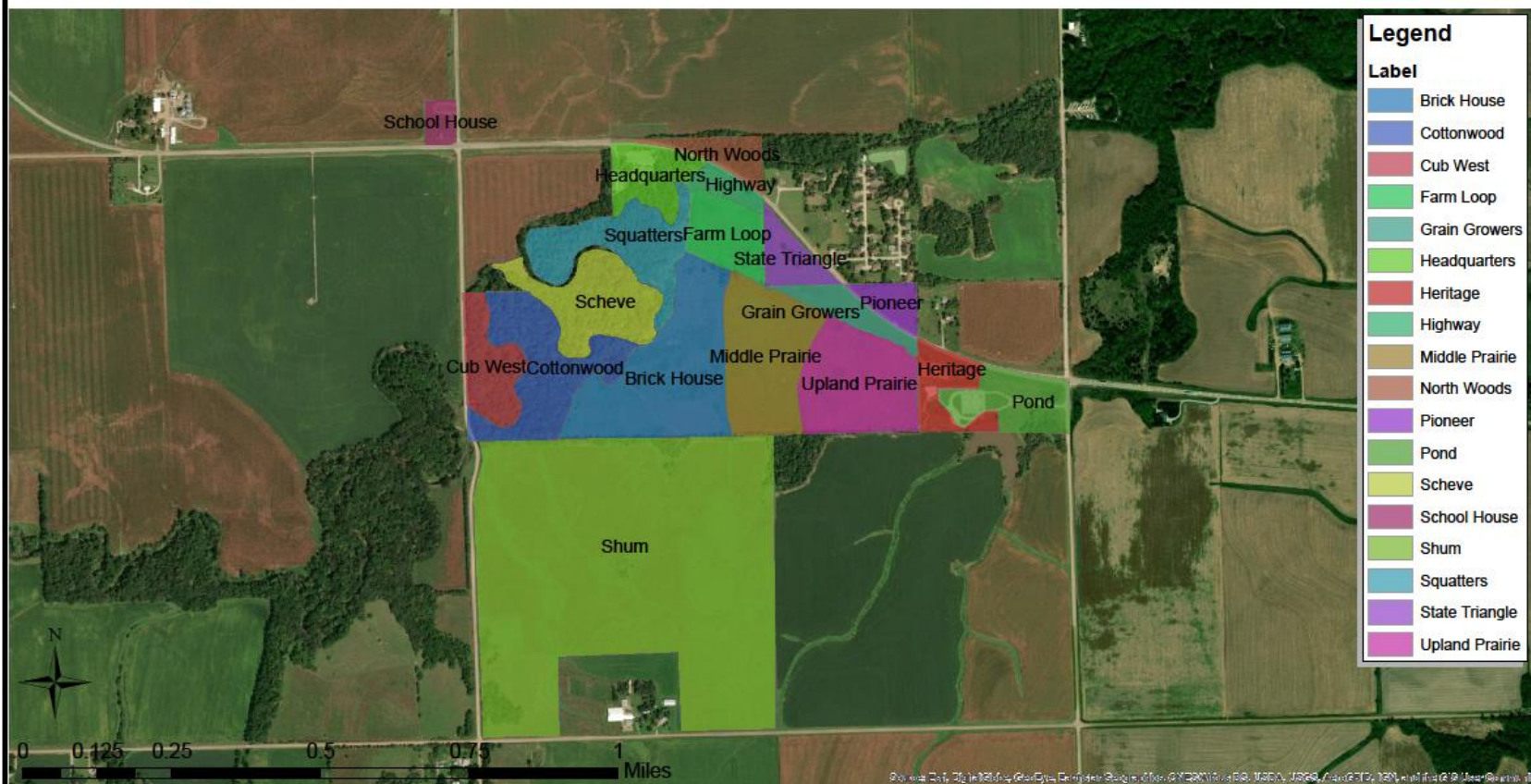
OWNER GRANTS PERMISSION BEING FULLY ADVISED BY NPS OF THE RISKS OF BURNING

Signature of Owner or authorized individual	Date
---	------

IMPORTANT: PRESCRIBED FIRE PLAN MUST BE ATTACHED



Homestead NM Treatment Units



Produced by MWRO Fire Ecology

April 2020

FILE: home_trt_units.mxd

Appendix K – WFDSS Objectives and Requirements

STRATEGIC OBJECTIVE - All unplanned ignitions receive a prompt, safe, and cost-effective suppression response causing the least possible resource damage.

- Minimize losses of structures and property during fire events.
- Utilize suppression-oriented actions to reduce risk from fire to specially identified resources, private lands, developed areas and infrastructure.
- Including objectives for resource benefits is not allowed.

MANAGEMENT REQUIREMENTS

Unit Wide Management Direction

- Ensure that firefighter and public safety is the highest priority in every fire management action.
- Effectively manage fire actions commensurate with values at risk and meet incident objectives while employing fiscal responsibility.
- Ensure socio-political economic impacts, including wildland urban interface, are considered in developing implementation plans.
- Ensure minimum impact suppression tactics (MIST) are utilized to the degree possible.
- To minimize the spread of noxious weeds, out of area equipment will be washed prior to entering the fire area and upon departure.
- Off-road use by ATV/UTVs will be considered under certain conditions and must be approved by superintendent or duty officer.
- No bulldozer or grader use will be allowed unless approved by the Superintendent.
- Off-road equipment use will not be permitted without Superintendent approval.
- Aerial delivery of retardant requires Superintendent approval.

Riparian Habitat

- Every attempt will be made to exclude fire retardant chemical from surface waters, including perennial and intermittent streams.
- No aerial retardant drops within 400 feet of open water.
- No application of foam within 25 feet of open water when using small portable pumps.
- No application of foam with backpack pumps within 10 feet of open water.
- All backpack pumps will be filled minimum of 10 feet from open water.

Cultural Resources

- Make every effort that fire management activities do not destroy or disturb important archeological and historical resources.
- Use protection measures in identified cultural resource areas, such as constructing firelines around sites, treating sites with approved retardant, and removing fuels around and within sites.
- Wildland fires that pose a potential threat to identified cultural resources require a qualified cultural resource specialist (READ) to provide specific on-site mitigation strategies during operations or, at a minimum, provide information that could be used for planning response actions.
- Any cultural resources, ethnographic sites, or traditional cultural properties discovered during fire activity will be protected and reported.

Natural Resources

- Northern long-eared bats are known to roost and most likely have maternity colonies within the woodland. Therefore, fire management activities will be minimized between May 1 and July 31.

Appendix L – Serious Injury or Death Procedure

In the event of a serious injury or death staff will utilize *Agency Administrator's Guide to Critical Incident Management*. 2008. PMS 926 and *NPS Loss of Human Life Response Handbook*. 2013.

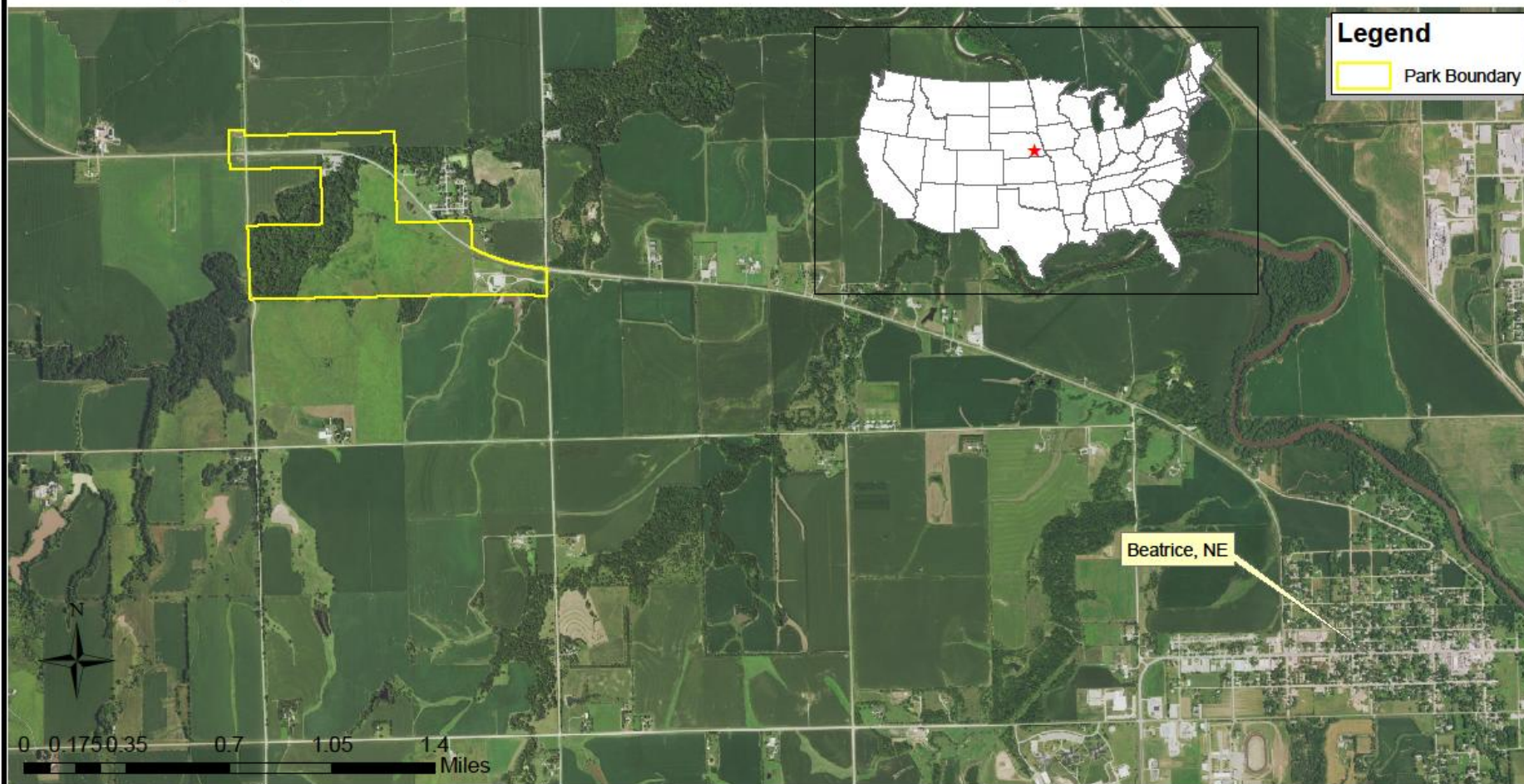
Appendix M – Safety Program/Plan

The parks Documented Safety Plan is maintained in hardcopy in the park's library which is located at the Education Center.

Appendix N – Maps



Vicinity Map



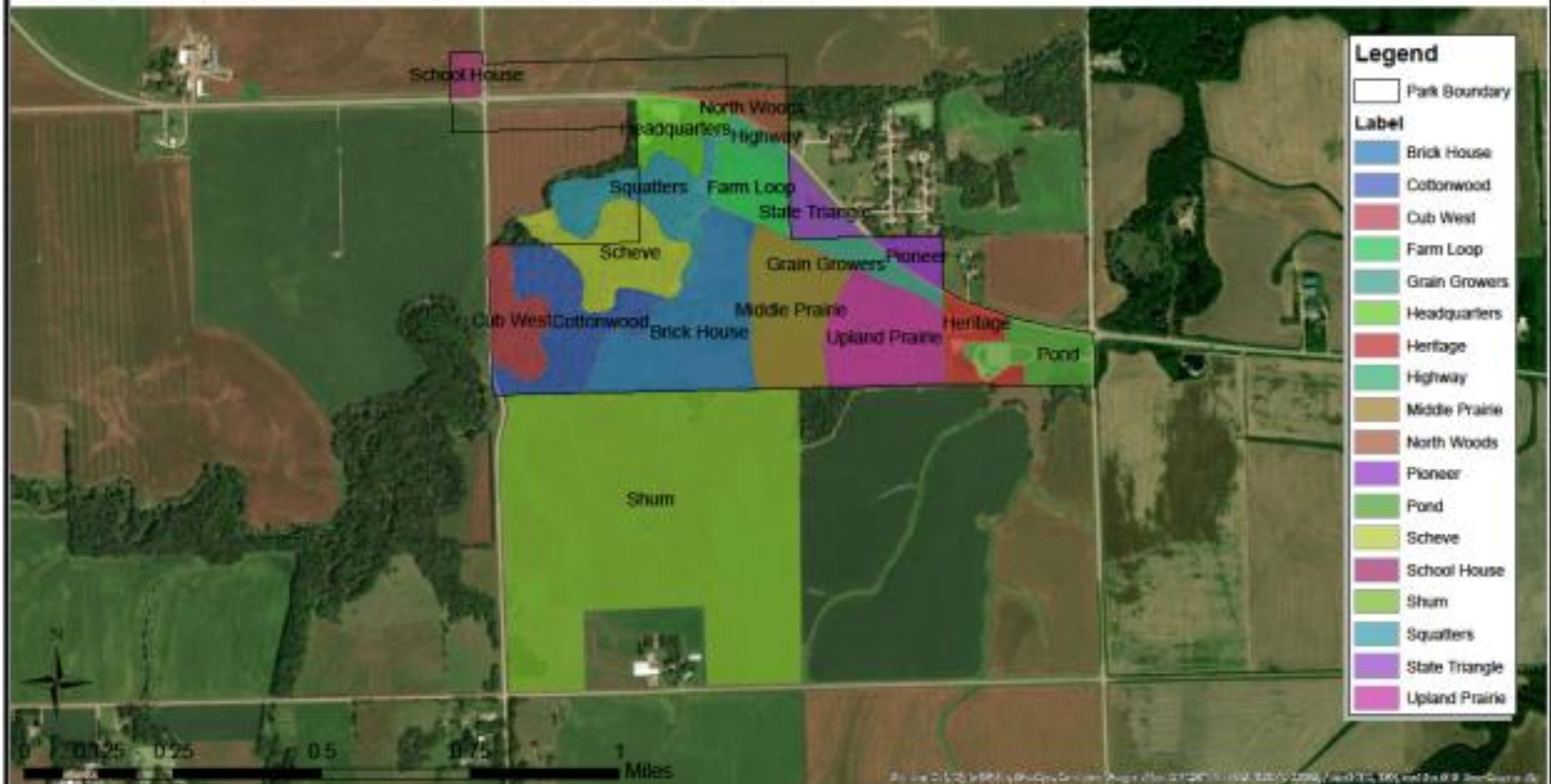
Produced by MWRO Fire Ecology

FILE: home_vicinity.mxd

August 2019



Homestead NM Treatment Units



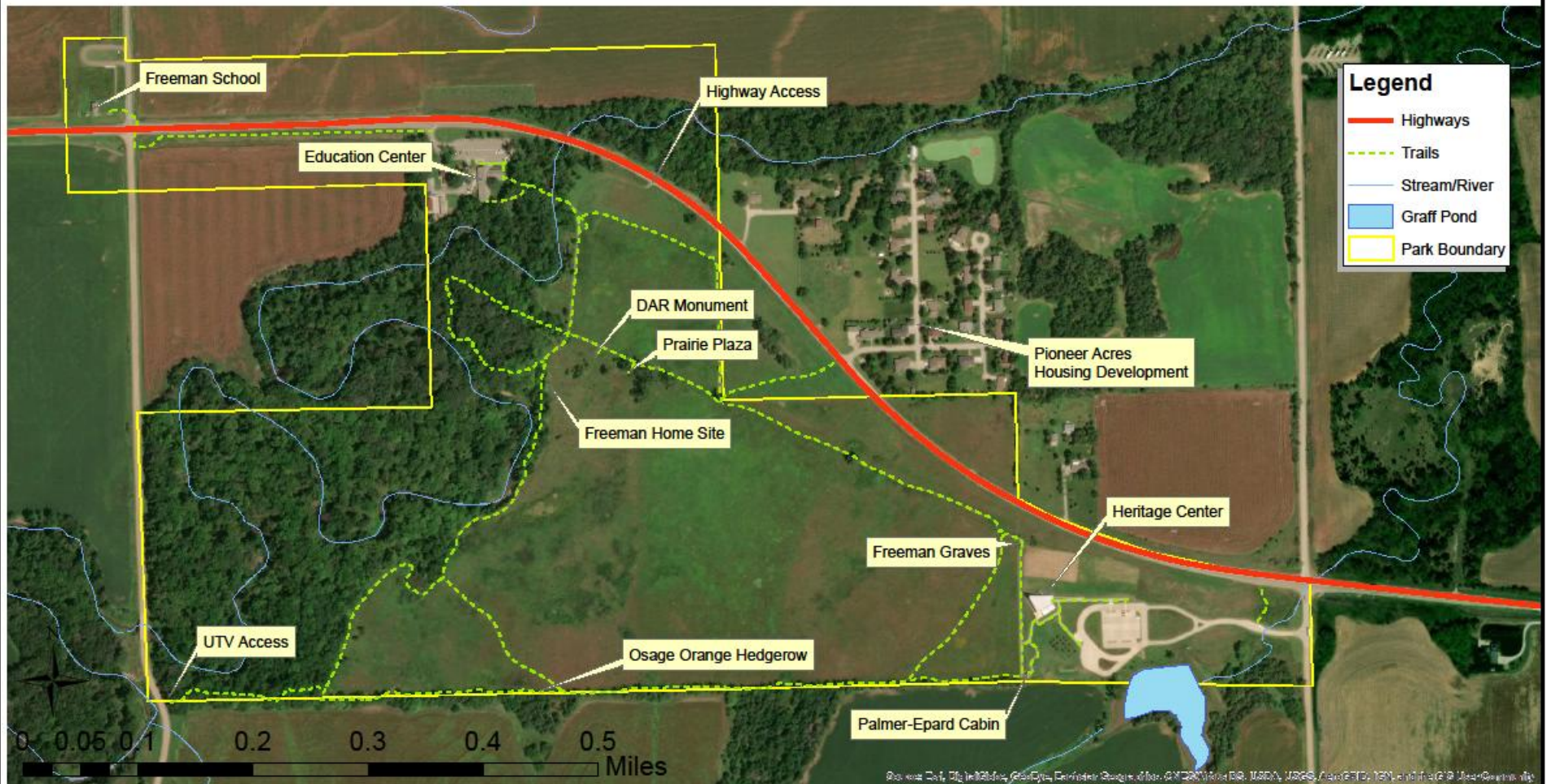
Produced by MWRO Fire Ecology

FILE: home_trt_units.mxd

April 2020



Homestead NM Values At Risk



Produced by MWRO Fire Ecology

FILE: home_trt_units.mxd

April 2020

[illegible]

© 2004 Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNR/DigitalGlobe, USDA, USGS, AeroGRID, IGN, and the GIS User Community

April 2020

62