Draft Environmental Assessment

Clark County Fire Fuels Reduction Program

FM-5170-KS-03

Clark County, KS

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Federal Emergency Management Agency
Region 7
Department of Homeland Security
11224 Holmes Rd,
Kansas City, Missouri 64131

Cover: Dead trees in Englewood shelterbelt.

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Acronyms and Abbreviations

AA	Action Area
APE	Area of Potential Effects
ATSF	Atchison, Topeka, and Santa Fe Railway
ARS	Arkansas River shiner
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CK&W	Chicago, Kansas, and Western Railroad
dBA	A-weighted decibels
EA	environmental assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	finding of no significant impact
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan
IPaC	Information for Planning and Consultation System
KDEM	Kansas Division of Emergency Management
KDHE	Kansas Department of Health and Environment
KDWPT	Kansas Department of Wildlife, Parks, and Tourism
KHRI	Kansas Historic Resources Inventory
KSHS	Kansas Historical Society
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
ND	No Date
NEPA	National Environmental Policy Act

NHD	National Hydrography Dataset
NOAA	National Oceanic and Atmospheric Administration
NRCS	U.S. Department of Agriculture Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
SHPO	State Historic Preservation Office
TMDL	Total Maximum Daily Limit
USC	United States Code
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
WSDOT	Washington State Department of Transportation

Glossary

Air Curtain Buner: An air curtain burner may be used to burn wood waste in a metal container or trench with a blower that creates a "curtain" of air over the top of the fire that reduces particulate air pollution

Hazardous Fuels Reduction: Includes thinning vegetation, removing ladder fuels, reducing flammable vegetative materials, and replacing flammable vegetation with fire-resistant vegetation for the protection of life and property. Vegetation may include excess fuels or flammable vegetation.

Loam: Well-drained soils composed of sand, silt, and clay in relatively even proportions.

Slash: Vegetative debris created by hazardous fuels reduction and other forest management activities.

Swamper Burn: A swamper burn pile is a pile that materials are gradually and continually added to over the course of a day allowing for more material to be burned in a smaller footprint.

Thinning: Removal of some trees, branches, or shrubs from a forest stand.

Wildfire: Any uncontrolled fire that spreads through vegetative fuels, such as forests, shrubs, or grasslands, exposing and possibly consuming structures.

Wildland-Urban Interface: Geographical area where buildings and structures and other human development meet or intermingle with wildland or vegetative fuels (U.S. Department of Agriculture [USDA] and U.S. Department of the Interior 2001).

SECTION 1 Introduction

Clark County, Kansas is proposing to implement hazardous fuels reduction work on approximately 784 acres in and near the communities of Ashland and Englewood, Kansas. Clark County applied to the Federal Emergency Management Agency (FEMA) through the Kansas Division of Emergency Management (KDEM) for a grant under FEMA's Hazard Mitigation Grant Program (HMGP). KDEM is the direct applicant for the grant, and Clark County is the subapplicant.

The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Under the HMGP, federal funds pay 75 percent of the project cost, and the remaining 25 percent is supplied by nonfederal funding sources. The HMGP Post Fire funds were made available via a Fire Management Assistance declaration made by FEMA in 2017 in response to the Kansas Highland Hills Fire.

Clark County is a rural county in southwestern Kansas along the Kansas-Oklahoma Border (**Figure 1-1**). The project area for the Clark County Fire Fuels Reduction Program includes two communities, Ashland and Englewood. The proposed action would remove dead trees and invasive cedar trees (*Juniperus virginiana*) from approximately 211 acres in Ashland and approximately 573 acres in Englewood. **Figures 1-2** and **1-3** show the project areas in each community.

By removing dead trees and invasive cedars in the communities of Ashland and Englewood, the project would reduce the existing fuel loads and the risk of wildfire spread. Hazardous fuel reduction does not prevent wildfires, but it may contribute to containment by mitigating the intensity of wildfires. A less intense fire is easier for firefighters to control and manage, which ultimately reduces the risks to people living in and near the project area.

This environmental assessment (EA) was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969; the President's Council on Environmental Quality (CEQ) regulations to implement NEPA (40 Code of Federal Regulations [CFR] Parts 1500 to 1508); U.S. Department of Homeland Security DHS Instruction 023-01-001; and FEMA Instruction 108-01-1, NEPA implementing procedures. FEMA is required to consider potential environmental impacts before funding or approving actions and projects. The purpose of this draft EA is to analyze the potential environmental impacts of the proposed project. FEMA will use the findings in this draft EA to determine whether to prepare an environmental impact statement or to issue a finding of no significant impact (FONSI).

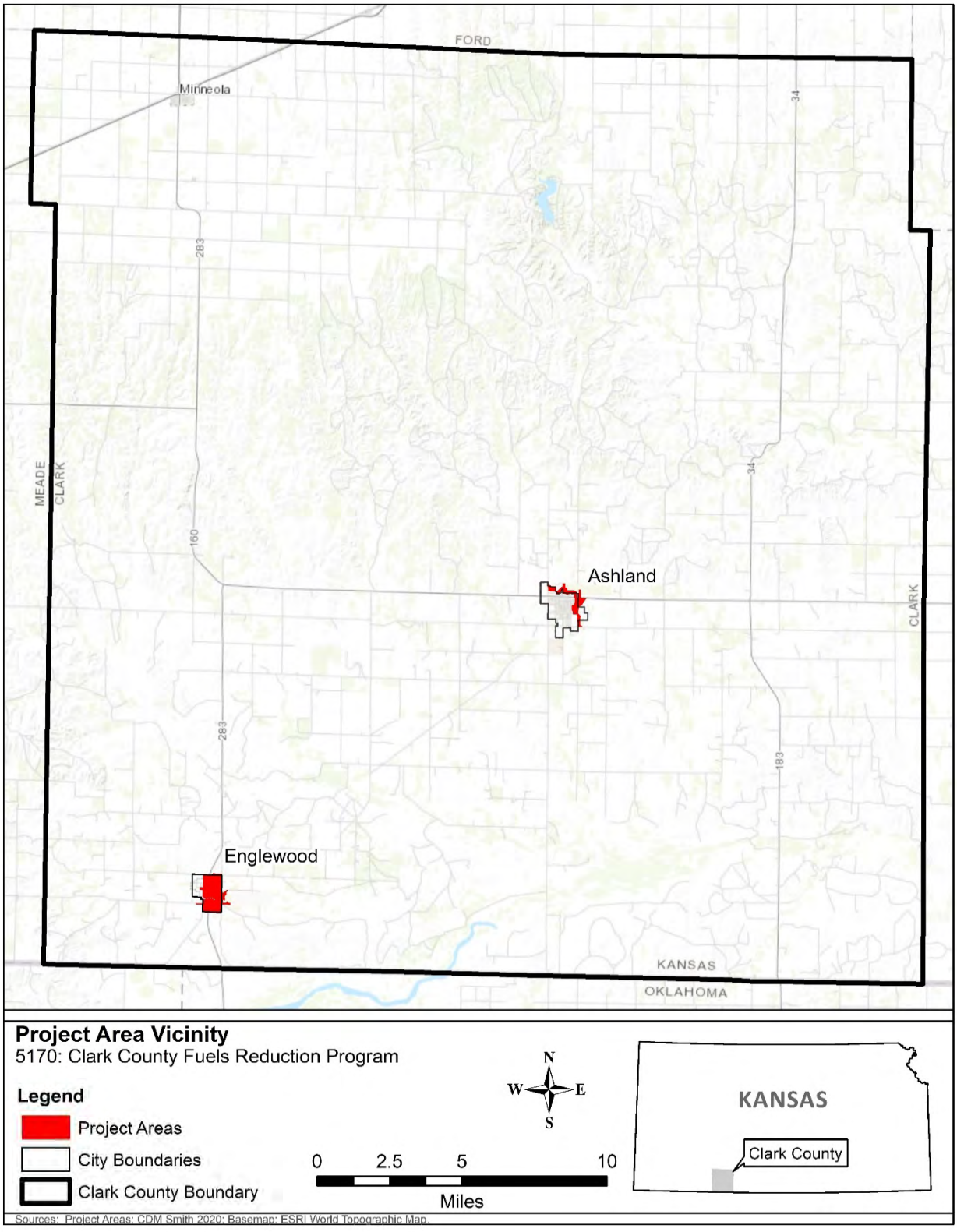

Figure 1-1. Project Vicinity

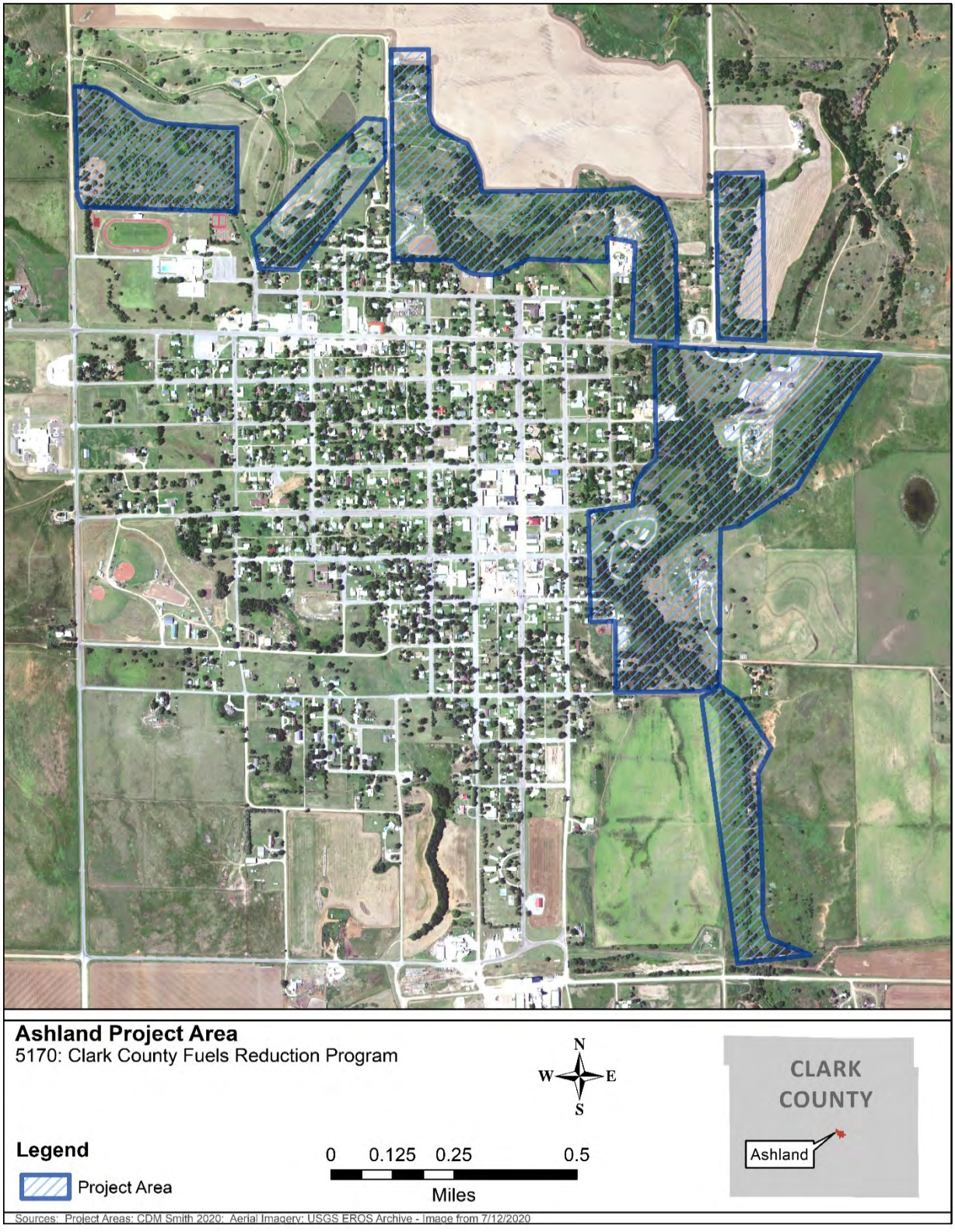

Figure 1-2. Ashland Project Area

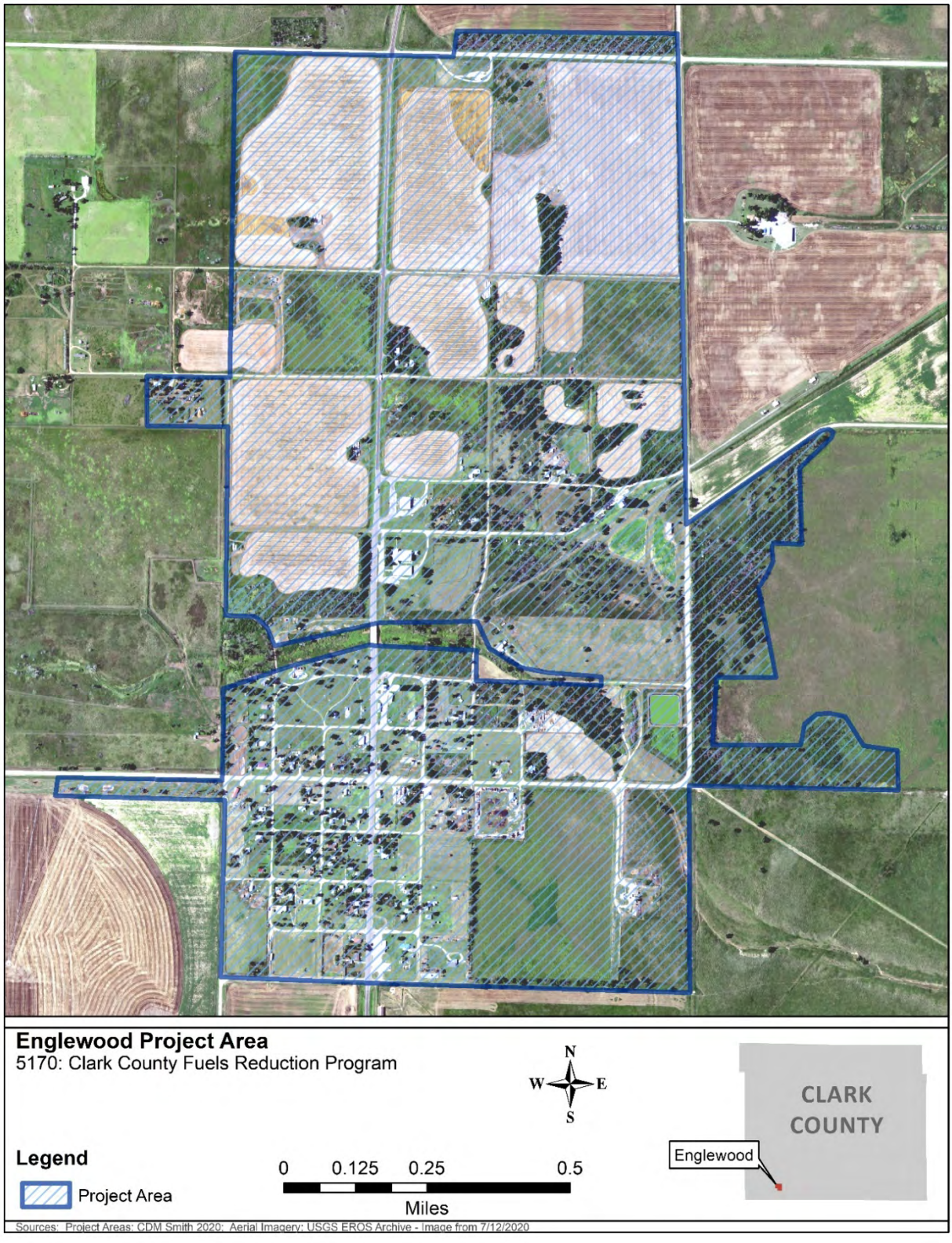

Figure 1-3. Englewood Project Area

SECTION 2 Purpose and Need

The Bipartisan Budget Act of 2018 authorized HMGP Post Fire funding following Fire Management Assistance declarations between October 1, 2016 and September 30, 2018 for eligible states and local governments, federally recognized tribal governments, and nonprofit organizations. To be eligible, these entities must have had land burned from a declared fire in order to apply to FEMA as a direct Applicant. The HMGP Post Fire funding is a result of seven fire declarations in Kansas in March of 2017, and aggregated under the first declaration, FM-5170.

The purpose of the HMGP is to reduce the loss of life and property caused by natural disasters and to enable risk mitigation measures to be implemented during the recovery from a declared disaster. Specifically, the purpose of the proposed Clark County HMGP project is to reduce the risk of fire damage to the built environment in the communities of Ashland and Englewood, Kansas.

Clark County experienced severe wildfire damage during the 2017 Starbuck Fire. The community of Ashland was surrounded by fire on all sides. The Ashland Health Center had to be evacuated, which meant that the local emergency room was unavailable. The community of Englewood was also surrounded by fire on all sides and residents were required to evacuate. Public utilities and infrastructure such as electric poles, culverts bridges, and guardrail posts experienced severe damages. Over 30 homes and outbuildings were burned in Clark County, including 8 homes in Englewood. The Gardiner Angus Ranch alone, just outside of Englewood, lost 270 miles of fence, 600 cows with claves, and 42,000 acres of grassland.

The 2017 fire burned many trees along the creeks and in the shelterbelts around each community. Many of these dead trees are still standing and contribute to the wildfire hazards. The creeks and shelterbelts also contain numerous cedar trees, which are highly flammable. These invasive trees spread easily along riparian zones, where they may form dense thickets. For example, along Bear Creek, which surrounds Ashland on the north and east sides, the vegetation is approximately 50 to 60 percent dead trees or invasive cedars, representing substantial fuel loads that could contribute to the spread of future wildfires.

The project is needed because existing dead trees and the density of cedars create wildfire hazards that threaten homes, businesses, and other infrastructure in these communities. Within these two communities, there are an estimated 904 residential properties, 104 business/commercial properties, 2 public buildings, and 10 schools, hospitals, and houses of worship that are at risk from wildfire damage.

The KDEM 2018 Kansas Hazard Mitigation Plan (HMP) ranks wildfire as a high probability hazard for Clark County and is a high priority for hazard mitigation planning. High winds and dry conditions that commonly occur across the state increase the risk of wildfire spread. These general climatic conditions, in combination with the existing vegetation conditions in Clark County, contribute to a very high risk of wildfire damage in the communities of Ashland and Englewood.

According to data from the National Interagency Fire Center, the average wildfire size in the United States has increased from less than 40 acres in the 1980s and early 1990s to more than 120 acres in 2017 and 2018. Wildfire smoke exposure can impact human health by exacerbating respiratory health issues, such as asthma and chronic obstructive pulmonary disease. Wildfire smoke may also contribute to respiratory infections and possibly cardiovascular concerns (Reid et al. 2016). According to an ongoing study in Montana, prolonged exposure to wildfire smoke may result in long-term health effects even several years after exposure (Houghton 2020).

SECTION 3 Alternatives

This section describes the no action alternative, the proposed action, and alternatives that were considered but dismissed.

3.1 No Action Alternative

The no action alternative is included to describe potential future conditions if no action is taken to reduce wildfire hazards. Under this alternative, no FEMA-funded fuels reduction work would be conducted in the project area. Some property owners may continue to implement wildfire mitigation activities on their property on their own initiative, including removal of dead trees and cedars. However, community-wide protection from wildfire spread would not occur and the risk of wildfire would largely remain the same—threatening residents in Ashland and Englewood with the associated potential for loss of life and property.

3.2 Proposed Action Alternative

The proposed action would reduce hazardous fuels in and near Ashland and Englewood by removing dead trees and invasive cedars from shelterbelts and riparian areas (**Figures 3-1** through **3-4**). Project areas were generally determined based on the presence of vegetative fuels. Around Ashland, the project areas are focused on vegetated areas associated with Bear Creek, as it wraps around the north and east sides of the community. The Englewood project area encompasses most of the community and would address dead trees and cedars throughout the community.

The proposed action would include the removal of all the dead trees and invasive cedars from the project areas, including dead trees laying on the ground. Saplings of all tree species approximately 2 inches or less in diameter would remain. Trees would be cut at the ground surface using chainsaws or a wheeled skid steer with saw heads. Tracked equipment would not be used. Stumps would not be removed and no alteration of the shape of stream banks is proposed. Live deciduous trees would be removed only as necessary to access dead trees or cedars. Cutting would occur from October to April when weather is cooler and the fire danger is low enough for the work to be conducted safely. This timing also avoids impacts on migratory birds and monarch butterflies.

Figure 3-1. Invasive Cedars Along Bear Creek in Ashland

Figure 3-2. Down Wood in Ashland Project Area

Figure 3-3. Dead Trees Along Shelterbelt in Englewood

Figure 3-4. Invasive Cedars in Englewood

3.2.1 Debris and Slash Management

To minimize travel of machinery, cut trees will be piled in close proximity to where they lay or where they were cut from. Trees may be carried across the creeks for piling in a place that is more suitable for burning. Any crossing of the creeks would take place while creek beds are dry.

Piles would be relatively small, approximately 10 feet by 10 feet and less than 10 feet high, to reduce the risk of soil disruption and to keep them manageable by firefighters. All burning would

be conducted by the Ashland and Englewood Fire Departments and pile size, burn timing, and burn methods would comply with Clark County Resolution 2011-08, which regulates burning in the county. Material would be piled by hand and by machinery. Multiple piles would be created in each project area. Piles may sit for up to six months to dry before being burned. Burning would take place when weather permits and the risk of wildfire spread is minimal. Residents near the burn piles and the County Sheriff's office would be notified prior to burning. Wind direction and forecast would be considered, and adequate water would be available on-site during pile burning.

3.2.2 Maintenance Activities

Follow-up maintenance is not part of the proposed federal grant funding; however, it is a requirement of the grant award and may be considered an effect of the proposed action. Maintenance would include mowing using a brush hog or tractor mower to prevent cedar saplings from reestablishing in the project areas. Maintenance would be conducted annually by the County for five years. To the extent practicable, mowing activities would occur only once or twice per year and would be limited to those times when the monarch butterfly (*Danaus plexippus plexippus*) would not be present in the project areas (October 15–April 1). In the event that mowing must occur during the summer months, work would be performed between July 1 and July 20 to coincide with an expected lull in monarch activity (Monarch Joint Venture 2020).

3.2.3 Avoidance and Minimization Measures

The following avoidance and minimization measures will be incorporated into the proposed scope of work to avoid potential harm to the monarch butterfly:

- Burn scars resulting from burn piles will be reseeded with a mixture of regionally specific native milkweed species and nectar-providing forb species.
- Ground-disturbing work, including vegetation removal and mowing, will be limited to those times of the year when monarchs will not be present in project areas (October 15–April 1). Should maintenance activities be required during the summer months, work will coincide with an expected lull in monarch activity (July 1–July 20).

Additional avoidance and minimization measures recommended by the Kansas Department of Wildlife, Parks, and Tourism (KDWPT) to mitigate potential project impacts on aquatic wildlife are presented below. These measures would also provide avoidance and minimization for the Arkansas river shiner (*Notropis girardi*) in the highly unlikely event that the species were to occur in or near the project areas. To the extent feasible and necessary, the following measures would be implemented during all project-related activities to limit project-related effects on existing riparian and aquatic habitats:

- Minimize activities in floodplains.
- Minimize the disturbance to native riparian vegetation.

- Protect warm-season pastures or rangeland.
- Do not fill wetlands or areas that routinely pond water.
- When applicable, re-seed and landscape with native warm-season grasses, forbs and shrubs to permanently re-vegetate all areas disturbed by the project.

3.3 Debris and Slash Management Alternatives

Several alternative methods for disposal of the cut material are considered in this EA. All other elements of these alternatives are the same as the proposed action including the methods for removing hazardous fuels, schedule, duration, maintenance, and avoidance and minimization measures.

Swamper burning is a method that uses a smaller pile that materials are gradually and continually added to over the course of a day. With a swamper burn, there may be less smoke because fewer piles are ignited at one time, there is less likelihood that material in the interior of the pile would not burn, and there would be fewer burn scars left on the landscape. However, the cut material would need to be transported longer distances to get to the burn site.

Air curtain burning burns the wood waste in a metal container or trench with a blower that creates a "curtain" of air over the top of the fire that reduces particulate air pollution. The air curtain burner operates at a higher temperature than can be achieved in an open pile while also minimizing the risk of small fires spreading because the fire is contained. The air curtain burner requires specialized equipment and would also require cut material to be transported over longer distances to get to the burner, which would be placed in one or more centralized locations. Curtain burning that is contained within a trench may also alter soil properties on the bottom and sides of the trench. However, when it is backfilled at the end of the project, the top layer of fill material would allow for regrowth of vegetation. Air curtain burning would require equipment that the Ashland and Englewood fire departments do not currently have. It is likely this alternative could require renting up to four air burners for approximately two months. If equipment is rented, then it is likely that materials would be stockpiled in a centralized location within each project area to minimize the rental duration.

Chipping uses mechanical chippers to dispose of cut material. Chips could be broadcast on the ground to decompose in place or be carried off-site. Mechanical chippers work best for smaller tree limbs and debris; however, industrial rig-mounted mechanical chippers can chip even large tree trunks. An industrial rig-mounted chipper would likely need to be brought from another location in the state for the duration the project. Cedar chips contain a resin that makes them unsuitable for broadcasting, as they resist decomposition and it is likely that chips would need to be disposed of in a community disposal site.

3.4 Additional Action Alternatives Considered and Dismissed

No other reasonable or practicable alternatives were identified for the proposed action. Other activities that might reduce the risk of property damage include defensible space and ignition-

resistant construction; however, these activities would not meet the purpose and need of the project.

3.4.1 Defensible Space

Creating defensible space typically involves vegetation management within 100 feet of homes. Defensible space may include activities such as replacing flammable vegetation with fire-resistant vegetation or removing ladder fuels (e.g., shrubs, small trees, down wood or brush, and low limbs that may provide the means for fire to climb from the ground up into the forest canopy). The purpose of defensible space is to provide a buffer around a structure that limits the spread of wildfire and to establish an area from which firefighters can safely conduct fire suppression activities to protect structures (FEMA 2015).

Defensible space is focused on individual structures and requires the participation of individual homeowners. It is unlikely that 100 percent of homeowners in an area would be willing or able to participate. Therefore, defensible space would not provide community-wide protection. Defensible space also requires constant maintenance to remain effective. Furthermore, a defensible space program would not remove fuel loads lining Bear Creek in Ashland and Fivemile Creek in Englewood. Therefore, this alternative would not meet the purpose and need for the project.

3.4.2 Ignition-Resistant Construction

This type of hazard mitigation involves the use of ignition-resistant materials and technologies on new and existing buildings and structures. Ignition-resistant construction is the application of construction standards based on the use of fire-resistant materials, noncombustible materials, and one-hour fire-rated assemblies.

Ignition-resistant construction is expensive and requires individual homeowner participation. An ignition-resistant construction project may be eligible for FEMA funding only when the property owner has previously created defensible space and agrees to maintain the defensible space in accordance with FEMA HMA guidance or when both defensible space and ignition-resistant construction activities are part of the same project. Ignition-resistant construction is also focused on individual structures rather than community-wide protection and would not remove hazardous fuels. Therefore, this alternative does not meet the purpose or need of the project.

SECTION 4 Affected Environment, Potential Impacts, and Mitigation

This section describes the environment potentially affected by the alternatives, evaluates potential environmental impacts, and recommends measures to avoid or reduce those impacts. When possible, quantitative information is provided to establish potential impacts, and the potential impacts are evaluated qualitatively based on the criteria listed in **Table 4.1**. The study area generally includes the project areas and corresponding access, and staging areas needed for the proposed action. If the study area for a particular resource category is different from the project area, the differences will be described in the appropriate subsection.

Table 4.1. Evaluation Criteria for Potential Impacts

Impact Scale	Criteria
None/Negligible	The resource area would not be affected, or changes or benefits would be either nondetectable or, if detected, would have effects that would be slight and local. Impacts would be well below regulatory standards, as applicable.
Minor	Changes to the resource would be measurable, although the changes would be small and localized. Impacts or benefits would be within or below regulatory standards, as applicable. Mitigation measures would reduce any potential adverse effects.
Moderate	Changes to the resource would be measurable and have either localized or regional scale impacts/benefits. Impacts would be within or below regulatory standards, but historical conditions would be altered on a short-term basis. Mitigation measures would be necessary, and the measures would reduce any potential adverse effects.
Major	Changes would be readily measurable and would have substantial consequences on a local or regional level. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would be required to reduce impacts, though long-term changes to the resource would be expected.

4.1 Resources Not Affected and Not Considered Further

The resources described in **Table 4.2** would not be affected by either the no action alternative or the proposed action because they do not exist in the project area, or the alternatives would have no effect on the resources. These resources were removed from further consideration in this EA.

Table 4.2. Resources Eliminated from Further Consideration

Resource Topic	Reason for Elimination
Geology	Hazardous fuel reduction through vegetation management is a surface-level activity that would have no effect on geology.
Sole Source Aquifers	According to the U.S. Environmental Protection Agency's (EPA) sole source aquifer map (EPA 2020b), there are no sole source aquifers designated in Clark County; therefore, the alternatives would have no effect on sole source aquifers.
Wild and Scenic Rivers	According to the National Wild and Scenic Rivers website (National Wild and Scenic Rivers System 2020), Kansas and Oklahoma have no designated Wild and Scenic Rivers. The alternatives would have no effect on wild and scenic rivers.
Coastal Resources	The project area is not located in a coastal state or within a Coastal Barrier Resources Unit (U.S. Fish and Wildlife Services [USFWS] 2020a).
Land Use and Zoning	The proposed action is not expected to change existing land use and is consistent with current zoning. The alternatives would have no effect on land use and zoning.

4.2 Soils and Topography

The proposed project areas are located within the Southwestern Tablelands ecoregion of southwestern Kansas. This ecoregion is characterized by varied topographical conditions with elevations ranging from 1,700 to 2,500 feet above sea level. The project areas are located at approximately 1,975 feet. The soils across the Southwestern Tablelands consist of red-colored Permian shale, siltstone, sandstone, salt, gypsum deposits, sand and gravel, and silty alluvium (Kansas Department of Health and Environment [KDHE] No Date [ND]).

The 14 soil types in the proposed project areas are characterized by flat slopes where wind and fuel availability are the primary factors influencing wildfire spread (Santa Rosa Junior College 2017) (**Table 4.3**). Flat slopes across the plains of Kansas have soil layers several feet deep (KDHE ND). KDHE data indicate these soils are well drained with low runoff, except for the Missler silty clay loam and Penden clay loam, which are classified as medium runoff soil classes.

In Ashland, approximately half (50.2 percent) of the project area's soil is designated as prime farmland or farmland of statewide importance (Natural Resource Conservation Service [NRCS] 2020). However, most of the project area is within the city limits and the Farmland Protection Policy Act would not apply. The portions of the project area outside of the city limits are not currently being used for farming purposes. In Englewood, the majority of the project area (98.5 percent) is designated as prime farmland or farmland of statewide importance. Most of the Englewood project area is within the city limits and the Farmland Protection Policy Act would not apply. A small area on the eastern portion of the project area is outside of the city limits and is not currently being used for farming purposes (NRCS 2020).

Table 4.3. Average Slopes and Predominant Soil Type by Project Area

Treatment Area	Soil Types	Average Slope
Ashland	Roxbury silt loam, occasionally flooded	0 to 2 percent
	Missler silty clay loam	0 to 2 percent
	Penden clay loam	7 to 15 percent
	Likes loamy fine sand	1 to 8 percent
	Yahola loam	0 to 1 percent
	Kingsdown fine sandy loam	2 to 5 percent
	Lincoln loamy fine sand	0 to 2 percent
Englewood	Roxbury silt loam, occasionally flooded	0 to 2 percent
	Uly silt loam	0 to 1 percent
	Uly silt loam	1 to 3 percent
	Kingsdown fine sandy loam	0 to 2 percent
	Kingsdown fine sandy loam	2 to 5 percent
	Southside forty-one complex	1 to 5 percent
	Woodward loam	1 to 3 percent

Source: Kansas Department of Health and Environment, Division of Environment. Ecoregions of Nebraska and Kansas.

No Action Alternative

Under the no action alternative, no FEMA funded hazardous fuels reduction would take place. Individual landowners may conduct some scattered hazardous fuels reduction work on their own initiative; however, community-wide risk reduction would not occur, and the risk of wildfire spread would remain high. In the event of a wildfire, there would be a higher risk of wildfire damage and loss of vegetation. Following a severe wildfire, the resulting soil conditions could lead to decreased agricultural potential until the soils are able to recover. Vegetation loss would lead to increased soil erosion from wind and water across the project areas. Wildfires can alter the physical and chemical properties and the moisture, temperature, and biotic characteristics of soils (U.S. Forest Service [USFS] 2005). Soils can form hydrophobic layers that repel water, resulting in decreased stormwater infiltration from the heat of fires. This occurs when plants burn in fires, releasing a gas into the soil that cools and solidifies into a waxy, water-repelling substance that covers the soil. This is more likely to occur in sandy and coarse textured soils, which are more vulnerable because they transmit heat more easily than heavily textured soils such as clay (USFS 2005). These vulnerable soil types are sparsely located throughout the project areas and are somewhat more common in the Ashland area. In the event of a wildfire, there would be minor to moderate adverse impacts on soils in the no action alternative, depending on the scale and intensity of a fire. There would be no effect on topography under the no action alternative.

Proposed Action

Under the proposed action, hazardous fuels reduction would take place using hand tools and mechanical equipment, such as wheeled skid steers, that would minimize potential soil disturbance. Tracked equipment would not be used. Mechanical equipment would only cross creek beds when dry, reducing the potential for erosion and soil mobilization. Hazardous fuels reduction activities would not convert farmland soils to nonagricultural uses, nor would they prevent the future use of the soils for farmland purposes.

Traditional burn piles would be relatively small. The small slash piles would burn quickly and without the intensity needed to create hydrophobic soils on the landscape. There would be short-term burn scars; however, vegetation would grow back in time and residual ash may contribute to soil nutrients.

The proposed action would have negligible impacts on soil. The proposed action would have minor long-term beneficial impacts on the soil quality by reducing the risk of wildfire damage. There would be no impacts on topography from the proposed action.

Debris and Slash Management Alternatives

Swamper burn pile: Because fewer swamper burn piles would be created than under the proposed action, there would be fewer burn scars left on the landscape. However, each swamper burn pile would remain hot for a longer time and the cut material would need to be transported longer distances to reach the burn site. The longer burn time could potentially create hydrophobic soils in some areas. However, because there would be fewer piles, vulnerable soils could potentially be avoided. There could be more soil disturbance from equipment driving back and forth between the work area and the burn area and for longer distances to reach the swamper burn piles.

Air curtain burning: Curtain burning produces more intense heat and faster burning that may create hydrophobic soil properties under the metal container or on the bottom and sides of the trench. A curtain burn trench would be backfilled at the end of the project and the top layer of fill material would allow for vegetation regrowth. Because the area affected would be small (approximately 20 by 10 feet), hydrophobic soils created under a container curtain burner could be dug up and disposed of or buried to mitigate the effects on soils. Use of an air curtain burner would also require cut material to be transported over longer distances than under the proposed action, which could result in more soil disturbance from equipment travel.

Chipping: Chips would be broadcast on the ground to decompose in place or be carried off-site. The decomposition of chipped material could result in a beneficial effect on soil nutrients; however, cedar trees contain a resin that resists decomposition and makes the chips unsuitable for broadcasting. Chipped material that contains cedar chips would need to be collected and transported to a suitable disposal site, which could result in more soil disturbance from additional vehicle and equipment traffic through the project areas. There would be no potential for the creation of hydrophobic soils with the chipping disposal method. Chippers could be repeatedly

moved to always be in close proximity to where materials are being cut, which would minimize the amount of soil disturbance from equipment travel.

Swamper burning and air curtain burning could both create small areas of hydrophobic soils, which could be disposed of or covered; locations that avoid vulnerable soils could be chosen. Both disposal methods would result in more ground disturbance from the added movement of equipment and vehicles to carry material to the burn sites. Additional ground disturbance would create more areas subject to erosion. Swamper burning and air curtain burning would have minor impacts on soils within the project areas. Disposal by chipping would have negligible impacts on soils if cedar chips are collected and disposed of in a suitable disposal site.

4.3 Air Quality and Climate

The Clean Air Act, amended in 1990, requires EPA to set National Ambient Air Quality Standards (NAAQS) for six pollutants harmful to human and environmental health, including ozone, particulate matter, nitrogen dioxide, carbon monoxide, sulfur dioxide, and lead (EPA 2016). Air quality is negatively affected by everyday activities, such as vehicle use, and major events, such as wildfires. Wildfire smoke is composed of carbon dioxide, water vapor, particulate matter, carbon monoxide, nitrogen oxides, organic chemicals such as hydrocarbons, and trace minerals, which all affect air quality (EPA et al. 2016). Air quality can also be affected by fugitive dust, which is considered a component of particulate matter. Fugitive dust is released into the air by wind or human activities and can have human and environmental health impacts (California EPA Air Resources Board 2007).

The Ashland and Englewood project areas are closest (approximately 50 miles south) to the Dodge City air quality monitoring station located at 1510 Soule Street in Dodge City that continuously monitors PM_{10} levels (KDHE 2020a). There are no locations within the State of Kansas listed in the EPA Greenbook as nonattainment or maintenance area for PM_{10} levels. In addition, Clark County, Kansas is in attainment for all criteria pollutants (EPA 2020a).

The climate of southwestern Kansas is classified as semiarid and consists of dry air with an abundance of sunshine. The temperature ranges from an average low of 18 degrees Fahrenheit in January to an average high of 93 degrees Fahrenheit in July and August (U.S. Climate Data 2018). These high temperatures in the summer turn into average low temperatures of 67 degrees after the sun sets (National Oceanic and Atmospheric Administration [NOAA] 2019). During the winter, larger temperature swings are common. February has the coldest average high temperature at 40 degrees Fahrenheit and low temperatures of 18 degrees Fahrenheit overnight. Cold spells and extended snow cover are brief owing to the relatively mild temperatures and plentiful sunshine (NOAA 2019). The generally flat/unconstrained topography favors air movement across the area. The average monthly wind speed varies from 10.8 to 14.7 miles per hour in southwest Kansas (NOAA 2019).

Spring thunderstorms provide most of the annual moisture along with periodic hail and strong winds (NOAA 2019). Ashland receives an average of 22 inches of rain and 13 inches of snowfall

annually (U.S. Climate Data 2018). Although climate data is not available for Englewood, similar rain totals are presumed because of the proximity of the two locations.

"Climate change" refers to changes in the Earth's climate caused by a general warming of the atmosphere. Its primary cause is emissions of greenhouse gases, including carbon dioxide and methane. Climate change is capable of affecting species distribution, temperature fluctuations, and weather patterns. The CEQ's *Final NEPA Guidance on Consideration of Greenhouse Gas Emissions and the Effects on Climate Change* (CEQ 2016) suggested that quantitative analysis should be done if an action would release more than 25,000 metric tons of greenhouse gases per year. Estimates indicate that average annual temperatures in Kansas are changing in a manner comparable to the United States and global warming rates (Lin et al. 2017). Western Kansas is trending towards an increase in the number and severity of warmer and drier days, which would lead to increased drought, decreased water supplies, and increased risk of wildfires (Lin et al. 2017).

No Action Alternative

Under the no action alternative, some hazardous fuels reduction work may still occur in the project areas. This would result in negligible short-term impacts on air quality from vehicle and equipment use, such as chainsaws. The risk of wildfire spread would remain high. Wildfire smoke can deteriorate air quality and expose vulnerable populations (e.g., the young and the elderly) to harmful pollutants (EPA et al. 2019). Particulate matter, specifically, can have many harmful effects, including eye and respiratory tract irritation, reduced lung function, asthma, and heart failure (EPA et al. 2019). As discussed in **Section 2**, prolonged exposure to wildfire smoke may result in long-term health effects even several years after exposure (Houghton 2020).

Smoke from large wildfires can affect air quality over large areas. Additionally, major wildfires can emit high levels of greenhouse gases into the atmosphere, thus contributing to climate change, which exacerbates the risk of wildfires. In the event of a wildfire, the no action alternative could have a minor to major impact on air quality and regional climate, depending on the intensity and scale of the wildfire.

Proposed Action

Under the proposed action, mechanical equipment use, such as wheeled skid steers, would have minor localized impacts on air quality. The short duration and limited extent of this activity would minimize potential impacts on air quality, including the release of fugitive dust.

Traditional burn piles would take place when weather permits and the risk of wildfire spread is minimal; however, they would produce smoke. Residents near the burn piles and the County Sheriff's office would be notified prior to burning. Wind direction and forecast would be considered to minimize the risk of wildfire spread and smoke impacts on residents, and adequate water would be available on-site during pile burning as a safety precaution; therefore, impacts on air quality would be negligible for local residents and there may be a short-term minor impact on local air quality outside of the towns from pile burning. The proposed action would have a

minor long-term benefit by reducing the risk of wildfire spread and associated air quality and climate impacts.

Debris and Slash Management Alternatives

Swamper burning: Less smoke may be produced because fewer piles would be ignited at one time; however, each swamper burn pile would burn longer than the individual piles under the proposed action. Because the same amount of material would be burned over the entire project, the total amount of smoke produced would likely be the same. However, the cut material would need to be transported longer distances to get to the burn site, increasing air emissions from equipment use. The increased ground disturbance would also increase the risk of creating fugitive dust.

Air curtain burning: Burners operate at a higher temperature than can be achieved in a traditional open burn pile or swamper burn pile while also minimizing the risk of small fires spreading because the fire is contained. The higher burning temperature reduces the amount of smoke that is produced, which also reduces particulate air pollution. However, cut materials would need to be transported longer distances to get to the burn site, increasing air emissions from equipment use. The increased ground disturbance would also increase the risk of creating fugitive dust.

Chipping: Although the alternative of mechanical chippers would not include any burning and associated smoke production, mechanical chippers are powered by combustible fuels that send emissions into the air. In addition, this alternative would require additional vehicle use and associated air emissions to haul cedar chips to a community disposal site.

The alternative disposal methods would require additional vehicle and equipment use that would increase air emissions and thus have a slightly greater impact on air quality. The alternative disposal methods would have negligible to minor impacts on air quality and climate depending on the method of disposal.

4.4 Visual Quality and Aesthetics

Because hazardous fuels reduction projects have the potential to alter vegetative cover, they have the potential to affect visual quality—a qualitative analysis that considers the visual context of the project area, the potential for changes in character and contrast (whether the project areas include any places or features that were designated for protection), and the number of viewers, their activities, and the extent to which those activities are related to the aesthetic qualities of the area. The project areas are primarily located along the riparian corridors and treed shelterbelts that provide some natural relief from the surrounding built, agricultural, and grassland environments. Surrounding land uses include small towns with residential support services and agriculture uses. Several of the parcels to be treated border public highways and secondary roads, and others are visible from the school, golf course, and multiple other viewpoints.

The Ashland project area primarily follows Bear Creek and the shelterbelt that surrounds Ashland on the north and east sides. Vegetation along the creek is approximately 50- to 60-percent dead trees or invasive cedars. **Figures 3-1 and 3-2** provide a visual example of invasive

cedars and downed wood along Bear Creek. The Englewood project area encompasses most of the community and would address dead trees and invasive cedars throughout the community. **Figures 3-3 and 3-4** provide a visual example of invasive cedars and dead trees along a shelterbelt in Englewood.

No Action Alternative

Under the no action alternative, limited ongoing wildfire hazard reduction activities would not result in perceptible changes in the appearance and visual quality of the project area overall. Areas that receive hazardous fuels treatment would undergo a slight visual change that could be perceived as cleaner and safer looking on a localized scale. However, a major wildfire would still be likely to spread through the treatment areas, which could have a minor to major adverse impact on the visual quality of the treatment areas depending on the extent of the fire damage.

Proposed Action

Removal of dead trees and invasive cedars would likely affect the visual quality and aesthetics of the project areas. In the Ashland project area, the proposed action would be concentrated along Bear Creek, which borders the community to the north and east. In the Ashland project area, approximately 40 to 50 percent of trees are live and would remain, which may reduce impacts. The proposed action would be dispersed throughout Englewood, including along roadways where visual changes may be more apparent. However, live trees and other vegetation would remain. Residents may perceive the removal of dead trees as a positive attribute. The small burn piles proposed would produce temporary burn marks on the ground surface; however, vegetation would regrow over time.

The greatest visual impact in the project areas occurred when the 2017 fire burned many of the large trees and lower canopy layers. The remaining standing dead wood is a stark reminder of the fire and removing the dead trees may reduce the visual contrast between the pre- and post-fire aesthetics of the project areas. The surrounding agricultural landscape experiences dramatic shifts in vegetative cover depending on the season and crops. It may be assumed that residents expect the vegetation communities to change visually. Depending on how residents and visitors perceive the visual effects of treatment, the proposed action would have negligible to moderate impacts on visual quality and aesthetics. In the long-term, the risk of wildfire spread in the vicinity of the treatment areas would be reduced, which would have minor long-term beneficial effects on visual quality and aesthetics by reducing the chance that vegetation and properties are burned and damaged in a wildfire.

Debris and Slash Management Alternatives

Swamper burning and air curtain burning would produce fewer burn marks, as there would be fewer burn piles or burn locations. Air curtain burning may also be conducted in trenches that would be filled after use, allowing for vegetation growth. Mechanical chipping would not produce burn marks and chips would likely be transported off-site because cedar chips resist decomposition. The alternative disposal methods would have no effect on visual quality.

4.5 Surface Waters and Water Quality

Section 303(d) of the Clean Water Act of 1977, as amended (33 United States Code [U.S.C.] § 1313(d)(2)), establishes requirements for states and tribes to identify and prioritize water bodies that do not meet water quality standards. Data from KDHE were queried to determine whether any streams in the project areas are considered impaired or waters of concern (2020b). Both Ashland and Englewood project areas contain streams. Both project areas are in the upper watersheds of the Cimarron River watershed.

The Ashland project area includes Bear Creek and the West Branch Bear Creek, both of which are intermittent or ephemeral in nature. The EPA list of Total Maximum Daily Limits (TMDLs) revealed that Bear Creek is listed for chlorine, selenium, and sulfate (EPA 2020c). West Branch Bear Creek is not listed on the EPA TMDL list. The Englewood project area contains Fivemile Creek, which is intermittent or ephemeral in nature and is not listed on the EPA TMDL list.

No Action Alternative

Although some hazardous fuels reduction work could still occur in the project areas, it would be scattered and smaller in scale than the proposed action. Individual actions to reduce hazardous fuels would be unlikely to cross creek beds and would have no effect on water quality. If a wildfire occurs and spreads, vegetation in riparian zones would be at a high risk of burning. The loss of riparian vegetation from a major fire would impact surface water quality through increased soil erosion and sedimentation and increased water temperatures from the loss of shade along riparian zones. Additionally, intense lasting heat from major wildfires can cause soils to form hydrophobic layers, as described in **Section 4.2.** This would decrease infiltration of stormwater while increasing runoff, erosion, sedimentation, and peak stream discharges. The no action alternative would have a minor to moderate impact on surface waters and water quality.

Proposed Action

Under the proposed action, project activities would take place in riparian zones along and across Bear Creek in Ashland and Fivemile Creek in Englewood. Equipment would be used to carry cut material across the creeks; however, this would only occur while creek beds are dry. No work would occur in water, and no herbicides would be used. No tracked equipment would be used and thus equipment would not redistribute soils at the bottom of creek beds. The creek beds will not be altered and there would be no regrading of soils or topography. Minimal soil disturbance throughout the project area would be expected.

Traditional burn piles would minimize travel of machinery across streambeds by increasing the frequency of burn piles and burn piles would be located away from water sources and away from vegetation retained along the creeks to avoid impacts. Thus, the proposed action would have negligible to minor short-term impacts on surface waters and water quality. The proposed action would reduce the risk of wildfire spread into the treatment area vicinity and would reduce the risk of impacts associated with wildfires on water resources in and near the project area. Hence, there would be a minor long-term beneficial effect on surface waters and water quality in and near the project area.

Debris and Slash Management Alternatives

Swamper burning and air curtain burning may result in slightly higher levels of impacts on surface waters and water quality, as these methods would require equipment to travel to a more central disposal location for each project area and thus could require more frequent stream crossings. Chipping would have the same effect on water quality as the proposed action because the chippers would be moved to multiple locations close to where the material is being cut. All three alternative disposal methods would result in negligible to minor impacts on water quality.

4.6 Wetlands

Executive Order (EO) 11990, Protection of Wetlands, requires federal agencies to consider alternatives to work in wetlands and limits potential impacts on wetlands if there are no alternatives. FEMA regulation 44 CFR Part 9, Floodplain Management and Protection of Wetlands, sets forth the policy, procedures, and responsibilities to implement and enforce EO 11990 and prohibits FEMA from funding activities in a wetland unless no practical alternative exists.

The USFWS's National Wetlands Inventory (NWI) Mapper (USFWS 2020b) indicates that the Ashland project area overlaps with three narrow linear wetlands, a small freshwater pond, and a segment of ephemeral stream channel (**Figure 4-1**). Based on aerial imagery, the linear wetlands, as well as the segment of ephemeral channel, are largely congruent with existing stream channels corresponding to Bear Creek and its tributaries. Aerial imagery also indicates that the area identified as a freshwater pond does not support perennial surface water. Within the Englewood project area, the NWI mapper identifies narrow linear wetlands within the Fivemile Creek channel and a small emergent wetland in a low-lying field devoid of trees near the southeast corner of the project area (**Figure 4-2**). Both project areas are predominately characterized by sandy well-drained soils that are not conducive to wetland development (NRCS 2020). Therefore, it is unlikely that any wetlands are present in project areas outside of locations within and immediately adjacent to existing stream channels.

No Action Alternative

Under the no action alternative, some hazardous fuels reduction work may still occur over time. If this work occurs in wetlands, it would likely only involve the removal of invasive cedars and dead trees, resulting in negligible impacts on existing wetlands. Work conducted on individual initiatives would also be unlikely to occur in all of the wetlands in the project area. However, the no action alternative would not substantially reduce the risk of a major wildfire, which could destroy or deteriorate all vegetation in wetlands within and beyond the project areas. Vegetation destruction in wetlands would damage habitat for wildlife and lessen the effectiveness of wetlands to filter pollutants and maintain water quality in areas located downslope and downstream. Because the wetlands in the region are likely to be small and associated with streams, impacts on wetlands from a wildfire would be similar to the impacts on the riparian system described in **Section 4.5.** The no action alternative would have a minor to moderate impact on wetlands.

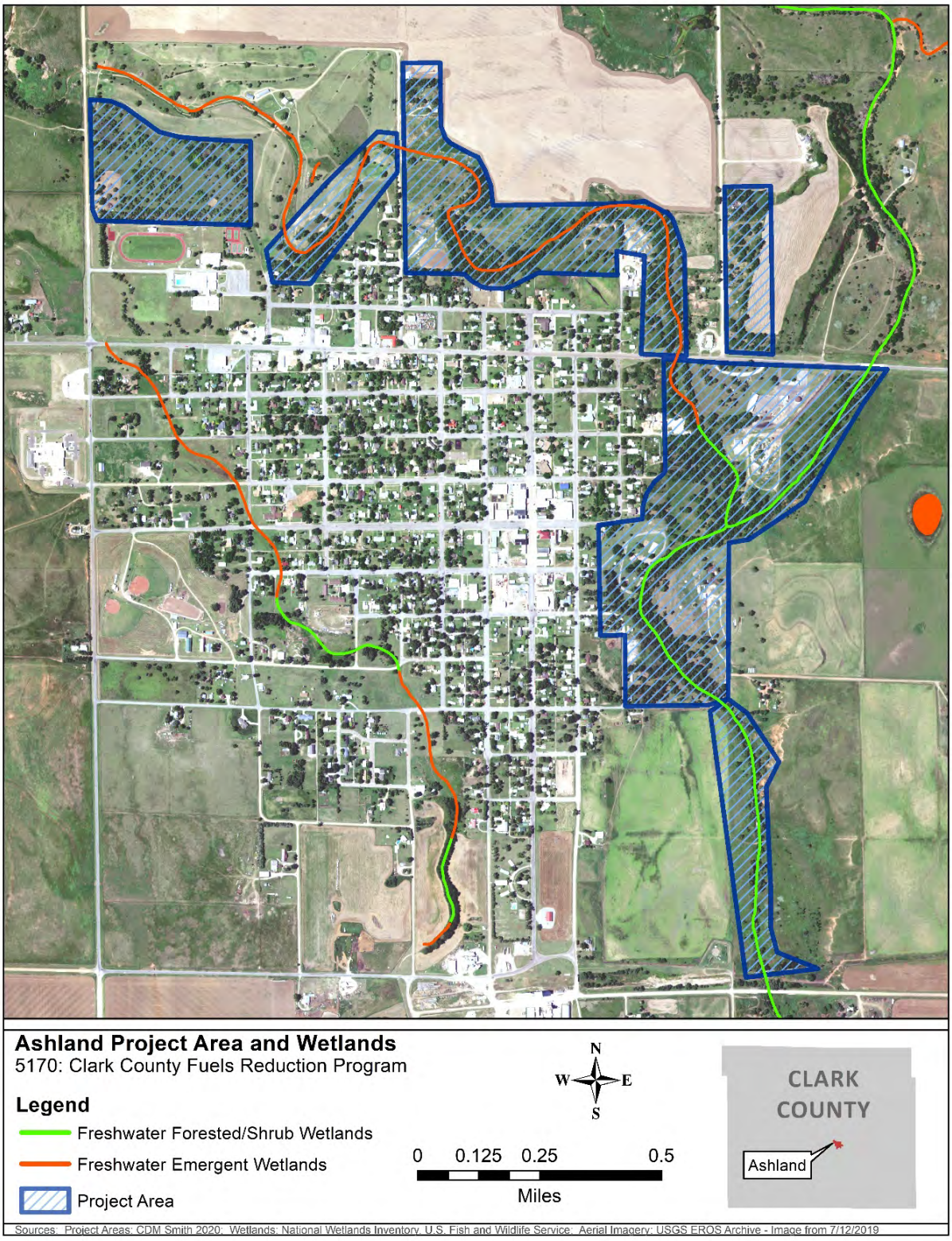

Figure 4-1. Ashland Project Area and Wetlands

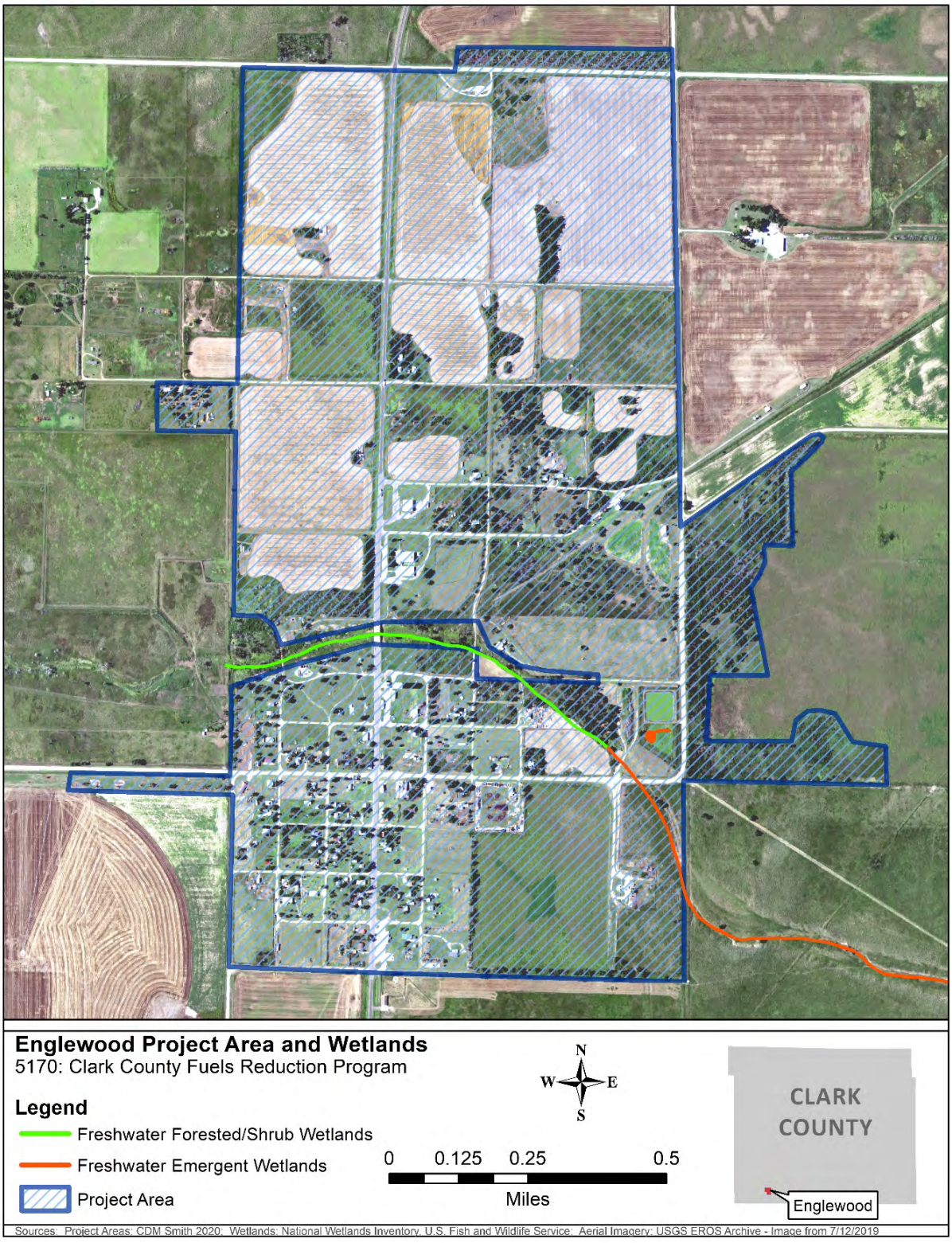

Figure 4-2. Englewood Project Area and Wetlands

Proposed Action

Because existing wetlands within the project areas are restricted to areas within or immediately adjacent to existing stream channels, the proposed action would have short-term minor effects on wetlands where stream crossings are required to transport slash and debris to burn piles. Traditional burn piles would be located to minimize stream and wetland crossings. The proposed action would not result in any fill in wetlands and the removal of invasive cedars may improve wetland habitat conditions in the long term. To minimize potential impacts on existing wetlands, the avoidance and minimization measures described in **Section 3.2.3** would be implemented where possible and applicable. Therefore, the project is anticipated to have negligible impacts on wetlands. Additionally, the proposed action would reduce the risk that a major wildfire would spread and damage wetland vegetation within and surrounding the project areas; hence, there would be minor, long-term beneficial effects on wetlands.

Debris and Slash Management Alternatives

Swamper burning and air curtain burning may result in slightly higher levels of impacts on potential wetlands, as these methods would require equipment to travel to a more central disposal location for each project area and thus could require more frequent stream crossings. Chipping would have the same effect on wetlands as the proposed action because the chippers would be moved to multiple locations close to where the material is being cut. All three alternative disposal methods would result in negligible to minor impacts on wetlands.

4.7 Floodplains

EO 11988, Floodplain Management, requires federal agencies to avoid, to the extent possible, long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practical alternative. FEMA regulations (44 CFR Part 9.7) use the 100-year floodplain as the minimal area for floodplain evaluation. Although FEMA has not conducted a formal analysis of flood hazards and no FEMA flood insurance rate maps (FIRM) are available for the Ashland project area, aerial imagery and topographic data indicate that the terrain is generally flat. In addition, the predominate soil types within the project area are characterized as being "occasionally flooded" (NRCS 2020). Therefore, portions of the Ashland project area may fall within the 1-percent floodplain. Based on FEMA FIRM panel 200050 (effective July 16, 1976), portions of the Englewood project area near Fivemile Creek and along Friend Street (in the northeast corner of the project area) are located in the 1-percent floodplain. Heavy rains associated with thunderstorms frequently result in localized flooding in the Ashland and Englewood areas. For example, in 2017 and 2019, flooding along the West Branch Bear Creek damaged the Ashland golf course adjacent to the project area (KWCH12 2019). However, it is unclear whether this flooding extends very far from the stream channels. The Bear Creek channel is incised and although heavy storms do occasionally result in the creek overtopping its banks, there is no evidence of widespread flooding throughout Ashland.

No Action Alternative

Under the no action alternative, some hazardous fuels reduction work would still be expected to occur within the project area. If this work is conducted within floodplains, it is expected that these efforts would have negligible impacts on existing floodplains. However, this alternative would not substantially reduce the risk of wildfire spread that could damage or eliminate existing vegetation throughout and beyond both project areas. If a wildfire were to occur, substantial vegetation would be destroyed. This loss of vegetation would adversely affect natural floodplain functions by contributing to increased stormwater runoff and sedimentation. Therefore, the no action alternative could have minor to moderate adverse effects on floodplains within the project areas, depending on the intensity and scale of a wildfire.

Proposed Action

Under the proposed action, project activities may occur within floodplains along Bear Creek in Ashland and Fivemile Creek in Englewood. Hazardous fuels reduction work would involve minimal ground disturbance, and stumps would be retained (where trees are removed) to provide bank stabilization. The work would require mechanized equipment to transport debris and slash across existing stream channels; however, stream crossings would be limited to the dry season to minimize the potential for erosion. Burn piles may be placed within the floodplain in some areas if the floodplains extend a substantial distance beyond the creek channels. Burn piles would be unlikely to create hydrophobic soils. It is anticipated that burn piles would result in burn scars that would subsequently be reseeded with a mixture of regionally specific native milkweed and forb species. Additionally, residual ash may contribute to soil nutrients if distributed in appropriate concentrations. The small burn piles proposed would not result in a large concentration of ash in any one spot; therefore, the ash produced at each location would have minor beneficial effects on the soils at the pile location. The proposed action would have negligible short-term effects on floodplains. The proposed action would not result in the development or modification of floodplains. Furthermore, the avoidance and minimization measures described in **Section 3.2.3** would be implemented where practicable. Therefore, the proposed action is anticipated to result in negligible impacts on floodplains. In the long-term, the proposed action would reduce the risk of wildfire spread and subsequent damage to vegetation. Depending on the scale and intensity of these wildfire impacts that would be avoided, the proposed action would result in less stormwater runoff and sedimentation than the no action alternative. Therefore, the proposed action would have minor long-term beneficial effects on floodplains within the project areas and surrounding areas.

Debris and Slash Management Alternatives

Swamper burning and air curtain burning would result in fewer burn scars left on the landscape and thus would reduce the need for reseeding. However, material would need to be transported longer distances to get to centralized burn sites, which may require more equipment use in floodplains. Both swamper burning and air curtain burning may create hydrophobic soils at the burn sites. The small area potentially impacted by these burning methods would not have a measurable impact on floodplains. Furthermore, , if the floodplains are narrow and closely associated with the creek channels, burn sites would be easily located outside of the floodplain

and the project would be able to avoid impacting floodplains with burning activities. Swamper burning and air curtain burning disposal alternatives would have negligible effects on floodplains. If chipped material were disposed of in concentrated locations within the floodplain, the chips could act like fill within the floodplain. Because of the number of invasive cedar trees to be removed, the chipping alternative would need to include provisions for collection and off-site disposal of chips. Hence, there would be no need to deposit chips within the floodplain at depths greater than a few inches. The chipping disposal method would have no effect on floodplains.

4.8 Vegetation

Both project areas include residential and agricultural uses surrounded by fallow fields and a mosaic of managed and unmanaged grasslands with patches of trees that occur naturally along stream channels and in planted shelterbelts. Where grasslands occur within project areas, extensive disturbance associated with residential and agricultural development has likely resulted in the replacement of native bluestem grasses (e.g., big bluestem [*Andropogon gerardii*]) and grama (*Bouteloua* spp.) with non-native grasses such as old-world bluestem (*Bothriochloa* spp.), smooth brome (*Bromus inermis*), and Kentucky bluegrass (*Poa pratensis*), as well as state-designated noxious weed species, including field bindweed (*Convolvulus arvensis*) and Johnson grass (*Sorghum halepense*) (Kansas Department of Agriculture 2018, Kansas Native Plant Society 2019, The Nature Conservancy 2020). Where forested areas occur along streams, tree species likely include cottonwood (*Populus* spp.) and elm (*Ulmus* spp.) as well as invasive cedars (e.g., eastern red cedar).

According to the county, vegetation near Bear Creek in the Ashland project area is approximately 50- to 60-percent dead trees or invasive cedars. Similarly, riparian vegetation along the segment of Fivemile Creek that traverses the Englewood project area largely consists of dead trees and invasive cedars. The shelterbelts that would be treated also include both invasive cedars and a high proportion of dead trees.

Although site photos do not confirm the presence of larval host plants for monarch caterpillars (i.e., milkweeds, [*Asclepias* spp.]) in either project area, milkweed plants may occur throughout both project areas where conditions are favorable (i.e., areas receiving full sun with well-drained soils). Additionally, both project areas likely support species of flowering plants that provide nectar sources for adult monarchs, such as asters (*Asteraceae* spp.), forget-me-nots (*Boraginaceae* spp.), lilies (*Liliaceae* spp.), verbena (*Verbenaceae* spp.), buttercup (*Ranunculaceae* spp.), wild carrots (*Apiaceae* spp.) legumes (*Fabaceae* spp.), goldenrod (*Solidago* spp.), clover (*Trifolium* spp.), and alfalfa (*Medicago* spp.) (Tooker et al. 2002).

EO 13112 requires federal agencies to prevent the introduction of invasive species and provide for their control to minimize the economic, ecological, and human health impacts that invasive species cause. Invasive cedars currently constitute a substantial proportion of existing trees within the project areas. The increase in red cedar on the landscape has contributed to a change in the regional fire regime from frequent, low-intensity fires to high-intensity fires and are highly flammable. Johnson grass is regionally abundant and likely comprises a substantial proportion of

existing vegetation in open, disturbed areas across both project areas. In areas where Johnson grass is highly productive, it may promote fire spread by generating more dry-matter biomass than associated native species (U.S. Department of Agriculture [USDA] 2008). Ash trees in Kansas are also at risk of infestation from the emerald ash borer. However, the Kansas counties currently considered at risk for infestation and under quarantine orders for the emerald ash borer are isolated to the northeastern corner of the state and do not include Clark County.

No Action Alternative

Although some hazardous fuels reduction work could still occur under the no action alternative, the risk of wildfire spread would likely remain high. Historically, fire was a natural component of regional ecosystems, and the native vegetation communities are adapted to periodic fires. However, years of fire suppression, agricultural practices, and the spread of non-native plant species have resulted in the accumulation of vegetative fuel materials, which altered natural fire regimes and resulted in increased fire frequency and severity throughout the region. Depending on the intensity and scale of a wildfire, there could be partial or complete loss of vegetation in and around the project areas. In addition, a major wildfire could result in changes to the soil characteristics (described in **Section 4.2**) that would prevent regrowth of vegetation for years following a fire. Hence, there could be minor to major adverse impacts on vegetation under the no action alternative.

Proposed Action

The proposed action would include the removal of all the dead trees and invasive cedars from shelterbelts and riparian areas, including dead trees laying on the ground within the project areas. Native saplings approximately 2 inches or less in diameter would be left in place, and mature live native trees would be removed only as necessary to access dead trees or cedars. Debris and slash would be burned using traditional pile burning methods. Associated burn piles would have minor impacts on affected soils that would not hinder vegetation regrowth. The proposed action would remove and therefore impact individual trees. The proposed action could have a minor beneficial effect on existing vegetation communities in some areas. The project would remove invasive cedars, thereby reducing canopy cover and promoting conditions conducive to the growth of numerous herbaceous species, including those providing habitat and nectar sources for monarch butterflies, resulting in increased species diversity. However, in those areas where Johnson grass is currently established, the proposed action may contribute to an expansion of the species' localized distribution as Johnson grass thrives in open disturbed areas and spreads quickly (USDA 2008). Thus, the proposed action would have minor negative to minor beneficial impacts on vegetation communities in the short term, depending on the existing proportion of non-native species present in treated areas. In the long term, the proposed action would have minor beneficial effects because the risk of wildfire spread, and associated vegetation damage, would be reduced.

Debris and Slash Management Alternatives

Swamper burning and air curtain burning may result in changes to soil characteristics (described in **Section 4.2**) at burn sites that could hamper vegetation regrowth in the short term. However,

burn scars would be reseeded with a mixture of regionally specific native milkweed forb species to facilitate revegetation of affected areas such that any short-term impacts on vegetation would be negligible. Therefore, swamper burning and air curtain burning would have negligible impacts on vegetation within the project areas. Chipping could have beneficial effects on vegetation, as decomposition of chipped material could result in an increase in soil nutrients. However, these beneficial effects would only apply to chipped material that is free of cedar chips because cedar resists decomposition and may reduce soil moisture and limit light, thus hindering vegetation growth. Because of the number of invasive cedar trees to be removed, it is anticipated that the chipping alternative would need to include provisions for collection and off-site disposal of chips. Therefore, the chipping disposal method would have a negligible impact on vegetation.

4.9 Fish and Wildlife

The Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. §§ 703–711), provides protection for migratory birds and their nests, eggs, and body parts from take (including harm, sale, or other injurious actions) except under the terms of a valid permit issued pursuant to federal regulations. All native birds are protected by the MBTA, and existing habitat in the project areas has the potential to support a variety of native bird species. Species associated with woodland habitats that could occur in the project area include Mississippi kite (*Ictinia mississippiensis*), red-headed woodpecker (*Melanerpes erythrocephalus*), downy woodpecker (*Picoides pubescens*), and dark-eyed junco (*Junco hyemalis)* (Cornell Lab of Ornithology 2020). The nesting season for migratory birds is generally between April 1 and July 15, depending on the species and the location (USFWS 2011).

The Bald and Golden Eagle Protection Act of 1940 prohibits the take, possession, sale, or other harmful action of any bald or golden eagle, alive or dead, including any part, nest, or egg (16 U.S.C. §§ 668(a)). Although the bald eagle (*Haliaeetus leucocephalus*) is known to occur along secluded coves of major reservoirs in the eastern half of Kansas, the species would not be expected to occur within the project areas because of the distance to any substantial bodies of water (Kansas Trail Guide 2019). The golden eagle (*Aquila chrysaetos*) is known to occupy open grasslands in western Kansas and to nest sporadically eastward but would be similarly unlikely to occur in the project areas because of the proximity to human activity (KDWPT 2020a).

Both project areas are in the Southwestern Tablelands ecoregion. Mammal species generally associated with woodland and grassland habitats in the region include Virginia opossum (*Didelphis virginiana*), nine-banded armadillo (*Dasypus novemcinctus*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), bobcat (*Lynx rufus*), and white-tailed deer (*Odocoileus virginianus*) (Potts and Gress 2013). Additionally, reptile species such as ornate box turtle (*Terrapene ornata*), prairie lizard (S*celoporus consobrinus*), and great plains skink (*Plestiodon obsoletus*) may occur in upland portions of the project areas where suitable habitat is available (Taggart and Riedle 2017).

The project areas are within the Upper Cimarron-Bluff watershed, and both project areas overlap with tributary streams to the Cimarron River. West Branch Bear Creek, East Branch Bear Creek, and the Bear Creek main stem occur along the north, east, and south sides of Ashland,

respectively. According to the National Hydrography Dataset (NHD), East Branch Bear Creek and the Bear Creek main stem are characterized as intermittent streams while West Branch Bear Creek is characterized as perennial (United States Geological Survey [USGS] 2020). However, site photos indicate that West Branch Bear Creek experiences seasonal dry periods where no flowing surface water is present. Therefore, West Branch Bear Creek is also considered intermittent in nature in this EA. Fivemile Creek crosses through the middle of Englewood from west to east and is characterized by the NHD as intermittent (USGS 2020). Although stream segments within project areas are characterized by hydrologic regimes that would only support seasonal surface flows, they may provide habitat for fish species including red shiner (*Cyprinella lutrensis*), fathead minnow (*Pimephales promelas*) as well as the state's threatened Arkansas Darter (*Etheostoma cragini*).

No Action Alternative

In the absence of a major wildfire, the no action alternative would have minimal effects on wildlife species occurring in or near the project area. Some hazardous fuels reduction work would still be expected to occur within the project area, and some vegetation and habitat would be removed. However, any treatment work under the no action alternative is expected to be limited in area and would result in negligible potential impacts on both terrestrial and aquatic wildlife. Similarly, impacts on migratory birds would be negligible if work is performed outside of the nesting season. A major wildfire would be more likely to occur under the no action alternative, which would result in the destruction of both terrestrial and aquatic habitat. Additionally, under the no action alternative, there is a higher potential for widespread postfire conditions that could lead to increased erosion and sedimentation, which would further degrade fish and wildlife habitat in the watershed. Therefore, the no action alternative would result in minor to moderate adverse effects on wildlife and their habitats.

Proposed Action

Under the proposed action, project activities would take place in upland and riparian habitats along and near Bear Creek in Ashland and Fivemile Creek in Englewood. Mechanized equipment would be used to carry debris across existing stream channels; however, this would be limited to times when flows are nonexistent. Scattered small burn piles would minimize travel of machinery across streambeds by increasing the frequency of burn piles. No in-water work would occur, no herbicides would be used, and minimal levels of soil disturbance would be expected.

Implementation of the project would generate noise and activity that could affect wildlife using habitats within the project areas; however, these effects would be temporary and localized. In addition, the avoidance and minimization measures described in **Section 3.2.3** would be implemented where possible and applicable. Therefore, the project is expected to have short-term and minor impacts on terrestrial wildlife species and negligible impacts on aquatic species.

The proposed action could affect migratory birds if work were to occur during the breeding season. The nesting season for migratory birds in Clark County, Kansas is generally April 1 through July 15, depending on the species and the location. Project-related disturbances could result in inadvertent nest destruction, birds abandoning nesting activities, and displacement of

birds from preferred foraging areas. Proposed vegetation management activities would have localized and temporary impacts on migratory birds. Under these circumstances, the project would be subject to the MBTA and the subrecipient would be responsible for obtaining and complying with any necessary permits from USFWS or for avoiding impacts (as described below).

If vegetation removal during the nesting season cannot be avoided, the project would still be subject to the prohibitions of the Migratory Bird Treaty Act. The county would be responsible for (1) determining if active nests are present prior to clearing, (2) obtaining and complying with any necessary permits from the USFWS, and (3) documenting compliance. USFWS allows empty or abandoned nests to be removed and destroyed without a permit as long as they are not taken into possession.

Typically, compliance with the MBTA requires a pre-activity survey to identify any active nesting locations in and near work areas no more than three days prior to the start of work in that area. If no active nests are found (that would be potentially impacted), the proposed action may proceed. If an active nest is found within or adjacent to work areas, an appropriate buffer zone around the nest would be marked off and no work would occur in the buffer area until the nest is vacated.

With the implementation of pre-activity nesting surveys, the proposed action would have a negligible effect on migratory birds. In addition, the project would have minor beneficial long-term effects on migratory birds because the risk of wildfire spread and associated widespread habitat loss would be reduced and the area of less suitable habitat dominated by invasive species would be reduced.

The proposed action would have a negligible effect on bald and golden eagles because treatments would take place in areas where the habitat is generally unsuitable for eagles.

In the long-term, there would be minor beneficial effects on fish, wildlife, migratory birds, and eagles because the risk of wildfire spread and associated widespread loss of vegetation providing habitat and forage would be reduced.

Debris and Slash Management Alternatives

Swamper burning and air curtain burning would require equipment to travel longer distances to a more central disposal location for each project area and thus may require more frequent stream crossings. However, stream crossings would be limited to times of the year when streams are dry. Chipping would have the same effect as the proposed action on fish and wildlife habitat because the chippers would be moved to multiple locations close to where the material is being cut. All three alternative disposal methods would result in negligible impacts on fish and wildlife.

4.10 Threatened and Endangered Species and Critical Habitat

The Endangered Species Act of 1973 gives USFWS and the National Marine Fisheries Service authority for the protection of threatened and endangered species. This protection includes a prohibition of direct take (e.g., killing, harassing) and indirect take (e.g., destruction of habitat).

A project Action Area (AA) was identified to analyze the potential effects of the proposed project activities on listed species. The AA is defined as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action" (50 CFR §402.02). Therefore, observable or measurable effects of the project are not expected beyond the boundaries of the AA. The outermost extent of the AA for terrestrial species was determined based on the extent of noise disturbance. Maximum terrestrial noise generated from equipment operation is expected to be approximately 90 dBAs (A-weighted decibels) measured 50 feet from the noise source. The 90 dBA measurement was determined using a decibel escalator calculation based on the three loudest pieces of heavy equipment that could be used during implementation, consisting of a chainsaw (84 dBA), wood chipper (88 dBA), and a skid steer (82 dBA) (U.S. Department of Health and Human Services 2017, Washington State Department of Transportation [WSDOT] 2019). Based on the logarithmic increase of decibel addition, the combined output is anticipated to reach up to 90 dBA (if these three pieces of equipment are used simultaneously). The existing background noise level for the surrounding area is anticipated to be approximately 35 dBA, given that population density in Clark County is approximately 2.3 people per square mile (U.S. Census Bureau 2018, WSDOT 2019). Under these assumptions, it is anticipated that airborne noise would attenuate to background levels approximately 1.5 miles from project areas. This method provides a conservative estimate of potential impacts because the use of a mechanical chipper is an alternative disposal method, and if chipping equipment is not used, the area of potential impact would likely be slightly smaller.

For the analysis in this EA, the AA consists of the project footprint (i.e., areas directly disturbed by implementation of the proposed project), including staging areas and access routes, and a buffer of 1.5 miles around the project footprint to account for potential noise disturbance.

The USFWS Information for Planning and Consultation (IPaC) System (USFWS 2020c) and the USFWS critical habitat mapper (USFWS 2020d) were consulted regarding occurrences of federally listed species and their designated critical habitats in the vicinity of the AA. Recovery plans and other published literature were reviewed for further details concerning species occurrences and status in the region, habitat preferences, documented historical and current ranges, and life history. All federally listed species that may occur near the AA are listed in **Table 4.4** and are briefly discussed below. A biological evaluation of effects on listed species was completed and is available in **Appendix A**.

Table 4.4. Federally Listed Species near the Project Area

Common Name	Scientific Name	Status
Invertebrates		
Monarch butterfly	*Danaus plexippus plexippus*	Candidate [1]
Fish		
Arkansas River Shiner	*Notropis girardi*	Threatened
Birds		
Least tern – Interior population	*Sterna antillarum*	Endangered [2]
Piping plover	*Charadrius melodus*	Threatened
Whooping crane	*Grus americana*	Endangered

Source USFWS 2020c
[1] A decision on whether to propose the monarch butterfly for listing as threatened or endangered is scheduled for December 15, 2020. Although USFWS does not consult on "candidate" species, the USFWS action on the species status would occur during FEMA's review of the proposed action's potential impacts. The species is included in this analysis so that FEMA may make an informed decision on the proposed action.
[2] Proposed for delisting.

Least tern – Interior population: The interior least tern generally nests on the ground, in open areas, near appropriate foraging habitat. Foraging habitat includes large river channels, oxbows, side channels, sloughs, and shallow-water habitats adjacent to sand islands and must be within a short distance of a colony for successful reproduction (USFWS 2020e). The current documented east-to-west distribution of summer nesting least tern encompasses more than 18 degrees of longitude (approximately 900 miles) from the lower Ohio River in Indiana/Kentucky, west to the Upper Missouri River, Montana. The north-to-south distribution encompasses more than 21 degrees of latitude (approximately 1,450 miles) from Montana to southern Texas (USFWS 2008). There is no federally designated critical habitat for this species. Nesting birds were recorded in six central and western Kansas counties, Jeffery Energy Center, and along the Kansas River (KDWPT 2020b). However, no suitable habitat or designated critical habitat for the species exists within or near the AA. Although there is low potential for individuals to pass through the AA during migration, individuals would not be expected to use the AA as a stopover site because it lacks suitable habitat. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project and the species is not considered further in this EA.

Piping plover: The piping plover generally occupies wide, flat, open, sandy beaches with very little grass or other vegetation associated with large river and lake/reservoir systems. Nesting territories often include small creeks or wetlands. There are three locations where piping plovers nest in North America: (1) the shorelines of the Great Lakes, (2) the shores of rivers and lakes in the Northern Great Plains, and (3) along the Atlantic Coast. Their nesting range has become smaller over the years, especially in the Great Lakes area. In the fall, plovers migrate south and winter along the coast of the Gulf of Mexico or other southern locations (USFWS 2001). There is no federally designated critical habitat for this species in Kansas. The nearest federally designated critical habitat for the species is in northeast Nebraska. Although KDWPT has designated critical habitat for the species in northeast Kansas, no suitable habitat or federally

designated critical habitat exists within or near the AA (KDWPT 2020c). The species may pass over the AA during migration; however, given the absence of suitable habitat, the species would not be expected to use the AA as a stopover site. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project and the species is not considered further in this EA.

Whooping crane: The whooping crane typically inhabits coastal marshes and estuaries, inland marshes, lakes, ponds, wet meadows and rivers, and agricultural fields near water sources. The whooping crane is a biannual migrant, traveling between its summer habitat in central Canada, and its wintering grounds on the Texas coast, across the Great Plains of the United States in the spring and fall each year. The species' migratory corridor runs in an approximately straight line from the Canadian Prairie Provinces of Alberta and Saskatchewan through the Great Plains states of eastern Montana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas. The nearest federally designated critical habitat for the species is approximately 85 miles southeast of the AA in northern Oklahoma. No federally designated critical habitat for the species exists within or near the AA. Although whooping cranes may pass through the AA during migration, the AA generally lacks suitable stopover habitat (wetlands in level to moderately rolling terrain away from human activity) (KDWPT 2020d). In the unlikely event that the species were to use AA as resting habitat during migration, individuals would not be expected to occupy the area for an extended period of time because of the proximity to human activity. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project and the species is not considered further in this EA.

Arkansas River Shiner: The Arkansas River shiner (ARS) historically inhabited the main channels of wide, shallow, sandy-bottomed rivers and larger streams of the Arkansas River Basin. However, a population of ARS introduced into the Pecos River in New Mexico was documented in small intermittent tributary streams (Bestgen et al. 1989). Adult Arkansas River shiners are uncommon in quiet pools or backwaters lacking streamflow, and almost never occur in habitats having deep water and bottoms of mud or stone. The ARS was once common throughout the Cimarron River and its tributaries (Pigg 1991). The abundance of ARS in the Cimarron River declined markedly after 1964 (Felley and Cothran 1981). The Red River shiner, a small minnow endemic to the Red River, was first recorded from the Cimarron River in Kansas in 1972 (Cross et al. 1985). Since that time, the Red River shiner has essentially replaced the ARS. Habitat alteration and resulting flow modification have also contributed to the decline of the species from the Cimarron River. A small, remnant population may still persist in the Cimarron River, based on the collection of only nine individuals since 1985 (USFWS 1998). The KDWPT has designated critical habitat for the species in Clark County; however, the nearest federally designated critical habitat for the species consists of the main stem of Cimarron River, approximately 2 miles south of the AA (KDWPT 2020e). Although stream intersecting project sites may provide habitat capable of supporting ARS on a seasonal basis, the AA is outside of the current known range of the species, as documented occurrences of the species are restricted to the Cimarron River main stem. In addition, at the time of the species' listing in 1998, the USFWS stated that, "We believe that ARS may indeed have been extirpated from Kansas" (USFWS 1998). Furthermore, in the extremely unlikely event that ARS were to occur within or

near the AA, work timing and the implementation of avoidance and minimization measures described in **Section 3.2.3** would limit project-related effects on existing aquatic habitats. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project.

Monarch Butterfly: Habitat for the monarch butterfly is broadly defined by the distribution of the larval host plants for the species (suitable species of milkweeds). Additional monarch habitat requirements include adult nectar sources and sites for roosting, thermoregulation, mating, hibernation, and predator escape (Zalucki and Lammers 2010). The geographical range of the species encompasses breeding areas, migration routes including staging areas, and winter roosts. During the spring and summer breeding season, monarchs disperse throughout the United States and southern Canada as successive generations migrate north. During winter, butterflies that primarily originate from east of the Rockies converge on specific locations in Mexico. (Wassenaar and Hobson 1998, Oberhauser and Solensky 2004, Commission for Environmental Cooperation 2008). There is no federally designated critical habitat for this species. Although the presence of milkweeds within the AA was not confirmed, several species are known to occur regionally (e.g., green antelopehorn [*Asclepias viridis*] and green comet milkweed [*Asclepias viridiflora*]) and conditions conducive to milkweed growth occur throughout the AA. Additionally, monarchs east of the Rockies follow one main "central" flyway from southern Ontario and Midwest states south-southwest through the states of Kansas, Missouri, Oklahoma and Arkansas to Texas and Northern Mexico (Howard and Davis 2008). However, neither monarch adults nor larvae have been sighted in Clark County within the last 20 years (Journey North 2020). Therefore, monarchs are expected to have a low potential to occur within the AA during the breeding season where milkweed plants exist. Although milkweed plants may occur in areas where ground-disturbing work would occur, these activities would be limited to times of the year when monarchs would not be present. Additionally, the level of project-associated ground disturbance would be minor because tracked equipment would not be used and grubbing would not occur. Therefore, except for burn pile locations, project-related disturbance is not expected to reduce existing milkweed abundance because established milkweed root systems would remain intact and plants would re-emerge following project completion. Many species of milkweed are deep-rooted and, as a result, may avoid potential damage related to pile burning. However, to offset any potential loss of monarch larval host plants, burn scars will be reseeded, as described in **Section 3.2.3**. Additionally, the proposed project would result in more open conditions in treated areas, which are conducive to milkweed growth. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project.

No Action Alternative

In the absence of a major wildfire, the no action alternative would have negligible effects on federally listed species or their habitats. Some hazardous fuels reduction work would still be expected to occur within the AA, and some vegetation would be removed. However, any treatment work under the no action alternative would likely be limited to the removal of dead trees and invasive cedars. As such, these activities would not be expected to result in the loss of monarch larval host or nectar plants and would have only negligible potential impacts on aquatic

habitat that may support ARS. Although some hazardous fuels reduction treatments may occur in the AA under the no action alternative, these treatments would not be as extensive as the proposed action. Therefore, under the no action alternative a major wildfire would be more likely to spread, which depending on the intensity and scale of the wildfire, could have minor to major impacts on federally listed species and their habitats if a wildfire were to spread to areas that support such species.

Proposed Action

Because of the absence of suitable habitat within or near the AA for listed species and the low potential for ARS and the monarch butterfly to occur, there would be no effect on any federally listed species from the proposed action. Because of the absence of designated critical habitat within or near the AA, there would be no effect on critical habitat. Additionally, measures would be implemented to minimize and avoid potential impacts to species as described in **Section 3.2.3**.

Additionally, the proposed action would reduce the risk of wildfire spread and resultant destruction of suitable habitat for federally listed species within the AA and in surrounding areas. Therefore, there would be minor, long-term beneficial effects on federally listed species occurring regionally.

Debris and Slash Management Alternatives

Because the project is expected to adhere to the avoidance and minimization measures described in **Section 3.2.3**, none of the alternative disposal methods would affect listed species. The AA was developed to account for the use of mechanical chippers, which would be the loudest type of equipment potentially used under any of the alternatives.

4.11 Cultural Resources

This section provides an overview of potential impacts on cultural resources, including historic properties and archeological resources. Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. § 470f), requires that activities using federal funds undergo a review process to consider potential effects on historic properties that are listed in or may be eligible for listing in the National Register of Historic Places (NRHP 2020c). Cultural resources include prehistoric or historic archeology sites, historic standing structures, historic districts, objects, artifacts, cultural properties of historic or traditional significance (referred to as Traditional Cultural Properties that may have religious or cultural significance to federally recognized Indian Tribes), or other physical evidence of human activity considered to be important to culture, subculture, or community for scientific, traditional, religious, or other reasons.

Pursuant to 36 CFR 800.4(a)(1), an Area of Potential Effects (APE) was defined to include the areas within which the undertaking may directly or indirectly affect cultural resources. Within the APE, impacts on cultural resources were evaluated for historic properties; that is, any prehistoric or historic district, site, building, structure, or object listed in, or eligible for inclusion in, the NRHP. To define the APE for direct effects, contemporary aerial photography (National Agricultural Imagery Program 2015, 2017, 2019) was examined to systematically identify and

exclude areas lacking tree coverage. Specifically, agricultural fields and waterbodies were marked for exclusion.

Before the United States acquired the Louisiana Purchase, the Great Plains were nominally controlled, but remaining largely unsettled and uncharted, by the French and Spanish. After Francisco Vásquez de Coronado's 1540–1542 expedition, Spain claimed the Great Plains, although Spanish settlement never developed and further exploration was limited. Despite a lack of consensus, several scholars believe that Coronado's expedition may have led through or near present-day Clark County in 1541.

Following the Louisiana Purchase, the area remained an unorganized territory reserved for the resettlement of displaced Native Americans. In 1834, the area was officially reserved as Indian Territory (Kansas Historical Society [KSHS] 2015a). In successive treaties in 1818 and 1825, the Osage Nation relinquished their traditional lands in Missouri, Arkansas, and Oklahoma for a strip of land known as the Osage Diminished Reserve along what would become Kansas' southern border (KSHS 2015b). The Kansas-Nebraska Act of 1854 established the Territory of Kansas, setting the southern Kansas boundary at the 37th parallel, which falsely was assumed to coincide with the southern Osage boundary (Barry 1963). The southern boundary of the former Osage Diminished Reserve, which coincided with the northern boundary of the Cherokee Strip, passed though the town of Englewood.

After 1821, the Santa Fe Trail became an important route in the United States. This route passed through or very near present-day Ashland (KSHS 2020). In 1870, approximately five miles north of present-day Ashland, the U.S. Army established the Bear Creek Redoubt along the Fort Dodge-Camp Supply Military Road. After the Red River War of 1874–1875, Camp Supply was renamed Fort Supply, and the military road became safer for civilian use. In the 1880s, contractors assumed mail routes and initiated stage lines along the route; a portion of the route was used as a branch of the Western Cattle Trail and the government completed a telegraph line along the route. The town of Ashland was settled along this route.

With the passage of the Homestead Act, settlement of Kansas advanced following the Civil War, tempered by continuing conflict with Native American groups through the 1870s. Ambitious rail system expansion also provided a boon to the growth of towns and settlement in the region (KSHS 2011). Ashland was incorporated in 1884 along the Fort Dodge-Camp Supply trail. Clark County was organized the following year, and Ashland became the county seat (KSHS 2010). Englewood was also established in 1884. Originally planned as the northern terminus of the Wichita Falls and Northwestern Railway, the railroad never reached Englewood (Hofsommer 1977).

Both Ashland and Englewood are located on the same branch line of the former Atchison, Topeka, and Santa Fe Railway (ATSF). The line from the eastern Clark County line to Englewood was constructed by the Southern Kansas and Panhandle Railroad, a subsidiary of the Chicago, Kansas, and Western Railroad (CK&W). The CK&W itself was a subsidiary of the ATSF (Thompson 1942). Despite efforts to extend this line farther west into New Mexico, Englewood remained the western terminus. The line from Rago to Englewood was sold to the

Central Kansas Railway in 1992. Abandonment proceedings began in 1997; the abandonment was consummated in 2000, and this portion of the line was railbanked (Eisenberg 2007). As of 2019, plans were underway to convert an abandoned right-of-way into the Short Grass Prairie Trail (Kansas Department of Transportation 2019).

In Ashland, five NRHP-listed historic properties (buildings) were identified; however, none of the historic properties are in the project area. No Kansas Historic Resources Inventory (KHRI)-listed properties are present (2020b). Portions of the Fort Dodge-Camp Supply Military Trail and ATSF railroad roadway cross the Ashland project area. An unrecorded railroad trestle bridge is present within the southernmost portion of the Ashland project area where the ATSF crosses Bear Creek. No archeological sites have been recorded in Ashland.

In Englewood, no historic properties were identified; however, two KHRI-listed buildings are located in the Englewood project area; both buildings are unassessed with respect to their National Register eligibility. A section of ATSF railroad roadway and the historic administrative boundaries cross the Englewood project area. No archeological sites have been recorded in Englewood.

Consultation with the Kansas Historical Society State Historic Preservation Office (SHPO) was completed on November 4, 2020, with their concurrence with a No Adverse Effect on Historic Properties determination. Tribes with potential interest in the project were contacted and provided a 30-day comment period ending on December 19, 2020. The following tribes were contacted: Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes of Oklahoma, Comanche Nation of Oklahoma, Osage Nation, United Keetoowah Band of Cherokee Indians in Oklahoma, and the Witchita and Affiliated Tribes of Oklahoma. The Osage Nation responded on December 23, 2020 requesting additional information. After receiving additional information, the Osage Nation concurred on January 19, 2021 that the proposed action would have no adverse effect on cultural resources. **Appendix B** contains all agency and tribal correspondence.

No Action

Under the no action alternative, some hazardous fuels reduction would be conducted by individual landowners on their own initiative; however, it would be scattered and smaller in scale than the proposed action. Individual actions to reduce hazardous fuels would be unlikely to impact cultural resources. Under the no action alternative, the risk of wildfire spread would remain high. In the event of a wildfire, cultural resources within and in proximity to the project area would be at risk of damage.

Proposed Action

The proposed action has the potential to directly affect surficial cultural resources through the use of heavy machinery to cut down dead trees or invasive cedars. In Ashland, only portions of the Fort Dodge-Camp Supply Military Trail and a section of ATSF railroad roadway actually cross the project area. An unrecorded railroad trestle bridge is present within the southernmost portion of the project area where the ATSF crosses Bear Creek. Care would be taken to avoid potential damage to these resources while cutting and burning material. In Englewood, two

unassessed KHRI-listed buildings are located in the project area, but it is unclear if tree removal would actually occur in the immediate vicinity of either building. Work in the vicinity of these buildings would be undertaken with extra care to avoid inadvertent damage during project activities. Additionally, a section of abandoned ATSF railroad roadway and the historic administrative boundaries also cross the Englewood project area. The ATSF railroad roadway section lacks integrity and requires no special consideration. The intangible historic administrative boundaries would not be affected by the proposed action.

Based on the results of the background research, and the nature of the proposed action, the potential for effects to historic properties and unassessed cultural properties in the project areas is negligible to minor and the project would have no adverse effects on historic properties or unassessed cultural properties. The proposed action would have a minor, long-term beneficial effect by reducing the risk of wildfire spread.

Debris and Slash Management Alternatives

Swamper burning and air curtain burning, would require additional use of heavy machinery to transport debris and slash material longer distances to get to centralized burn sites, which could affect surficial cultural resources. However, fewer burn piles would be needed, which would reduce the potential that cultural materials under a burn pile might be present and affected. Mechanical chippers would be moved to multiple locations close to where the material is being cut and would not require either additional off-road equipment travel or burning. Therefore, chipping would have a slightly less potential for impacts on cultural resources than the proposed action or the other alternative disposal methods. However, because surficial cultural resources within the treatment areas are not expected, this difference in potential impacts would be negligible.

4.12 Environmental Justice

Environmental justice is defined by EO 12898 (59 Federal Register 7629) and CEQ guidance (1997). Under EO 12898, demographic information is used to determine whether minority populations or low-income populations are present in the areas potentially affected by the range of project alternatives. If so, a determination must be made whether implementation of the program alternatives may cause disproportionately high and adverse human health or environmental impacts on those populations.

This environmental justice analysis is focused at the local (i.e., city) level. The local area included in this analysis is where project-related impacts would occur, potentially causing an adverse and disproportionately high effect on neighboring minority and low-income populations.

Minority or low-income census tracts are defined as meeting either or both of the following criteria:

- Census tract contains 50 percent or more minority persons or 25 percent or more low-income persons.

- Percentage of minority or low-income persons in any census tract is more than 10 percent greater than the average of the surrounding county.

Ashland and Englewood are rural in nature. They share a single census tract, namely 20025967100, which is also the same geography as the county. Therefore, a comparison between census tracts and the county is not available. However, it is important to determine if there are potential concentrations of minority populations in the project areas. Thus, a comparison of the cities and county is provided alongside state demographics for context (**Table 4.5**).

Table 4.5. Environmental Justice Demographics

Area	Minority Population (%)	Population Below Poverty Level (%)
Ashland, Kansas	4	12
Englewood, Kansas	23	38
Clark County/Census Tract 20025967100	6	11
Kansas	12	12

Source: U.S. Census Bureau, American Community Survey 5-year estimates (2014–2018)

Minority Populations

CEQ (1997) defines the term minority as persons from any of the following groups: Black, Asian or Pacific Islander, American Indian or Alaskan Native, and Hispanic. According to the U.S. Census Bureau's American Community Survey data (2018), the community of Ashland has a 4-percent minority population and Englewood has a 23-percent minority population, as compared to Clark County and Kansas, 6 percent and 12 percent, respectively. Ashland would not be considered to have a minority population. Englewood may be considered to contain an environmental justice minority population because the percentage of the population identifying as minority is over 10-percent higher than the county and the state.

Low-Income Populations

Residents of areas with a high percentage of people living below the federal poverty level may be considered low-income populations. As listed in **Table 4.5**, the low-income population in Ashland is 12 percent and in Englewood is 38 percent. The low-income population in Clark County and Kansas is 11 percent and 12 percent, respectively. Ashland would not be considered to contain a low-income population. Englewood may be considered to contain an environmental justice low-income population because the percentage of the population considered low-income is over 10-percent higher than the county and the state.

No Action Alternative

Under the no action alternative, scattered hazardous fuels reduction may be conducted by individual landowners on their own initiative; however, community-wide protection would not occur, and the risk of wildfire spread would remain high. In the event of a wildfire, the population in Englewood, including minority and low-income populations, may experience adverse health impacts such as those discussed in **Section 2** and/or damage or loss of property

and assets. Health impacts related to smoke would adversely affect all populations in Englewood equally so there would not be a disproportionate effect on minority populations. Low-income populations in Englewood could be disproportionately and adversely affected by a wildfire because of their limited resources to afford health care or to recover from property losses. Frequently, low-income populations are also minority populations; therefore, minor to moderate impacts may occur on minority and low-income populations in Englewood depending on the intensity and scale of a wildfire.

Proposed Action

The proposed action would remove hazardous fuels along shelterbelts and riparian zones to reduce the risk of wildfire spread and provide community-wide protection. Temporary impacts from the proposed action, such as noise and smoke, would impact those proximate to work locations, including low-income and minority populations. These short-term impacts would occur throughout Englewood where project activities would be dispersed over the entire community. Potential impacts from burning, such as smoke, could also impact the entirety of the community, including minority and low-income populations, depending on the intensity and direction of wind. However, the county would burn cut materials in compliance with Clark County Resolution 2011-08, which regulates burning in the county. This would reduce potential effects of smoke on all populations to a negligible level. The benefits of reduced risk of wildfire spread also would be applicable to the entire population of Englewood, including minority and low-income populations. Therefore, no disproportionately high and adverse impacts on minority or low-income populations would result from the proposed action.

Debris and Slash Management Alternatives

Swamper burning and air curtain burning may help reduce the amount of smoke produced by burn piles; however, each alternative would require the use of additional equipment and for longer lengths of time, contributing to noise. Chipping would not produce smoke but would require additional on-road equipment. Mechanical chippers would contribute to noise and localized traffic disruption as chipping equipment would likely be parked on the edge of existing roads and additional trucks would be needed to haul away chips. Because the project activities would be dispersed throughout Englewood, the potential impacts from additional off- and on-road equipment would also be dispersed throughout Englewood. Therefore, no disproportionally high and adverse impacts on low-income populations would result from alternative disposal methods.

4.13 Noise

Sounds that disrupt normal activities or otherwise diminish the quality of the environment are considered noise. Noise events that occur during the night (10 p.m. to 7 a.m.) are more disruptive than those that occur during normal waking hours (7 a.m. to 10 p.m.). Assessment of noise impacts includes the proximity of the proposed action to sensitive receptors. A sensitive receptor is defined as an area of frequent human use that would benefit from a lowered noise level. Typical sensitive receptors include residences, schools, churches, hospitals, nursing homes, and libraries. Sensitive receptors in and near the Ashland project area include residences, schools,

churches, hospitals, and libraries. Sensitive receptors in the Englewood project area and vicinity include residences. Any noise-generating activities in proximity to residences would have the potential to adversely affect these receptors. Typical existing noise sources in the project area are associated with traffic and other residential conditions, including the use of mechanical equipment such as lawn mowers and leaf blowers.

No Action Alternative

Under the no action alternative, scattered hazardous fuels reduction may occur; however, it would be conducted by individual landowners on their own initiative and would adhere to local noise restrictions. Therefore, the no action alternative would not result in noise impacts on sensitive receptors.

Proposed Action

Under the proposed action, noise would be generated by the operation of equipment, such as chainsaws and wheeled skid steers. The loudest equipment likely to be used would be chainsaws, which can produce noise levels up to 85 dB when perceived from approximately 50 feet away (Federal Highway Administration 2017). The implementation of the proposed action in Ashland would be concentrated in the north and east and there would be increased noise levels within the immediate vicinity of the work for the duration of the work. The implementation of the proposed action in Englewood would be scattered throughout the town. As described in **Section 4.13**, noise effects could potentially be perceived up to 1.5 miles from the project activities; although, the greater the distance from the source, the more likely that noise sources closer to a receptor such as lawn mowers and traffic noises would be louder than the more distant project activity noises. Noise effects would be temporary and of short duration at any one location. Although the proposed scattered small burn piles may be burned at a later time than the initial cutting activities, burning would not require additional equipment and would not result in noise impacts. All work would occur during normal waking hours. Potential noise impacts on receptors near project activities would be negligible to minor, depending on location and duration of work. No long-term noise impacts would occur.

Debris and Slash Management Alternatives

Swamper burning and air curtain burning would require mechanical equipment to carry debris longer distances to reach a centralized burning location, which would increase the duration of noise. A mechanical chipper would produce more noise than any of the potential burn methods. All work would be temporary and conducted during normal waking hours. Thus, impacts from alternative disposal methods would be negligible to minor depending on the method of disposal chosen.

4.14 Transportation

The transportation system in Ashland is composed of a grid network serving a central town center and surrounding residential streets. US 160 is the primary east-west thoroughfare crossing across the northern portion of the city and Main Street is the primary north-south route providing

access to the local grocery, post office, bank, and other businesses. Most roadways are paved; however, dirt roads become more common further from the town center.

Englewood is located along US 283, which serves as the primary north-south arterial through the center of town. It is named Hartfield Street to the north and transitions into 3rd Street to the south. North of Fivemile Creek, Englewood is primarily larger tracts of farmland with dirt and gravel surfaced roadways extending east and west of Hartfield Street. South of Fivemile Creek, smaller tracts are accessed from residential dirt and gravel surfaced roads on a grid network.

No Action Alternative

Under the no action alternative, transportation in the project areas would not be directly affected by individual landowners performing hazardous fuels reduction activities on their own initiative. However, community-wide protection would not occur, and the risk of wildfire spread would remain high. Wildfire may encroach upon roadways and wildfire smoke may inhibit the ability to see roadways clearly and travel through town. In 2017, the Starbuck Fire surrounded Ashland and Englewood restricting escape routes, reducing visibility from smoke, and requiring road closures. Thus, impacts on transportation could be minor to major, depending on the intensity and scale of a wildfire.

Proposed Action

The proposed work would be conducted by a single crew for each project area that would primarily access project areas from existing roads. Work in any location would occur for a short duration (a few days to a couple weeks). No roadway closures would be expected. There may be negligible, localized, short-term impacts on transportation from equipment staging on roadsides. The use of a single crew and the short duration of work would minimize any potential damage to the surface of unpaved roadways. In Ashland, project activities and potential transportation impacts would be concentrated in the northern and eastern outskirts of the town. Transportation and traffic through the town center and along most roadways is unlikely to be impacted. In Englewood, project activities and potential transportation impacts would be scattered throughout the town.

Traditional burning would have the potential to obstruct visibility on roadways by generating smoke. Traditional burn piles would be small and burned in accordance with Clark County Resolution 2011-08, as described in **Section 3.2.1**. Burning would be conducted in a manner that minimizes smoke production and under conditions that minimize potential effects on the surrounding road network. Thus, there would be negligible impacts on transportation from the proposed pile burning. There would be a minor, long-term beneficial effects by reducing the risk of wildfire spread and resulting smoke and damage to transportation infrastructure.

Debris and Slash Management Alternatives

Swamper burning and air curtain burning would have the potential to obstruct visibility on roadways by generating smoke. Swamper burning would ignite fewer burn piles at one time; however, each swamper burn pile would burn longer than the individual piles under the proposed action. Because the same amount of material would be burned over the entire project, the total

amount of smoke produced would likely be the same. An air curtain burner burns material at a higher temperature and thus produces less smoke. All burning would take place in accordance with Clark County Resolution 2011-08, as described in **Section 3.2.1**. Chipping would not produce any smoke. Swamper burning and air curtain burning would require materials to be transported over longer distances to a centralized burn location, which may include travel on existing roadways. This additional traffic on local road systems could result in negligible traffic disruptions as the equipment would likely be slow moving. Although chippers would be moved to multiple locations close to where the material is being cut, they would likely be operated from the edge of existing road, thus resulting in potential localized negligible traffic disruptions. Therefore, swamper burning, air curtain burning, and chipping would result in negligible impacts on transportation and traffic.

4.15 Public Services and Utilities

In both Ashland and Englewood, power is provided from overhead and underground power lines serviced by Kansas Gas Energy. Drinking water is provided by the towns and wastewater is treated with on-site septic systems. Drinking water is provided by the towns using groundwater and holding tanks. Ashland and Englewood are members of the Kansas Rural Water Association, which provides education and leadership to enhance the effectiveness of Kansas' water and wastewater utilities.

No Action Alternative

Under the no action alternative, some scattered hazardous fuels reduction may be conducted by individual landowners on their own initiative; however, the risk of wildfire spread and damage to utilities would remain high. In the event of a wildfire, intense heat could adversely impact electrical and water system components on the surface and underground. If intense heat modifies the chemical properties of water system components, chemicals might leach into the water, causing contamination (FEMA 2019). Most of the functional components of a septic system are several feet belowground and are therefore typically resistant to fire damage. However, it is possible that firefighting activities, such as digging fire breaks, may damage septic systems (Montana Department of Environmental Quality 2012).

Damage or destruction of public utilities such as power distribution and drinking water infrastructure or wastewater treatment systems from a wildfire would likely result in the loss of public services. Thus, impacts on public utilities could be minor to major, depending on the intensity and scale of a wildfire.

Proposed Action

The proposed action and debris management alternatives would not directly affect utilities. In Ashland, the implementation of the proposed action would occur along the northern and eastern boundaries of the town, lining Bear Creek and the associated shelterbelts where public utilities such as overhead powerlines are not present. In Englewood, removal of dead trees close to structures may also occur close to overhead powerlines and contractors would take care to not interact with powerlines when felling dead trees. The proposed removal of dead trees and cedars

throughout Englewood could also reduce the potential for powerlines to spark a fire. Thus, the proposed action would have negligible impacts on public services and utilities. In the long term, the proposed action would reduce the risk of damage to public utilities from a wildfire. Therefore, the proposed action could have minor, long-term beneficial effects on public utilities.

Debris and Slash Management Alternatives

Alternative disposal methods would not affect public services and utilities.

4.16 Public Health and Safety

The Clark County Sheriff's Office, located in Ashland, is responsible for the oversight and dispatch of all emergency services in Ashland and Englewood. The Sheriff's Office provides crime prevention, emergency, and nonemergency policing services, and dispatches the local fire departments that are staffed by volunteers. In addition to emergency medical services provided by the county, the Ashland Health Center provides emergency and nonemergency medical care. Englewood does not have medical providers. Community members likely travel to Ashland for medical care.

Clark County has a history of wildfires and both Ashland and Englewood have limited options for evacuation routes in the event of a large wildfire.

No Action Alternative

Under the no action alternative, some scattered hazardous fuels reduction may be conducted by individual landowners on their own initiative. However, current conditions would not significantly change, and the risk of wildfire spread would remain high. In the event of a wildfire, there is increased risk to public health and safety, and to emergency service providers, such as firefighters. Although the communities in Clark County provide mutual aid to each other in times of crisis, a large wildfire can quickly isolate the towns and leave each with minimal resources to respond to the emergency, as happened during the 2017 Starbuck Fire.

Wildfires can generate substantial amounts of particulate matter, which can affect the health of people breathing smoke-laden air. This is a particular concern for vulnerable populations, such as the youth and elderly, as discussed in **Section 4.3**. Wildfires can also generate substantial amounts of carbon monoxide, which can pose a health concern for frontline firefighters. In addition, fires that are burning residences can release toxic materials into the air, soils, and water, posing health risks to populations both during the fire and later during cleanup and recovery (CalRecycle 2020).

During a major wildfire, emergency personnel would not be available to respond to other emergencies in their service area, potentially resulting in indirect impacts on health and property. Therefore, if a wildfire occurs under the no action alternative, there could be minor to major impacts depending on the scale and intensity of the fire.

Proposed Action

Under the proposed action, hazardous fuels reduction in Ashland and Englewood would provide community-wide protection to reduce the risk of wildfire spread. These activities would not prevent wildfires but could contribute to containment, which would ultimately reduce the risks for people living in and near the project areas. This would create a safer environment for firefighters and emergency responders and allow them to more easily control the spread of a wildfire. In addition, when wildfires are controlled more quickly, a smaller area is burned and less smoke is produced.

The proposed burn method would produce smoke, which can pose health concerns as described in **Section 4.3**. All burning would comply with Clark County Resolution 2011-08, which considers wind direction and requires notification of all persons in proximity to burning; therefore, short-term impacts on public health from smoke would be negligible. The proposed action could reduce the probability that all emergency services would be focused on firefighting and may allow some emergency responders to remain available to respond to other emergencies throughout the county during a wildfire. Therefore, the proposed action would have a minor to moderate beneficial effect on public health and safety in the long term.

Debris and Slash Management Alternatives

Air curtain burning would produce less smoke than other burning alternatives and thus would have a slightly lesser effect on public health than the proposed action or a swamper burn method. The potential impact would still be negligible under any burn method. Chipping would not produce smoke and associated potential health impacts.

4.17 Hazardous Materials

Hazardous materials are those substances defined by the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act, and the Toxic Substances Control Act. The Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, which was further amended by the Hazardous and Solid Waste Amendments, defines hazardous wastes. In general, both hazardous materials and waste include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may present substantial danger to public health or to the environment when released or otherwise improperly managed.

Hazardous materials may be encountered in the course of a project or they may be generated by the project activities. To determine whether any hazardous waste facilities exist in the vicinity or upgradient of the proposed treatment parcels or whether there is a known and documented environmental issue or concern that could affect the proposed treatment parcels, a search for Superfund sites, toxic release inventory sites, industrial water dischargers, hazardous facilities or sites, and multiactivity sites was conducted using EPA's NEPA Assist website (EPA 2019). According to this database, no hazardous materials are present in the Ashland project area; however, five hazardous waste sites (RCRA) and two water discharger sites (NPDES) are

present within one mile of the project area, see **Table 4.6**. Two hazardous waste sites are present in the Englewood project area.

Table 4.6. Hazardous Materials Sites

Name	Hazard	Location
Ashland		
Clark County Recycle Center Lot	Hazardous Waste	453 West 4th Ashland, KS
Fountain View Villa	Hazardous Waste	528 West 8th Ashland, KS
Clark County Conservation District	Hazardous Waste	614 West 11th Ashland, KS
Ashland Auto	Hazardous Waste	120 East 8th St Ashland, KS
Ashland Auto Supply	Hazardous Waste	West Highway 160 Ashland, KS
Eslinger Construction and Ready Mix	Water Discharger	6th and Willow
Unknown	Water Discharger	Ashland, KS
Englewood		
Northern Natural	Hazardous Waste	Englewood, KS
Calvin McGonigle	Hazardous Waste	321 4th Street Ashland, KS

Source: EPA NEPA Assist 2019

No Action Alternative

Under the no action alternative, scattered hazardous fuels reduction may be conducted by individual landowners on their own initiative. There would be some limited potential for release of hazardous materials from equipment, and thus very localized and negligible site contamination from leaks or spills. Under this alternative, the risk for wildfire spread would not be effectively reduced. In the event of a wildfire, there could be damage to hazardous material sites farther from the project areas and fire-retardant materials from suppression activities might be applied in and near the project area. Fire retardants are generally considered to be nontoxic, but there may be risks to small mammals and other wildlife from concentrated exposures (Modovsky 2007). However, exposures would likely be short-term as the application "footprint" of these chemicals is quite limited in terms of foraging areas and species habitat for any individual animal and the ingredients generally degrade in the environment (Modovsky 2007). Wildfire damage in residential areas can also directly release hazardous materials into the air, soil, and water as plastics burn and materials that are otherwise safely stored are damaged and released (CalRecycle 2020). Therefore, the no action alternative would have a negligible to moderate impact related to hazardous materials depending on the intensity and scale of a wildfire.

Proposed Action

There are RCRA-regulated hazardous waste sites and water dischargers in proximity to the proposed action in Ashland. These sites would not be affected by implementation of the

proposed action because they are not within the project area. There are RCRA-regulated hazardous waste sites within the project area of Englewood; however, they are not contaminated sites and the proposed action is unlikely to have measurable ground disturbance. The proposed action would involve the use of mechanical equipment, such as chainsaws or wheeled skid steers with saw heads, which would pose the threat of minor leaks and spills. Scattered small burn piles would require minimal use and travel of mechanical equipment. The short-term duration of the use of equipment at any individual treatment area and the use of equipment in good condition would reduce any potential effect to an insignificant level. All equipment and project activities would adhere to local regulations to reduce the risk of hazardous leaks and spills. Any spills during construction would be contained and cleaned. Thus, there would be a negligible contamination threat from vehicle and equipment use. In the long term, the proposed action would reduce the risk of damage to regulated sites and the risk of release of hazardous materials from burning homes by reducing the risk of wildfire spread through Ashland and Englewood.

Debris and Slash Management Alternatives

Swamper burning, air curtain burning, and chipping would require additional mechanical equipment. Swamper burning and air curtain burning would require equipment to carry debris longer distances to a centralized burn location than the proposed action with scattered burn piles. A mechanical chipper could be moved from place to place to be close to where materials are being cut from, which would minimize equipment travel. However, the mechanical chippers and additional haul trucks would also pose risks of spills and leaks. Mechanical equipment in good condition would reduce any potential effect to an insignificant level and any spills during project implementation would be cleaned right away. Thus, the alternative disposal methods would have negligible impacts related to hazardous materials.

4.18 Summary of Effects and Mitigation

Table 4.7 provides a summary of the potential environmental effects from implementation of the proposed action, any required agency coordination efforts or permits, and any applicable proposed mitigation or BMPs.

Table 4.7. Summary of Impacts and Mitigation

Affected Resource Area	Impacts	Alternative Disposal Method Impacts	Agency Coordination or Permits	Mitigation/BMPs
Soils	Negligible short-term impact; minor long-term benefit from reduced risk of wildfire spread.	Minor short-term impacts from swamper burn and air curtain burn; negligible impacts from chipping.	NA	Crossing of creek beds would only occur when dry.

Affected Resource Area	Impacts	Alternative Disposal Method Impacts	Agency Coordination or Permits	Mitigation/BMPs
Air Quality and Climate	Negligible short-term impact; minor long-term benefit from reduced risk of wildfire spread.	Negligible to minor short term impacts.	NA	Mechanical equipment would be kept in good condition. All burning would comply with Clark County Resolution 2011-08 restricting burning.
Visual Quality and Aesthetics	Negligible to moderate short-term impact; minor long-term beneficial effect from reduced risk of wildfire spread.	No effect	NA	NA
Surface Waters and Water Quality	Negligible to minor short-term impact; minor long-term benefit from reduced risk of wildfire spread.	Negligible to minor short term impacts.	NA	Crossing of creek beds would only occur when dry.
Wetlands	Negligible short-term impact; minor long-term benefit from reduced risk of wildfire spread.	Negligible to minor short term impacts.	NA	Crossing of creek beds would only occur when dry. Avoidance and minimization measures described in **Section 3.2.3** would be implemented where possible and applicable.
Floodplains	Negligible short-term impact; minor long-term beneficial effect from reduced risk of wildfire spread and subsequent damage to vegetation that could lead to increased stormwater runoff and sedimentation within the watershed.	Negligible short-term impacts from swamper burn and air curtain burn; no effect from chipping.	NA	Crossing of creek beds would only occur when dry. Avoidance and minimization measures described in **Section 3.2.3** would be implemented where possible and applicable.

Affected Resource Area	Impacts	Alternative Disposal Method Impacts	Agency Coordination or Permits	Mitigation/BMPs
Vegetation	Minor negative to minor beneficial negligible impacts on vegetation communities in the short term, depending on the existing non-native species present; minor long-term beneficial effect from reduced risk of wildfire spread and associated vegetation loss.	Negligible short-term impacts.	NA	Avoidance and minimization measures described in **Section 3.2.3** would be implemented where possible and applicable.
Fish and Wildlife	Minor, short-term impact on terrestrial wildlife and migratory birds from vegetation-clearing activities; negligible impacts on aquatic species; negligible short-term impact on eagles; minor long-term beneficial effects by reducing the risk of wildfire spread and vegetation loss.	Negligible short-term impacts.	NA	Avoidance and minimization measures described in **Section 3.2.3** would be implemented where possible and applicable. Additional measures to avoid impacts on migratory birds described in **Section 4.9**, including pre-implementation nesting surveys, would be implemented where applicable

Affected Resource Area	Impacts	Alternative Disposal Method Impacts	Agency Coordination or Permits	Mitigation/BMPs
Threatened and Endangered Species	No effect on federally listed species or their habitats; minor long-term beneficial effects by reducing the risk of wildfire spread and regional habitat loss.	No effect on federally listed species or their habitats.	NA	Avoidance and minimization measures described in **Section 3.2.3** would be implemented to avoid potential harm to the monarch butterfly and to avoid potential impacts on aquatic habitats that may support ARS.
Cultural Resources	Negligible to minor short-term impact; minor long term benefit from reduced risk of wildfire spread.	Negligible to minor short term impacts.	SHPO and Tribal Consultation	All work would be performed in accordance with Kansas SHPO guidelines, 36 CFR Part 800, "Protection of Historic Properties," the implementing regulations for the NHPA, with the Secretary of the Interior's Standards and Guidelines. Caution would be used during tree removal in the proximity of one unassessed cultural property in Ashland, and two in Englewood, and burn piles will be established at sufficient distances from them.
Environmental Justice	No disproportionate impact on environmental justice populations.	No disproportionate impact on environmental justice populations.	NA	NA

Affected Resource Area	Impacts	Alternative Disposal Method Impacts	Agency Coordination or Permits	Mitigation/BMPs
Hazardous Materials	Negligible short-term impacts. Minor long-term benefit from reduced risk of wildfire spread.	Negligible short-term impacts.	NA	Any spills during construction would be contained and cleaned immediately.
Noise	Negligible to minor short-term impacts; no long term impacts.	Negligible to minor short-term impacts.	NA	Noise-producing equipment would occur during less sensitive, waking hours (7 a.m. to 10 p.m.) and would be temporary.
Transportation	Negligible impacts from proposed action and traditional burn piles; minor short-term impacts from Swamper burn, air curtain burn, or chipping; minor, long-term beneficial effect from reduced risk of wildfire spread.	Negligible short-term impacts.	NA	NA
Public Services and Utilities	No short-term impact; minor long term benefit from reduced risk of wildfire spread.	No effect	NA	NA
Public Health and Safety	Negligible short-term impact; minor long term benefit from reduced risk of wildfire spread and associated public health concerns.	Negligible short-term impacts from swamper burn and air curtain burn; no effect from chipping.	NA	NA

SECTION 5 Cumulative Impacts

This section addresses the potential cumulative impacts associated with the implementation of the proposed action. Cumulative impacts can be defined as the impacts of a proposed action when combined with impacts of past, present, or reasonably foreseeable future actions undertaken by any agency or person. CEQ's regulations for implementing NEPA require an assessment of cumulative effects during the decision-making process for federal projects. Cumulative impacts can result from individually minor but collectively significant actions.

The study area for cumulative effects includes but is not limited to the proposed project areas. The FEMA HMGP guidelines specify that projects more than 2 miles from structures are ineligible for hazardous fuels reduction grants. The communities in the proposed project are small, approximately 1-mile across. Therefore, an area within 2 miles of the proposed project areas was selected for the cumulative effects' analysis. This would include the entire communities of Ashland and Englewood.

Kansas state encourages participation in the Firewise Community Program, which assists community members and local fire professionals in reducing wildfire risks in their local area. There is an emphasis on helping community members understand the importance of protecting homes and structures from wildfire (National Fire Protection Association 2020). Alongside this state educational resource, Clark County removed dead trees and performed a prescribed burn in the Spring of 2020 to remove Johnson grass (*Sorghum halepense*) on 13 acres along Fivemile Creek in Englewood. No other past, present, or reasonably foreseeable future actions are known. Prescribed burning activities have the potential to compound with potential effects of the proposed action with respect to air quality and climate, soils, surface water and water quality, and visual quality and aesthetics. Activities that may have impacts that spread over long distances, such as smoke from burning, or that may persist for long periods, such as the effects of tree removal on visual quality and vegetation, have the potential for cumulative effects. Smoke from pile burning can affect air quality and, if many areas are conducting burning at the same time (e.g., burning of field stubble or Johnson grass infestations and proposed action debris piles), there could be a cumulative impact on air quality even if they are widely separated geographically. However, the Clark County burn resolution restricts pasture burning as well as burning associated with the proposed action. Restrictions include consideration of the direction and intensity of wind to reduce the risk of wildfire spread and smoke impacts as well as the acreage to be burned. These restrictions would help prevent cumulative air quality and public health impacts.

No cumulatively significant impacts are anticipated because potential past, present, and reasonably foreseeable future activities would be separated temporally from the proposed action and local regulations would protect air quality.

SECTION 6 Agency Coordination, Public Involvement, and Permits

6.1 Agency Coordination

Consultation with federally recognized tribes was initiated on November 19, 2020 when FEMA sent the cultural resources report to the tribes for their review. The following tribes were contacted: Apache Tribe of Oklahoma; Cheyenne and Arapaho Tribes, Oklahoma; Comanche Nation, Oklahoma; Osage Nation; United Keetoowah Band of Cherokee Indians in Oklahoma; and Witchita and Affiliated Tribes (Witchita, Keechi, Waco and Tawakonie), Oklahoma. The Osage Nation responded on January 19, 2021 and concurred that the proposed action would have no adverse effect on cultural resources. Consultation with the SHPO was initiated on October 23, 2020 and completed on November 4, 2020. A copy of the cultural resources report may be available upon request.

Appendix B provides copies of all agency response and coordination letters related to this EA.

As described in Section 4.10, FEMA has determined that there would be no effect on listed species; therefore, no coordination with USFWS is required. The no effect memorandum prepared for this project is in **Appendix A**.

6.2 Public Participation

A public scoping notice and fact sheet about the proposed project was published at https://clarkcountykansasemergencymanagement.com/ on October 4, 2020 and in the *Clark County Gazette* on October 8, 2020. The scoping notice was intended to notify and provide the public with an opportunity to comment on the proposed action, potential alternatives, and preliminary identification of environmental issues. The 30-day public comment period on scoping closed on November 4, 2020. No comments were received.

In accordance with NEPA, FEMA will release this draft EA to the public and resource agencies for a 30-day public review and comment period. Comments on this draft EA will be incorporated into the final EA, as appropriate. This draft EA reflects the evaluation and assessment of the federal government, the decision-maker for the federal action; however, FEMA will take into consideration any substantive comments received during the public review period to inform the final decision regarding grant approval and project implementation. If no substantive comments are received from the public and/or agency reviewers, this draft EA will be assumed to be final and a FONSI will be issued by FEMA.

Clark County will make the draft EA available on their Emergency Management website at: https://clarkcountykansasemergencymanagement.com/. The draft EA will be available on FEMA's website. A hard copy of the draft EA will be made available at the Ashland Library, 604 Main Street, Ashland, Kansas 67831. The comment period will start when the public notice is published and will extend for 30 days.

Comments on the draft EA may be submitted to FEMA-R7-MT-HMA@fema.dhs.gov. Please include "Clark County" in the subject line. Comments may also be submitted via mail to:

Mary Kerschner,
Senior Specialist Hazard Mitigation Assistance Branch
FEMA Region 7
11224 Holmes Rd
Kansas City, MO 64131

6.3 Permits

Clark County will obtain any necessary local, state, or federal permits for conducting the proposed work. At this time, no permits are needed.

SECTION 7 List of Preparers

The following is a list of preparers who contributed to the development of the Clark County Fuels Reduction Program draft EA for FEMA. The individuals listed below had principal roles in the preparation of this document. Many others, including senior managers, administrative support personnel, and technical staff, had significant roles and contributions, and their efforts were no less important to the development of this EA.

Preparers	Experience and Expertise	Role in Preparation
Bankston, Sam[1]	Environmental Planner	Biological Resources
Kelley, Laura[1]	Project Manager	Project Manager
McLean, Janice[2]	Project Manager	Cultural Resources
Murphy, Gina[1]	Environmental Planner	NEPA Specialist, Reviewer
Potter, Alan[2]	Principal Investigator	Cultural Resources
Shepherd, Brian[1]	GIS Specialist	GIS
Stenberg, Kate PhD[1]	Senior Biologist, Senior Planner	Technical Review
Weddle, Annamarie[1]	Environmental Planner	NEPA Documentation

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Federal Emergency Management Agency

Reviewers	Role in Preparation
Kerschner, Mary	Project Manager
Stojsavljevic, Kate	Review and Approval
Weisgerber, Julie	Technical Review
Zawisa, Antonia	Technical Review

SECTION 8 References

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Appendix A Endangered Species Act No Effect Memo

Endangered Species Act No Effect Determination

Clark County Fire Fuels Reduction Program

Clark County, KS
FM-5170-03-KS

October 2020

Federal Emergency Management Agency
Region 7
Department of Homeland Security
11224 Holmes Rd
Kansas City, MO 64131

This document was prepared by:

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Acronyms

AA	Action Area
AMM	Avoidance and Minimization Measure
ARS	Arkansas River Shiner
dBA	A-weighted decibel
FEMA	Federal Emergency Management Agency
FMAG	Fire Mitigation Assistance Grant
KDEM	Kansas Division of Emergency Management
KDWPT	Kansas Department of Wildlife, Parks and Tourism
HGMP	Hazard Mitigation Grant Program
HUC	Hydrologic Unit Code
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NHD	National Hydrography Dataset
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

SECTION 1. INTRODUCTION

Clark County, Kansas (County), proposes to implement hazardous fuels reduction work on approximately 784 acres in and near the communities of Ashland and Englewood, Kansas (**Figure 1**). The County applied to the Federal Emergency Management Agency (FEMA) through the Kansas Division of Emergency Management (KDEM) for a grant under FEMA's Hazard Mitigation Grant Program (HMGP). KDEM is the direct recipient of the grant and the County is the subrecipient.

The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Under the HMGP, federal funds pay 75 percent of the project cost, and the remaining 25 percent is supplied by nonfederal funding sources. The HMGP funds were made available via a Fire Mitigation Assistance Grant (FMAG) declaration made by FEMA in 2017 in response to the Kansas Highland Hills Fire. FEMA is proposing to provide funding for the project and is the the lead action agency for any required Endangered Species Act consultation.

This biological evaluation describes the potential for federally listed species and/or their designated critical habitat to occur within the Action Area and/or be affected by the project as summarized in **Table 1**. In addition, the monarch butterfly (*Danaus plexippus plexippus*) was evaluated for potential project related-impacts because a decision on whether to propose the species for listing as threatened or endangered is scheduled for December 15, 2020; therefore, the species may be proposed for listing at the time of project implementation. Based on the analysis presented herein, there would be no effect on the monarch butterfly or any federally listed species or their designated critical habitat as a result of proposed project activities.

Table 1. Threatened and Endangered Species that May Occur in the Action Area

Common Name	Scientific Name	Listing Status	Designated Critical Habitat	Effect Determination
Least tern – Interior population	*Sterna antillarum*	FE*	None	**No effect**
Piping plover	*Charadrius melodus*	FT	None in the Action Area	**No effect**
Whooping crane	*Grus americana*	FE	None in the Action Area	**No effect**
Arkansas River Shiner	*Notropis girardi*	FT	None in the Action Area	**No effect**
Monarch butterfly	*Danaus plexippus plexippus*	C*	None	**No effect**

FE = Federally Endangered
FT = Federally Threatened
C = Candidate
* This species is currently under review to determine whether to propose it for listing under the ESA.

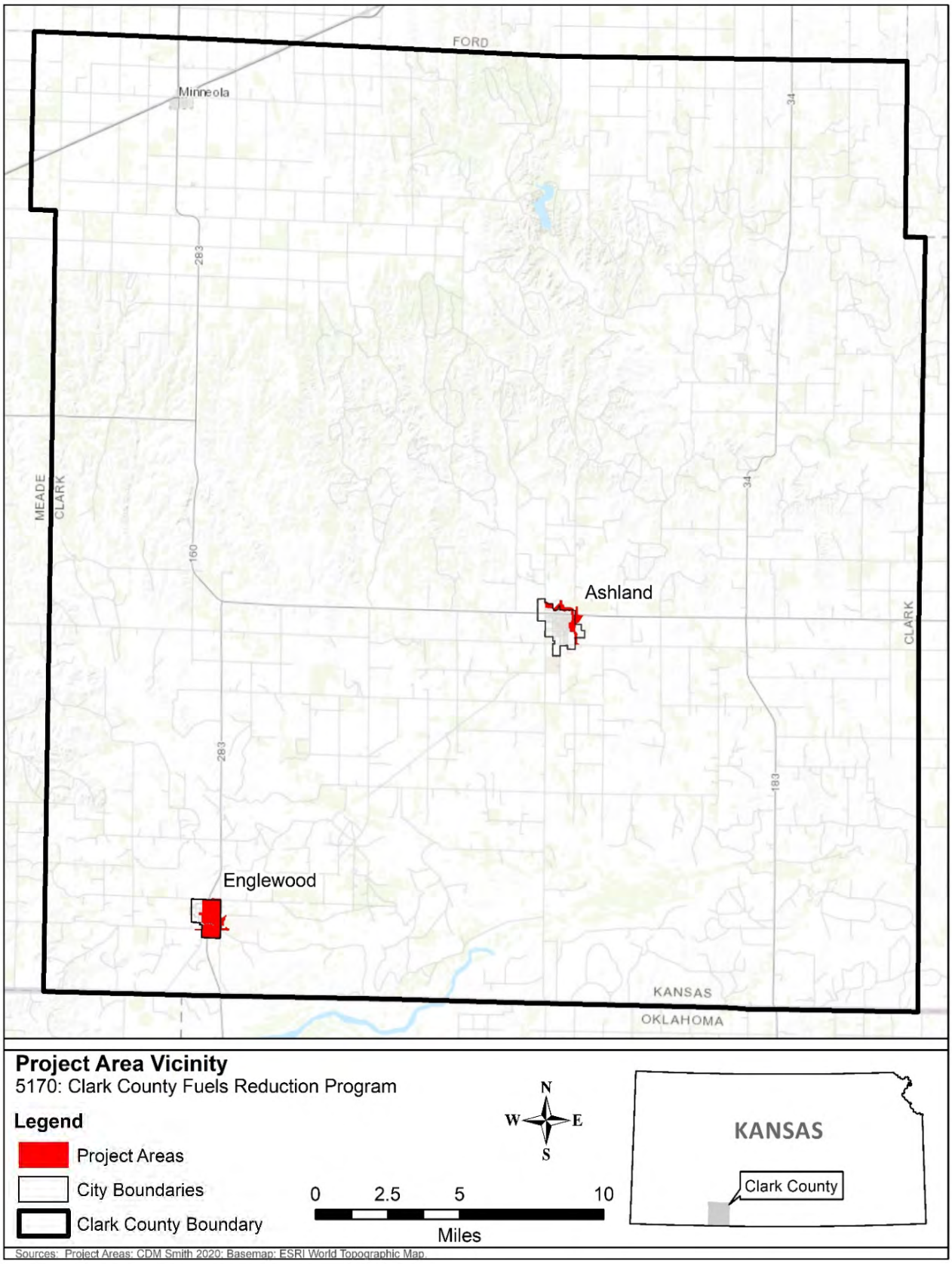

Figure 1. Project Vicinity

SECTION 2. PROJECT DESCRIPTION

2.1 PURPOSE AND LOCATION

The purpose of the proposed action is to remove dead trees and invasive vegetation, such as eastern redcedar (*Juniperus virginiana*), in the communities of Ashland and Englewood to reduce the existing fuel loads and the risk of wildfire spread. Clark County experienced severe wildfire damage as a result of the 2017 Starbuck Fire. The Starbuck Fire burned many trees along creeks and within shelterbelts throughout both communities. Many of these dead trees are still standing and contribute to the wildfire hazards. The creeks and shelterbelts also contain numerous cedar trees, which are highly flammable. These invasive trees spread easily along riparian zones, where they may form dense thickets.

The project would remove dead trees and invasive cedars from approximately 211 acres in Ashland and approximately 573 acres in Englewood. Project areas were generally determined based on the presence of vegetative fuels. The Ashland project area focuses on vegetated areas associated with Bear Creek, which wraps around the north and east sides of the community (**Figure 2**). The Englewood project area encompasses most of the community and would address dead trees and cedars throughout the area (**Figure 3**).

The Ashland project area is in the Ashland U.S. Geological Survey (USGS) 7.5-minute quadrangle (quad) and the Englewood project area is in the Englewood USGS quad. The Public Land Survey System location of the Ashland project area is encompassed by Township 33 South, Range 23 West, Sections 1 and 12 and Township 33 South, Range 22 West, Sections 6 and 7. The Englewood project area is within Township 34 South, Range 25 West, Section 36 and Township 35 South, Range 25 West, Section 1.

2.2 PROPOSED ACTION

2.2.1 HAZARDOUS FUELS REMOVAL

The proposed action would include removing all dead trees and invasive cedars from shelterbelts and riparian areas, including dead trees laying on the ground, within the project areas. Native saplings approximately 2 inches or less in diameter would be left in place. Live deciduous trees would be removed only as necessary to access dead trees or cedars. Trees would be cut at the ground surface using chainsaws or a wheeled skid steer with saw heads. Tracked equipment would not be used. Stumps would not be removed to avoid modifying existing stream banks and because they provide bank stabilization. Cutting activities would be performed between October 15 and April 1 when temperatures are cooler and to avoid times of the year when monarch eggs and caterpillars may be present (Monarch Joint Venture [MJV] 2020).

2.2.2 DEBRIS AND SLASH MANAGEMENT

Cut trees would be piled near the removal site to minimize machinery travel time. Trees may be carried across existing stream channels using mechanized equipment for piling in locations that are more suitable for burning; however, stream crossings would be limited to the dry season when flows are low or nonexistent.

Figure 2. Ashland Project Area

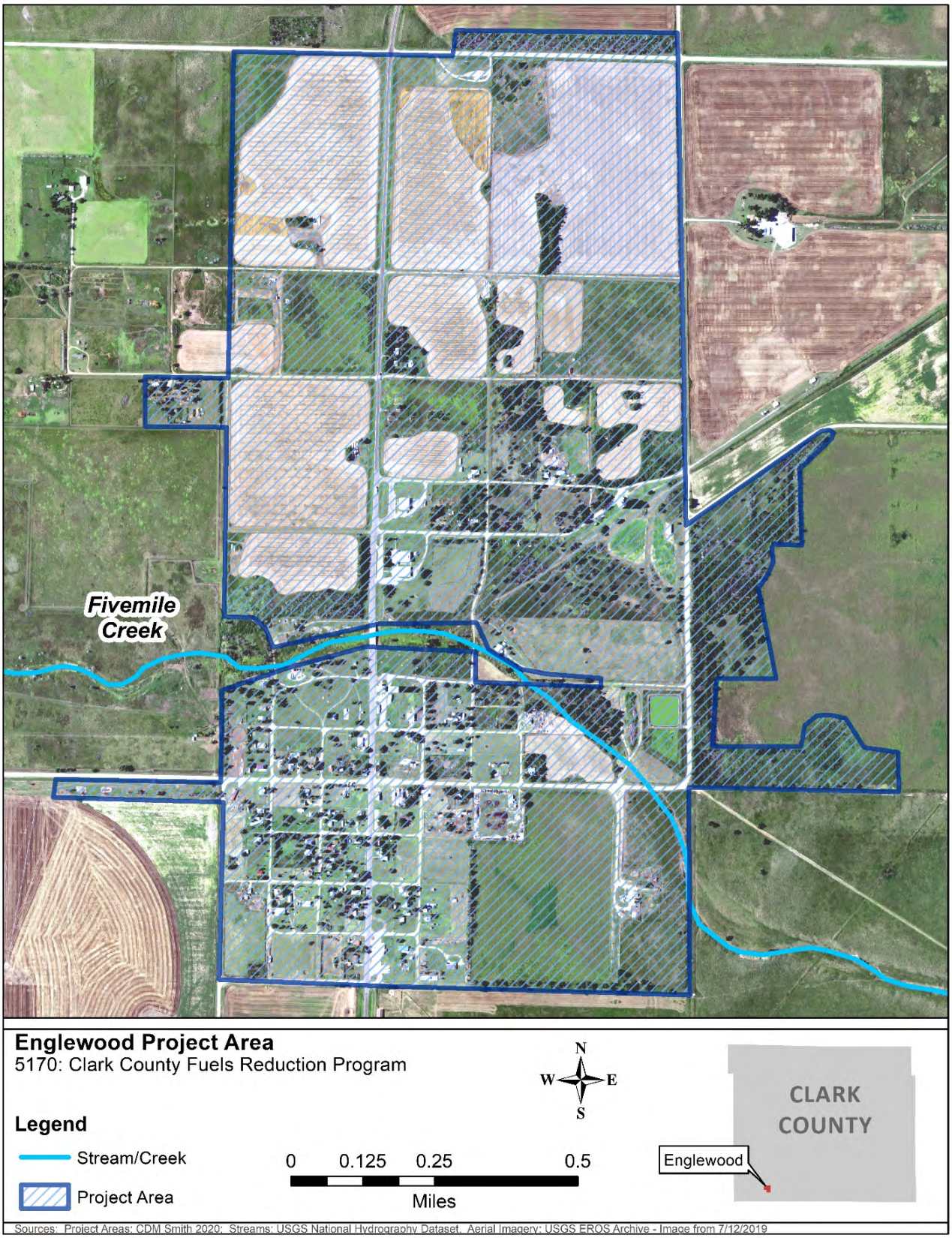

Figure 3. Englewood Project Area

Piles of cut material would be approximately 100 square feet in area and less than 10 feet high to reduce the risk of soil disruption and to keep them manageable for firefighters. Material would be piled by both hand and machinery. Multiple piles would be created in each project area. Piles may sit for up to six months to dry before being burned. All burning would be conducted by the Ashland and Englewood Fire Departments and comply with Clark County Resolution 2011-08, which regulates burning in the County. Burning would take place when weather permits and the risk of wildfire spread is minimal. Residents near the burn piles and the County Sheriff's office would be notified prior to burning. Wind direction and forecast would be considered and adequate water would be available on-site during pile burning.

Following the completion of pile burning activities, burn scars located in previously vegetated areas would be reseeded with a mixture of regionally-specific native milkweed species and nectar providing forb species to avoid any potential reduction in monarch larval host plants or adult forage plants.

2.2.3 MAINTENANCE ACTIVITIES

Following initial fuels reduction activities, the County would conduct maintenance activities, consisting of mowing using a brush hog or tractor mower, for five years following project completion. To the extent practicable, mowing activities would occur only once or twice per year and would be limited to those times when monarchs would not to be present in the project areas (October 15 through April 1). In the event that mowing must occur during the summer months, work would be performed between July 1 and July 20 to coincide with an expected lull in monarch activity (MJV 2020).

2.3 AVOIDANCE AND MINIMIZATION MEASURES

The following avoidance and minimization measures (AMMs) will be incorporated into the proposed scope of work to avoid potential harm to monarch butterflies:

- Burn scars resulting from burn piles located in previously vegetated areas will be reseeded with a mixture of regionally-specific native milkweed species and nectar providing forb species.
- Ground disturbing work including vegetation removal and mowing will be limited to those times of the year when monarchs will not be present in project areas (October 15 through April 1). Should maintenance activities be required during the summer months, work will coincide with an expected lull in monarch activity (July 1 through July 20).

Additional AMMs recommended by the Kansas Department of Wildlife, Parks and Tourism (KDWPT) to mitigate potential project impacts on aquatic wildlife are presented below. These measures would also provide avoidance and minimization for the Arkansas river shiner in the highly unlikely event that the species were to occur in or near the project areas. To the extent feasible and necessary, these AMMs will be implemented during all project-related activities to limit project-related effects on existing riparian and aquatic habitats:

- Minimize activities in floodplains.
- Minimize the disturbance to native riparian vegetation.

- Protect warm-season pastures or rangeland.
- Do not fill wetlands or areas that routinely pond water.

SECTION 3. ACTION AREA

A project Action Area (AA) was identified for the analysis of the potential effects of the proposed project activities on listed species. The AA is defined as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action" (50 CFR §402.02). Thus, observable or measurable effects of the project are not expected beyond the boundaries of the identified AA. Impacts on air quality from smoke generated by burn piles are expected to be negligible, and no project-related turbidity would be generated because stream crossings would be minimized and would only occur when creek beds are dry. Therefore, the extent of noise generated during project implementation is expected to be the farthest reaching effect and an appropriate determinant of the proposed AA. Maximum terrestrial noise generated from equipment operation is expected to be approximately 90 dBAs (A-weighted decibels) measured 50 feet from the noise source. The 90 dBA measurement was determined using a decibel escalator calculation based on the three loudest pieces of heavy equipment expected to be used during implementation, consisting of a chainsaw (84 dBA), wood chipper (88 dBA), and a skid steer (82 dBA) (U.S. Department of Health and Human Services 2017, Washington State Department of Transportation [WSDOT] 2019). Based on the logarithmic increase of decibel addition, the combined output is anticipated to reach up to 90 dBA if these three pieces of equipment are used simultaneously. The existing background noise level for the surrounding area is anticipated to be approximately 35 dBA, given that population density in Clark County is approximately 2.3 people per square mile (United States Census Bureau 2010, WSDOT 2019). Using these assumptions, it is anticipated that airborne noise would attenuate to background levels approximately 1.5 miles from project areas.

Therefore, the AA, as shown in **Figure 4** and **Figure 5**, consists of the project footprint (i.e., areas directly disturbed by implementation of the proposed project, including staging areas and access routes [**Figures 2 and 3**]) and a buffer of 1.5 miles around the project footprint to account for potential noise disturbance and other potential effects of the proposed project.

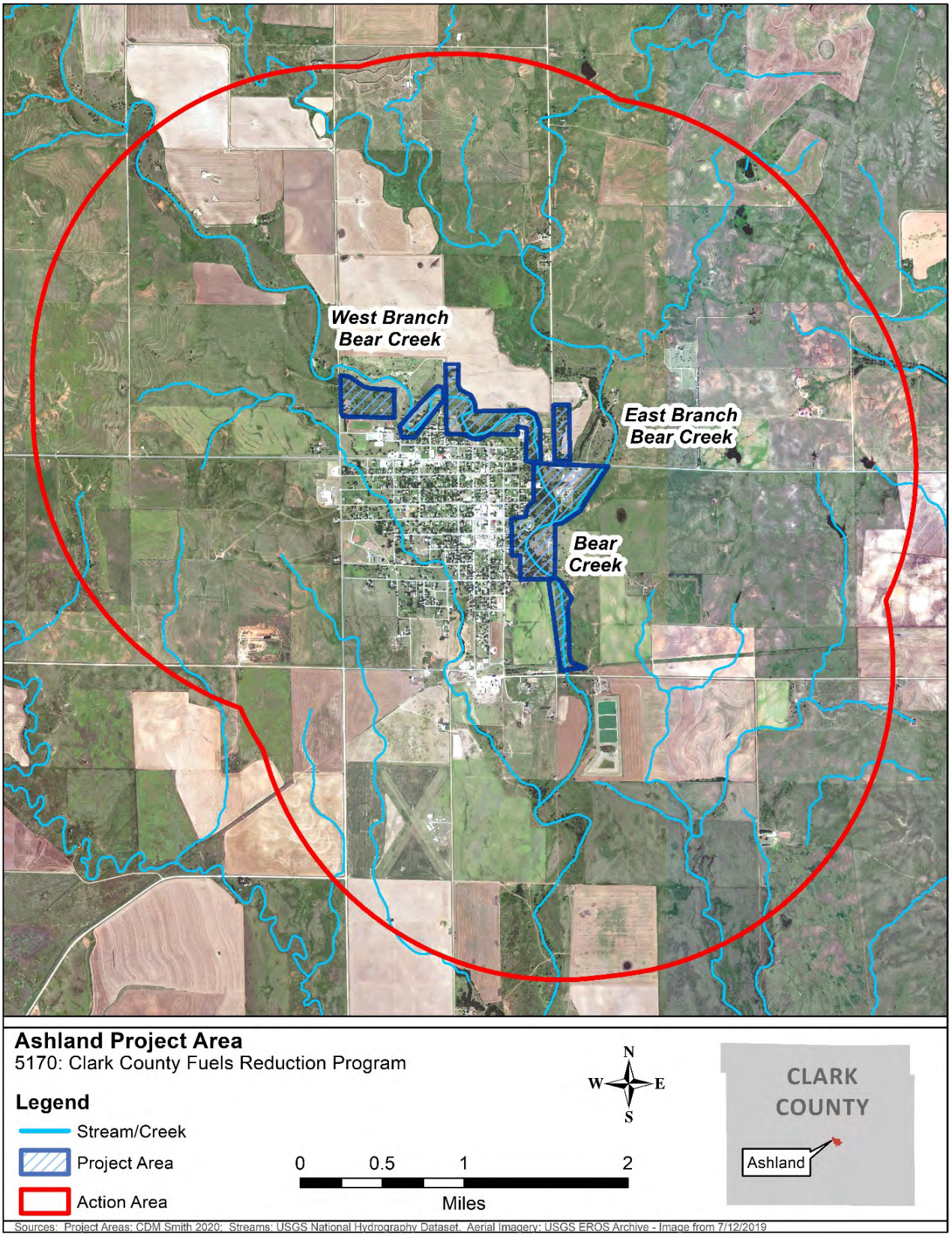

Figure 4. Ashland Action Area

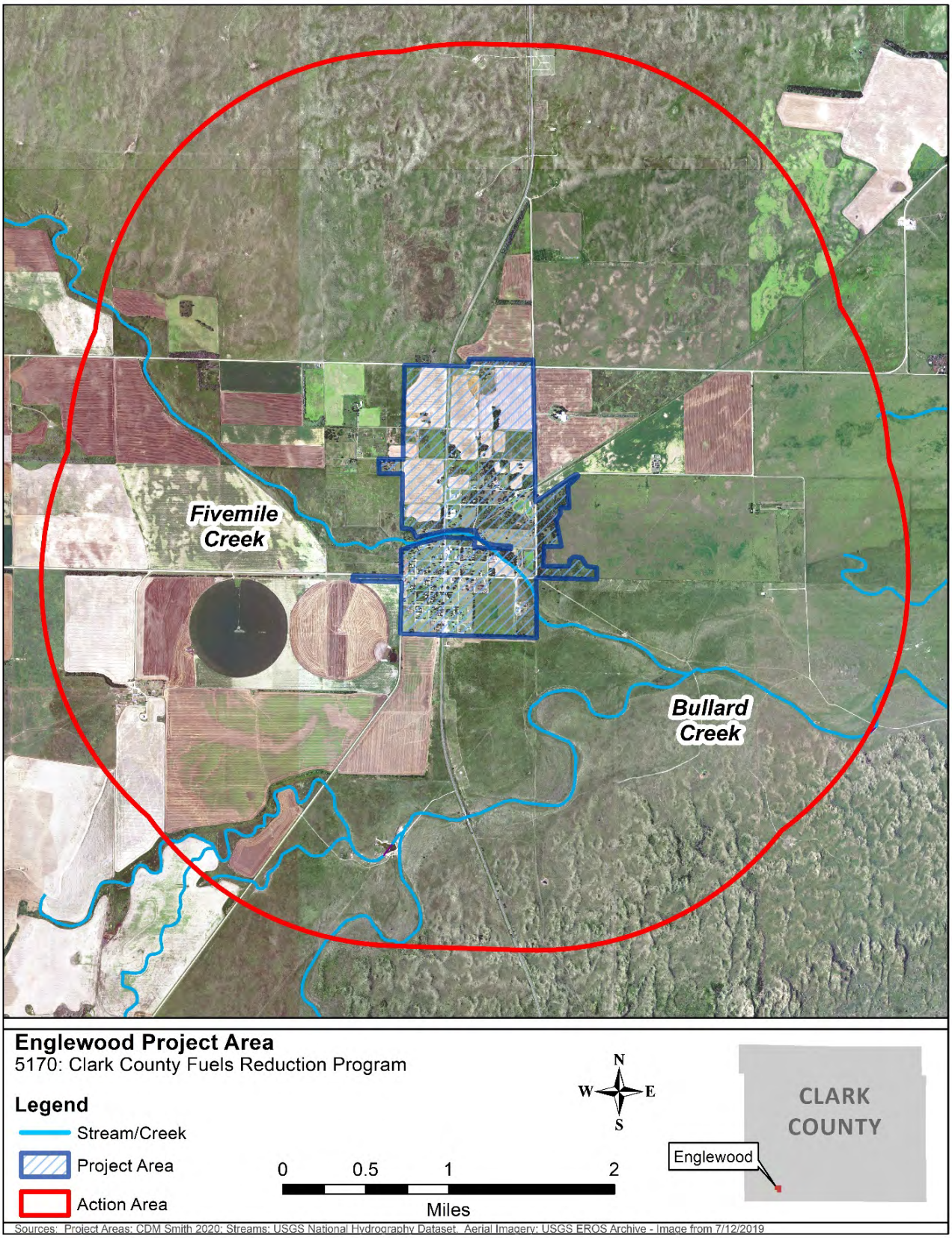

Figure 5. Englewood Action Area

SECTION 4. EXISTING AND BASELINE CONDITIONS

4.1 ENVIRONMENTAL SETTING

The project areas are within the Upper Cimarron-Bluff watershed (Hydrologic Unit Code [HUC] 11040008) and overlap with tributary streams to the Cimarron River. The Cimarron River mainstem is approximately 7.5 miles south of the Ashland portion of the AA and 2.2 miles south of the Englewood portion of the AA. West Branch Bear Creek, East Branch Bear Creek, and the Bear Creek main stem are along the north, east, and south sides of Ashland, respectively (**Figure 4**). According to the National Hydrography Dataset (NHD) developed by USGS, East Branch Bear Creek and the Bear Creek main stem are characterized as intermittent streams while West Branch Bear Creek is characterized as perennial (USGS 2020a). However, site photos indicate that West Branch Bear Creek experiences seasonal dry periods when no flowing surface water is present (**Figure 6**). Therefore, West Branch Bear Creek is also considered intermittent. Fivemile Creek crosses through the middle of Englewood from west to east and is characterized by the NHD as intermittent (USGS 2020a, **Figure 5**).

The entire AA is in the Southwestern Tablelands ecoregion. This region is broadly characterized as sub-humid grassland and semiarid range land (USGS 2020b). The terrain is generally flat throughout both project areas. Elevations within the AA range from approximately 1,940 feet to 2,010 feet above mean sea level.

Historically, fire was a natural component of regional ecosystems, and the native geology, soils, and ecological communities are adapted to periodic fires. However, years of fire suppression, agricultural practices, and the spread of non-native plant species have resulted in the accumulation of vegetative fuel materials, which has altered natural fire regimes resulting in increased fire frequency and severity throughout the region.

4.2 VEGETATION COMMUNITIES/LAND USE TYPE

The portion of the AA corresponding to the Ashland site consists of residential and agricultural development surrounded by fallow fields and grasslands (**Figure 4**). These predominant land uses are interspersed with patches of trees that occur naturally along stream channels and in planted shelterbelts. According to the County, the existing tree layer along Bear Creek (where fuels reduction work would take place) is composed of approximately 50 to 60 percent dead trees or invasive cedars (**Figure 7**). Based on site photos, much of the Ashland site is characterized by a mixture of unmanaged and managed grassland that likely comprise a variety of non-native grass species including johnsongrass (*Sorghum halepense*) (**Figure 9**).

The portion of the AA associated with Englewood consists of low-density residential development and agricultural lands surrounded by grasslands (**Figure 5**). As with the Ashland AA, the highest density of woody vegetation occurs along stream channels and in association with shelterbelts. According to the County, riparian vegetation along the segment of Fivemile Creek that traverses the town of Englewood largely consists of dead trees and invasive cedars (**Figure 8**). Similar to the Ashland portion of the AA, site photos indicate that the herbaceous and shrub layers throughout the Englewood part of the AA are characterized by unmanaged and

managed grassland with some patches of dense shrubs occurring along road shoulders and stream banks (**Figure 10**).

Although site photos do not confirm the presence of larval host plants for monarch caterpillars (i.e., milkweeds, [*Asclepias* spp.]) in either portion of the AA, milkweed plants may occur throughout both portions of the AA where conditions are favorable (i.e., areas receiving full sun with well-drained soils). Additionally, both portions of the AA likely support species of flowering plants that provide nectar sources for adult monarchs such as asters (*Asteraceae* spp.), forget-me-nots (*Boraginaceae* spp.), lilies (*Liliaceae* spp.), verbenas (*Verbenaceae* spp.), mallows (*Ranunculacea* spp.), wild carrots (*Apiaceae* spp.) legumes (*Fabaceae* spp.), goldenrod (*Solidago* spp.), clover (*Trifolium* spp.), and alfalfa (*Medicago* spp.) (Tooker *et al.* 2002).

Figure 6. Dry Intermittent Section of West Branch Bear Creek in the Ashland Project Area

Figure 7. Invasive Cedars Along Bear Creek in Ashland

Figure 8. Invasive Cedars in Englewood

Figure 9. Representative Unmanaged Grassland Vegetation in Ashland

Figure 10. Dense Herbaceous and Shrub Vegetation Along a Road Shoulder in Englewood

SECTION 5. LISTED SPECIES AND SITE USE

A desktop review was conducted to identify federally listed species under the United States Fish and Wildlife Service (USFWS) jurisdiction with potential to occur in the AA. The USFWS Information for Planning and Consultation (IPaC) System (USFWS 2020a) and the USFWS critical habitat mapper (USFWS 2020b) were consulted for information regarding occurrences of federally listed species and their designated critical habitats in the vicinity of the AA. Recovery plans and other published literature were reviewed for further details concerning species occurrences and status in the region, habitat preferences, documented historical and current ranges, and life history. The USFWS IPaC report is provided in Appendix A.

The IPaC list identifies four federally listed species as potentially present in the AA. Despite being identified in the IPaC system, a detailed evaluation during the desktop review determined that only the Arkansas River shiner has any potential to occur in the AA as detailed below and in **Table 1**. In addition, the IPaC does not identify any designated critical habitats within the AA. Therefore, no effects on federally listed species or their habitats are expected to result from the proposed project. USFWS is currently reviewing the status of the monarch butterfly to determine whether proposing to list the species as endangered or threatened under the ESA is warranted. USFWS is expected to make this determination by December 15, 2020. Therefore, the species was also evaluated for potential project related-impacts because the species may be proposed for listing at the time of project implementation. The effect determination for each species was based on the habitat present in the AA (as determined by a review of aerial and ground-level photography as well as site photos) and consideration of the habitat requirements, observation records, and natural history characteristics of each species as described below and in **Table 2**.

Least tern – Interior population: The interior least tern generally nests on the ground, in open areas, near appropriate foraging habitat. Foraging habitat includes large river channels, oxbows, side channels, sloughs, and shallow-water habitats adjacent to sand islands and must be within a short distance of a colony for successful reproduction (USFWS 2020c). The current documented east-to-west distribution of summer nesting least tern encompasses more than 18 degrees of longitude (more than 1,440 km [900 mi]) from the lower Ohio River in Indiana/Kentucky, west to the Upper Missouri River, Montana. The north-to-south distribution encompasses more than 21 degrees of latitude (more than 2300 km [1,450 mi]) from Montana to southern Texas (USFWS 2008). There is no federally designated critical habitat for this species. Nesting birds have been recorded in six central and western Kansas counties, Jeffery Energy Center, and along the Kansas River (KDWPT 2020a). However, no suitable habitat or designated critical habitat for the species exists within or near the AA. Although there is low potential for individuals to pass through the AA during migration, individuals would not be expected to use the AA as a stopover site because the AA lacks suitable habitat. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project.

Piping plover: The piping plover generally occupies wide, flat, open, sandy beaches with very little grass or other vegetation that are associated with large river and lake/reservoir systems. Nesting territories often include small creeks or wetlands. There are three locations where piping plovers nest in North America: (1) the shorelines of the Great Lakes, (2) the shores of rivers and lakes in the Northern Great Plains, and (3) along the Atlantic Coast. Their nesting range has become smaller over the years, especially in the Great Lakes area. In the fall, plovers migrate

south and winter along the coast of the Gulf of Mexico or other southern locations (USFWS 2001). There is no federally designated critical habitat for this species in Kansas. The nearest federally designated critical habitat for the species is in northeast Nebraska. Although KDWPT has designated critical habitat for the species in northeast Kansas, no suitable habitat or federally designated critical habitat exists within or near the AA (KDWPT 2020b). The species may pass over the AA during migration; however, given the absence of suitable habitat the species would not be expected to use the AA as a stopover site. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project.

Whooping crane: The whooping crane typically inhabits coastal marshes and estuaries, inland marshes, lakes, ponds, wet meadows and rivers, and agricultural fields near water sources. The whooping crane is a bi-annual migrant, traveling between its summer habitat in central Canada, and its wintering grounds on the Texas coast, across the Great Plains of the U.S. in the spring and fall of each year. The species' migratory corridor runs in an approximately straight line from the Canadian Prairie Provinces of Alberta and Saskatchewan through the Great Plains states of eastern Montana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas. The nearest federally designated critical habitat for the species is approximately 85 miles southeast of the AA in northern Oklahoma. No federally designated critical habitat for the species exists within or near the AA. Although whooping cranes may pass through the AA during migration, the AA generally lacks suitable stopover habitat (wetlands in level to moderately rolling terrain away from human activity) (KDWPT 2020c). In the unlikely event that the species were to use AA as resting habitat during migration, individuals would not be expected to occupy the area for an extended period of time because of the proximity to human activity. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project.

Arkansas River Shiner: The Arkansas River shiner (ARS) historically inhabited the main channels of wide, shallow, sandy-bottomed rivers and larger streams of the Arkansas River Basin. However, a population of ARS, introduced into the Pecos River in New Mexico, has been documented in small intermittent tributary streams (Bestgen *et al.* 1989). Adult Arkansas River shiners are uncommon in quiet pools or backwaters lacking streamflow, and almost never occur in habitats having deep water and bottoms of mud or stone. The ARS was once common throughout the Cimarron River and its tributaries (Pigg 1991). The abundance of ARS in the Cimarron River declined markedly after 1964 (Felley and Cothran 1981). The Red River shiner, a small minnow endemic to the Red River, was first recorded from the Cimarron River in Kansas in 1972 (Cross *et al.* 1985). Since that time, the Red River shiner has essentially replaced the ARS. Habitat alteration and resulting flow modification also have contributed to the decline of the species from the Cimarron River. A small, remnant population may still persist in the Cimarron River based on the collection of only nine individuals since 1985 (USFWS 1998). The KDWPT has designated critical habitat for the species in Clark County; however, the nearest federally designated critical habitat for the species consists of the main stem of Cimarron River approximately 2 miles south of the AA (KDWPT 2020d). Although streams intersecting project sites may provide habitat capable of supporting ARS on a seasonal basis, the AA is outside of the current known range of the species as documented occurrences of the species are restricted to the Cimarron River main stem. In addition, at the time of the species' listing in 1998 the USFWS stated that, "We believe that ARS may indeed have been extirpated from Kansas" (USFWS 1998). Furthermore, in the extremely unlikely event that ARS were to occur within or near the

AA, work timing and the implementation of AMMs as described in Section 2.3 would limit project-related effects on existing aquatic habitats. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project.

Monarch Butterfly: Habitat for the monarch butterfly is broadly defined by the distribution of suitable species of milkweeds as these are the sole larval host plants for the species. Additional monarch habitat requirements include adult nectar sources, and sites for roosting, thermoregulation, mating, hibernation, and predator escape (Zalucki and Lammers 2010). The geographical range of the species encompasses breeding areas, migration routes including staging areas, and winter roosts. During the spring and summer breeding season, monarchs disperse throughout the United States and southern Canada as successive generations migrate north. During winter, butterflies that primarily originate from east of the Rockies converge on specific locations in Mexico (Wassenaar and Hobson 1998, Oberhauser and Solensky 2004, Commission for Environmental Cooperation 2008). There is no federally designated critical habitat for this species.

Although the presence of milkweeds within the project areas has not been confirmed, several species are known to occur regionally (e.g., green antelopehorn [*Asclepias viridis*] and green comet milkweed [*Asclepias viridiflora*]) and conditions conducive to milkweed growth occur throughout both project areas. Additionally, monarchs east of the Rockies follow one main "central" flyway from southern Ontario and Midwest states south-southwest through the states of Kansas, Missouri, Oklahoma and Arkansas to Texas and Northern Mexico (Howard and Davis 2008). However, neither monarch adults nor larvae have been sighted in Clark County within the last 20 years (Journey North 2020). Therefore, monarchs are expected to have a low potential to occur within project areas during the breeding season where milkweed plants exist. Although milkweed plants may occur in areas where tree removal work would occur, these activities would be limited to times of the year when monarchs would not be present. Additionally, the level of project-associated ground disturbance would be minor because no tracked equipment would be used and no grubbing (i.e., digging up roots and stumps) would occur. Therefore, excepting burn pile locations, project related activities are not expected to reduce existing milkweed abundance because established milkweed root systems would remain intact and plants would re-emerge following project completion. Many species of milkweed are deep-rooted and as a result may also avoid potential damage related to pile burning. However, to offset any potential loss of monarch larval host plants, burn scars in previously vegetated areas will be reseeded as described in Section 2.3. Additionally, the proposed project would result in more open conditions in treated areas which are conducive to milkweed growth. Therefore, no effects to the species are anticipated to occur from implementation of the proposed project.

Table 2. Federally Listed Species with Potential to Occur in the Action Area

Common Name	Scientific Name	Listing Status	General Habitat	Breeding Season	Range or Summary of Populations	Potential to Occur in the Action Area/ Effect Determination
BIRDS						
Least tern – Interior population	*Sterna antillarum*	FE*	The interior least tern generally nests on the ground, in open areas, near appropriate foraging habitat. Foraging habitat includes large river channels, oxbows, side channels, sloughs and shallow-water habitats adjacent to sand islands, and must be within a short distance of a colony for successful reproduction (USFWS 2020c).	April–July	The current documented east-to-west distribution of summer nesting least tern encompasses >18 degrees of longitude (>1,440 km [900 mi]) from the lower Ohio River in Indiana/Kentucky, west to the Upper Missouri River, Montana. The north-to-south distribution encompasses >21 degrees of latitude (>2300 km [1,450 mi]) from Montana to southern Texas (USFWS 2008). There is no federally designated critical habitat for this species.	Nesting birds have been recorded in six central and western Kansas counties, Jeffery Energy Center, and along the Kansas River (KDWPT 2020a). However, no suitable habitat or designated critical habitat for the species exists within or near the AA. Although there is low potential for individuals to pass through the AA during migration, individuals would not be expected to use the AA as a stopover site because the AA lacks suitable habitat. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project. **Effect Determination:** **No effect**

Common Name	Scientific Name	Listing Status	General Habitat	Breeding Season	Range or Summary of Populations	Potential to Occur in the Action Area/ Effect Determination
Piping plover	*Charadrius melodus*	FT	The piping plover generally occupies wide, flat, open, sandy beaches with very little grass or other vegetation that are associated with large river and lake/reservoir systems. Nesting territories often include small creeks or wetlands.	April–July	There are three locations where piping plovers nest in North America: (1) the shorelines of the Great Lakes, (2) the shores of rivers and lakes in the Northern Great Plains, and (3) along the Atlantic Coast. Their nesting range has become smaller over the years, especially in the Great Lakes area. In the fall, plovers migrate south, and in winter, they migrate along the coast of the Gulf of Mexico or other southern locations (USFWS 2001). There is no federally designated critical habitat for this species in Kansas. The nearest federally designated critical habitat for the species is in northeast Nebraska.	Although KDWPT has designated critical habitat for the species in northeast Kansas, no suitable habitat or federally designated critical habitat exists within or near the AA (KDWPT 2020b). The species may pass over the AA during migration; however, given the absence of suitable habitat, the species would not be expected to use the AA as a stopover site. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project. **Effect Determination:** **No effect**

Common Name	Scientific Name	Listing Status	General Habitat	Breeding Season	Range or Summary of Populations	Potential to Occur in the Action Area/ Effect Determination
Whooping crane	*Grus americana*	FE	The whooping crane typically inhabits coastal marshes and estuaries, inland marshes, lakes, ponds, wet meadows and rivers, and agricultural fields near water sources.	April–June	The whooping crane is a bi-annual migrant, traveling between its summer habitat in central Canada and its wintering grounds on the Texas coast, across the Great Plains of the U.S. in the spring and fall each year. The species' migratory corridor runs in an approximately straight line from the Canadian Prairie Provinces of Alberta and Saskatchewan through the Great Plains states of eastern Montana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas. The nearest federally designated critical habitat for the species is approximately 85 miles southeast of the AA in northern Oklahoma.	No federally designated critical habitat for the species exists within or near the AA. Although whooping cranes may pass through the AA during migration, the AA generally lacks suitable stopover habitat (wetlands in level to moderately rolling terrain away from human activity) (KDWPT 2020c). In the unlikely event that the species uses the AA as resting habitat during migration, individuals would not be expected to occupy the area for an extended period of time because of the proximity to human activity. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project. **Effect Determination:** **No effect**

Common Name	Scientific Name	Listing Status	General Habitat	Breeding Season	Range or Summary of Populations	Potential to Occur in the Action Area/ Effect Determination
FISH						
Arkansas River Shiner	*Notropis girardi*	FT	The Arkansas River shiner (ARS) historically inhabited the main channels of wide, shallow, sandy-bottomed rivers and larger streams of the Arkansas River Basin. However, a population of ARS introduced into the Pecos River in New Mexico has been documented in small intermittent tributary streams (Bestgen *et al.* 1989). Adult ARS are uncommon in quiet pools or backwaters lacking streamflow, and almost never occur in habitats with deep water and bottoms of mud or stone.	May–July	The ARS was once common throughout the Cimarron River and its tributaries (Pigg 1991). The abundance of ARS in the Cimarron River declined markedly after 1964 (Felley and Cothran 1981). The Red River shiner, a small minnow endemic to the Red River, was first recorded from the Cimarron River in Kansas in 1972 (Cross et al. 1985). Since that time, the Red River shiner has essentially replaced the ARS. Habitat alteration and resulting flow modification also have contributed to the decline of the species from the Cimarron River. A small, remnant population may still persist in the Cimarron River based on the collection of only nine individuals since 1985 (USFWS 1998). The nearest federally designated critical habitat for the species consists of the main stem of Cimarron River approximately 2 miles south of the AA.	Although KDWPT has designated critical habitat for the species in Clark County, no federally designated critical habitat exists within or near the AA (KDWPT 2020d). Although streams intersecting project sites may provide instream habitat capable of supporting ARS on a seasonal basis, the AA is outside of the current known range of the species as documented occurrences of the species are restricted to the Cimarron River main stem. In addition, at the time of the species' listing in 1998, USFWS stated that "We believe that ARS may indeed have been extirpated from Kansas" (USFWS 1998). Furthermore, in the extremely unlikely event that ARS were to occur within or near the AA, work timing and the implementation of AMMs as described in Section 2.3 would limit project related effects on existing aquatic habitats. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project. **Effect Determination:** **No effect**

Common Name	Scientific Name	Listing Status	General Habitat	Breeding Season	Range or Summary of Populations	Potential to Occur in the Action Area/ Effect Determination
INSECTS						
Monarch butterfly	*Danaus plexippus plexippus*	NA*	Monarch habitat is broadly defined by the distribution of suitable species of milkweeds as these are the sole larval host plants for the species. Additional monarch habitat requirements include adult nectar sources, and sites for roosting, thermoregulation, mating, hibernation, and predator escape (Zalucki and Lammers 2010).	April–August	The geographical range of the species encompasses breeding areas, migration routes including staging areas, and winter roosts. During the spring and summer breeding season, monarchs disperse throughout the United States and southern Canada as successive generations migrate north. During winter, butterflies that primarily originate from east of the Rockies converge on specific locations in Mexico. (Wassenaar and Hobson 1998, Oberhauser and Solensky 2004, Commission for Environmental Cooperation 2008). There is no federally designated critical habitat for this species.	Although the presence of milkweeds within the project areas has not been confirmed, several species are known to occur regionally (e.g., green antelopehorn [*Asclepias viridis*] and green comet milkweed [*Asclepias viridiflora*]) and conditions conducive to milkweed growth occur throughout both project areas. Additionally, monarchs east of the Rockies follow one main "central" flyway from southern Ontario and Midwest states south-southwest through the states of Kansas, Missouri, Oklahoma and Arkansas to Texas and Northern Mexico (Howard and Davis 2008). Therefore, monarchs may occur within project areas during the breeding season where milkweed plants exist. Although milkweed plants may occur in areas where tree removal would occur, these activities would be limited to times of the year when monarchs would not be present. Additionally, the level of project-associated ground disturbance would be minor because no tracked equipment would be used and no grubbing (i.e., digging up roots and stumps) would occur. Therefore, excepting burn pile locations, project related activities are not expected to reduce existing milkweed abundance because established milkweed root systems would remain intact and plants would re-emerge following project completion. Many species of milkweed are deep-rooted and as a result may also avoid damage related to pile burning. However, to offset any potential loss of monarch breeding habitat, burn scars will be reseeded as described in Section 2.3. Therefore, no potential direct or indirect effects to the species are anticipated to occur from implementation of the proposed project. **Effect Determination: No effect**

Source: USFWS IPaC, August 2020
PFL: Proposed for Listing
FE = Federally Endangered
FT = Federally Threatened
* This species is currently under review to determine whether proposing to list it under the ESA is warranted

SECTION 6. PROJECT IMPACTS

There are no endangered or threatened species or designated critical habitat that have been documented in the AA. There is no suitable habitat within the AA for interior least tern, piping plover or whooping crane; therefore, no effects on any these species or designated critical habitats would result from project implementation. Although streams intersecting project sites may provide habitat capable of supporting ARS on a seasonal basis, the AA is outside of the current known range of the species as documented occurrences of the species are restricted to the Cimarron River main stem. Additionally, in the extremely unlikely event that ARS were to occur within or near the AA, work timing restrictions and the implementation of AMMs as described in Sections 2.2 and 2.3 respectively would avoid any effects on ARS. Because the AA is within a known monarch migratory flyway and larval host plants may occur within proposed work areas, monarchs may occur within project areas during the monarch breeding season. However, AMMs as described in Section 2.3 would avoid potential harm to monarch butterflies. Therefore, no project-related effects on monarchs are expected to result from project implementation.

SECTION 7. REFERENCES

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SECTION 8. LIST OF PREPARERS

Name, Organization	**Education**	**Experience**
Sam Bankston, CDM Smith	BS, Aquatic Biology	Seven years of experience in wildlife and fisheries science, threatened and endangered species surveys, biological assessment, regulatory compliance and permitting
Matt Petty, CDM Smith	BA, Zoology; Environmental Science MS, Environmental Studies	Fourteen years of experience in NEPA evaluation and documentation, wildlife and fisheries science, threatened and endangered species surveys and consultations, restoration design and management, regulatory compliance and permitting, etc.
Kate Stenberg, CDM Smith	Ph.D., Wildlife and Fisheries Science and Regional Planning; Master of Administration in Land Use Planning	Thirty-five years of experience in wildlife and fisheries science, threatened and endangered species surveys, biological assessment, NEPA documentation, regulatory compliance and permitting

Appendix A: USFWS Information for Planning and Consultation Species List

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Clark County, Kansas

Local office

Kansas Ecological Services Field Office

(785) 539-3474
(785) 539-8567

2609 Anderson Avenue
Manhattan, KS 66502-2801

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

NOT FOR CONSULTATION

Least Tern Sterna antillarum No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8505	Endangered
Piping Plover Charadrius melodus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened
Whooping Crane Grus americana There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/758	Endangered

Fishes

NAME	STATUS
Arkansas River Shiner Notropis girardi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4364	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

NOT FOR CONSULTATION

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

- Measures for avoiding and minimizing impacts to birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds
  http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NOT FOR CONSULTATION

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Lark Bunting Calamospiza melanocorys This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 10 to Aug 15
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSTRUCTION

NOT FOR CONSULTATION

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

DRAFT FOR CONSULTATION

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

NOT FOR CONSULTATION

FRESHWATER EMERGENT WETLAND

- PEM1A
- PEM1C

FRESHWATER FORESTED/SHRUB WETLAND

- PFOA
- PSSA
- PFOAh
- PSSAh

FRESHWATER POND

- PABFh
- PUSCh
- PUSAh
- PUSA
- PUSCx
- PUSAx
- PUBFx
- PABF

RIVERINE

- R4SBC
- R4SBA
- R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

NOT FOR CONSULTATION

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix B Agency and Tribal Correspondence

Cultural Resources Division
State Historic Preservation Office
6425 SW 6th Avenue
Topeka KS 66615-1099

Kansas Historical Society

785-272-8681, ext. 240
kshs.shpo@ks.gov
kshs.org

Jennie Chinn, Executive Director

Laura Kelly, Governor

KSR&C No. 20-10-182
November 4, 2020

Kate Stojsavljevic
Federal Emergency Management Agency
Via E-Mail

RE: Fuels Reduction Hazard Mitigation Grant Project
Ashland and Englewood Vicinities
Clark County

According to our records, we reviewed an earlier version of this project in 2019 (KSR&C No. 19-01-132). For this review, the Kansas State Historic Preservation Office has reviewed a report entitled: *Phase I Cultural Resources Background Research for the Clark County, Kansas Fuels Reduction Project,* by Alan R. Potter and Janice A. McLean of R. Christopher Goodwin & Associates, Inc., dated October 2020. We find the report to be acceptable and concur that the proposed project will have no adverse effect on historic properties as defined in 36 CFR 800. Our office continues to have no objection to the Clark County Fuels Reduction Hazard Mitigation Grant project.

If you have questions or need additional information regarding these comments, please contact Tim Weston at 785-272-8681 (ext. 214) or Lauren Jones at 785-272-8681 (ext. 225). Please refer to the Kansas Review & Compliance number (KSR&C#) above on all future correspondence relating to this project.

Sincerely,

Jennie Chinn
Executive Director and
State Historic Preservation Officer

Timothy Weston for

Patrick Zollner
Deputy State Historic Preservation Project

U.S. Department of Homeland Security
FEMA Region VII
11224 Holmes Road
Kansas City, MO 64131

FEMA

November 18, 2020

Chairperson Bobby Komardly
Apache Tribe of Oklahoma
PO Box 1330
Andarko, OK 73005

RE: Environmental Assessment Notification – Clark County, Kansas

Dear Chairperson Komardly:

The Federal Emergency Management Agency (FEMA) has identified the Apache Tribe of Oklahoma as a party with potential interests within the State of Kansas/Clark County regarding a Hazard Mitigation Grant Program (HMGP) project for wildfire reduction. Clark County, Kansas proposes to implement hazardous fuels reduction work on approximately 784 acres in and near the communities of Ashland and Englewood, Kansas. The County applied to FEMA through the Kansas Division of Emergency Management (KDEM) for a grant under FEMA's HMGP. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP funds were made available via a Fire Mitigation Assistance Grant (FMAG) declaration made by FEMA in 2017 in response to the Kansas Highland Hills Fire.

In accordance with the National Environmental Policy Act, an Environmental Assessment is being prepared to consider potential effects to natural and cultural resources within the defined project areas in Clark County. This Environmental Assessment Notification intent is to notify your tribe of the Environmental Assessment and to inform you that FEMA will continue using previously established consultation procedures in accordance with Section 106 of the National Historic Preservation Act for this project. A copy of the Phase I Cultural Resources Report is included for your consideration. **Based upon the proposed activities in the Areas of Potential Effect, FEMA finds this undertaking will result in No Adverse Effect to Historic Properties.** FEMA respectfully requests your concurrence with this effect determination. Should you require any changes or updates to the consultation process for this project, including the establishment of new consultation protocols such as point of contact, method of communication, the geographic areas of interest to your tribe by county, and types of undertakings of concern to your tribe, or have any general questions or comments, please contact FEMA-R7-MT-HMA@fema.dhs.gov.

Thank you in advance for your consideration.

Sincerely,

Kate Stojsavljevic
FEMA Region 7 Environmental Officer

CC: Mr. Daren Cisco, Head of Cultural Affairs
Enclosure: Clark County Phase I Cultural Resources Report

U.S. Department of Homeland Security
FEMA Region VII
11224 Holmes Road
Kansas City, MO 64131

November 18, 2020

Mr. Max Bear
Tribal Historic Preservation Officer
Cheyenne and Arapaho Tribes of Oklahoma
PO Box 167
Concho, OK 73022

RE: Environmental Assessment Notification – Clark County, Kansas

Dear Mr. Bear:

The Federal Emergency Management Agency (FEMA) has identified the Cheyenne and Arapaho Tribes of Oklahoma as parties with potential interests within the State of Kansas/Clark County regarding a Hazard Mitigation Grant Program (HMGP) project for wildfire reduction. Clark County, Kansas proposes to implement hazardous fuels reduction work on approximately 784 acres in and near the communities of Ashland and Englewood, Kansas. The County applied to FEMA through the Kansas Division of Emergency Management (KDEM) for a grant under FEMA's HMGP. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP funds were made available via a Fire Mitigation Assistance Grant (FMAG) declaration made by FEMA in 2017 in response to the Kansas Highland Hills Fire.

In accordance with the National Environmental Policy Act, an Environmental Assessment is being prepared to consider potential effects to natural and cultural resources within the defined project areas in Clark County. This Environmental Assessment Notification intent is to notify your tribe of the Environmental Assessment and to inform you that FEMA will continue using previously established consultation procedures in accordance with Section 106 of the National Historic Preservation Act for this project. A copy of the Phase I Cultural Resources Report is included for your consideration. **Based upon the proposed activities in the Areas of Potential Effect, FEMA finds this undertaking will result in No Adverse Effect to Historic Properties.** FEMA respectfully requests your concurrence with this effect determination. Should you require any changes or updates to the consultation process for this project, including the establishment of new consultation protocols such as point of contact, method of communication, the geographic areas of interest to your tribe by county, and types of undertakings of concern to your tribe, or have any general questions or comments, please contact FEMA-R7-MT-HMA@fema.dhs.gov.

Thank you in advance for your consideration.

Sincerely,

Kate Stojsavljevic
FEMA Region 7 Environmental Officer

Enclosure: Clark County Phase I Cultural Resources Report

U.S. Department of Homeland Security
FEMA Region VII
11224 Holmes Road
Kansas City, MO 64131

November 18, 2020

Ms. Martina Minthorn
Tribal Historic Preservation Officer
Comanche Nation
6 SW D Avenue
Suite C
Lawton, OK 73507

RE: Environmental Assessment Notification – Clark County, Kansas

Dear Ms. Minthorn:

The Federal Emergency Management Agency (FEMA) has identified the Comanche Nation as a party with potential interests within the State of Kansas/Clark County regarding a Hazard Mitigation Grant Program (HMGP) project for wildfire reduction. Clark County, Kansas proposes to implement hazardous fuels reduction work on approximately 784 acres in and near the communities of Ashland and Englewood, Kansas. The County applied to FEMA through the Kansas Division of Emergency Management (KDEM) for a grant under FEMA's HMGP. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP funds were made available via a Fire Mitigation Assistance Grant (FMAG) declaration made by FEMA in 2017 in response to the Kansas Highland Hills Fire.

In accordance with the National Environmental Policy Act, an Environmental Assessment is being prepared to consider potential effects to natural and cultural resources within the defined project areas in Clark County. This Environmental Assessment Notification intent is to notify your tribe of the Environmental Assessment and to inform you that FEMA will continue using previously established consultation procedures in accordance with Section 106 of the National Historic Preservation Act for this project. A copy of the Phase I Cultural Resources Report is included for your consideration. **Based upon the proposed activities in the Areas of Potential Effect, FEMA finds this undertaking will result in No Adverse Effect to Historic Properties.** FEMA respectfully requests your concurrence with this effect determination. Should you require any changes or updates to the consultation process for this project, including the establishment of new consultation protocols such as point of contact, method of communication, the geographic areas of interest to your tribe by county, and types of undertakings of concern to your tribe, or have any general questions or comments, please contact FEMA-R7-MT-HMA@fema.dhs.gov.

Thank you in advance for your consideration.

Sincerely,

Kate Stojsavljevic
FEMA Region 7 Environmental Officer

Enclosure: Clark County Phase I Cultural Resources Report

U.S. Department of Homeland Security
FEMA Region VII
11224 Holmes Road
Kansas City, MO 64131

FEMA

November 18, 2020

Dr. Andrea Hunter
Osage Nation Historic Preservation Office
627 Grandview Avenue
Pawhuska, OK 74056

RE: Environmental Assessment Notification – Clark County, Kansas

Dear Dr. Hunter:

The Federal Emergency Management Agency (FEMA) has identified the Osage Nation as a party with potential interests within the State of Kansas/Clark County regarding a Hazard Mitigation Grant Program (HMGP) project for wildfire reduction. Clark County, Kansas proposes to implement hazardous fuels reduction work on approximately 784 acres in and near the communities of Ashland and Englewood, Kansas. The County applied to FEMA through the Kansas Division of Emergency Management (KDEM) for a grant under FEMA's HMGP. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP funds were made available via a Fire Mitigation Assistance Grant (FMAG) declaration made by FEMA in 2017 in response to the Kansas Highland Hills Fire.

In accordance with the National Environmental Policy Act, an Environmental Assessment is being prepared to consider potential effects to natural and cultural resources within the defined project areas in Clark County. This Environmental Assessment Notification intent is to notify your tribe of the Environmental Assessment and to inform you that FEMA will continue using previously established consultation procedures in accordance with Section 106 of the National Historic Preservation Act for this project. A copy of the Phase I Cultural Resources Report is included for your consideration. **Based upon the proposed activities in the Areas of Potential Effect, FEMA finds this undertaking will result in No Adverse Effect to Historic Properties.** FEMA respectfully requests your concurrence with this effect determination. Should you require any changes or updates to the consultation process for this project, including the establishment of new consultation protocols such as point of contact, method of communication, the geographic areas of interest to your tribe by county, and types of undertakings of concern to your tribe, or have any general questions or comments, please contact FEMA-R7-MT-HMA@fema.dhs.gov.

Thank you in advance for your consideration.

Sincerely,

Kate Stojsavljevic
FEMA Region 7 Environmental Officer

Enclosure: Clark County Phase I Cultural Resources Report

U.S. Department of Homeland Security
FEMA Region VII
11224 Holmes Road
Kansas City, MO 64131

FEMA

November 18, 2020

Ms. Whitney Warrior
Director of Environmental Services and Cultural Preservation
United Keetoowah Band of Cherokee Indians
PO Box 746
Tahlequah, OK 74465

RE: Environmental Assessment Notification – Clark County, Kansas

Dear Ms. Warrior:

The Federal Emergency Management Agency (FEMA) has identified the United Keetoowah Band of Cherokee Indians as a party with potential interests within the State of Kansas/Clark County regarding a Hazard Mitigation Grant Program (HMGP) project for wildfire reduction. Clark County, Kansas proposes to implement hazardous fuels reduction work on approximately 784 acres in and near the communities of Ashland and Englewood, Kansas. The County applied to FEMA through the Kansas Division of Emergency Management (KDEM) for a grant under FEMA's HMGP. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP funds were made available via a Fire Mitigation Assistance Grant (FMAG) declaration made by FEMA in 2017 in response to the Kansas Highland Hills Fire.

In accordance with the National Environmental Policy Act, an Environmental Assessment is being prepared to consider potential effects to natural and cultural resources within the defined project areas in Clark County. This Environmental Assessment Notification intent is to notify your tribe of the Environmental Assessment and to inform you that FEMA will continue using previously established consultation procedures in accordance with Section 106 of the National Historic Preservation Act for this project. A copy of the Phase I Cultural Resources Report is included for your consideration. **Based upon the proposed activities in the Areas of Potential Effect, FEMA finds this undertaking will result in No Adverse Effect to Historic Properties.** FEMA respectfully requests your concurrence with this effect determination. Should you require any changes or updates to the consultation process for this project, including the establishment of new consultation protocols such as point of contact, method of communication, the geographic areas of interest to your tribe by county, and types of undertakings of concern to your tribe, or have any general questions or comments, please contact FEMA-R7-MT-HMA@fema.dhs.gov.

Thank you in advance for your consideration.

Sincerely,

Kate Stojsavljevic
FEMA Region 7 Environmental Officer

Enclosure: Clark County Phase I Cultural Resources Report

U.S. Department of Homeland Security
FEMA Region VII
11224 Holmes Road
Kansas City, MO 64131

November 18, 2020

Mr. Gary McAdams
Tribal Historic Preservation Officer
Witchita and Affiliated Tribes
PO Box 729
Andarko, OK 73005

RE: Environmental Assessment Notification – Clark County, Kansas

Dear Mr. McAdams:

The Federal Emergency Management Agency (FEMA) has identified the Witchita and Affiliated Tribes as parties with potential interests within the State of Kansas/Clark County regarding a Hazard Mitigation Grant Program (HMGP) project for wildfire reduction. Clark County, Kansas proposes to implement hazardous fuels reduction work on approximately 784 acres in and near the communities of Ashland and Englewood, Kansas. The County applied to FEMA through the Kansas Division of Emergency Management (KDEM) for a grant under FEMA's HMGP. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP funds were made available via a Fire Mitigation Assistance Grant (FMAG) declaration made by FEMA in 2017 in response to the Kansas Highland Hills Fire.

In accordance with the National Environmental Policy Act, an Environmental Assessment is being prepared to consider potential effects to natural and cultural resources within the defined project areas in Clark County. This Environmental Assessment Notification intent is to notify your tribe of the Environmental Assessment and to inform you that FEMA will continue using previously established consultation procedures in accordance with Section 106 of the National Historic Preservation Act for this project. A copy of the Phase I Cultural Resources Report is included for your consideration. **Based upon the proposed activities in the Areas of Potential Effect, FEMA finds this undertaking will result in No Adverse Effect to Historic Properties.** FEMA respectfully requests your concurrence with this effect determination. Should you require any changes or updates to the consultation process for this project, including the establishment of new consultation protocols such as point of contact, method of communication, the geographic areas of interest to your tribe by county, and types of undertakings of concern to your tribe, or have any general questions or comments, please contact FEMA-R7-MT-HMA@fema.dhs.gov.

Thank you in advance for your consideration.

Sincerely,

Kate Stojsavljevic
FEMA Region 7 Environmental Officer

Enclosure: Clark County Phase I Cultural Resources Report

Weddle, Annamarie E.

From: Stojsavljevic, Katie <kate.stojsavljevic@fema.dhs.gov>
Sent: Monday, December 28, 2020 8:51 AM
To: Mary Kerschner; Stenberg, Kathryn (CTR); Morgan, Kirsty; Maria Maldonado
Cc: Weisgerber, Julie; Weddle, Annamarie E.; Murphy, Gina L.; Kelley, Laura (CTR)
Subject: FW: 2021-2634KS-11, FEMA, FM-5170-KS, Fuels Reduction Project, Clark County, Kansas, Request additional information
Attachments: 2019-0407_Historic-Preservation_ONHPO-Survey-Standards.pdf; Archaeological Consultants prefered 2020.docx

Good morning, all –

The Osage Nation responded to the Clark County Fuels Reduction project on December 23, requesting additional information pertaining to previous Phase I Cultural Resource survey work completed within the project's defined Areas of Potential Effect (APEs).

Kate Stojsavljevic
Regional Environmental Officer | Mitigation Division | FEMA Region VII
Mobile: 202.705.1192
Kate.stojsavljevic@fema.dhs.gov

Federal Emergency Management Agency
fema.gov

From: Johnnie Jacobs <johnnie.jacobs.ctr@osagenation-nsn.gov>
Sent: Wednesday, December 23, 2020 3:52 PM
To: FEMA-R7-MT-HMA <fema-r7-mt-hma@fema.dhs.gov>; Stojsavljevic, Katie <kate.stojsavljevic@fema.dhs.gov>
Subject: 2021-2634KS-11, FEMA, FM-5170-KS, Fuels Reduction Project, Clark County, Kansas, Request additional information

Date: December 23, 2020 **File: 2021-2634KS-11**

RE: FEMA, FM-5170-KS, Fuels Reduction Project, Clark County, Kansas

FEMA Region VII
Kate Stojsavljevic
11224 Holmes Road
Kansas City, MO 64131

Dear Ms. Stojsavljevic,

The Osage Nation Historic Preservation Office has received notification and accompanying information for the proposed project listed as FEMA, FM-5170-KS, Fuels Reduction Project, Clark County, Kansas. While the Phase 1 background research report provided shows previous work done in the area, it does not meet our standards for a Phase I Cultural Resource Report. **Please provide our office with a KMZ file of each of the project total APEs. Also, we would like a copy of the cultural resource surveys that were mentioned in the background report for those that were completed within the APE of these 2 project areas. For any of the**

APE areas for Ashland or Englewood that were not covered by a cultural resource survey, the Osage Nation requests that a cultural resources survey be conducted for those project areas. I have attached a copy of our survey standards and a copy of a listed of preferred archaeological consultants for your convenience.

In accordance with the National Historic Preservation Act, (NHPA) [54 U.S.C. § 300101 et seq.] 1966, undertakings subject to the review process are referred to in 54 U.S.C. § 302706 (a), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Osage Nation has a vital interest in protecting its historic and ancestral cultural resources. The Osage Nation anticipates reviewing and commenting on the Phase I cultural resources survey report for the proposed FEMA, FM-5170-KS, Fuels Reduction Project, Clark County, Kansas.

Should you have any questions or need any additional information please feel free to contact me at the email listed above. Thank you for consulting with the Osage Nation on this matter.

Thank you,

Miss Johnnie Jacobs
Historic Preservation Specialist
Osage Nation Historic Preservation Office
627 Grandview Avenue
Pawhuska, OK 74056

From:	Johnnie Jacobs
To:	Stojsavljevic, Katie
Subject:	2021-2634KS-11, FEMA, FM-5170-KS, Fuels Reduction Project, Clark County, Kansas
Date:	Tuesday, January 19, 2021 12:28:47 AM

Date: January 17, 2021 **File: 2021-2634KS-11**

RE: FEMA, FM-5170-KS, Fuels Reduction Project, Clark County, Kansas

FEMA Region VII
Kate Stojsavljevic
11224 Holmes Road
Kansas City, MO 64131

Dear Ms. Stojsavljevic,

The Osage Nation Historic Preservation Office has evaluated your submission and concurs that the proposed FEMA,
FM-5170-KS, Fuels Reduction Project, Clark County, Kansas most likely will not adversely affect any sacred
properties and/or properties of cultural significance to the Osage Nation. **The Osage Nation has no further concern
with this project.**

In accordance with the National Historic Preservation Act, (NHPA) [54 U.S.C. § 300101 et seq.] 1966, undertakings
subject to the review process are referred to in 54 U.S.C. § 302706 (a), which clarifies that historic properties may
have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal
agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National
Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969). The Osage Nation
concurs that the FEMA Region VII has fulfilled NHPA compliance by consulting with the Osage Nation
Historic Preservation Office in regard to the proposed FEMA, FM-5170-KS, Fuels Reduction Project, Clark
County, Kansas.

The Osage Nation has vital interests in protecting its historic and ancestral cultural resources. We do not anticipate
that this project will adversely impact any cultural resources or human remains protected under the NHPA, NEPA,
the Native American Graves Protection and Repatriation Act, or Osage law. **If, however, artifacts or human
remains are discovered during project-related activities, we ask that activities cease immediately and the
Osage Nation Historic Preservation Office be contacted.**

Should you have any questions or need any additional information please feel free to contact me at the email listed
above. Thank you for consulting with the Osage Nation on this matter.

Thank you,

Miss Johnnie Jacobs
Historic Preservation Specialist
Osage Nation Historic Preservation Office
627 Grandview Avenue
Pawhuska, OK 74056

The Osage Nation has experienced setbacks due to the pandemic and vacancies in several archaeology positions over the past 10 months. Therefore, Section 106 inquiries and the 30-day clocks have been tolled at the Osage Nation and this will continue until further notice. This is in line with the Advisory Council on Historic Preservation recommendations due to the pandemic situation at the Osage Nation and specifically our office. The Osage Nation appreciates your patience during this time.