



APPENDIX F: WILDFIRE ASSESSMENT

Community Wildfire Protection Plan
Sumner County, Kansas
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Community Wildfire Hazard Assessment Report Sumner County, Kansas

Objective

To provide base information on the status of Wildland Urban Interface issues that might have an impact on the safety of persons and/or property in Sumner County Kansas, and to identify mitigation measures that should be employed. The Wildland Urban Interface (WUI) is any location where a fire can spread from vegetation (wildland fuels) to man-made (urban fuels).

Methods

County wide boundaries of the WUI were downloaded from the USGS website GeoMac (www.geomac.gov , see map #1), and other sources. Aerial photography was reviewed to identify areas in which vegetation might create a threat to communities. This baseline data was then confirmed with an on-site survey conducted by the Kansas Forest Service. During the survey areas both within and outside of the GeoMac WUI boundaries were inspected for any occurrence of threatening fuel types and/or fuel loads in close proximity to structures.

Findings (Refer to Map #2)

For the most part the GeoMac boundaries were fairly close to identifying those areas in the county that are the concentrations of population and therefore the most at risk for a wildfire causing structural or personal damage. **There very well may be additional areas and/or individual structures that are at risk. This survey focused on community-level risks, not individual homes, and the report is a preliminary step and does not assume to have found all homes in the county that may be at risk.** Of the nineteen Sumner County communities surveyed, six were rated as having a moderate risk, and the remainder were rated as low risk. This report will now look at each of these areas in more detail.

In evaluating via reviewing aerial photography and physically surveying each of the communities, the overall level of concern was low compared to many Kansas counties. While there is certainly potential for expansive grassland fires in much of the county, most of these areas have minimal interface with man made improvements that would present a threat to life or property. There certainly may be a threat to individual farmsteads or outbuildings, but not to any communities. Other areas are fairly broken with cultivated fields. One of the largest problems often found in Kansas, the progressive invasion of eastern redcedar, was found very less in Sumner County than in some other areas we have assessed. Even around those communities that had moderate WUI issues, most of the neighboring timber is hardwood rather than cedar, which presents a much lower fire threat.

The communities of Milan, Anson, Mulvane, Corbin, Asthon, and Oxford were identified as moderate risk, as there is significant timber adjacent to the community and carrying into the community, including areas with minimal clearance between timber and homes. Hardwood timber can carry devastating fire, but it is fairly uncommon, requiring just the right set of circumstances of weather, fuel condition, and so forth in order to present a real threat. Adding cedar to the mix, however,

greatly increases the flammability of the stand of timber, and significantly expands the range of conditions in which it may carry threatening fire into the community. In any of the low or moderate risk communities, if the hardwood timber around and into the communities begins to have a significant cedar component, as is occurring in many areas of Kansas, the risk will become significantly more acute.

The remaining communities did not appear to be at significant risk, despite the timber adjacent to the towns. A more concentrated parcel level hazard assessment would be beneficial in these areas. Within the low risk communities, nearly all had individual homes that lacked sufficient clearance between the structure and flammable vegetation. These communities just had few enough such structures that a community-level threat from wildfire was somewhat less. **These communities could benefit from collaborative wildland/urban interface protection planning in the form of a program such as FIREWISE Communities USA.**

Another concern in areas surrounded by hardwood timber is the potential for the quality of timber to become degraded over time. An increase in dead/down material, from storm damage or simple neglect over time can greatly increase the likelihood of that timber carrying a fire into a community. Several timber stands were noted to have a significant dead and down component, but were far enough from structures that it did not present a community-level threat. Ongoing maintenance can reduce this threat.

Prioritized Fuel Reduction:

The following are some steps that can be taken by all communities in Sumner County to increase wildfire safety.

- 1) Reduce any concentrations of dead and down timber in areas where past storm damage or other causes has led to a buildup of this type of wildfire fuel.
- 2) Monitor for spread of eastern redcedars into areas where they may present a wildfire threat, as these trees carry fire very readily from grassland into developed areas, and often grow prolifically in areas where regular fires do not occur such as adjacent to developments. Be prepared to use prescribed fire or mechanical removal to prevent an accumulation that could present a fire threat.
- 3) In areas with eastern red cedar and other flammable vegetation that will not be removed, prune the branches at least twice the height of the surrounding grasses so that a grass fire will not carry into the canopy of the trees.
- 4) Maintain grasses to less than 4" height within 100 feet of structures.
- 5) Maintain an area of 30 feet cleared of volatile vegetation around structures.

Treatment of Structural Ignitability:

Regardless of the hazard rating of the surrounding area, any rural home is at risk from wildfire. For this reason the following protective recommendations should be passed on to homeowners living in the WUI.

Individual home protection can be made easier by breaking it down into Defensible Space Zones:

Zone 1 – Extends 30 feet from the edge of the home or any attached structure such as a deck or patio. This zone requires the most maintenance and the least amount of flammable material. Only a few scattered trees/bushes and no tall grasses should be in this zone. This is a zone of short green lawn and as little flammable debris as possible.

Zone 2 – Extends 75 feet beyond the edge of Zone 1. This zone contains more vegetation and flammable materials, but still needs regular maintenance activities to reduce fuel load and risk.

Zone 3 – Extends from the edge of Zone 2 to the property boundary. This zone includes the natural surroundings of your home. The vegetation closest to your home in this zone should still receive an annual “clean-up” such as mowing, pruning, removing dead vegetation, and thinning overcrowded trees and shrubs.

Note: Fire moves faster and burns more intensely uphill. Defensible space zones that are down slope from your home need to be extended beyond the above recommended distances based on slope steepness.

Additional Defensible Space Practices

- Fire resistant roofing materials such as metal, tile, or at least Class C shingles prevent your roof from being a source of ignition from the hot embers of a wildfire.
- Windows should be at least double paned. In case of wildfire move flammable materials such as curtains and furniture away from windows. Radiant heat can ignite these materials through windows.
- Stone, brick or other non-flammable siding is safer than wood or vinyl siding.
- Zone 2 should have tree crowns spaced at least 10 feet from each other. All trees in Zones 1 & 2 should be pruned to a height of 3 times the height of surrounding vegetation (usually 6-10 feet), but do not remove more than 1/3 of the live crown.
- Propane tanks, gasoline, and wood piles should be stored 30 feet from home, with no flammable vegetation immediately adjacent to or under them.
- All exterior vents should be covered with a non-flammable wire mesh ½ inch or smaller.
- Remove all dead vegetation from Zones 1 & 2. Especially prune any dead branches that overhang the roof or are within 15 feet of the chimney.

- If your property has no large year-round water source, consider working with neighbors or a home owners association to install one.
- Keep trees pruned and healthy in Zones 1 & 2.
- Maintain power line clearance. Have an arborist assist with existing trees that interfere with power lines. When planting new trees near power lines consider a species that has a mature height less than 25 feet.
- Make sure your address is clearly visible from the road especially in low visibility conditions.
- If you burn trash or use fire for vegetation management, consult local regulations and obtain proper training. Strictly follow all safety precautions!

Conclusions

This survey was an initial step and only overview in scope and scale; more detailed assessments might be needed in the future. No community should consider themselves to be immune to the dangers of Wildland Urban Interface fires, especially as more and more of the urban population moves out onto small rural parcels. Major wildfires that threaten property have occurred in most counties in Kansas. Cedar invasion in many areas is changing the nature of fire behavior and firefighting tactics. Kansas is not thought of as a state with a great Wildland Urban Interface problem, and only proactive actions will keep us that way! The Kansas Forest Service and national programs such as FIREWISE Communities USA have the tools to help you be proactive. Contact Jason Hartman, Fire Prevention Specialist at (785) 532-3316 for assistance.



In a situation like this, flammable vegetation like cedar trees surrounding the home could easily convert a fairly modest grass fire into a full blown crown fire that could quickly burn the home

**ATTACHMENT:
MAP #1**

<http://www.geonac.gov/server/com.esri/map.EsriMap?ServiceName...>

GeoMAC Overview Map



