



SOUTH DAKOTA
DEPARTMENT
OF PUBLIC SAFETY

prevention — protection — enforcement



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Hazardous Fuels Reduction Assessment/Mitigation Plan

The following is a fire mitigation plan for the property associated with parcel ID 22000-00604-282-10. The legal address for this property is NW1/4, Sec. 28, T6N, R4E.

The key to reducing the negative effects or impacts of wildfire on a property is to conduct fuels reduction treatments that will reduce the potential of a catastrophic wildfire event. Modifying the fuel loading and continuity of available fuels will reduce the spread and intensity of a fire. This treatment will also promote a resilient forest by removing unhealthy trees, decreasing the risk of insect and disease outbreaks, and will improve growing conditions for the remaining trees, shrubs and, forbs by reducing competition.

The treatment of your property is aimed at reducing the threat of an aerial fire, more commonly known as a “crown fire”. This is accomplished by increasing the distance between tree canopies and the reduction of ladder fuels and regeneration tree growth.

The tree density has increased from the historical norm due to past management practices. This has resulted in trees of similar age growing close together and an understory of thick ponderosa pine regeneration.

The concept of the Home Ignition Zone (HIZ), historically called “survivable space”, was created based on studies and experiments performed by the National Fire Protection Agency (NFPA) and the Institute for Business & Home Safety. These studies indicated that the materials a building is constructed from, and the composition of vegetation within 100’ of the structure have the biggest impacts to the structure in a wildfire event. Due to the steep terrain found throughout the Black Hills, the recommendations for treatments within the HIZ have been extended to a 300-foot radius.

Observations:

- Vegetation throughout the property is primarily a ponderosa pine and hardwood mix with scattered pockets of pine regeneration and areas of grass or brush understory.
- 20 acres of the property has been treated through South Dakota Wildland Fire’s Cost Share Program and 3 acres has been treated through the Environmental Quality Incentives Program (EQIP)
- Additional treatments performed by the landowner are evident throughout the property

Recommendations Within the Home Ignition Zone of Planned Structures: *

- Thinning ponderosa pine trees to achieve a 20' crown spacing throughout the property will reduce the probability of a sustained aerial or crown fire.
 - Larger dominate and co-dominate coniferous trees that are straight with good form and vigor, should be left, if they meet the minimum crown spacing requirements.
 - Diseased, insect infested, bent, deformed, or dead trees will be removed first, with remaining trees being cut next until the 20' crown spacing is achieved,
- Ladder fuels/tree regeneration should be removed to prevent a surface fire from turning into an aerial/crown fire.
 - Remove ponderosa pine regeneration to at least 20' between trees, excluding dominate and co dominate trees that are left. This will create a multi-age stand and allow for replacement trees increase forest diversity and overall forest health.
- Limb remaining coniferous.
 - All remaining coniferous trees will be limbed to at least 8' above the ground to reduce the risk of an aerial/crown fire. Replacement trees left after the thinning will be limbed to up to 8' from the ground but will not exceed 1/3 of the overall tree height.
- Encourage deciduous tree growth as it does not pose a large threat to aerial fire development and increases forest diversity.
 - Deciduous trees on the property should have surrounding conifers removed to a distance of at least 20' to promote hardwood growth.
- Utilize ignition resistant building materials and landscaping on proposed structures.
 - Follow the building construction and landscaping guidelines in the Lawrence County Wildfire Protection Plan which includes the use of ignition resistant roofing material and siding materials and utilizing drought resistant landscaping plants and design.

* These recommendations have already been achieved/met for the proposed building site indicated with a red house on the enclosed property map. It is recommended that any future construction within 300' of the recommended treatment zones, indicated by the yellow polygons on the enclosed property map, follow the recommendations listed above.

Considerations

- Ingress/Egress
 - Driveways with adequate turn around allow for the safe maneuverability of fire suppression apparatuses.
 - Two ingress/egress routes allow for safer egress during a wildfire and ingress for fire personnel.
- Slope
 - Current and planned structures on the property or located at the bottom of a gentle to moderate slope.
 - Fires burn with higher intensity and a higher rate of spread when burning uphill, this will help reduce the risk of direct flame contact.

- Fuel Breaks
 - Adding paths/trails/roads throughout the property allow for better firefighter access and creates fuel breaks throughout the property. Fuel breaks can slow or stop the spread of fire and will assist with wildfire suppression efforts.

Fire History

- Fire History Map
 - Enclosed is a map with the 20 year fire history around the property. This map includes State and Federal jurisdictional wildfires.

These recommendations meet and exceed the NFPA 1144 and the ICC International Wildland-Urban Interface Code standards.

These are only recommendations to promote a more fire resilient property and do not guarantee against any injury, or loss of property. Fire cannot be excluded from the landscape; however, through proper mitigation actions the impact to your home and property can be reduced. Wildfires can happen at any time, but preparation gives your home, trees, and properties the best chance for survival.

Sincerely,

Logan Brown
Urban Interface Specialist
South Dakota Wildland Fire Division

Enclosures:

- Encl. 1 – Property Map
- Encl. 2 – Fire History Map

CC: Amber Vogt
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