



RESIDENTIAL WILDFIRE MITIGATION GUIDELINES

DEAD RIVER CAMPERS, INC.

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INTRODUCTION

Many of the homes located within the Dead River Campers, Inc. (DRCI) property are within or near fire prone ecosystems. Such ecosystems include forests with a significant component of jack pine, red pine, or spruce and fir mixes. All of these species regenerate best following wildfire; in fact, jack pine requires significant heat provided by wildfire to release seeds from its serotinous cones. Additionally, these species are all moderately shade-tolerant to shade intolerant, meaning that they all require an open to mostly-open canopy to regenerate successfully. The presence of these species within DRCI ownership indicates that this area was likely subject to wildfire in the past. However, wildfire within the ownership (and North America as a whole) has been significantly suppressed since the early 1900's in an effort to prevent the loss of property for individuals in these fire prone ecosystems.

Wildland fire is a popular topic in today's news. The current philosophy for landscape-level wildland fire mitigation is to simply let undeveloped areas burn and passively reduce fuel loads, while focusing firefighting efforts near residences to protect property. In order to increase the efficacy of these firefighting efforts, the National Fire Protection Association (NFPA) has created guidelines to show homeowners how they can protect their homes from future wildfire. This document is an aggregation of NFPA guidelines found at <https://tinyurl.com/jnsfefzh> which have been assembled to provide DRCI Members with recommendations on how they can mitigate residential damages from wildfire if they choose to do so.

NFPA GUIDELINES FOR HOMEOWNERS

Research involving wildfires has found that the most significant factor contributing to home destruction survival in a wildfire is the transmission of embers and small flames directly onto structures via radiant heat. NFPA guidelines focus on mitigating wildfire within one-hundred feet of each home, known as the Home Ignition Zone (HIZ). The concept of a home ignition zone is a principle developed by the United States Forest Service in the late 1990s. Since the most significant factor leading to home destruction from wildfires is direct transmission of radiant heat, recommended management within the HIZ focuses on weighted management within three sub-zones: **The Immediate Zone, The Intermediate Zone, and The Extended Zone**. The zones are weighted based on their proximity to the permanent residency on a property, and do not necessarily include smaller structures such as detached garages, barns, or sheds. In order to be most effective, landowners should prioritize management in the management zones nearest to the house before moving on to management in the next zone.

The Immediate Zone (0-5 feet away from the home)

The Immediate Zone is the smallest, most important sub-zone to focus management on within the HIZ. The immediate zone extends to five feet from the furthest attached point of the home. This point could include porches or patios that are connected to the home. This area, being the closest to the house, is the most likely to transfer radiant heat to the home through small flames and burning embers. Therefore, most of the homeowner's management effort should take place within this small immediate area. Management should focus on the home structure before moving on to other areas within The Immediate Zone such as gardens or other landscaping. Management guidelines within The Immediate Zone are as follows:

- Clean roofs and gutters of dead leaves, debris, pine needles, and other fine materials that could catch embers.
- Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration.
- Prevent embers from passing through the eaves by installing 1/8-inch metal mesh screening.
- Clean debris from exterior attic vents and install 1/8-inch metal mesh screening to reduce embers
- Repair or replace damaged window screens and any broken windows.
- Screen or box-in areas below patios and decks with wire mesh to prevent the accumulation of debris and other combustible materials.
- Remove all flammable materials away from the exterior of the home, including but not limited to wood mulch, flammable shrubs, leaf litter, and firewood piles. Remove anything stored underneath decks or porches.

The Intermediate Zone (5-30 feet away from the home)

Once all of the mitigation recommendations are completed within The Immediate Zone, the homeowner should begin implementing management within the Intermediate Zone. Being further away from the house, fuel loads within The Intermediate Zone pose a lower, but not insignificant threat to the house. Mitigation efforts within this sub-zone focus on creating fire breaks and minimizing fire ladders by spacing out fuel sources in this area. Following these guidelines will minimize the amount of ignition sources that could eventually reach The Immediate Zone.

- Clear vegetation from under large stationary propane tanks, if applicable.
- Create fire breaks through the strategic placement of driveways, sidewalks, patios, and decks.
- Keep lawns mowed to a height of four inches or less.
- Remove fuel ladders so surface fires cannot reach the canopy of trees within this zone. Prune low limbs off of trees to a height of six to ten feet off the ground.
- Remove trees which have a dominant canopy within ten feet of the structure.
- Trees and shrubs should be limited to single individuals or small clusters in order to create abundant fuel breaks.

The Extended Zone (30-100 feet away from the home)

The Extended Zone is defined as the area extending from 30 to 100 feet away from the exterior of the home, but could go out to as far as 200 feet away from the home for landowners who would like to put extra effort in protecting their home from wildfire. Wildfire within The Extended Zone is acceptable, and management within this sub-zone focuses on preventing fuel ladders, and keeping flames burning at lower temperatures along the forest floor rather than eliminating fire completely. NFPA guidelines for management within this zone are as follows:

- Dispose of heavy accumulations of ground litter and debris.
- Remove dead plant and tree material.
- Remove small conifers growing between mature trees - these can act as fuel ladders.
- Remove vegetation that is adjacent to storage sheds or outbuildings.

CONCLUSION

If these guidelines are followed in their entirety, homes within DRCI fire-prone ecosystems will be much better protected in the unfortunate event of a wildfire. DRCI homeowners should remember that these management guidelines should be completed in order; management within The Immediate Zone should be completed before The Intermediate Zone, then management should be implemented in The Extended Zone. If all homeowners within the DRCI implement these practices, the community as a whole will be much less likely to see significant residential damage in the wake of a wildfire. In addition to these recommendations, each DRCI homeowner should take the time to develop an emergency response plan. Information on how to create an emergency response plan can be found at <https://www.nfpa.org/Public-Education/Staying-safe/Preparedness/Emergency-Preparedness>. More information on the National Fire Protection Association can be found at www.nfpa.org.