Buffalo Creek South– Plan Unit 24

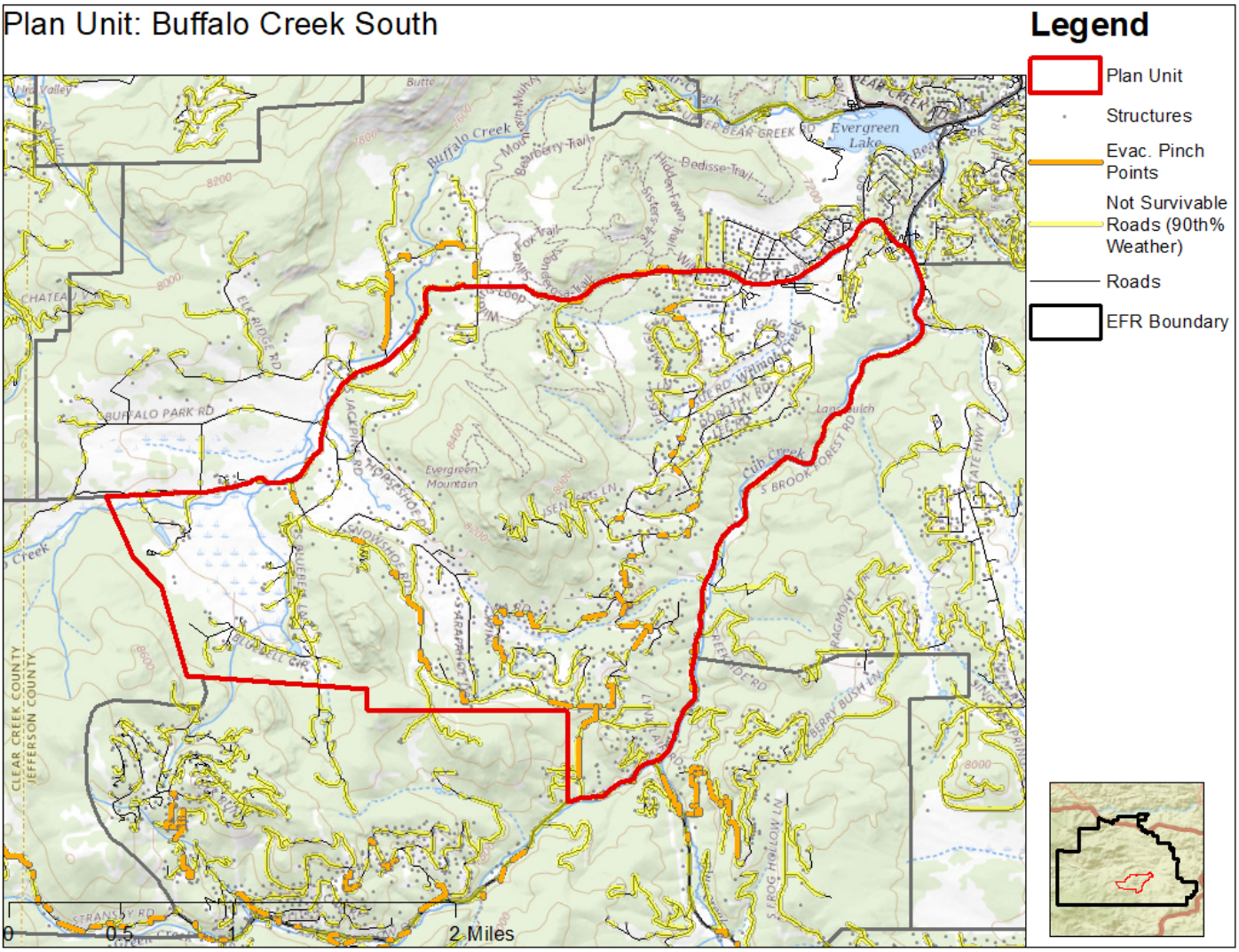
Rating: Very High

Evacuation Data Summary					
Number of Structures	Number of Cars	Average Time to Evacuate (min)	Median Time to Evacuate (min)	Minimum Time to Evacuate (min)	Maximum Time to Evacuate (min)
899	2150	82	85	33	123

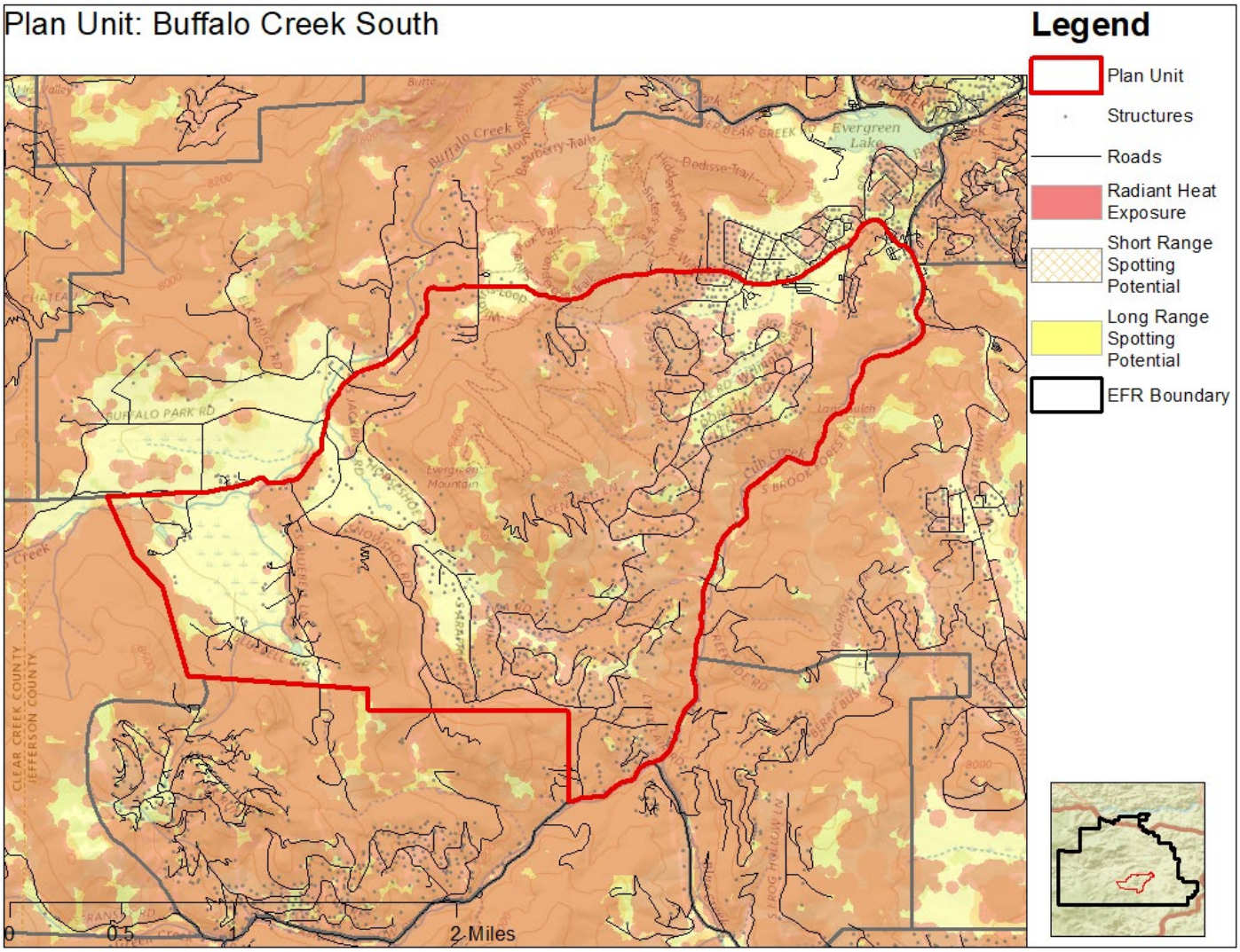
Roadway condition and signage is good in this plan unit, but many residents are essentially limited to a single ingress/egress point. Wildland fuel loading is dense in many places, following topography and north facing slopes. There are many residences which do not show any evidence of fire mitigation work. It is recommended that Buffalo Creek South treat dense pockets of timber in the ravines in between and adjacent to structures.

Homes in the Snowshoe/Arapahoe Road area are situated in denser mixed conifer with minimal fuels reduction work done. Continuous wildland fuels meet this part of the plan unit to the southwest and additional mitigation is necessary to improve firefighter tactical options for defense of these homes. Along King Road, natural topography features provide a great place to anchor defensible space treatments to.

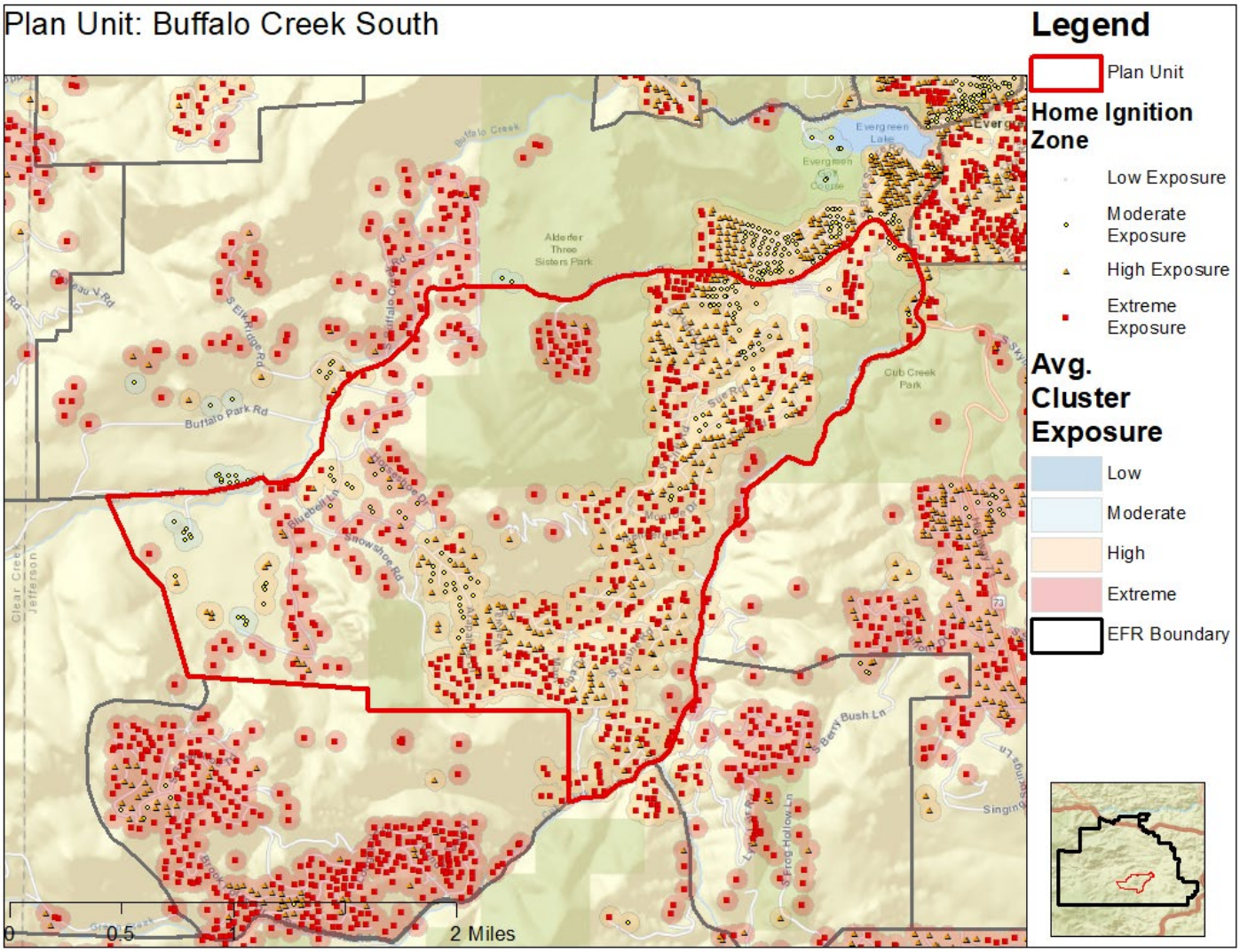
Central and northern portions of unit are Ponderosa Pine dominated and have moderate fuel loads. There is evidence of complete wildland mitigation treatments, but many properties have yet to begin reducing fuel loads. Canopy spacing should be increased to 15 ft throughout this plan unit to change wildfire risk.



Buffalo Creek South has the most Evacuation Pinch Points of any Plan Unit in the district. This includes the important evacuation corridor of S. Brook Forest and many internal roads, including Snowshoe Road, S Columbine Road, Niakwa Road, King Road, and S Elaine Road. A massive effort will need to be undertaken in Buffalo Creek South to ensure safe evacuation corridors. Investment must be made by residents to assist in this effort.



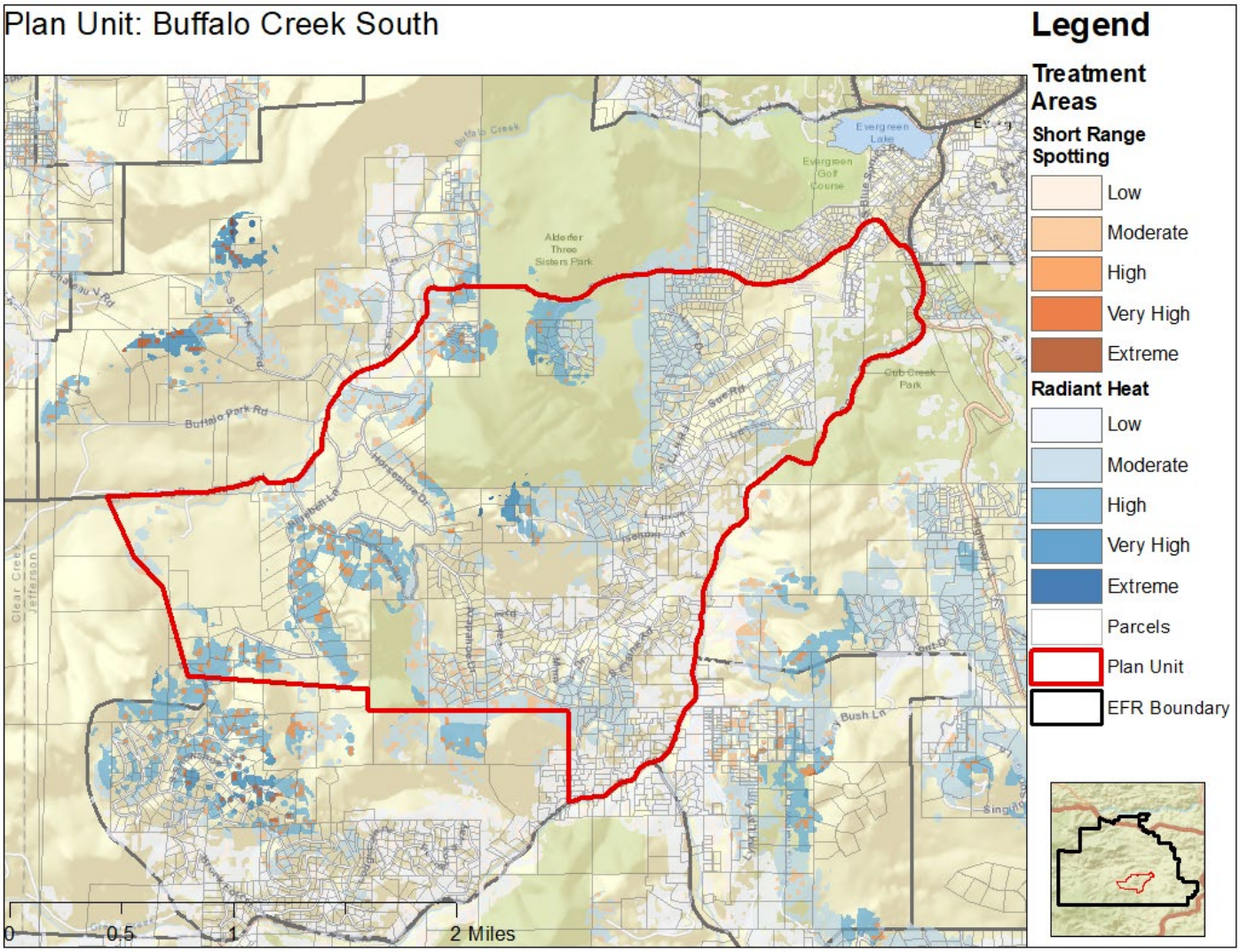
Radiant Heat exposure is designed to show neighborhoods where vegetation will create fire behavior extreme enough to ignite home materials. Short- and long- range spotting is when embers travel a distance from the fire and continue its spread away from the main fire –this can be a deluge of embers that is difficult to combat. These ignition risks are present to extreme degrees in Evergreen Fire Protection District. Different visualizations of this data are mapped on the following pages and will give residents a clearer path forward to mitigation.



Ember exposure outputs (radiant heat, short range spotting, and long-range spotting, as seen above) were overlaid with structure points buffered as the Home Ignition Zone (100 ft). Structures in which greater than 50% of the home ignition zone was covered by radiant heat, short range spotting, or long-range spotting were defined as being at risk from that hazard. Extreme exposure means all three factors are present, as the model indicates.

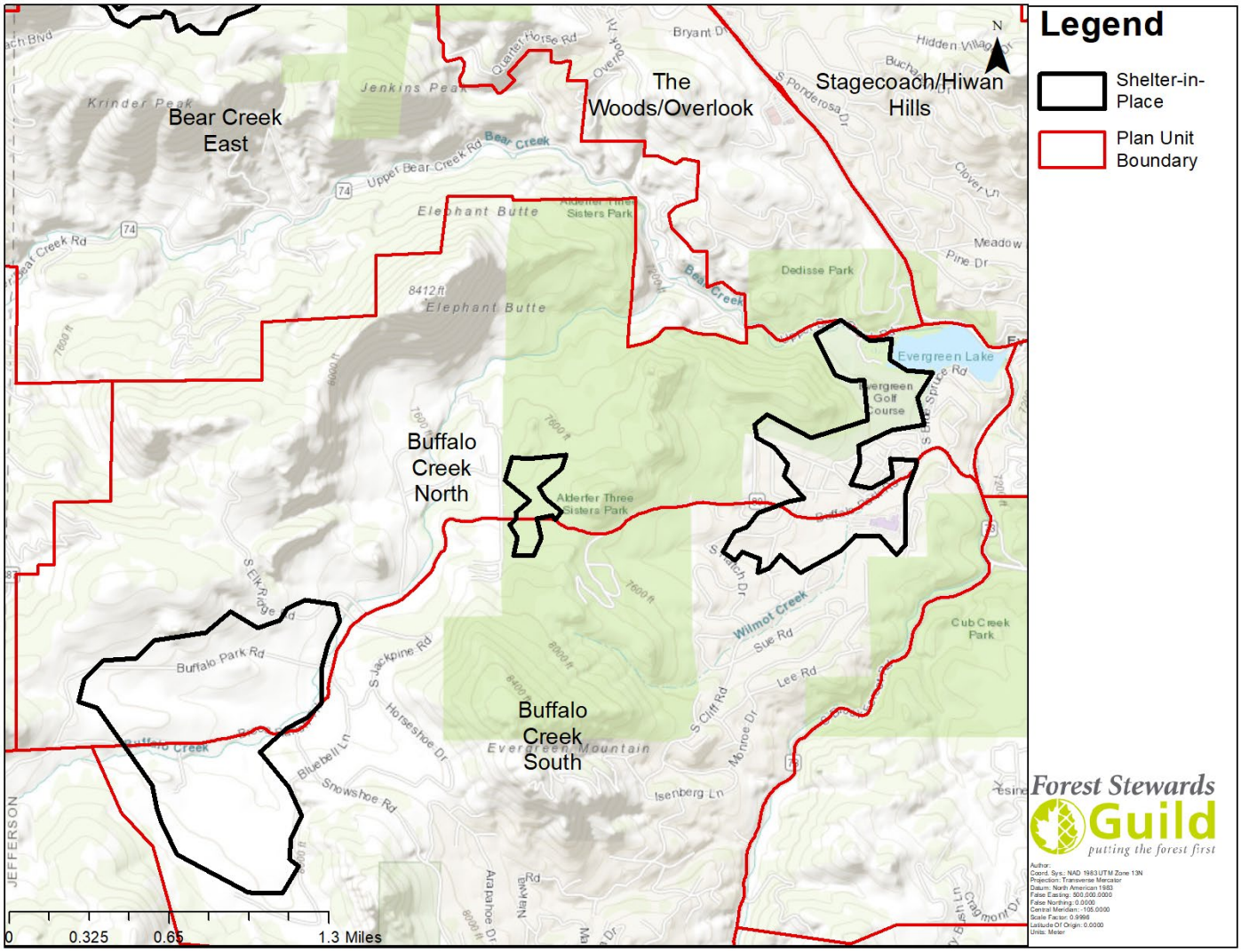
These values were then aggregated at the structure cluster level which are dissolved 100 m buffers of structures. If a structure's 100m buffer intersects a different structure's buffer, they are part of the same cluster. Average exposure to all the structures in the cluster is displayed behind the structure point on the above map. This means that even though some structures may be a lower risk due to the wildland fuels adjacent to their home, they will be still at extreme risk as home to home ignition is extremely likely.

Echo Hills has many extreme exposure structures, and most of the average cluster exposure is high. Developing robust defensible space work and implementing home hardening practices will reduce the rating of this cluster. The area of extreme cluster exposure on the western side should be a priority along Bluebell Lane.



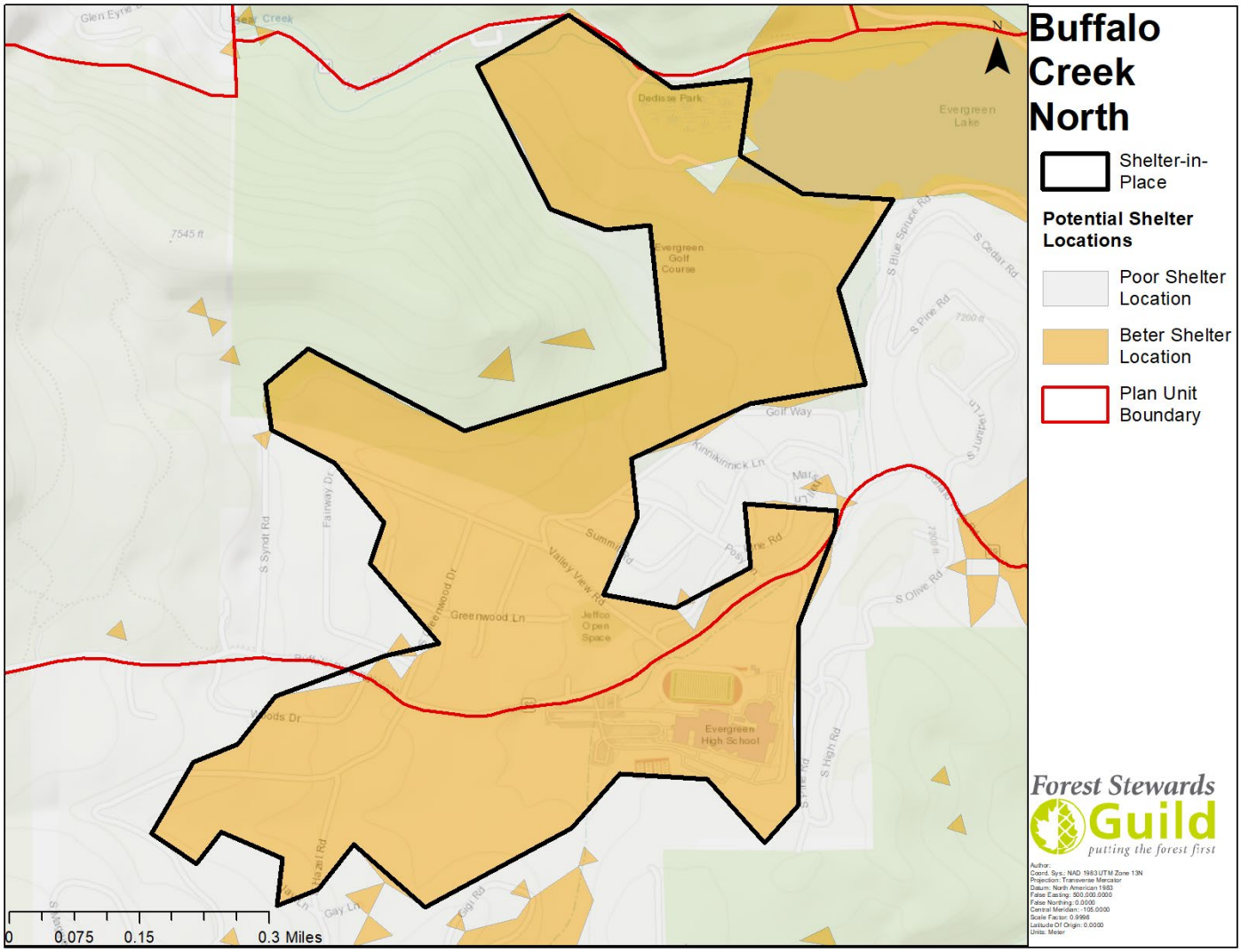
Radiant heat and short-range ember exposure are displayed and filtered by accessible treatment areas (by slope and distance to a roadway). High to Extreme risk areas displayed in those maps are highest priority to protect from radiant heat and short-range spotting, however, this does not negate the need for defensible space treatment across the landscape.

Treatment along Bluebell Lane and Snowshoe Road is imperative. This not only reduces risk to the residents in that area but provides a tactical option for firefighters working to prevent wildfire from moving northeast. This fuel treatment should accompany home ignition zone improvements, as the risks to radiant heat and short-range embers is extreme.

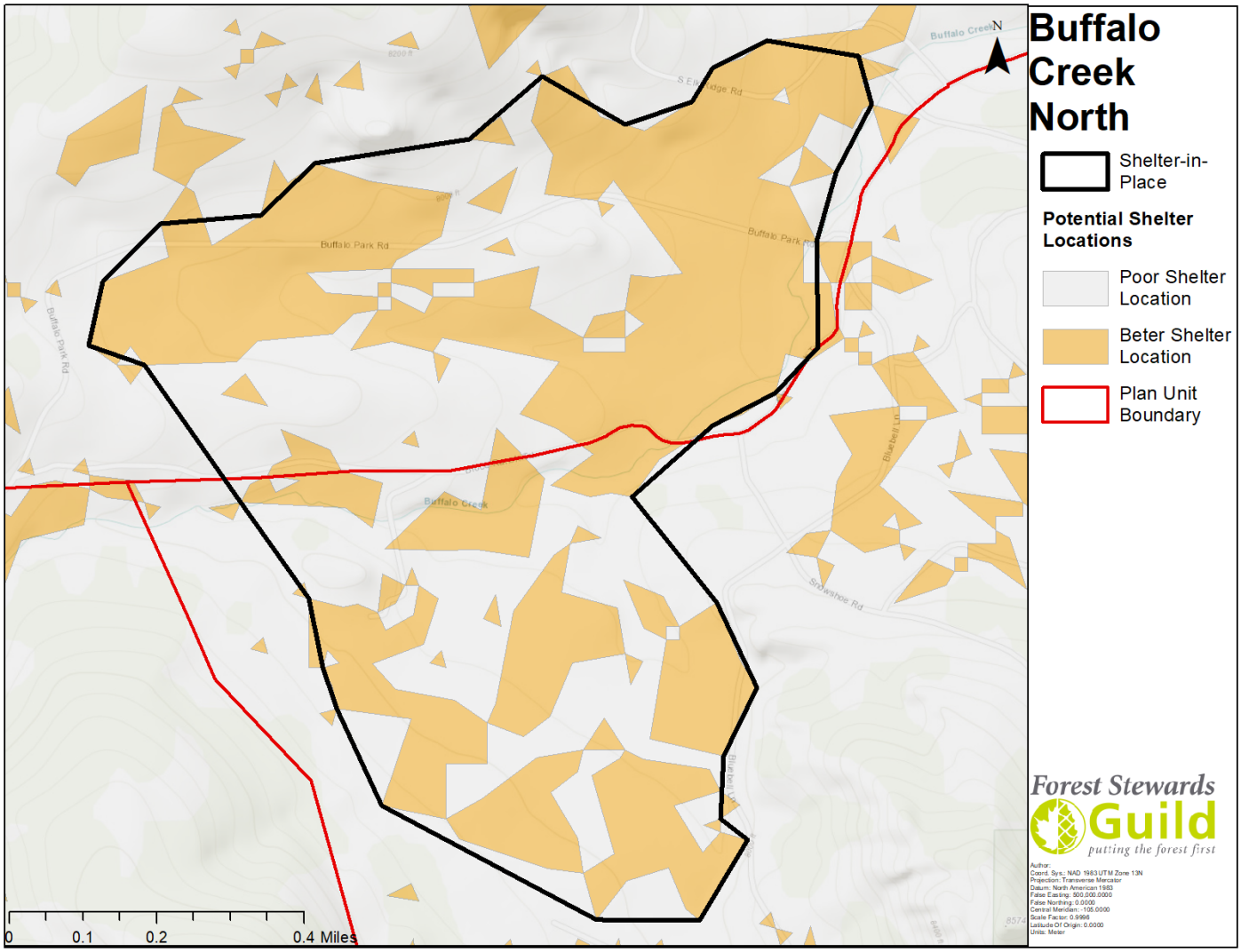


For the purposes of this CWPP, a shelter-in-place location is a location within a neighborhood that residents could drive to and survive the flame front of a wildfire. Shelter-in-place locations are a worst-case scenario option where all other evacuation and rescue efforts have failed. A shelter-in place location is an area where a person can stay safe during a flaming front. No resident should view these locations as a great place to go during a wildfire. If these locations are needed, first responders will direct vehicles in the right direction and determine how many vehicles will be safe during that wildfire event. Evergreen Fire Protection District was modeled for slope and vegetation throughout Evergreen and 20 mph winds using the Butler equation, described in detail in the Shelter-In-Place fuel treatment prescription section.

The Evergreen Golf Course and surrounding Denver Mountain Park - Dedisse Park should be expanded upon to create a great shelter-in-place, centrally located in Evergreen. Evergreen High School south of Buffalo Park Road is also a great location to shelter in place. The Jefferson County School District and Denver Mountain Parks should assist, as possible, in maintaining and expanding this area. To the east of S Lemasters Road, a small area to shelter is located on Jefferson County Open Space - Alderfer/Three Sisters Property. The surrounding area should be mitigated and expanded to make this a great shelter-in-place location. Lastly, the area surrounding Buffalo Park Road and Broce Ranch Trail has some great agricultural properties to be used for shelter-in-place, but first, a great deal of thinning and clearing must be done to make this area feasible and safe. These locations span Buffalo Creek North and South and both CWPIPs should address them.



This is a close view of a proposed shelter-in-place location for Buffalo Creek South. These areas should be mitigated to improve the overall shelter location.



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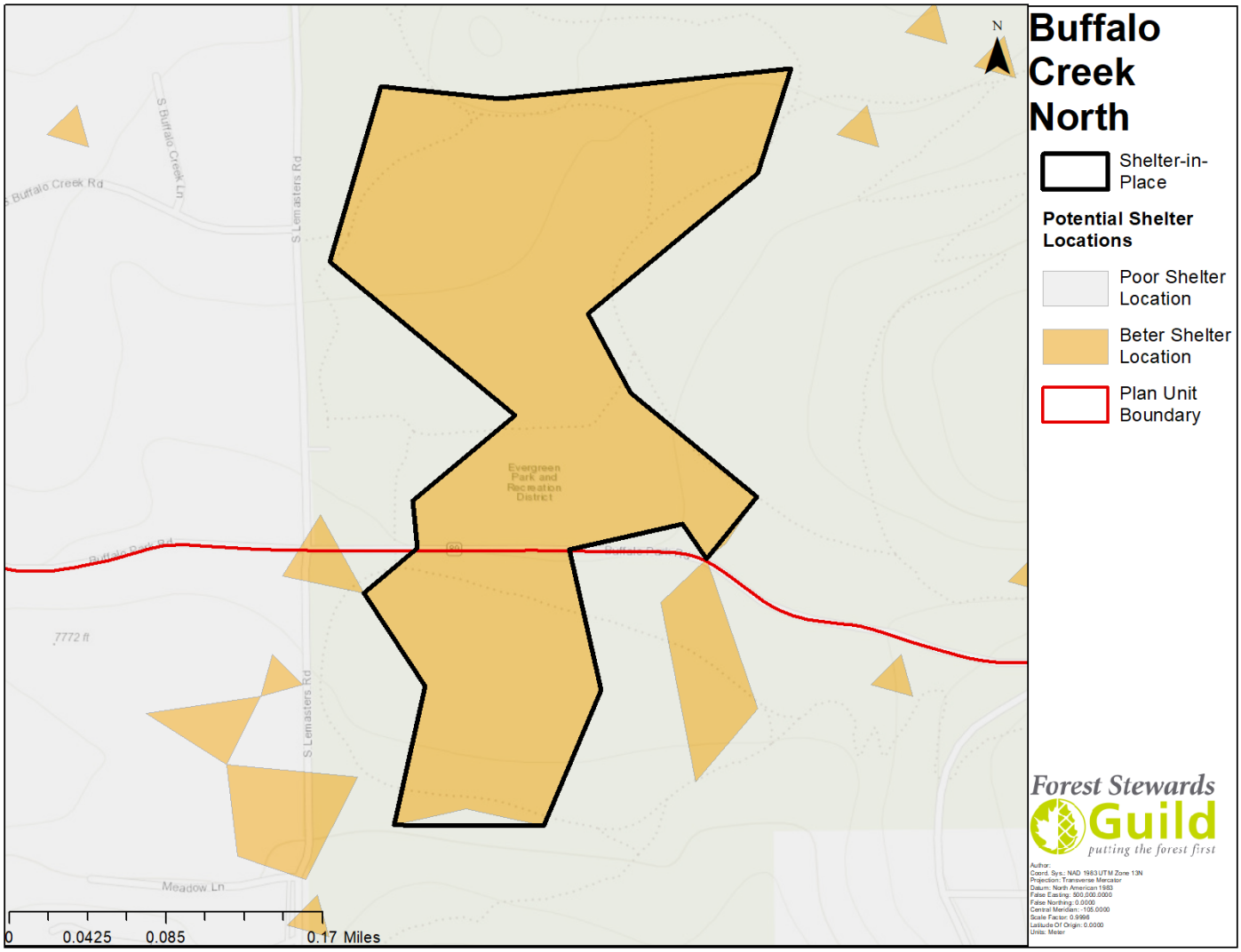

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