Buffalo Park Estates– Plan Unit 25

Rating: Extreme

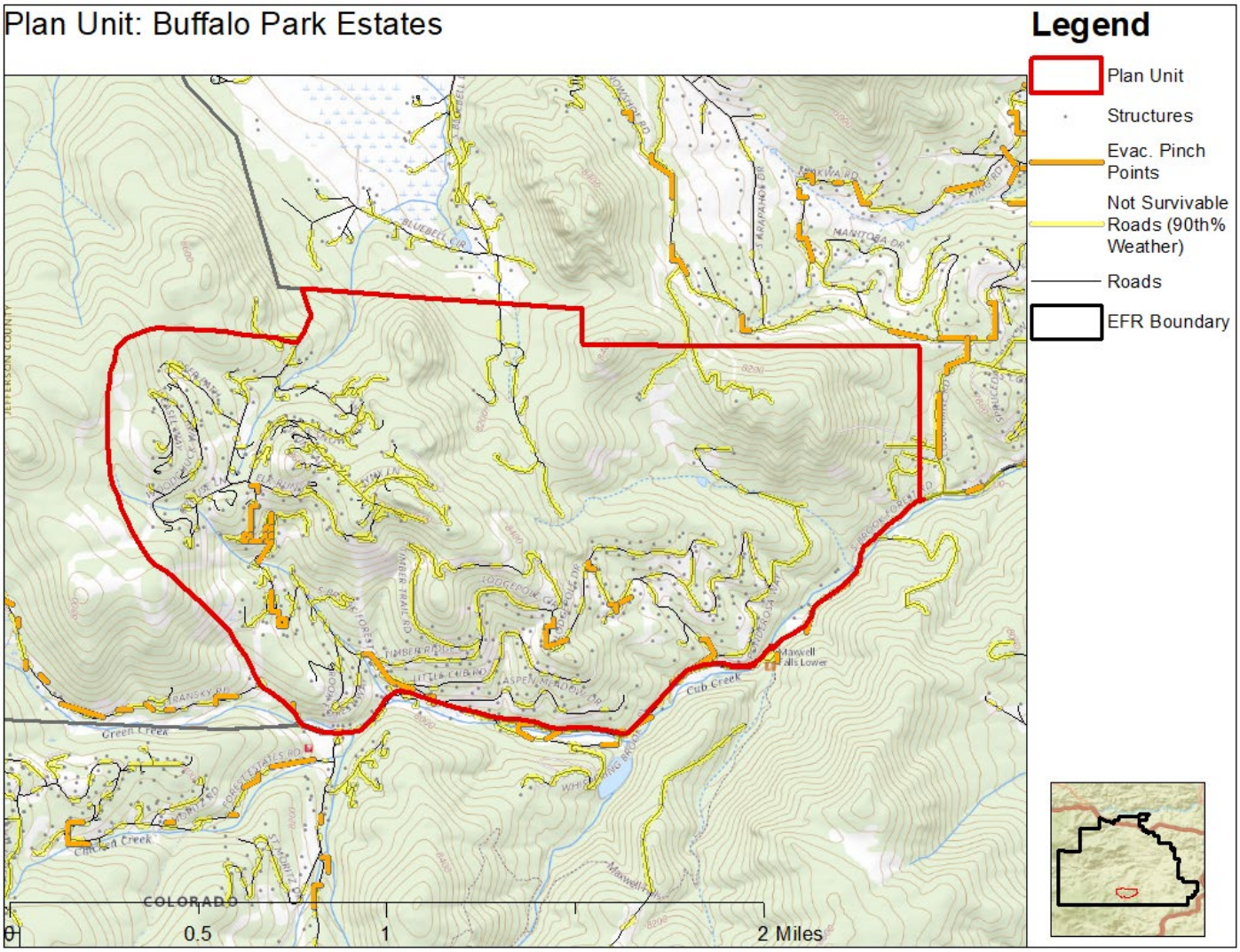
Evacuation Data Summary					
Number of Structures	Number of Cars	Average Time to Evacuate (min)	Median Time to Evacuate (min)	Minimum Time to Evacuate (min)	Maximum Time to Evacuate (min)
450	1076	82	81	56	95

Defensible space and overall fuels reduction work is not consistent across the plan unit. Many properties show past or ongoing work, while some have not started. This is a great start in an extreme risk community that should continue and be supported in the district. Defensible space has been established, but few properties have taken fuels reduction across their entire property or to the full 100-foot distance. Areas of concern are the untreated ravines and thick timber down slope from homes. The terrain makes both access and treatment more difficult. Roads are in good condition, but some sections have steep grade and tight, winding turns. Hydrants are present only in lower portion of unit.

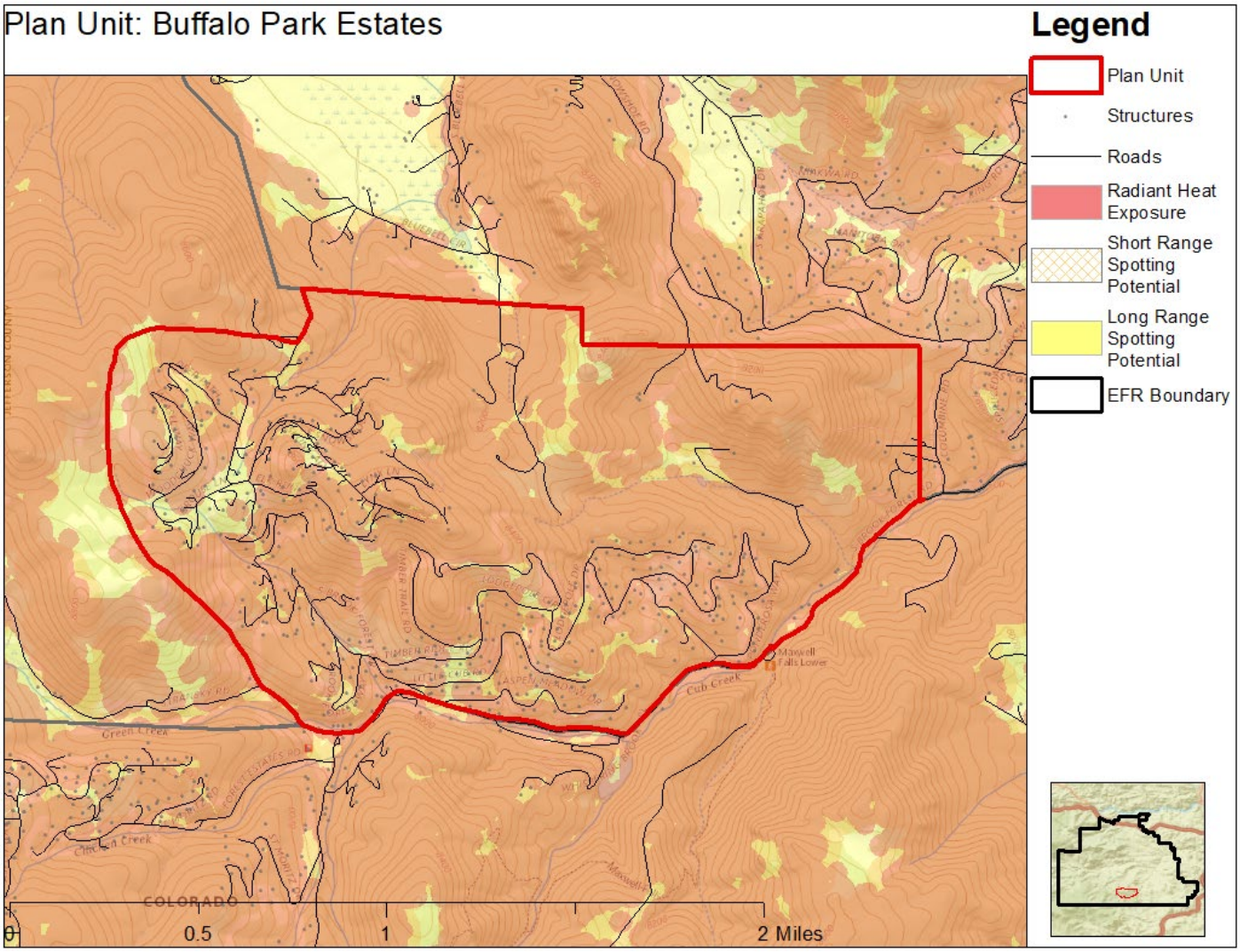
The work that has been done so far in Buffalo Park Estates follows the guidance of their CWPIP.

Treatments are visible on most properties, with varying degrees of thinning. In the area around Ponderosa Way, some existing treatments need to increase crown spacing to 15 ft.

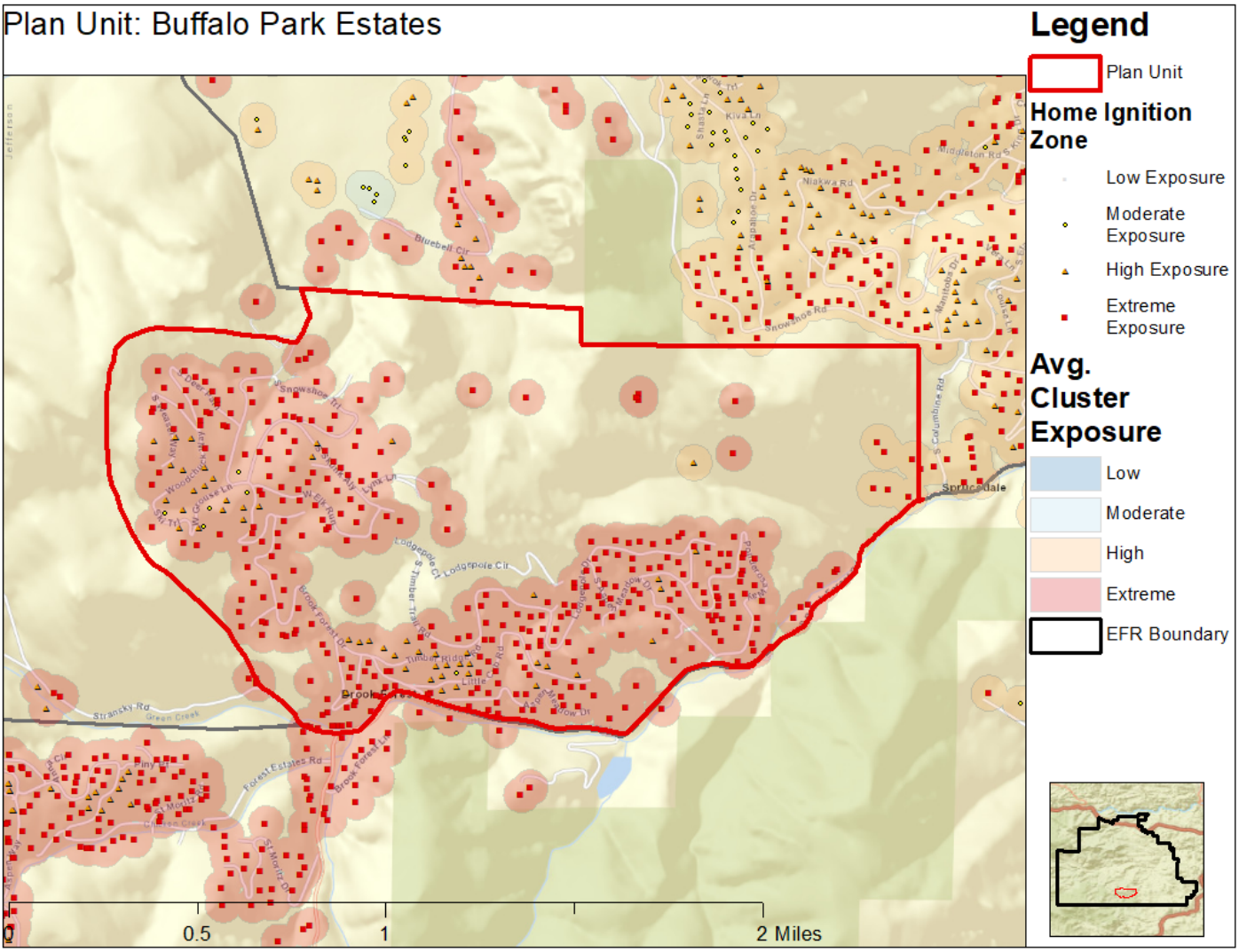
In other areas, like along S Brook Forest Drive, hazardous fuel loads are present in ravines close to homes. Throughout all of Buffalo Park Estates, dense fuel in ravines and down slope of homes is the most concerning and should be highest priority.



Buffalo Park Estates has a high number of Evacuation Pinch Points. This includes S. Brook Forest Road a high priority road for multiple Plan Units. Other internal roads with Evacuation Pinch Points include Lodgepole Drive, the entrance onto Blue Spruce Lane, S. Brook Forest Drive near Hemlock Lane, a portion of Timber Ridge Road that intersects with S. Brook Forest Drive, and S. Brook Forest near Jackpine Drive. These are all high priority locations to continue the roadway mitigation work being completed.



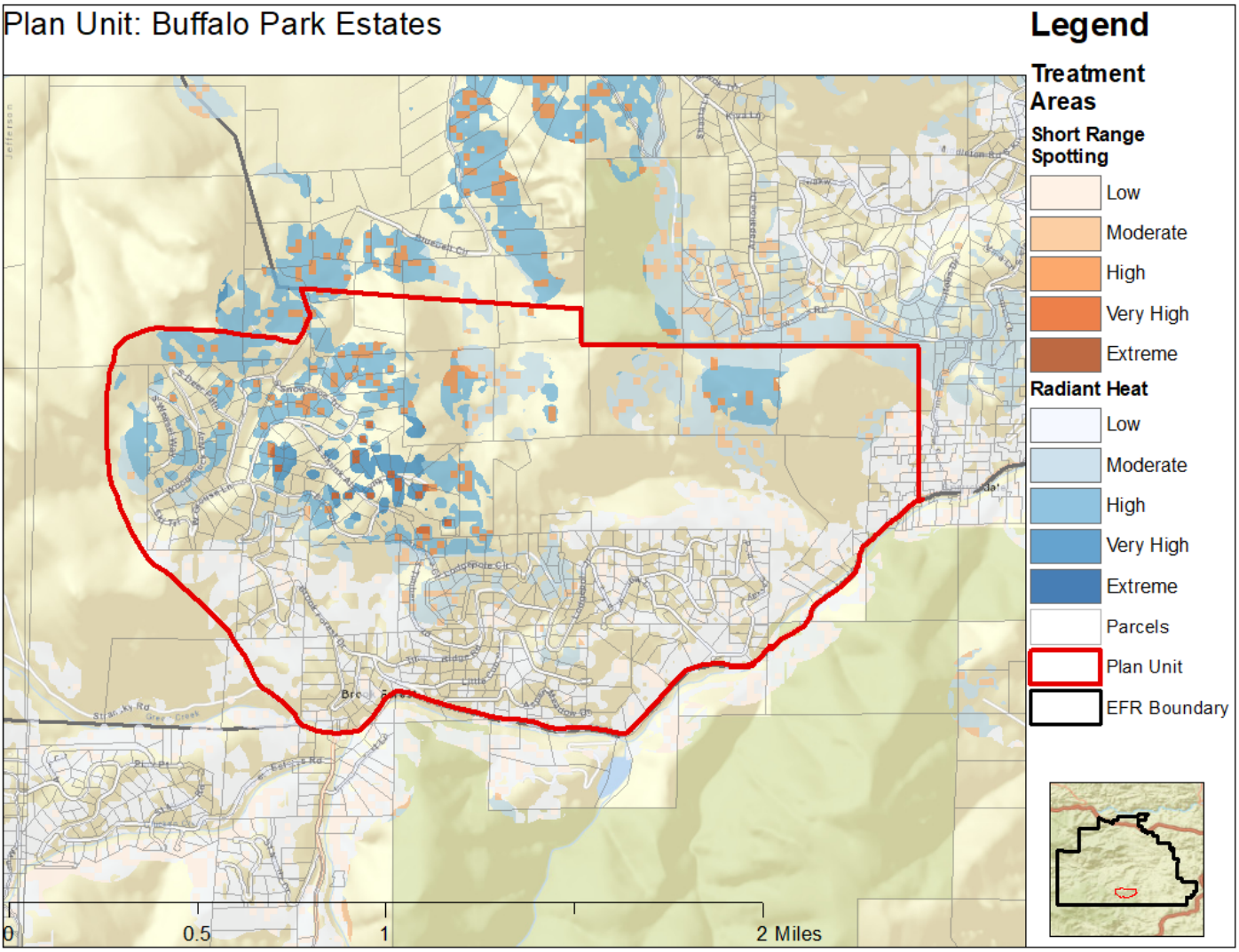
Radiant Heat exposure is designed to show neighborhoods where vegetation will create fire behavior extreme enough to ignite home materials. Short- and long- range spotting is when embers travel a distance from the fire and continue its spread away from the main fire –this can be a deluge of embers that 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 the average cluster exposure is extreme. This extreme cluster exposure means homes that are at lower risk from radiant heat & short- and long-range spotting are put at higher risk by their connection to other, higher risk structures. Developing robust defensible space work and implementing home hardening practices will reduce the rating of this cluster and need to accompany landscape scale treatments. Working first on the homes and neighborhoods on S. Brook Forest Drive leading to the north, and along W. Elk Run, Skunk Alley, Grouse Lane, Woodchuck Way, and the surrounding smaller streets would be the best place to focus efforts.



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.

Areas around the northern section of S. Brook Forest Drive and around Elk Run and Skunk Alley are both treatable and have the highest risks from radiant heat and short-range embers. Developing fuel treatments, in coordination with the previously mentioned defensible space and home hardening, is extremely important for the slope and vegetation density in this part of Buffalo Park Estates. This northern section not only poses a threat to residents living there, but to Plan Units to the north.

Shelter-in-place

There is no location with sufficiently low fuel densities to recommend a shelter-in-place location. No area is currently large enough and the surrounding fuels are at extreme risk of catastrophic wildfire. Topography also will make it difficult to create a shelter location here.