

BEAR CREEK EAST – PLAN UNIT 7

Rating: 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)
443	1006	66	69	49	79

Road access and signage are adequate with multiple roadways for ingress/egress. Many mid-slope homes show moderate defensible space, but often are adjacent to untreated fuels on steeper slopes or in ravines. Several north aspect slopes and drainages exhibit extremely hazardous mixed-conifer fuels. These drainages coupled with the fast rate of spread that will occur in the grass dominated understory could make this plan unit difficult to defend. It is recommended that residents improve individual Home Ignition Zone as specified by Firewise.





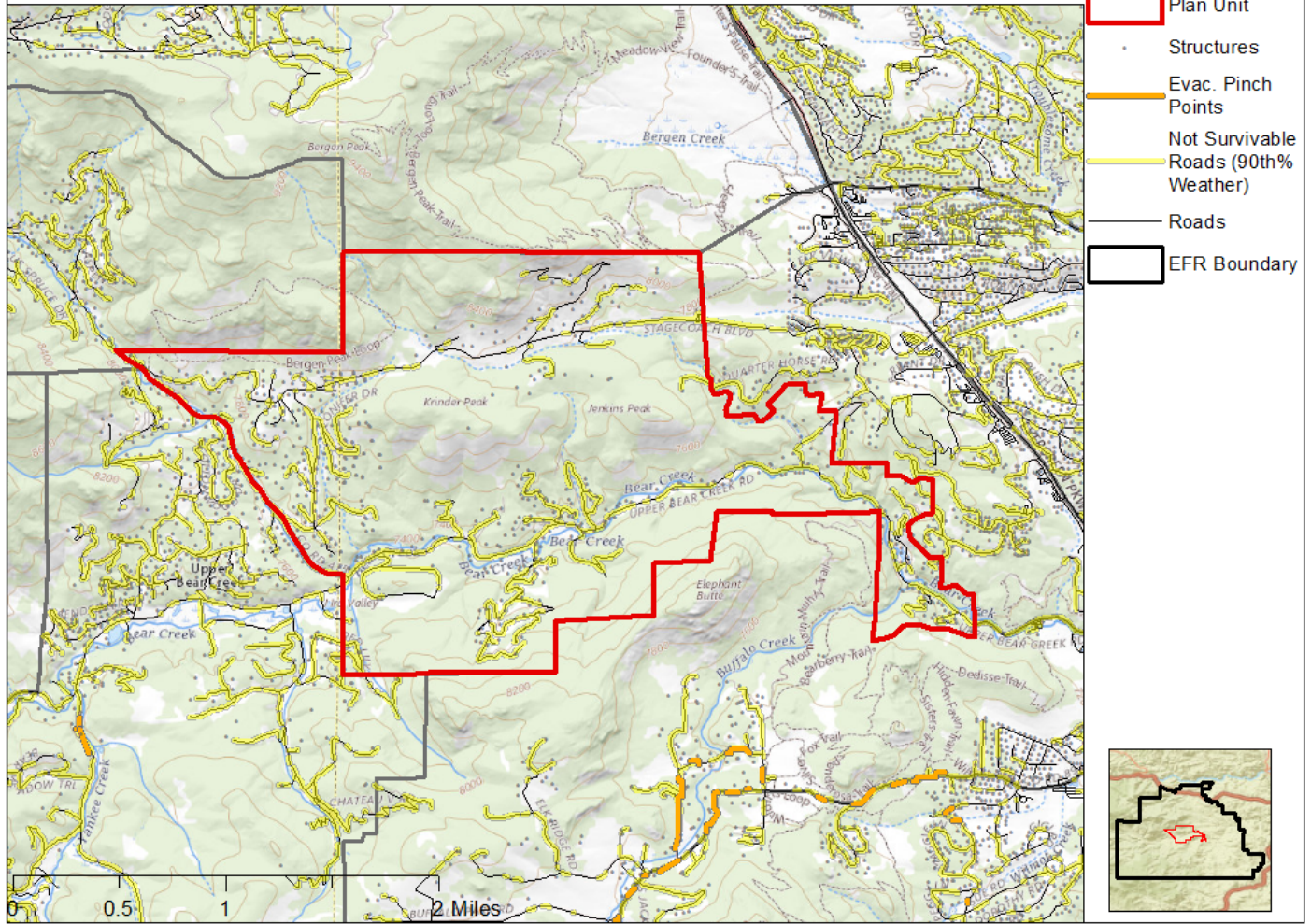
Generally good conditions on southern aspects except for homes next to ravines with hazardous loaded mixed conifer, like some homes along Stagecoach Boulevard.



Opportunities for major improvements are ravines and undeveloped parcels that have no mitigation work completed but will affect the outcome for all neighbors.

Plan Unit: Bear Creek East

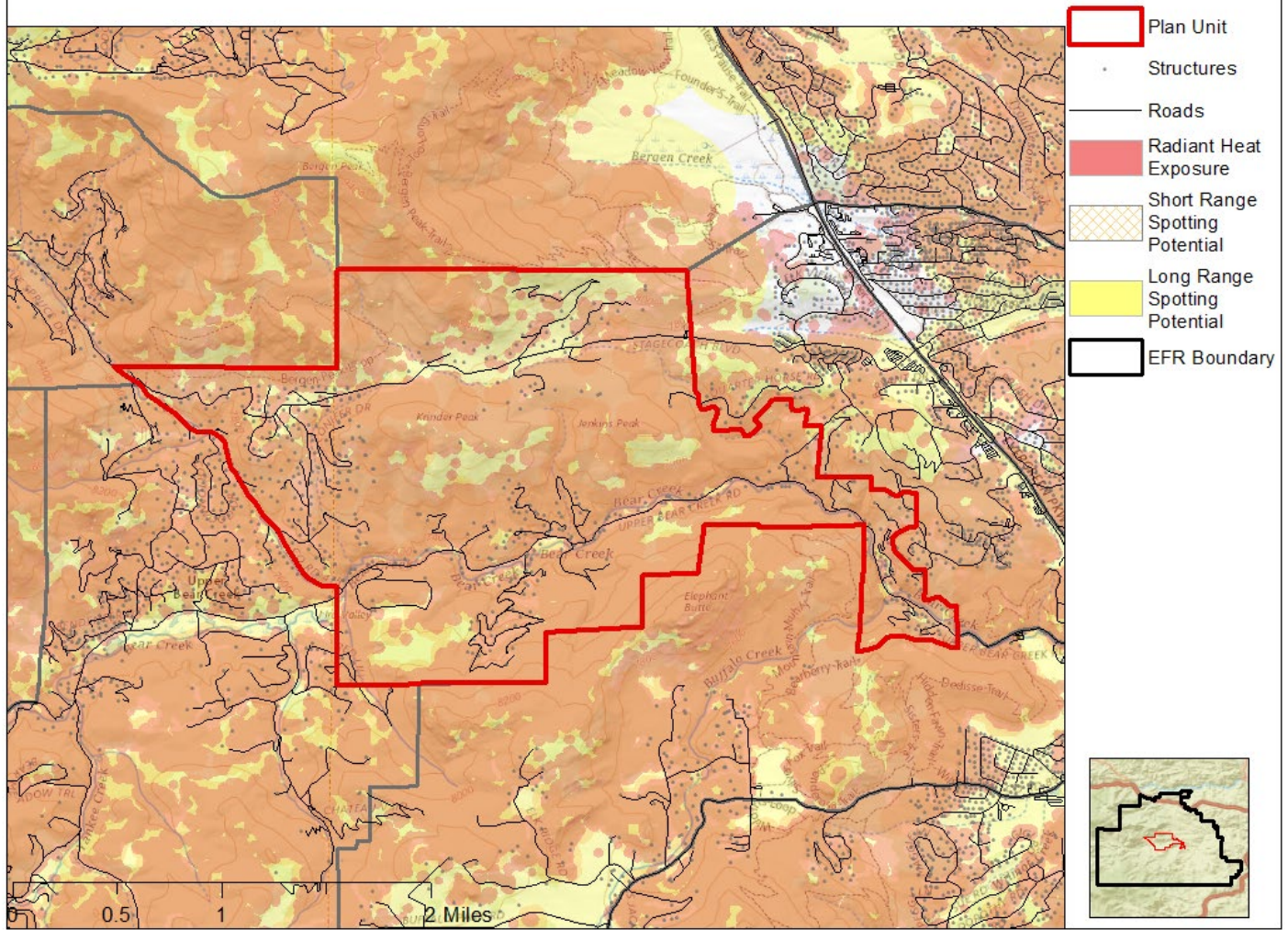
Legend



Bear Creek East has no modeled Evacuation Pinch Points. Two major evacuation corridors for residents have sections that are not survivable, and these should be first priority for roadway mitigation. These roads are Stagecoach Boulevard and CO Road 74. CO Road 74 has more area currently non-survivable. These areas are evacuation corridors for residents beyond this Plan Unit and should be considered with that in mind.

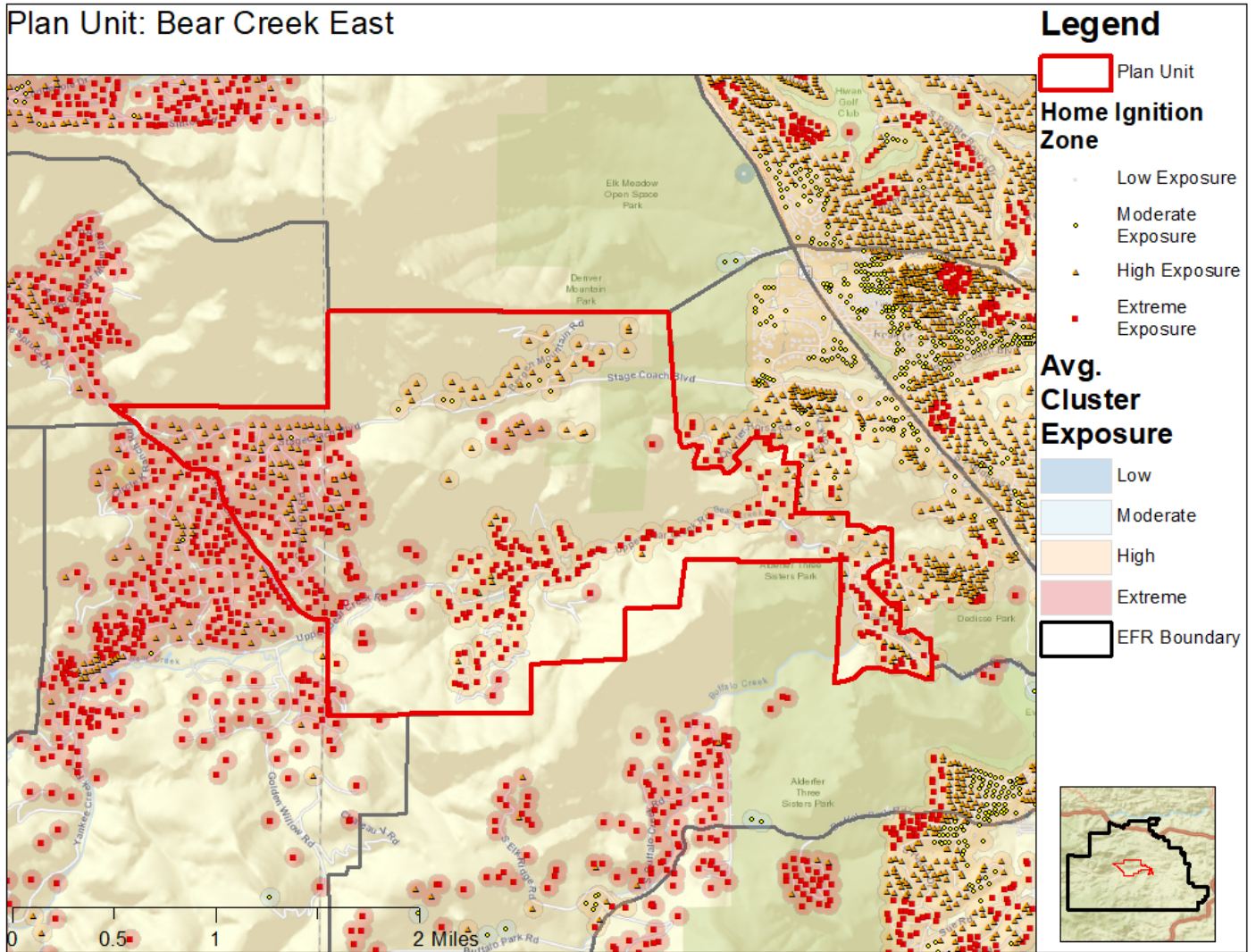
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Legend



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.

Plan Unit: Bear Creek East

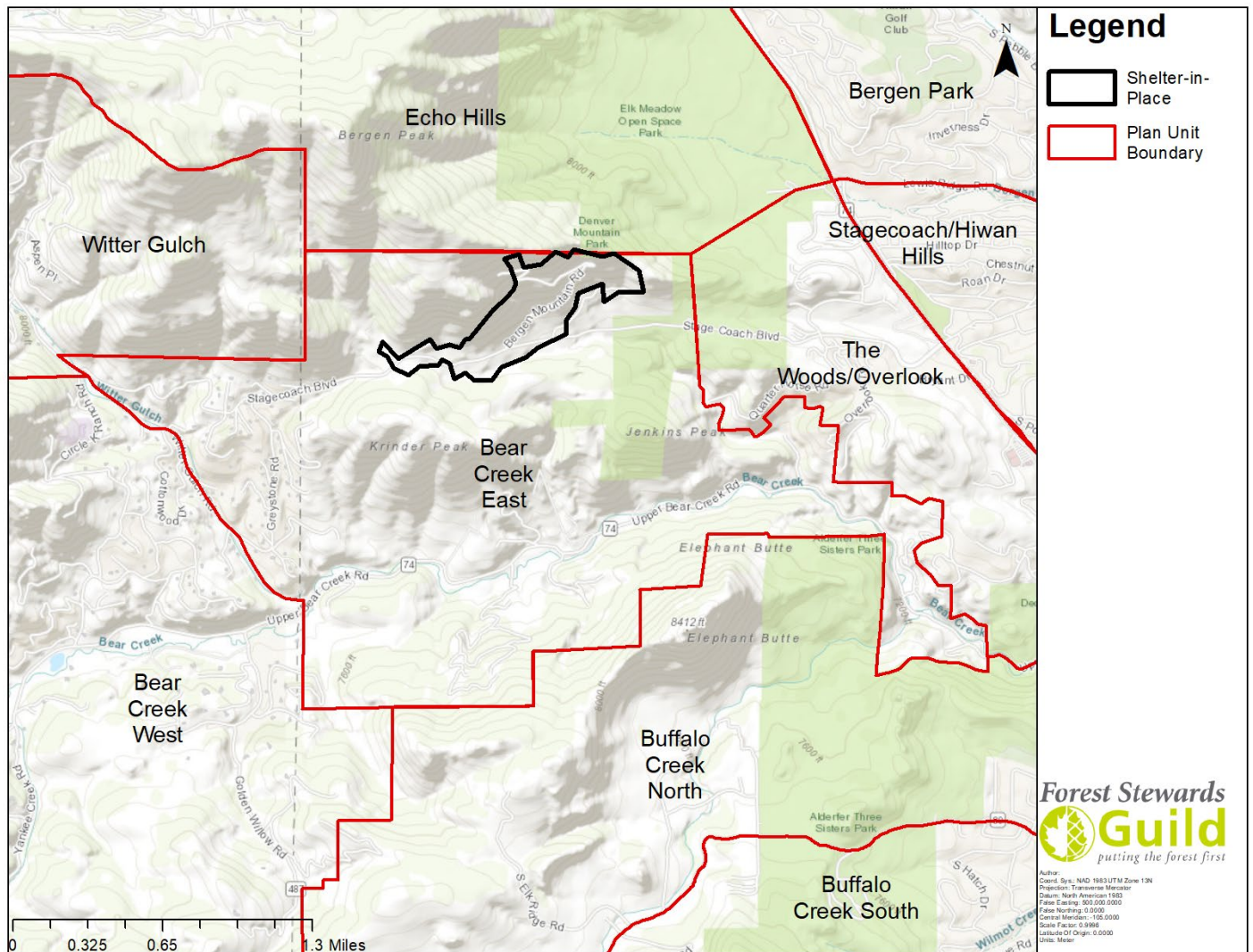


Ember exposure outputs (radiant heat, short range spotting, and long-range spotting, as seen above) were overlaid with structure points buffered as the Home Ignition Zone (100 ft). Structures in which greater than 50% of the home ignition zone was covered by radiant heat, short range spotting, or long-range 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.

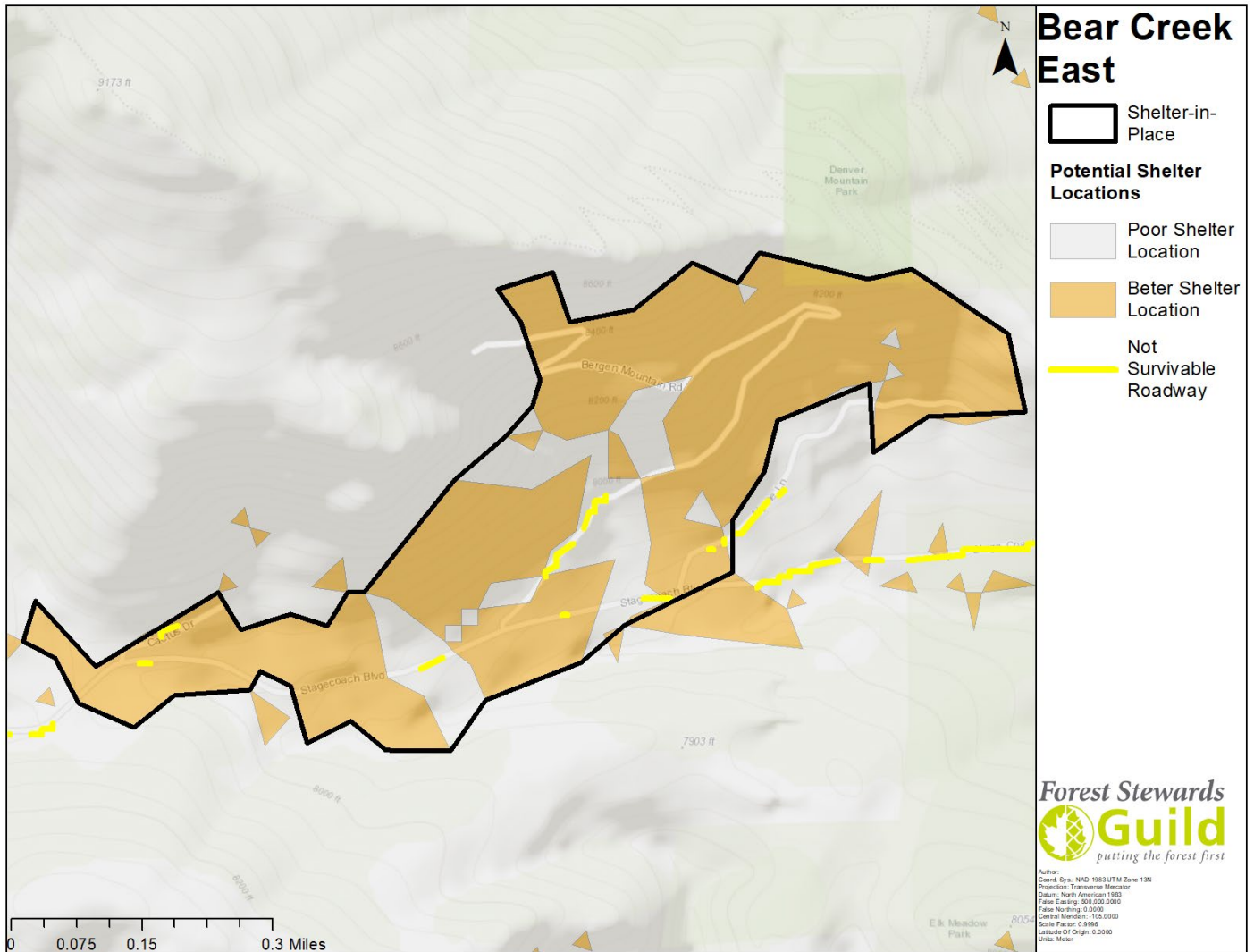
Bear Creek East has a cluster of extreme average exposure with many individual extreme exposure structures on the west side. In coordination with work in Bear Creek West, this location around Greystone Road and CO Road 476 should be mitigated to create a tactical option of defense for fires moving towards the SE corner of Evergreen's district.

Shelter-in-place



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.

On a south facing slope around Bergen Mountain Road, a shelter-in-place locations would be possible. This location is on private land, meeting up with Bergen Peak SWA, Denver Mountain Park - Bergen Peak, and Jefferson County Open Space - Elk Meadows. Those public lands do not have much space that meets the criteria of this model, and it is recommended those organizations work to improve and expand this Shelter-in-Place location. There are portions of this proposed location that are not currently suitable for shelter-in-place, but if wildland vegetation were cut, this would make this location more viable. Parts of the roadway in this location are not survivable and the surrounding fuels for those roadways are the primary areas of concern for mitigation.



This is a close view of the proposed shelter-in-place location for Bear Creek East. This area will need careful consideration before being utilized and the poor shelter areas must be mitigated before use is considered.