Fillius Park – Plan Unit 5

Rating: Moderate

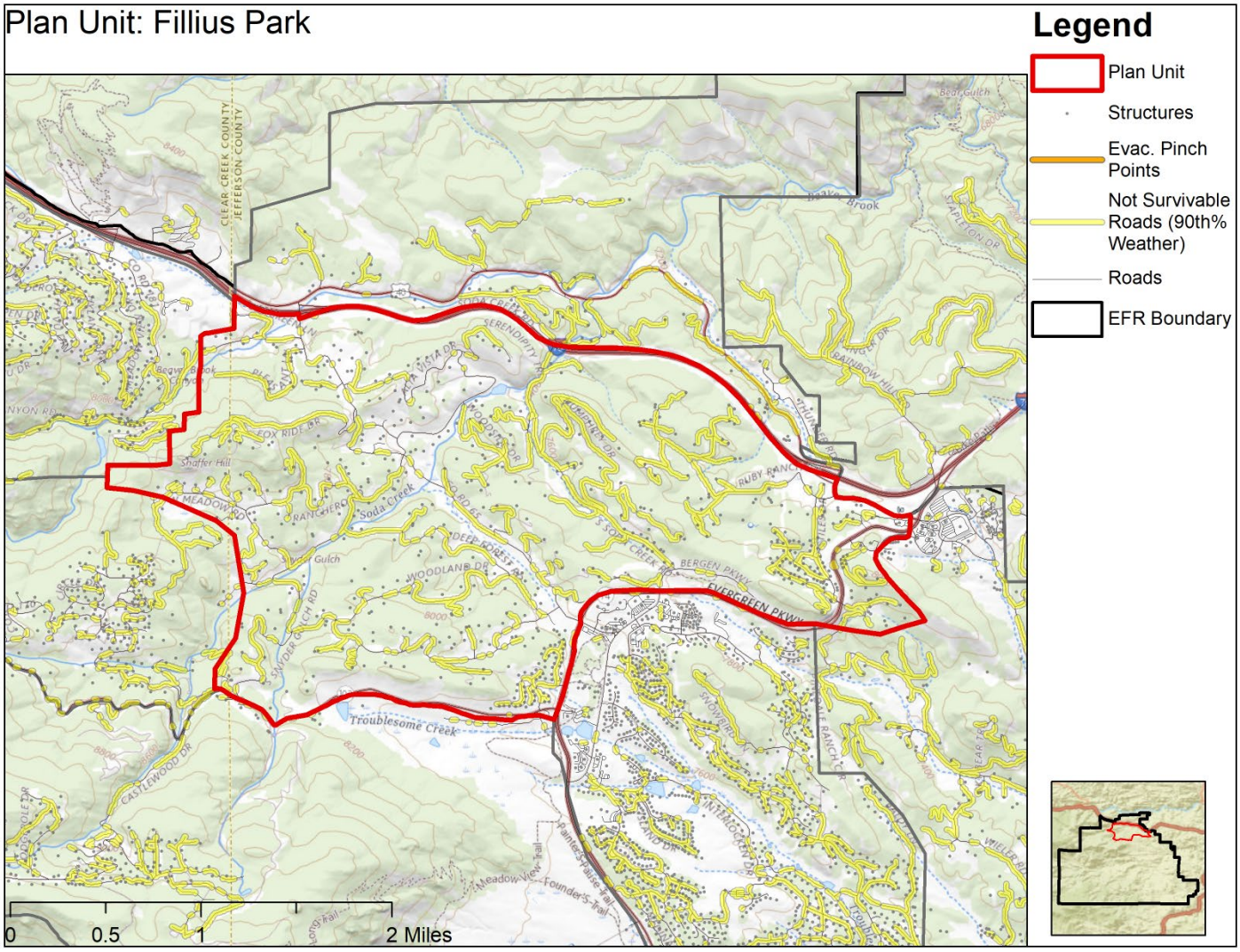
Evacuation Data Summary					
Number of Structures	Number of Cars	Average Time to Evacuate (min)	Median Time to Evacuate (min)	Minimum Time to Evacuate (min)	Maximum Time to Evacuate (min)
492	1184	39	39	32	50

Road access in Fillius Park is satisfactory: wide, paved roads with multiple points of ingress/egress. However, this neighborhood is filled with many long, narrow driveways with tight turnarounds. Adding or amending turnarounds allows for rapid response and improved apparatus mobility in emergency response situations. There are two distinct zones within this unit that diverge in housing construction and amount of wildfire mitigation.

One area is the denser neighborhoods closer to Evergreen Parkway where fuels are mixed conifer with higher housing density and smaller parcel size. Hydrants are obvious here which will aid firefighters, but housing construction is older, and more homes have flammable materials on or surrounding their structures. Most of these properties do have evidence of past and ongoing fuels reduction work but do not have sufficient tree density or roadway treatments.

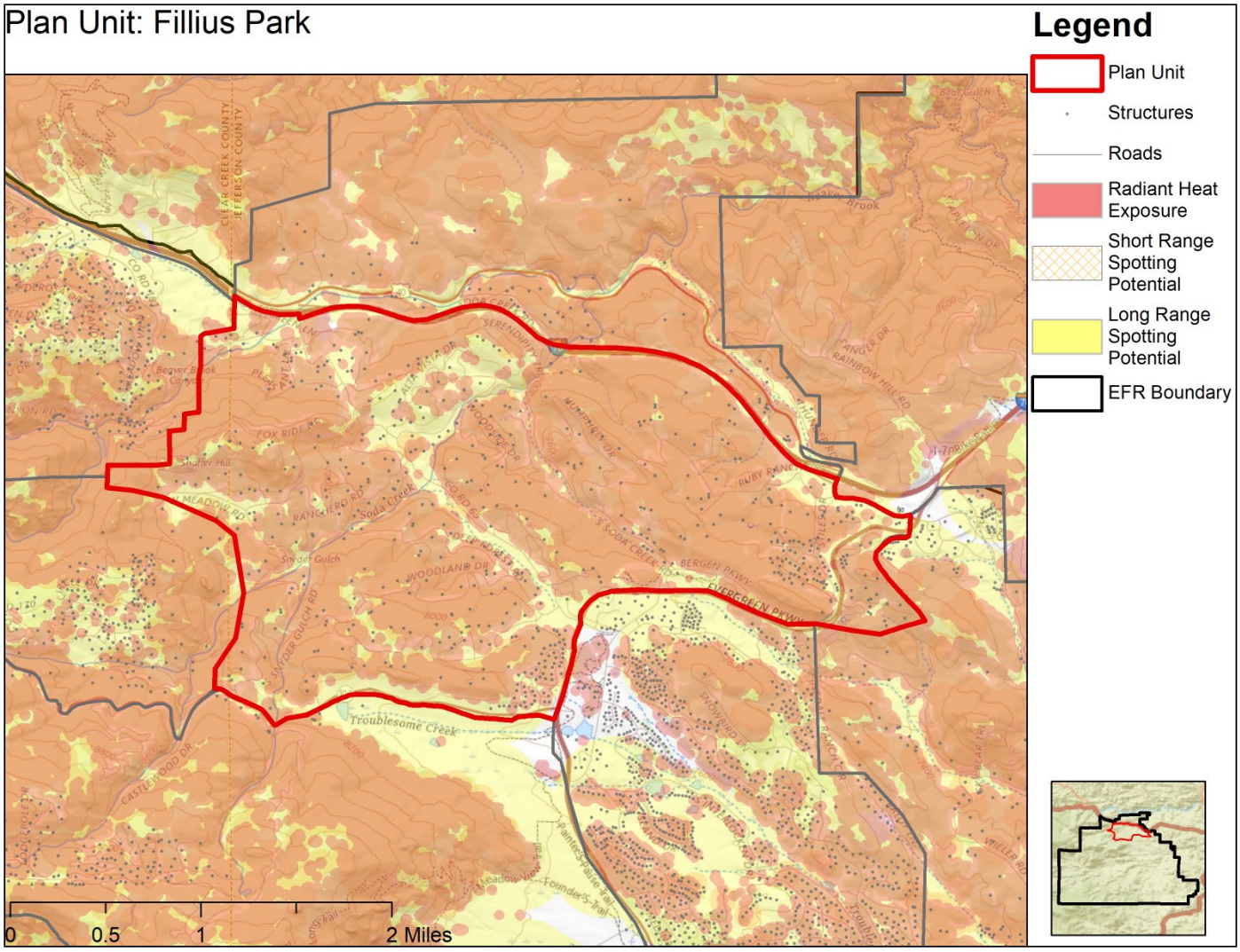
Recommendations for this zone include thinning to improve tree density to 15 feet canopy separation and removal of vegetation along roadways to provide safe evacuations.

The other community has larger parcel sizes with large, new homes. A large majority of the later properties have had significant fuels reduction work done, although they are currently at different stages. Residents should keep in mind the adequate defensible space standards set by Firewise. Parcels without current development are scattered throughout the unit with dense, unmodified wildland fuels.

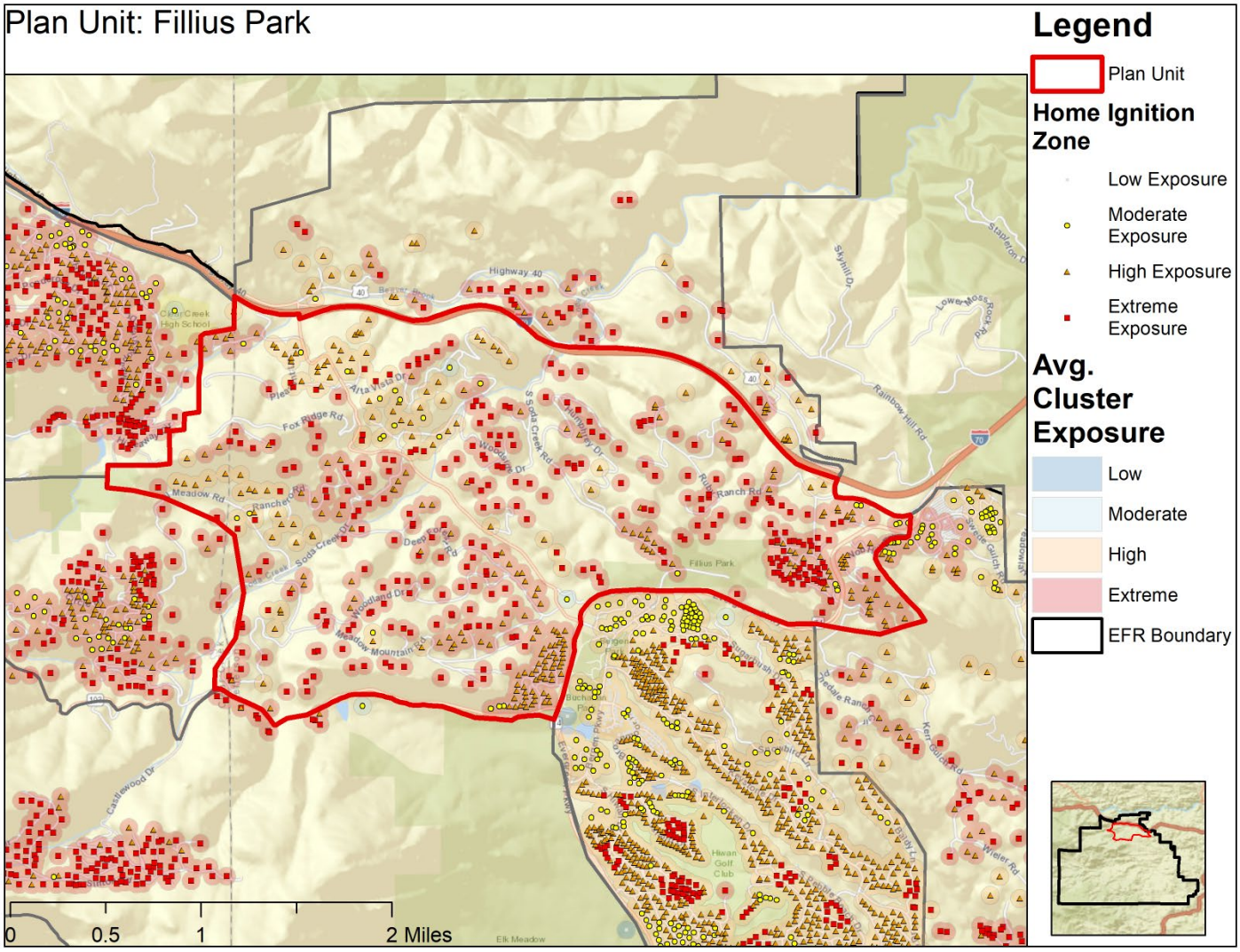


Roadways that overlap with predicted greater than 8 ft flame lengths under 90th percentile fire weather conditions are non-survivable. If the model indicates high evacuation congestion and non-survivable roadway are in the same place, there is a high risk to life safety. These sites are referred to as Evacuation Pinch Points. More information about this analysis can be found in the Roadway Survivability and Evacuation Sections of the CWPP document.

Fillius Park has no modeled Evacuation Pinch Points, but most roadways are not survivable during a wildfire. The two roadways to focus on should be major evacuation corridors of Soda Creek Road and CO Road 65. Beginning from these corridors and working outwards will deliver best evacuation improvements, even though plenty of Fillius Park's roadways need clearing. High congestion is likely to be experienced along Evergreen Parkway, so residents must plan well for evacuation.



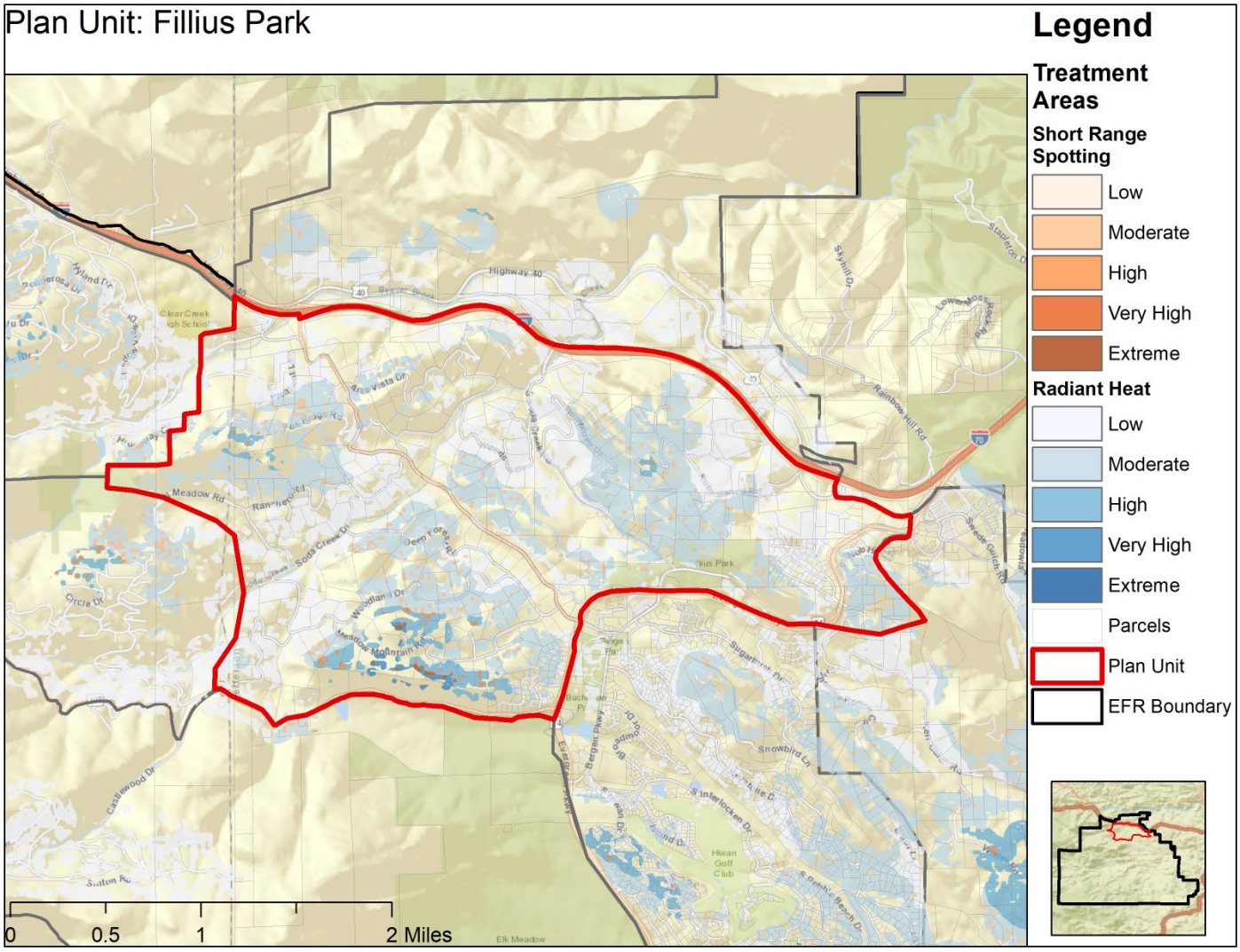
Radiant Heat exposure is designed to show neighborhoods where vegetation will create fire behavior extreme enough to ignite home materials. Short- and long- range spotting is when embers travel a distance from the fire and continue its spread away from the main fire –this can be a deluge of embers that 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.

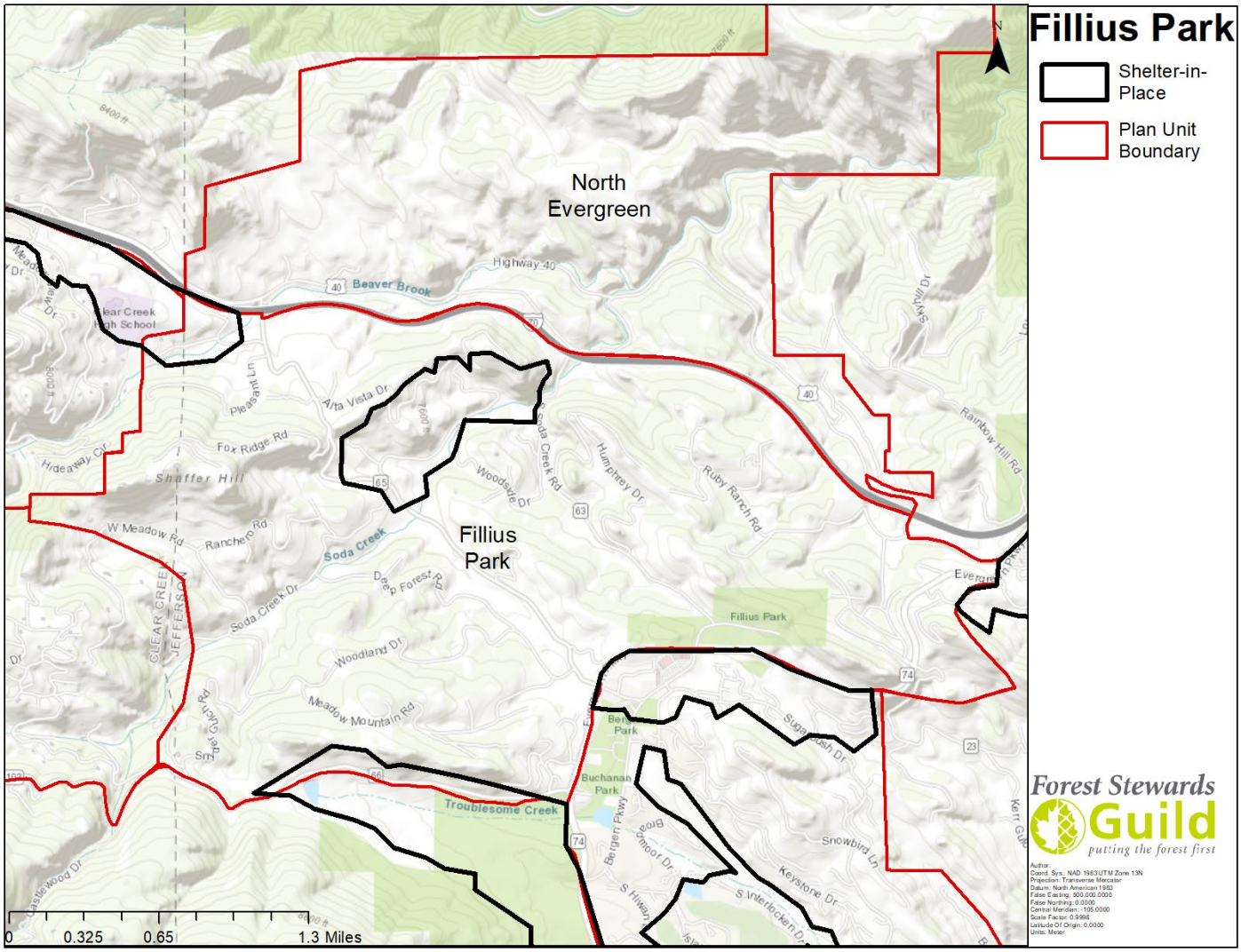
Fillius Park has extreme exposure structures along Pine Crest Drive and Between Meadow Mountain Road and Woodland Drive due to dense, north-facing wildland vegetation. Residences are more dispersed in Fillius Park than some other areas of Evergreen, which means there are many distinct clusters of exposure, some of which are extreme. Areas at extreme cluster risk must work together to mitigate and improve collective risk.



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.

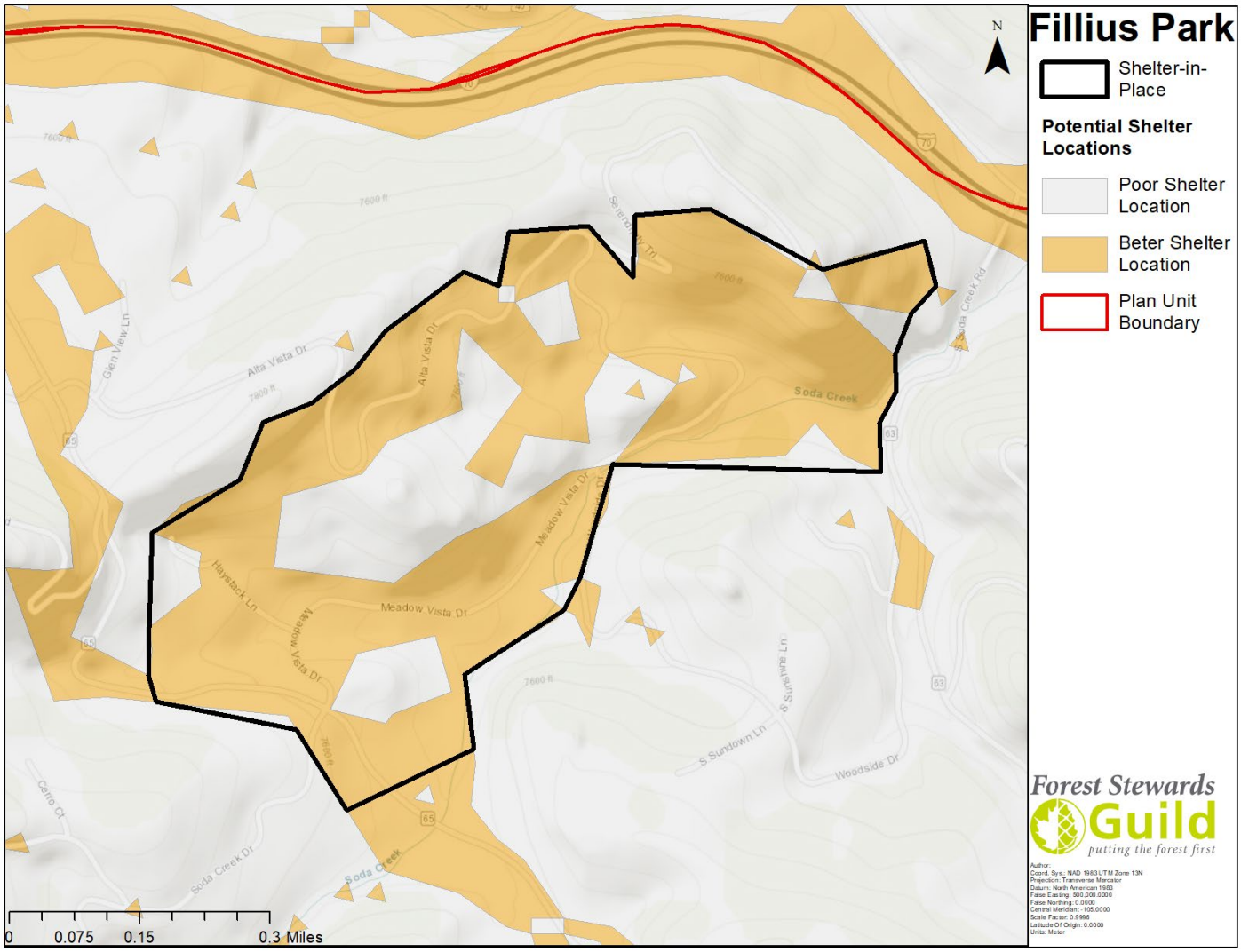
In Fillius Park, locations of highest risk and accessibility are north-facing slopes with un-mitigated fuels. The area with the most extreme fuels that we know has an impact on homes beyond that area is around Woodland Drive and Meadow Mountain Road. This area is highly accessible, making it a great candidate for fuel treatment projects.

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.

Between Meadow Vista Drive and Alta Vista Drive, a potential shelter location exists. In the center, too much wildland vegetation remains which would need to be mitigated before this location would be viable. This location could serve residents of this neighborhood, but care would have to be taken for slope and private access.



This is a close view of the proposed shelter location for Fillius Park. Central sections have too much vegetation and comprise the current status of this location.