# KITTREDGE– PLAN UNIT 12

## *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) |
| 699 | 1725 | 81 | 82 | 56 | 97 |

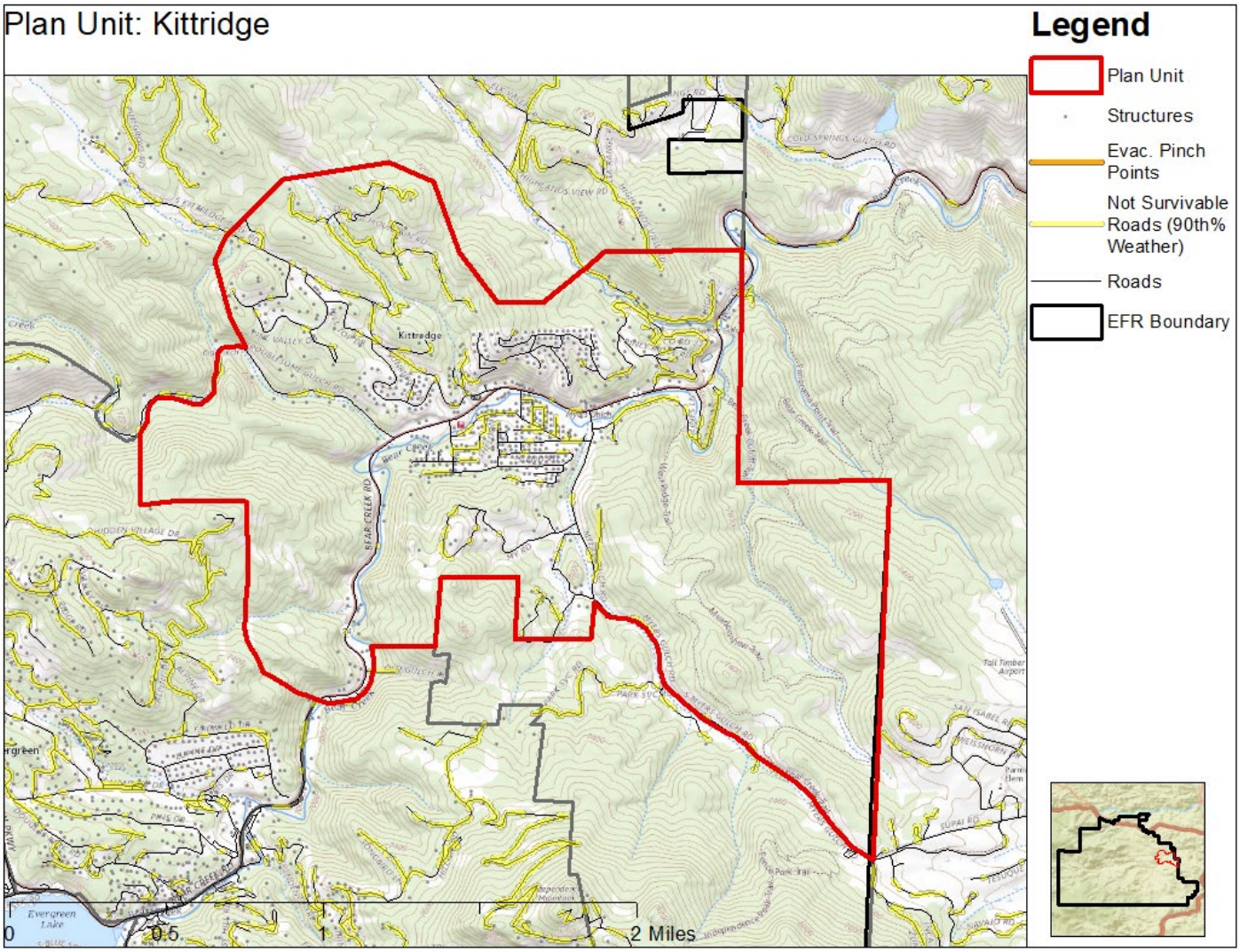
Kittredge has steeper southern facing slopes that are comprised of medium-sized, newer homes that generally have non-flammable construction. Homes are very tightly packed together on the hillside with steep slopes and a winding road network without adequate turnarounds. Hydrants are present through this subdivision. Within these neighborhoods, southern aspect fuels require light thinning and expansion of the treated area around the neighborhood is necessary to improve tactical wildland fire response. On the northern facing aspects, hazardous fuel conditions are dominant and expansive. Many north-aspect homes classify as not defensible with in the Firewise defensible space classification. North aspect timber within river corridor is late successional and should be heavily thinned.

Homes located mid-slope and on ridge tops have completed some mitigation work. Northern steep aspects and drainage bottom are choked with dense fuels with no obvious effort to mitigate. Windy steep roads, inadequate turnouts and

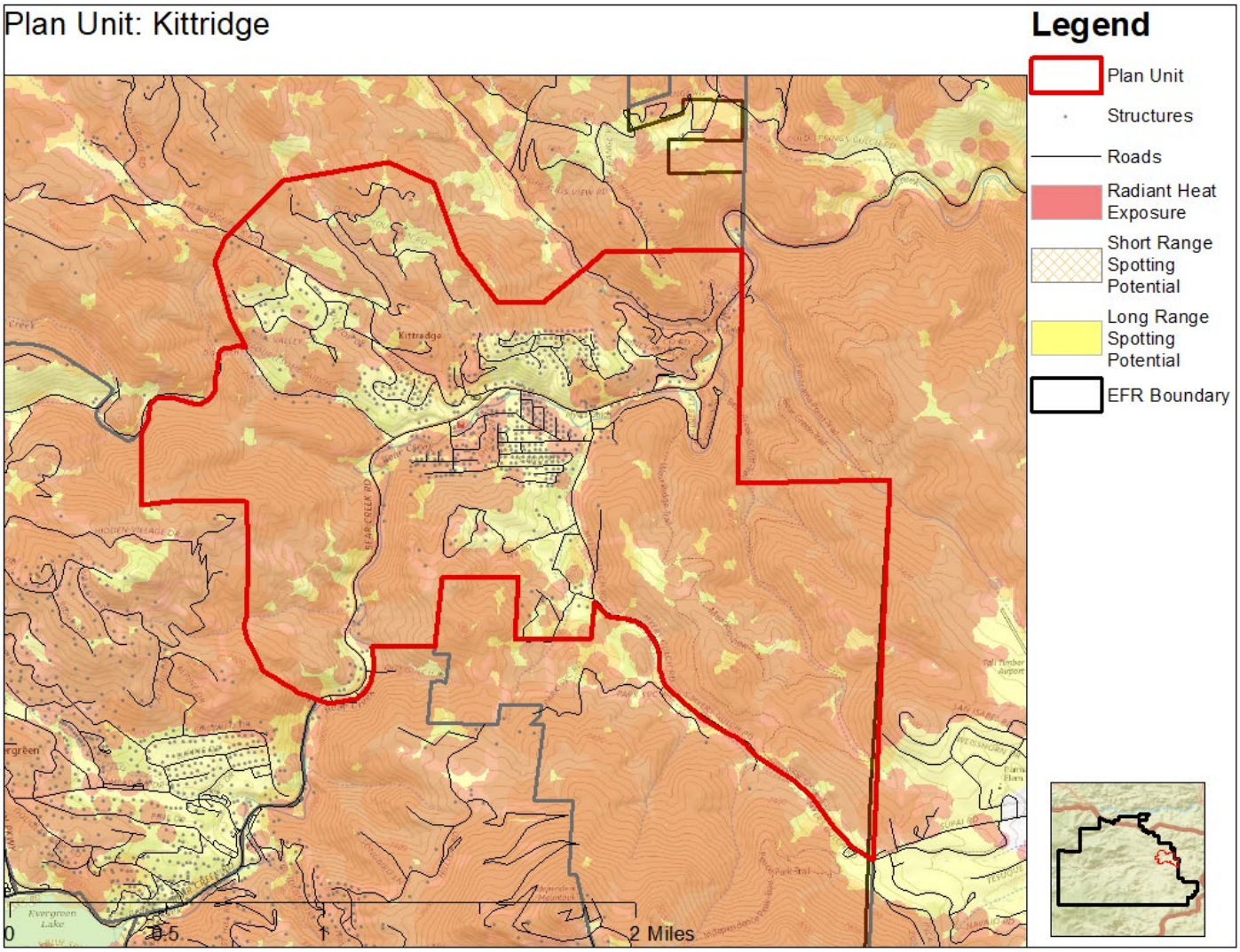
signage, tight driveways contribute to an area that will not be accessible to firefighting personnel during a wildfire. Power lines need additional mitigation cutting.

By Sweetbriar Trail and Snow Trillium Way, homes are much closer together. Ponderosa Pines in the Home Ignition Zone have been thinned where appropriate but should be amended to the Firewise recommended 15-foot crown spacing. To prevent structure, lose during a fire event large pockets of Ponderosa Pine should be thinned. Defensible space is adequate in some parts of Kittredge, but it is recommended that the defensible space in maintained and expanded along areas like Snowdrop Road. Houses located on the southern aspect have newer construction and good defensible space. Slopes are steep and seem to experience high winds but have lower fuel loading and road hydrants throughout.

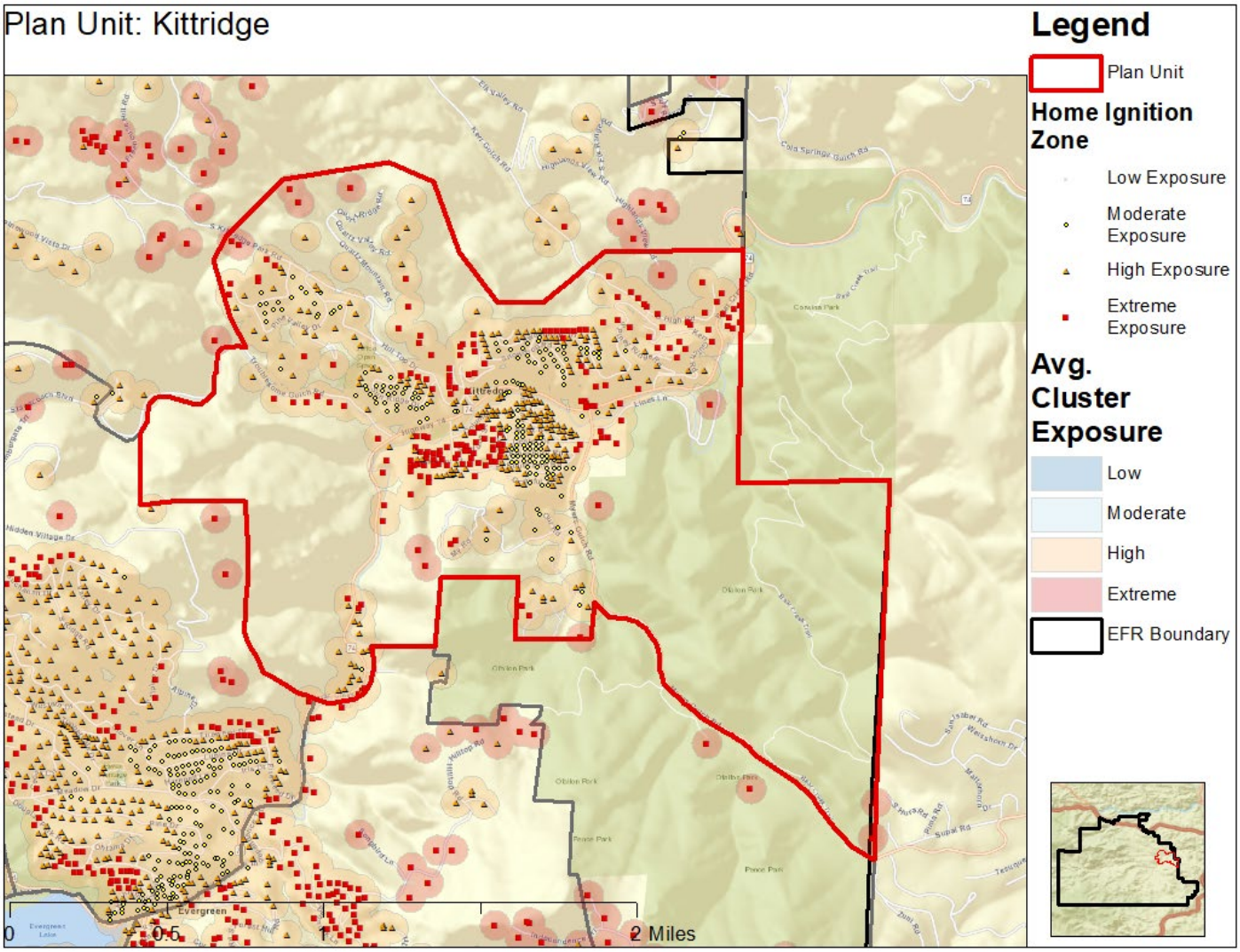
The part of Kittredge south of U.S. 74 from Welch Ave., South End Road, to Myers Gulch Road has thick north aspect timber. Homes are densely packed and mostly made of wood or other flammable products on narrow tight roads. This neighborhood has a high potential for structure to structure ignition which should be mitigated with a combination of home hardening improvements and surrounding fuels reduction. This area is considerably different than the other areas within this Plan Unit.




Kittredge has no modeled Evacuation Pinch Points. Most Major corridors in this Plan Unit are in good shape and residents should focus on mitigation of roadways in the heart of residential areas. Many roads are narrow with dense fuels surrounding and will be a challenge for all fire engines to navigate. Making these roadways survivable under 90$^{th}$ percentile fire weather conditions would change some of the risk to Kittredge.



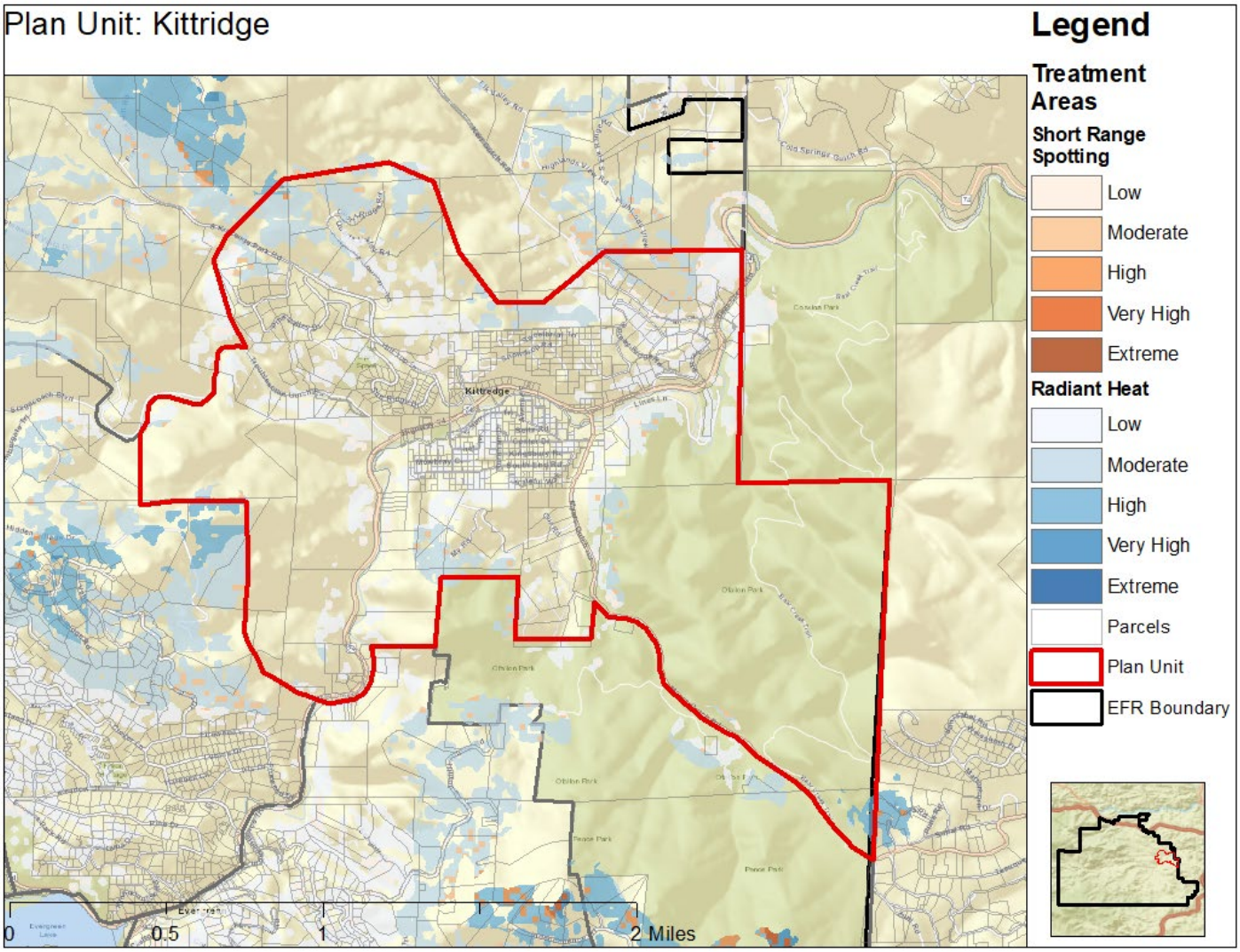

Radiant Heat exposure is designed to show neighborhoods where vegetation will create fire behavior extreme enough to ignite home materials. Short- and long- range spotting is when embers travel a distance from the fire and continue its spread away from the main fire –this can be a deluge of embers that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

Kittredge has some very distinct areas of extreme structure exposure with the average cluster exposure being high. Pockets of extreme structures should be first priority for home hardening improvements and defensible space work. Not only will those structures be safer, but all other residences within that cluster will risk less home to home ignition.




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.

The best accessible area with higher risk is the area surrounding My Road. Prominent drainages are located here, below most of Kittredge's population. The vegetation is too dense, and wildland mitigation work needs to be done to better protect the population that lives north.

## ***Shelter-in-place***

There is no current location to recommend shelter-in-place in this Plan Unit. All locations that show up on our model are located on roadways or steep slopes. It would be best to look to adjacent Plan Units for shelter locations, or to prioritize evacuation planning with all residents.