

James A. Neumann  
1700 Nipomo  
Los Osos, CA 93402

Roger Maggio, Fire Marshall  
San Luis Obispo City Fire Department  
2180 Santa Barbara  
San Luis Obispo, CA

February 27, 2020

Regarding: Westmont Subdivision Wildland Fire Protect Report

Dear Mr. Maggio,

I have been asked to review the above noted project and to make comments on the fire threat and to propose wildfire mitigation measures. I am very familiar with the area, as I was a CAL FIRE firefighter for 29 years, 12 of those years working at the adjacent CAL FIRE headquarters as a Battalion Chief.

### **Fire History**

Historically, wildland fires in San Luis Obispo County have burned thousands of acres and caused considerable property loss with an occasional life loss. Most of these large fires have occurred in the northern and central portions of the County. Past large fires that have threatened the City of San Luis Obispo include, the Los Pilitas Fire (75,000 acres) and Hwy. 41 Fire (45,000 acres). Every summer wildfires, usually quickly contained, occur in the Camp San Luis area just to the north of the proposed project site. In December of 2001 an approximately 400-acre fire burned on southeast aspect of Bishops Peak, just off O'Connor way. The fuels and topography were similar to the those found at the project site. The fire was quickly contained with no damage to the structures in the area.

### **Fire Factors**

Three factors contribute to wildland fire spread and threat:

- Topography: Canyons, hillsides, ridges and other "lay of the land" features will have a dramatic effect on fire spread. Aspect or orientation of the fuel beds also plays an important role, in general south facing slopes are subject to greater solar radiation, making them drier and thereby intensifying wildland fire behavior. Slope is a critical factor in fire spread, in general fire burns 16 times faster up hill.
- Weather: In this coastal region weather plays a key factor in the wildland fire potential. Rain fall occurs primarily between the months of November and April, and ranges between 20 to 25 inches per year. Summers are typically cool with fog and or high humidity the norm. Wind in the area, a key factor in spread, is quite predictable. It typically flows from the north, down the Chorro Valley, and is moisture laden due to the proximity of the ocean, minimizing the fire danger. The fall season will see dryer and warmer days, with occasional east to west wind flows (offshore). This, in combination of the lack of rainfall, will see the fire hazard threat increase. It should be noted that these winds do not have the intensity of the

Southern California “Santa Ana’s” and do not meet typically meet “Red Flag” warning criteria.

- Fuel: The arrangement of the fuel on the land is an important consideration. By breaking up or thinning fuel beds one can slow the rapid spread rates of wildfires. In addition, the removal of certain fuels in the horizontal plane can prevent fires from “laddering” into the tops of trees where it may burn hotter and be more difficult to contain.

### **Site Specifics**

- Topography: The project site is slightly sloped and located near the base of Bishops Peak on the north and northwest aspect. The topography does not negatively impact fire spread or fire protection efforts. In fact, it is favorable as fire, if not driven by wind, will burn upslope away from the site. The slope to the north, behind the project site, increases slightly but not enough to subject the mosaic of fuels to preheating.
- Weather: The generally mild coastal climate keeps the wildland fire threat to the site at a minimum. As noted above, the normal wind flow is from the north and it is cool and moisture laden, approaching the site flowing downhill. In the fall moderate east to west offshore wind flows do occasionally occur. The wind direction will then flow around Bishops Peak to the north away from the project site, down the Chorro Valley to the coast at Morro Bay.
- Fuels: There are very limited or no fire fuels on the east and south sides of the project, these areas being fully developed residential areas. The area to the west is vegetated in a riparian habit. The remaining north - northeast side is vegetated in light flashy fuels (grass) that has traditionally been grazed by either sheep or cattle. The pine trees surrounding the CAL FIRE station to the northeast are widely spaced and do not present a crowning potential, however, should they be ignited the ember cast would be of concern. The distance to the steeper portions of Bishops Peak where denser brush fields and an oak woodland fuel model is found is considerable; therefore, these fuels do not present a hazard to the project based on distance.

### **Mitigation Measures**

The proposed structures in this project are not adequately set back (100 feet) from unmanaged wildland vegetation and riparian areas.

The existing City requirements of fire sprinklers, non-combustible roofs, dual window glazing, fire department access, and water supply issues are sufficient.

The following additional requirements are necessary:

- Rain gutters, when not adequately maintained, will collect leaf material which becomes a receptive fuel bed for embers and sparks and can then transmit fire underneath the non-combustible roof materials. I recommend that rain gutters be protected by non-combustible leaf shields or not allowed.

- Record on all lots a deed restriction that allows for only non-combustible fences and decks are in the subdivision.
- Record on all lots a deed restriction that allows for fire resistant landscaping in the back yards of the subdivision.
- Require enclosed eaves on all structures within the subdivision
- Install fireproof vents on all structures (Fire-rated, flame and ember resistant)
- Working with the biologist, remove the non-native vegetation in the creek, riparian area, reducing the fuel load.
- Install a non-combustible wall (block or steel stud /stucco) wall 36 inches in height all around the northern perimeter of the subdivision. (Installed from the riparian area/ creek on the west side of the project terminating at the property line of the CAL FIRE Station. The purpose of this wall is to interrupt fire progression from the north onto the proposed lots without obstruct the very desirable view of the open space.

### **Conclusion**

The area fire history and weather patterns, indicate that should a fire occur it will either move slowly onto the proposed subdivision, pushed downhill through the light fuels by the prevailing north wind. Or, move away from the site, up the gentle slope, potential pushed along by an offshore wind flow. In either situation, the construction type and proposed mitigation measures will allow a wildfire fire to pass from or onto the site with little or no damage to the improvements.

While the unmanaged wildland fuels located on the north/northeast side of the project do present a threat, the combination of the favorable topography, the strong coastal weather influence, the current fire department standard for fire sprinklers, coupled with the required mitigation measures diminishes this hazard to an acceptable level.

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James A. Neumann