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RE: Valiano Specific Plan PDS2013-SP-13-001, PDS2013-GPA-13-001, PDS2013-REZ-13-001, PDS2013-TM-5575, PDS2014-MUP-14-019, PDS2013-STP-13-003, PDS2013-ER-13-08-002 (The Valiano project by Integral Communities located in Eden Valley and Harmony Grove)

These comments are provided on behalf of the Elfin Forest/Harmony Grove Town Council

Review of Fire Protection Plan (March 12, 2015) for Viliano development

The Fire Protection Plan (12 March 2015) (FPP) applied models of fire behavior (BehavePlus 5.0.5) to develop standards for the construction, setbacks, and treatment of fuels for the proposed Valiano development. It developed a "potential menu of requirements" and some recommended standards based on local fire codes and worst-case regional weather conditions, consistent with FPP content requirements and County guidelines. It complies with the requirement of local and state government with regard to a permit application for development to minimize structural ignitions within the new development, and for providing access by emergency responders to suppress a structural or vegetation fire within the development itself. It provides for 150-foot fuel treatment zones, based on estimated flame lengths from expected tall shrub fires.

However, it does not address the increased fire danger posed for the entire community outside the development. The FPP recognizes that the Valiano project will result in increased risk of fire (FPP p. 13), but only the protection of new Valiano homes is addressed. "As the density of structures and the number of residents in the [wildland-urban] interface increases, potential ignition sources will multiply and [potential for] a large wildfire occurrences increases." The Elfin Forest/Harmony Grove area is hazardous as a trap for fire, for smoke, and for impeded evacuation.

The Valiano proposed development is located in a Very High Fire Hazard Severity zone (see map; areas mapped as moderate hazard were probably assumed to be irrigated). The area has significant fire history. See the attached map of fires of at least 5 acres in size; this map does not include the approximately 24 vegetation fires per year extinguished by the San Marcos Fire Department (FPP page 13) and which were not large enough to become part of the CalFire database (see map). The fact that, before the Cocos fire, no "large fire" (FPP page 13) had been recorded in the vicinity in the past 50 years, is only evidence that the local vicinity is next in line to burn (see work of R. Minnich correlating fire hazard with vegetation stand age). Furthermore, the FPP mentions existing and past agricultural activity (irrigated groves) as the reason for the lack of recent fire history, but these groves are now dead and a fire hazard. This statement about lack of fire history does not acknowledge adjacent native vegetation in a mature condition, which indeed was set aflame in the Cocos fire. Please refer to the attached maps of the Cocos fire and fire history. All areas with native or unirrigated vegetation are expected to burn in the coming decades (See FPP map page 14).

The models applied in the FPP are for a uniform fire approaching a structure, and what can be done to mitigate possible fire damage by applying fire safe construction, buffered fuels, and firefighter access by optimizing response times and access for fire apparatus. The FPP applied regional worst-case fire

scenarios in compliance with County guidelines in order to estimate the benefit of buffer distances, fuel treatment, and firesafe construction in the development. The scenarios included a typical summer day, a Santa Ana condition, and a peak-gust Santa Ana condition. All assumed fuels composed of tall shrubs (the sh7 fuel model cited). The fire behavior calculations in the FPP added assumptions for more extreme fire conditions than those required by county FPP report content, and more extreme than those used by the San Marcos Fire Department in their Community Wildfire Protection Plan. While these are regionally important and facilitate a demonstration of the benefit of fuel treatment in protection of the new homes, the approach is not designed to evaluate the fire safety of the community at large. Moreover, the road width considerations are designed to provide access to firefighting equipment to fires within the development, but not to address the loss of firefighting capability during a regional fire siege as has occurred three times since 2003, nor address people needing shelter or to leave the area during dangerous fire conditions when suppression resources are unable to keep pace with eminent danger.

Problem fire scenarios described in the FPP were regional in nature and not local to the Valiano development. For example, two of the scenarios considered, Santa Ana and Santa Anas with extreme gusts, are with winds coming from the north and northeast. Santa Ana winds generally overtop the valley, and fire danger occurs with the collapse of the Santa Anas and upcanyon or southwest winds replace the northeast winds, such as when winds lay down and shift direction overnight. Since there is little fuel connectivity to the north and east of the valley; the FPP properly recognized that the primary problem posed by the Santa Anas would be embers flying into the valley from distant fires (up to two miles or more away). However, the fire planners did not consider the reality of the Santa Ana condition in the evening when winds shift to come from the south and west up canyon. This scenario can use the canyon systems and slopes as fuses to carry the fire back to towards the Elfin Forest/Harmony Grove area; moreover, this is where the most hazardous fuel condition exists. The models should represent where the fuels are located adjacent to the development, even under moderate conditions.

Here are some of the real problem scenarios for Elfin Forest/Harmony Grove: Another fire storm like in 2003, 2007, 2014, with suppression units deployed all over the county. People must evacuate or take shelter by themselves with suppression resources challenged and triaged across the region. Suppression resources are coming from national sources. Embers are entering the community from fires elsewhere burning to the north and northeast. Embers are landing on the planned open space and corridors of the development, or any burnable structure or dry landscape. In the evening when Santa Ana winds die down and become up-canyon winds, the community is threatened by fire from the south and southwest due to extremely dry vegetation and stretched suppression resources, with blocked exits.

The FPP recognized that the most hazardous vegetation loading on the west and southwest exposure of the development. The Cocos fire was fueled by this vegetation. While the Cocos fire is mentioned (it occurred about two years after the initial site visit by fire planners), it is not considered or modeled except for fuel treatment for new homes where the heavy fuels occurred. It was not an extreme Santa Ana fire. Cocos traveled from West to East. Winds were not extreme based on the closest RAWS (fire weather station) for which we could find a record (Valley Center RAWS 15 mph – this should be compared to records of the local fire department) (please refer to map). Relative humidity was extremely dry (4%). The Burn Index was high (131). The Energy Release Component (ERC) was a moderately high 75 (proportion live/dead fuel moisture by size class of fuel and a measure of the expected heat of flaming fire front). This ERC probably reflected the late spring time of year. Unseasonal

dryness and drought condition of vegetation plus low humidities resulted in hazardous fire conditions more than winds. The first evacuations were ordered a little over an hour into the fire, with continued expansion of evacuation orders for the next 24 hours or so. A little over 4 hours into the fire it was demonstrating, according to the After Action Report, "extreme fire behavior, spotting, and critical rate of spread." It was 500 acres at that time, and spreading by spotting and its own fire-generated weather system. Consequences: Burned 1,995 acres; 36 homes lost; $10MM in damages; **51,000 were called to evacuate;** 164 fire engines; 27 hand crews; 11 dozers; 15 aircraft; 1,300 personnel.

While the FPP mentions the critical fire scenario of embers spotting from fires distant from the proposed development; it does not carry this forward except to require ember-resistant construction features in the new homes, sprinklers on homes, and the removal of unirrigated vegetation. Embers are likely from chaparral, coastal sage, eucalyptus, and riparian vegetation two miles or more from development, or within the development and a fire start from an ember can be from anywhere in the valley.

Fire planners should:

- Consider whole valley community fire scenarios.
- An area/community fire plan should be completed with boundaries defined that are more logical for fire management than an individual cluster of homes.
- A community safety zone should be planned to take people and horses to as evacuation routes may be clogged.
- Model other problem fire scenarios including fine fuels (the areas mapped as non-native grass) for rate of spread in relation to people and evacuation. These were left out of the modeling because they do not relate to structural fire protection, for which the extreme heat and flame lengths of a shrub fire were used. Fine fuels (less than ¼ inch as in grassy vegetation) directly relate to the speed of a wildfire. Such fires spread faster than shrub fires, and are more likely to result in entrapment of firefighters or residents. Such fire scenarios should be used for evacuation and suppression planning.
- Represent the likelihood of embers from distant fires landing on dry vegetation and igniting fire from anywhere within the community.
- Analyze moderate to high hazard fires from the southwest (Escondido Creek) and west (dead avocado grove and adjacent chaparral – Cocos fire). The moderate condition fires are instructive due to connectivity of fuels in that direction, and there is a higher chance that preemptive fuel treatment and suppression planning could prevent a moderate fire from becoming catastrophic, and perhaps minimize the need to evacuate.
- Remove the consideration of irrigated agricultural groves from fuel model assumptions.
- Consider recommending community restrictiosn on days when Burn Indices or ERC's in a condition where almost anything will start a fire due to extreme dryness of fuels and low relative humidities, gusts (e.g. red flag days). No construction activity, no generator use in vegetation, no spark-producing equipment use in vegetation, no smoking, etc. There is a lost opportunity to predict problem fire scenarios based on RAWS indices, and reduce risk of ignitions by restricting use of outdoor ignitions.
- Provide for small/large animal evacuation.
- Analyze evacuation choke points mentioned by other reviewers.

- Consider the cumulative effects of increased fire ignition risk and on evacuation of this development, plus the 742 units at HG Village, plus other future development.

Other comments:

- Sprinklered homes only address spots that can be wetted. They do not address key fire issues for the community, only the house with the sprinklers. They do not address evacuation and burning vegetation, or smoke concentration in the valley.
- The 150 ft of fuel modification should not be waivered. An assumption of irrigated crops or landscapes should not be accepted when on adjacent and contiguous lands not controlled by the development. The Valiano project proposes encroachment into neighboring lands for fuel modification.
- The staffing of fire department, such as teaming with Rancho Santa Fe and mutual aid from Escondido fire departments, is again designed for structural fire protection such as for individual homes, and is not a community- or whole valley-level fire strategy for fires at the scale of the Cocos fire.
- The need for fire-barrier walls, impacts to vegetation and wildlife, wide roads are all out of character for current local residents of a rural community.
- No assumption of irrigation should play into the fire behavior models or in any of the fire planning.
- No California sagebrush, buckwheat, or black sage is permitted in fuel treatment zones. These are species the federally threatened California gnatcatcher depends on, so may need to consultation may be needed with USFWS on habitat loss. Fuel treatment should be limited to fall/winter due to breeding season restriction under the Migratory Bird Treaty Act.
- Distances to fire station not realistic as to drive time.
- Steep slopes will carry a fire rapidly uphill if started in EF/HG. This is liability to neighboring communities of a fire start within this development.
- • The report makes RPO findings for RPO wetland impacts. The second bullet on Page 30 doesn't make sense. Perhaps it says southeast corner of Neighborhood 2 by mistake, and should say northeast corner instead, but I am concerned that the finding was made to fit the project, rather than the project designed to meet the finding. The words "circulation element" which usually is a General Plan term to identify roads important to County infrastructure, is used in the justification. It may be used here to described project circulation and maybe the lack of capitalization is the way they are not claiming it as a General Plan mandated road.
- The project impacts the drainages and wetland areas with multiple road crossings to make the project work and get access to all flat areas. This may impact local corridors for wildlife.
- Habitat fragmentation, created by the multiple road crossing of drainages and riparian areas is not addressed.
- While the project IDs a cumulative impact to raptor foraging and grasshopper sparrow the project mitigates for project impacts alone which doesn't offset cumulative impacts. Typically mitigation in excess of project mitigation is required to offset cumulative effects.
- There is consideration of oak woodland buffers but they are not explicitly illustrated so one has to take it on faith the analysis is correct despite there being many places in Figure 11a and 11b where development is close to oak trees.

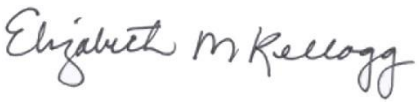
- Wetland mitigation is expected at the San Luis Rey Mitigation Bank in Oceanside. While the bank may have a service area that extends to this project, it is not in the same watershed, and not within t the unincorporated area. The County and other agencies may object to that location.

Summary:

- The fire mitigation proposed is completely about protection of structures of the new development, and of improving structural response time to five minutes by using a fire station in the HG Village for the new development. The FPP is a very site-specific plan. It does not address the increased danger to the surrounding community of fire ignitions due to the new numbers and density of people, only to the development itself. An area fire plan and community safety zone should be planned.
- Since the project would increase the risk of fire for the whole Elfin Forest/Harmony Grove community, as well set up a fire and smoke trap for residents due to impossible evacuation conditions, the project proponent should be required to employ more useful models for planning the fire protection of the whole valley rather than the new development alone. Such community protection is more strategic, and more likely to protect lives, animals, and property. It might use moderate -- high scenarios based on the where unirrigated vegetation currently exists (including the now-dry groves).
- The very real repeat of a fire like the 2014 Cocos fire should be analyzed for evacuation of people and animals.
- Part of the value to the rural community is the adjacency of native vegetation and wildlife; the need for fuel treatment and evacuation/shelter planning should be at a more consequential scale: that of the entire valley, rather than individual homes of the new development.
- Should add community-level fire predictive service for hazardous fire conditions such as Red Flag days when almost any ignition will start a spreading fire, and restrict certain activities during this time.
- Fire planners should be required to address problem fire scenarios for Elfin Forest/Harmony Grove as a whole, because the Valiano project in and of itself increases the risk of harm from fire for the entire valley.
- There is inadequate traffic planning, especially considering the scale of evacuation and sheltering required, as demonstrated by recent experience in the Cocos fire, during which **51,000 were called to evacuate** within about 24 hours of the fire start. The first evacuations were called for in about an hour from fire start. The cumulative impacts on fire safety and evacuation should be analyzed of the HGV development, the possible Citracado extension, with the most likely fire scenario coming from the south and west (if from the north/northeast, would most likely be embers with random start points). Consideration should be given that evacuation would be forced to Highway 78 via Country Club Road.
- There is inadequate consideration of the need to get large animals evacuated. Over 50% of existing 80 residences have horses and large animals which require tow vehicle/trailer combinations that can quickly clog escape routes and create dangerous congestion and route blockage.

If you have any questions, please contact me at liz@tierradata.com or 760-749-2247.

Sincerely,



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