November 13, 2018

Via Electronic Mail and Hand Delivery (with references)

San Diego County Board of Supervisors
Attn: David Hall
Clerk of the Board of Supervisors
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San Diego, CA 92101
David.hall@sdcounty.ca.gov

Re: Wildfire Impacts of Poorly-planned Development in San Diego County

Dear Supervisors:

These comments are submitted on behalf of the Center for Biological Diversity (Center) regarding the approval or pending approval of the following Projects:

1. Warner Ranch
2. Lilac Hills
3. Newland Sierra
4. Valiano
5. Harmony Grove Village South
6. Otay Ranch Village 14, 16, 19
7. Otay Ranch Village 13
8. Otay 250 Sunroad
9. Project Specific Requests (PSRs)

While the Center has many concerns regarding the environmental impacts and inadequate analyses provided in the Environmental Impact Reports of the proposed Projects, the purpose of this letter is to voice our concern regarding the public safety impacts of these poorly-planned, sprawl developments in fire-prone chaparral ecosystems in San Diego County. The Center reviewed the Environmental Impact Report of each Project to determine the cumulative impacts of these developments on wildfire risk and analyze the adequacy of proposed mitigation measures. Project footprints were compared to the fire history and fire threat of the region, as identified by state agencies (the Department of Forestry and Fire Protection [Cal Fire] and the California Public Utilities Commission [CPUC]), and the total number of housing units and potential residents for all the developments were calculated.

The proposed developments would be placed in natural landscapes dominated by fire-prone native chaparral and coastal sage scrub habitats that rely on wildfires to persist. Exurban developments like those proposed – with low to intermediate housing densities extending into chaparral and scrublands – have been shown to lead to frequent human-caused ignitions and fire

frequencies that exceed historical, natural levels in Southern California (Syphard et al. 2018). When fires occur too frequently, chaparral and sage scrub ecosystems are replaced by highly flammable non-native grasses, ultimately eliminating native habitats and increasing fire risks to communities.

By approving these sprawl Projects, the County will allow for the construction of almost 15,000 homes in natural areas dominated by chaparral and sage scrub habitat that regularly experience fire. The U.S. Census Bureau estimates that there are 2.87 persons per household in San Diego County, so together the developments would put more than 40,000 potential residents at risk. Placing more than 40,000 potential residents in fire-prone natural areas that are anticipated to burn without thoroughly considering the severe environmental, health, social, and economic consequences or requiring appropriate, science-based analyses regarding wildfire risk is reckless and a dereliction of your duty to the public. The developments will increase wildfire risks that could cause residents to lose their homes and the lives of loved ones and first responders. The increased fire risk could also worsen public health, destroy native ecosystems, and reduce biodiversity. These poorly-planned developments are not a solution to current housing needs; they will only lead to increased risk of harm and expenses for the County's residents.

Wildland fires are inevitable, natural processes in Southern California that are necessary and beneficial for chaparral and scrub ecosystems. The Center urges the County to protect human lives, property, and native biodiversity, by reforming growth strategies to focus on avoiding the placement of developments in high fire threat areas. Existing homes in fire-risk areas should be incentivized to complete retrofits with fire-resistant construction, appropriate defensible space, and homeowner fire safety education. Urban planning and design should focus on infill development in urban core areas, where wildfire threat is lower and people have access to jobs, public transit, and community. We can no longer dismiss California's natural fire regime and the direct relationship between urban sprawl and deadly wildfires. The County needs to stop approving development in high wildfire threat areas to keep its residents healthy and safe and to protect native biodiversity.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1 million members and online activists throughout California and the United Sates. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life in Southern California, including San Diego County.

I. Developments in Fire-prone Natural Areas That Have Historically Burned Have the Highest Chances of Burning

Approving these Projects will allow for the construction of almost 15,000 homes in areas that Cal Fire has identified as having extreme fire threat to people and the CPUC has determined to have elevated and/or extreme fire threat. Almost all the proposed Projects are located in or adjacent to natural areas that have evolved with fire historically and have burned multiple times in the last 140 years. In fact, 20 fires have burned in areas of the Otay Ranch Villages since

1910, with the most recent and largest fire in the area occurring in 2007 (the Harris 2 Fire, ~91,000 acres burned).

Between the years 2000 and 2011, nearly 1,000 homes per year were destroyed by wildfires in Southern California (Syphard et al. 2012), and those numbers appear to be rising, considering last year's fires burned over 10,000 structures and this year's Camp Fire in Butte County and Woolsey Fire in Ventura County have destroyed almost 7,000 homes. Multiple studies indicate that developments with low/intermediate-density clusters surrounded by fire-dependent vegetation (*i.e.,* chaparral) in areas with a history of fires – like those proposed by the County – have the highest chances of burning (Syphard et al. 2012; Syphard et al. 2013). By approving these Projects, the San Diego Board of Supervisors will be directly endangering the lives of more than 40,000 people by placing homes in the exact arrangement and placement for maximum fire susceptibility in areas where fires will inevitably burn.

II. Development in Fire-prone Areas Will Lead to More Human Ignitions and Too Frequent Fire in Southern California Shrublands

In Southern California, sprawl developments with low/intermediate densities extending into chaparral and sage scrub habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, like arson, improperly disposed cigarette butts, debris burning, fireworks, campfires, or sparks from cars or equipment (Keeley et al. 1999; Keeley and Fotheringham 2003; Syphard et al. 2007; Syphard et al. 2012; Bistinas et al. 2013; Balch et al. 2017; Radeloff et al. 2018). Human-caused fires account for 95% of all fires in Southern California (Syphard et al. 2013), and homes filled with petroleum-based products, such as wood interiors, paint, and furniture, provide additional fuel for the fires to burn longer and spread farther (Keeley et al. 2007). The most numerous and largest fires in San Diego County have been caused by equipment and powerlines in the wildland-urban interface, where housing density is low to intermediate (Syphard and Keeley 2015), and leapfrog developments have been found to have the highest predicted fire risk in the County (Syphard et al. 2013). With the increased ignition risk that comes with these poorly planned developments in high fire-prone areas, the County will only be fueling more frequent, larger, and more destructive wildfires.

The proposed developments would lead to a dangerous feedback loop of deadly fires and habitat destruction. Most would be placed in areas dominated by chaparral and sage scrub, native California habitats that rely on wildfires to persist. These habitats are adapted to infrequent (every 30 to 150 years), large, high-intensity crown fire regimes (Pyne et al. 1996; Keeley and Fotheringham 2001), and if these regimes are disrupted, the habitats become degraded (Keeley 2005, 2006a,b; Syphard et al. 2018). When fires occur too frequently, type conversion occurs and the native shrublands are replaced by non-native grasses and forbs that burn more frequently and more easily, ultimately eliminating native habitats and biodiversity while increasing fire threat over time (Keeley 2005, 2006a,b; Syphard et al. 2009; Safford and Van de Water 2014; Syphard et al. 2018). Thus, placing developments in these high fire-prone areas will lead to more frequent fires that will threaten the lives of more than 40,000 people who will live in or near these areas while degrading the health and biodiversity of Southern California's special ecosystems.

III. Public Safety in These New Development Areas Cannot be Guaranteed

Public safety issues are exacerbated by unreliable infrastructure to accommodate the consequences of more fires. Evacuating from wildfires can be life-threatening and having safety plans in place beforehand is not always enough. For example, while having warning systems and evacuation routes in place are important for fire preparedness and fire safety (e.g., County of San Diego, 2018, Lilac Hills Ranch App J Fire Protection Plan) their functionality when a fire occurs is not guaranteed. Wildfires may ignite with little or no notice, and warning systems can be slow and ineffective at reaching all residents in harm's way. This was the case in last year's Tubbs Fire in Sonoma County and Thomas Fire in Santa Barbara and Ventura Counties, which led to more than 40 deaths and almost $12 billion in property damage (St. John 2017; Lundstrom et al. 2017).

Instead of placing people and homes in places where residents will have to rely on potentially faulty warning systems and evacuation routes to escape from fires, the County should build homes in areas where fire is least likely to occur, such as in infill development in urban core areas. By avoiding placing developments in fire prone natural areas, the County could reduce the risk of fire and more effectively protect lives, property, and the natural environment.

IV. The Developments Contain Insufficient Fire Safety Measures and Fire Protection Plans

Despite the glaring wildfire issues of placing developments in fire-prone ecosystems, the County remains complacent with the developers' fire protection plans that rely on fuel modification zones that are counterproductive and guidelines that are inadequate (*e.g.*, County of San Diego, 2018, Harmony Grove Village South FEIR Appendix L Fire Protection Plan). Reliance on general guidelines and firesafe building/planning codes without sufficiently analyzing site-specific conditions or strategically implementing precautionary fire safety measures can lead to a false sense of safety and preparedness. Wildfire risk cannot be addressed with a one-size-fits-all solution.

Large fires in Southern California landscapes dominated by chaparral and shrublands are often associated with foehn winds (strong, warm, dry, and often downslope winds), such as the Santa Ana winds (Keeley 2006b). The region's largest fires have historically occurred in known wind corridors (Moritz et al. 2010). And in severe weather conditions, wind-driven fires can spread quickly – they can cover 10,000 hectares in one to two days (that's an area the size of Escondido, CA), as embers are blown ahead of the fires and towards adjacent fuels (*e.g.*, flammable vegetation, structures) (Syphard et al. 2011).

The primary approach to mitigating fire risk is through home safety measures to make structures less flammable and vegetation reduction in the defensible space immediately surrounding homes. However, a common misconception regarding defensible space in chaparral and scrub habitats immediately surrounding structures is that the wider the fuel modification zone the more protected the structures are from wildfires. For example, the Newland Sierra Project states that they plan to implement a 250-foot fuel modification zone to reduce fire risk, which is more than double the 100-foot fuel modification zone required by state law (County of

San Diego, 2018 Newland Sierra FEIR, Appendix N Fire Protection Plan). In the September 26, 2018 public hearing, the Board of Supervisors was satisfied that the project was doing as much as they could to mitigate the threat of fire. In addition, some local ordinances require homeowners to clear 300 feet or more of defensible space, and there have been reports of some people being unable to obtain fire insurance without that 300-foot zone (Syphard et al. 2014). However, these actions and guidelines neglect science and may not be appropriate for all regions or habitat types, and they could be dangerously misleading.

In a study conducted in San Diego County, the most effective vegetation treatment distances ranged between 16 to 58 feet from the home (Syphard et al. 2014). Fuel reduction treatments more than 100 feet from structures did not provide additional protection, even for structures situated on steep slopes (Syphard et al. 2014). And because continued disturbance can lead to type conversion from native shrublands to nonnative grasslands that can burn more quickly and easily, extended fuel modification zones could lead to further habitat degradation and increased fire threat (Merriam 2006; Keeley 2006a,b). Thus, asserting that a fuel modification zone beyond the 100-foot requirement provides additional mitigation and improved fire safety in a high fire-prone area gives a false sense of security. The best way to improve fire safety is to proactively reduce exposure to wildfire risk by avoiding the placement of homes in fire-dependent ecosystems (Syphard et al. 2014).

Another critical component of protecting lives and property from wildfires is fire hazard and fire safety education for homeowners in or near fire hazard areas. Structures with fire-resistant features, such as ember-resistant vents, fire-resistant roofs, and surrounding defensible space, have been shown to reduce the risk of destruction due to wildfires (Quarles et al. 2010; Syphard et al. 2014). However, simply stating that the structures are built to fire code does not guarantee that fire threat will be reduced. Proper maintenance and upkeep of the structures themselves as well as the immediate surroundings (*e.g*., removing leaf litter from gutters and roofing; removing flammable materials like wood fences, overhanging tree branches, or trash cans away from the home) are required to reduce the chances of the structures burning. In addition, external sprinklers with an independent water source would reduce flammability of structures, yet none of the proposed developments include this feature on their structures. And while these fire-resistant structural features are important for fire safety and homeowners should be properly informed, the focus should be on retrofitting existing homes and structures in or near high fire-prone areas with these features, not putting these features on new homes that should not be placed in high fire-prone areas in the first place.

As noted above, the number of homes being destroyed by fires in Southern California are starting to become thousands per year. The arrangement and location of developments have been found to be the main drivers of fire susceptibility, with the highest chances of burning in developments like those proposed by the County – low/intermediate-density clusters surrounded by wildland vegetation in areas with a history of fires (Syphard et al. 2012; Syphard et al. 2013). Thus, the best way to make new construction as fire safe as possible is to avoid placing them in high fire-prone areas (Pincetl et al. 2008; Syphard et al. 2012; Syphard et al. 2013; Moritz et al. 2014). Land-use planning must be reformed to more appropriately consider wildfire risk management.

V. Increased Human Ignitions Will Increase Unnatural Levels of Smoke.

Smoke is a product of the natural and necessary wildfire regime in chaparral and sage scrub ecosystems. However, new leapfrog developments situated in fire-prone chaparral and sage scrub habitats, like those at issue here, will lead to increased human ignitions that will produce increased levels of smoke beyond what is natural. This can lead to harmful public health impacts due to increased air pollution not only from burned vegetation, but also from burned homes, commercial buildings, cars, etc. Buildings and structures often contain plastic materials, metals, and various stored chemicals that release toxic chemicals when burned, such as pesticides, solvents, paints, and cleaning solutions (Weinhold 2011). Thus, human-caused wildfires at the urban wildland interface that burn through developments, as is becoming more common with housing extending into fire-prone chaparral and shrublands, increase the frequency and toxicity of smoke exposure to communities in and downwind of the fires.

Increased fire frequency due to human activity and ill-placed developments will lead to increased occurrences of poor air quality from smoke, which can have public health effects. Hospital visits for respiratory symptoms (*e.g.*, asthma, acute bronchitis, pneumonia, or chronic obstructive pulmonary disease) have been shown to increase during and/or after fire events (Kunzli et al. 2006; Viswanathan et al. 2006; Delfino et al. 2009; Rappold et al. 2012; Liu et al. 2015; Reid et al. 2016). In particular, a study assessing the health impacts of the 2003 Cedar Fire in San Diego County, which burned an area of about 280,000 acres that consisted of chaparral and scrub-dominated landscapes and almost 3,000 structures, there were increases in hospital emergency room visits for asthma, respiratory problems, eye irritation, and smoke inhalation (Viswanathan et al. 2006). The proposed Projects do not thoroughly consider the health impacts that communities will have to suffer if developments are placed in fire-prone shrublands where they will disrupt the natural fire regime and increase fire frequency and smoke exposure. The County needs to consider these public health impacts and refrain from placing poorly-planned, leapfrog developments in landscapes dominated by fire-prone chaparral and shrublands.

VI. The Direct Economic Impacts of Wildfires Are Worsening

The direct economic impacts of human-caused wildfires are staggering. The cost of fire suppression and property damage from wildfires in California is over $18 billion since 2010, which, after adjusting for inflation, is double the cost from the previous three decades combined (Figure 1). Placing more housing in fire-prone natural areas has led to more costly fires, and these patterns will continue should the proposed Projects be approved.

Who shoulders these costs? California and federal residents end up paying in the form of fire insurance premiums and taxes that support Cal Fire and federal government subsidies and grants for homes in high risk areas. And these costs do not include other indirect/hidden costs associated with wildfires, such as the costs of doctors' appointments, medication, sick days taken from places of work, funerals, etc. As the costs of housing in California continues to increase, these costs will also continue to rise, further exacerbating the affordable housing crisis.

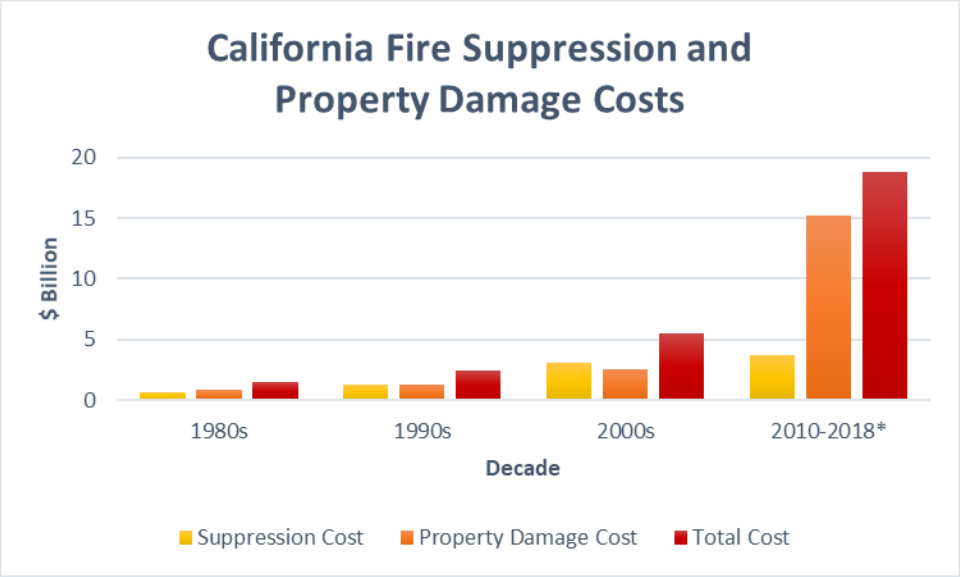

Figure 1. Costs of Fire Suppression and Property Damage by Decade. *Property damage cost data include 2017 insurance claim estimates and no 2018 costs. Data Source: Cal Fire and the Bureau of Labor Statistics.

VII. Conclusion

San Diego County can no longer afford to recklessly neglect the science of wildfires and wildfire risk in Southern California. The devastating environmental, health, social, and economic costs of poorly-planned, leapfrog developments in areas that *will* burn are too great. The Center urges the County to avoid placing developments like Newland Sierra and the Otay Ranch Villages in high fire-prone natural areas. Instead, the County should focus on creating communities in areas with lower wildfire risk, such as in infill development in urban core areas, where people will have access to jobs, public transit, and amenities. In addition, the County should prioritize retrofitting older homes and structures in the wildland-urban interface with fire resistant features, like ember-resistant vents, fire-resistant roofs, external sprinklers, and appropriate defensible space/fuel modification zones. Land-use planning must be reformed to more appropriately consider wildfire risk management and protect human lives, property, and the native biodiversity of Southern California's unique landscape.

Any focus on forest management to address California's fires is profoundly misguided. It makes no sense to complain about, and spend millions of dollars on, logging forests that are far away from communities when the actual fire threat facing thousands of families results primarily from poor planning in the interface adjacent to homes and businesses. Moreover, most of 2018's most extensive fires in California were not even in forests, and instead primarily burned grasslands and chaparral. We must also be honest about the conditions that are actually driving the fires – human ignitions, high winds, drought, and climate-change leading to hotter, drier conditions. Forest management is simply a scapegoat to ignore the difficult problems that need to be addressed, like poor land-use planning and climate change. California needs to stop allowing the building of flammable homes in flammable terrain, and fight climate change, instead of blaming the condition of California's forests for these fires.

Thank you for the opportunity to submit comments on these proposed Projects. We look forward to working to assure that the County forges responsible, fire safe planning to safeguard the health and safety of its residents and the natural environment. Please do not hesitate to contact the Center with any questions at the email listed below.

Sincerely,

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(Attached on CD)

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