April 23, 2024

Sent via email

City Council of the City of Orange
300 E. Chapman Ave
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Re: Subsequent EIR for Orange Heights/Santiago Hills II Project (SCH # 2000041122)

Dear City of Orange Councilmembers:

We are writing on behalf of the undersigned conservation organizations to urge you to require preparation of a subsequent environmental impact report ("EIR") for the Orange Heights/Santiago Hills II Project ("Project") prior to allowing any ground-disturbing activities on the Project site. The Project was approved nearly two decades ago before Southern California mountain lions were threatened with extinction and before studies on their plight were available. New information which did not exist when the EIR was approved in 2005 has become available demonstrating that the mountain lion populations in the Project area are facing an extinction vortex driven by habitat fragmentation, vehicle strikes, rodenticide poisoning, disease, and other causes. The Project will further degrade critical connectivity for the species and drive these vulnerable populations closer to extinction.

The EIR for the Project was certified in 2005, and contains no analysis of the Project's impacts on mountain lions. Nor does it consider the array of studies demonstrating the plight of mountain lions in the Project area and the critical need to avoid further degradation of habitat and connectivity. Moreover, the EIR does not account for (nor could it have accounted for) the "new normal" of destructive wildfire in Southern California driven by climate change and increased development in the wildland-urban interface, nor does it account for scientific studies showing that development like the Project increases wildfire risk, endangers new and existing residents, and contributes to a feedback loop of increased wildfire and loss of biodiversity.

A subsequent EIR will allow study of how the Project will impact vulnerable mountain lion populations, which are now provisionally listed under the California Endangered Species Act (“CESA”). A subsequent EIR also will allow for consideration and adoption of mitigation measures and alternatives such as avoiding important wildlife connectivity areas and restoring and enhancing crossings in the Project area. In addition, a subsequent EIR that fully analyzes the wildfire risk of the Project is necessary to allow for informed decision-making, including whether large-scale development in this location is in the public interest.

A. *Background on the Conservation Organizations*

The Center for Biological Diversity (“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 1.7 million members and online activists throughout California and the United States. The Center and its members have worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for people in Southern California.

The Sierra Club is an environmental organization with chapters in all 50 U.S. states, Washington D.C., and Puerto Rico. The Sierra Club’s mission is to explore, enjoy, and protect the wild places of the earth; practice and promote the responsible use of the earth's ecosystems and resources; educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives. The Sierra Club works with other partner organizations, nonprofits, and campaigns to build a diverse, inclusive movement that protect wildlife and wild places, ensure clean air and water for all, and fight the devastating effects of climate change.

Hills For Everyone’s mission is to protect, preserve and restore the environmental resources and natural environs of the Puente-Chino Hills and surrounding areas for the enjoyment of current and succeeding generations and to initiate, sponsor, promote, organize and carry out plans, programs, and activities that will tend to further these ends.

The Friends of Coyote Hills is an award-winning group of volunteers from Fullerton and its surrounding communities united on the mission to save all of West Coyote Hills as a park and nature preserve for now and the future.

Naturalist For You (NFY) is an environmental education non-profit offering a wide range of natural and cultural history activities, including guided nature walks, presentations, workshops, classes, field trips, community events, retreats and volunteer opportunities in Southern California and beyond. NFY’s mission is to connect everyone to local wilderness.

No Orange Heights (NOH) is an awareness campaign voluntarily operated by a team of concerned citizens to preserve 400 acres of critical wildlife habitat in Orange foothills, between Irvine Regional Park & Peters Canyon Regional Park. NOH is a project of NFY.

B. *New Information Regarding the Plight of Southern California Mountain Lions Has Emerged Since the EIR Was Certified in 2005.*

1. CEQA and CESA Requires Analysis and Mitigation for Impacts to Mountain Lions.

Relevant authorities require preparation of a subsequent EIR for this Project. The California Environmental Quality Act ("CEQA") states that a subsequent or supplemental EIR may be required when either (1) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report or (2) new information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available. (Pub. Res. Code § 21166.)

New information that mountain lions in the Project area are facing an extinction vortex fits within both of these categories. Mountain lions in the Project area are part of the Santa Ana Mountains ("SAM") population, which were granted "candidacy status" in April 2020 under the California Endangered Species Act ("CESA") (see Yap et al., 2019), such that they are afforded the same protections as other CESA-listed species. CEQA requires a "mandatory finding of significance" when a project has the potential to impact a CESA-listed species. (CEQA Guidelines § 15065(a)(1); *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 792 fn. 12.) And such a finding triggers a duty to consider and adopt all feasible alternatives or mitigation measures to reduce such impacts. (Pub. Res. Code § 21002.) Moreover, under CESA, the City may not approve projects that could jeopardize the continued existence of these populations or result in destruction of essential habitat (Fish & Game Code § 2053(a)) and agencies must require that appropriate mitigation measures be implemented for projects that could destroy mountain lion habitat or impair connectivity (Fish & Game Code § 2054). The 2005 EIR does not address these issues, and simply contains the bare and unsubstantiated conclusion that impacts to mountain lions would not be significant. (EIR at 3D-48.) The EIR also states that mountain lions are not state-listed, which is incorrect as of 2020 given their provisional listing under CESA. (EIR at 3D-24.)

2. Recent Scientific Studies Reveal That Mountain Lions in the Project Area are Threatened and the Project will Further Harm This Population.

By way of background, continued habitat loss and fragmentation has led to 10 genetically isolated populations within California (Gustafson et al., 2018, 2021). There are six identified mountain lion populations in the proposed Southern California and Central Coast Evolutionarily Significant Unit ("ESU"). Several populations within the proposed ESU, including the SAM population, are facing an extinction vortex due to high levels of inbreeding, low genetic diversity, high human-caused mortality rates from car strikes on roads, depredation kills, rodenticide poisoning, poaching, disease, and increased human-caused wildfires (Benson et al., 2016, 2019; Ernest et al., 2003, 2014; Gustafson et al., 2018, 2021; Riley et al., 2014; Vickers et al., 2015). This is detailed in the Center's petition to the California Fish and Game Commission to protect Southern California and Central Coast mountain lions under the California Endangered Species Act (Yap et al., 2019).

The Project area is located in the SAM, where there is significant evidence that mountain lions may become locally extinct if we do nothing to protect remaining habitat and improve connectivity. SAM mountain lions have the lowest genetic diversity documented, aside from endangered Florida panthers (Ernest et al., 2014), and they have an effective population size of just 3.5 (Gustafson et al., 2021). An effective population size of 50 is assumed to be sufficient to prevent inbreeding depression over five generations, while an effective population size of 500 is considered sufficient to retain evolutionary potential in perpetuity (Frankham et al., 2014; Traill et al., 2010). The SAM population's very low genetic diversity and effective population size indicate it is at risk of becoming extirpated. In fact, (Benson et al., 2019) predicted that if inbreeding worsens and inbreeding depression occurs, the SAM population has a 99% chance of becoming locally extinct within 50 years. Alarmingly, scientists have recently documented physical and reproductive signs of inbreeding depression, including kinked tails, undescended testes, and abnormal sperm, in local mountain lions(Huffmeyer et al., 2021). This emphasizes the importance of protecting the remaining SAM population, specifically through preserving existing habitat as well as maintaining and enhancing connectivity throughout the proposed ESU. Given that the Project is within a known male mountain lion's home range,[1] additional analyses are needed to adequately assess and mitigate the Project's impacts to mountain lions.

Numerous studies highlight the impacts of human activities on mountain lions. For example, (Shilling et al., 2019) reported 299 observed roadkill mountain lions throughout the state from 2015 to 2018, but these deaths are likely underreported. Former CDFW biologist Justin Dellinger estimates there could be 200 puma deaths on roads every year (Price, 2020). And a UC Davis report identified a 58% reduction in mountain lion road mortalities after a 71% decrease in road use due to COVID-19 pandemic "stay-at-home" orders (Nguyen et al., 2020). This report highlights how roads and traffic are deadly barriers to puma movement and gene flow.

In addition to causing direct mortality in pumas on roads, human activities also alter these large carnivores' behavior in ways that likely further impede important movement and gene flow. For example, (Smith et al., 2017) found that mountain lions are so fearful of humans and noise generated by humans that they will abandon the carcass of a deer and forgo the feeding opportunity just to avoid humans.[2] The study concluded that even "non-consumptive forms of human disturbance may alter the ecological role of large carnivores by affecting the link between these top predators and their prey" (Smith et al., 2017). In addition, mountain lions have been found to respond fearfully upon hearing human vocalizations, avoiding the area and moving more cautiously when hearing humans (Smith et al., 2017; Suraci et al., 2019). And even artificial lighting at night affects how mountain lions behave and move through a landscape (Barrientos et al., 2023). The EIR contains no analysis of how the Project and human activities associated with the Project will alter and disrupt mountain lion behavior.

Other studies have demonstrated that mountain lion behavior is impacted when exposed to other evidence of human presence, such as lighting or vehicles/traffic (Barrientos et al., 2023; Vickers et al., 2015; Y. Wang et al., 2017; Wilmers et al., 2013). In addition, preliminary results from a study by researchers at UC Davis and University of Southern California, as well as those by other researchers, suggest that the light, noise, and other aspects of highways can have negative impacts on wildlife numbers and diversity near the highways (Shilling, 2020; Winston Vickers et al., 2020). The researchers found a significant difference between species richness

[1] Brooks Staggs, "Residents protest Irvine company plan to build 1,180 houses in wildlife corridor." *OC Register* (January 28, 2024), available at: https://www.ocregister.com/2024/01/08/residents-protest-irvine-company-plan-to-build-1180-houses-in-wildlife-corridor/

[2] *See also* Sean Greene, "How a fear of humans affects the lives of California's mountain lions," *Los Angeles Times* (June 27, 2017), available at https://www.latimes.com/science/sciencenow/la-sci-sn-pumas-human-noise-20170627-story.html

and species type (mammals, including mountain lions), with lower richness and fewer species at crossing structures compared to background areas 1 km away from the roads (Shilling, 2020). They also found that as traffic noises surpassed 60 dBC, the number of visits by small to large mammals decreased and most of the species in their study avoid traffic noise (Shilling, 2020). It is clear that different species have variable sensitivities to noise and light associated with development and transportation infrastructure; this can lead to changes in species distributions near roads and development, which can have ecosystem-level impacts (Suraci et al., 2019). Thus, roads, traffic, and development have negative impacts on puma survival and behavior, which can reduce the genetic health of populations and ultimately diminish their chances of long-term survival.

(Yovovich et al., 2020) further documented the impacts of human activities on mountain lions in the Santa Cruz Mountains, specifically on communication and reproductive behaviors important for their survival. Males use scrapes to delineate territories as well as attract potential mates (Allen et al., 2015, 2016), and the males in the study preferred to use relatively flat areas away from human influence as scrape habitat (Yovovich et al., 2020). Similarly, when nursing females (with kittens less than 8 weeks old) shrank their home ranges to an average of 9 km^2 while their young were most vulnerable, they also selected undeveloped lands away from human disturbance, opting for habitat with protective cover and sufficient water and prey availability (Yovovich et al., 2020). The loss of adequate undisturbed communication and nursery habitat could disrupt important communication and reproductive behaviors that facilitate social structure and overall survival. The authors predicted that future development within the Santa Cruz Mountains could reduce nursery and communication habitat by 20% and 50%, respectively, while further fragmenting the landscape. Such patterns likely extend to other regions within the proposed Southern California/Central Coast ESU.

Other studies document nuanced sensitivities of California mountain lions to human presence, activities, and infrastructure while also providing glimpses of how humans and mountain lions can safely coexist. Pumas in the Santa Cruz Mountains were found to less likely occur in areas with higher development densities (*i.e.*, areas with greater road and/or building densities) (Nickel et al., 2020). This aligns with other studies that have demonstrated that mountain lion avoidance behavior increases with greater development densities (Smith et al., 2015, 2019; Y. Wang et al., 2017; Wilmers et al., 2013). In addition, Nickel et al. (2020) found that in open space areas where recreational activities are allowed (*e.g.*, hiking, biking), mountain lions generally avoided human presence and became more nocturnal as human presence increased. Similar shifts in puma behavior in response to human activities have been documented in other studies (Lucas, 2020; Smith et al., 2017; Suraci et al., 2019; Y. Wang et al., 2015, 2017). There is often a cost of these behavioral shifts, such as increased energy expenditure that could potentially reduce fitness. Studies have found that pumas expend more energy by increasing their kill rates in high housing density areas (Smith et al., 2015) and having higher nighttime activity in developed areas (Y. Wang et al., 2017). This is further supported by a study that found mountain lions increased movement efficiency during the Covid-19 shutdown, which suggests that they incur energetic costs by increasing movement and space-use when avoiding human activity (Benson et al., 2021).

In a study conducted from 2002 to 2019 in the Santa Monica Mountains, scientists found high human-caused mortality rates in puma adults and high intraspecific mortalities among subadults (Benson, Sikich, et al., 2020). Most known causes of death among adults and subadults (14/20) were directly human-caused: vehicle strikes, rodenticide poisoning, poaching, and wildfire. The remaining six known causes of deaths were intraspecific killing (Benson, Sikich, et al., 2020). And while intraspecific killings have been documented to naturally occur in mountain lion populations, it was likely exacerbated in the Santa Monica Mountains with the presence of significant movement barriers that prevent subadults from being able to adequately disperse, which likely led to increased conflicts with territorial males (Benson, Sikich, et al., 2020; Riley et al., 2014). The Santa Monica Mountains puma population is relatively small, extremely isolated, and geographically limited. Demographic and environmental stochasticity and high mortality rates increase the risk of local extinction, particularly when combined with small population size, low density, female-biased sex ratios, and skewed male reproductive success (Benson et al., 2016, 2019; Ernest et al., 2014; Gustafson et al., 2018; Riley et al., 2014; Vickers et al., 2015). Increased human-caused mortalities of adult males could lead to occasional male extinctions, which have been documented in the Santa Ana Mountains puma population (Beier & Barrett, 1993). Lack of breeding males would disrupt reproduction and could severely limit the short- and long-term viability of a population (Beier, 1993; Benson et al., 2016, 2019; Benson, Sikich, et al., 2020). This highlights the need to reduce human-caused mortalities, in part, by improving connectivity. The EIR contains no analysis how the Project could lead to increased human-caused mortalities or intraspecific killings by further diminishing the already-limited habitat for mountain lions in the Santa Ana mountains and adding thousands of new residents to this area.

In a recent statewide study that included data from 590 radio-collared mountain lions from 1974-2020, Benson et al. (2023) reported that human-caused mortalities exceeded natural mortality in California mountain lions. This, despite a hunting ban and mountain lions being a "specially protected" species, indicates that human-caused mortalities are having a population-level effect on mountain lions throughout the state (Benson et al., 2023). And land use is a primary threat to the species.

The researchers found the leading causes of death were retaliatory killing[3] and vehicle strikes, which were more likely to occur closer to rural areas and where voters were less likely to support environmental initiatives (Benson et al., 2023). When Nisi et al. (2022) focused on a 10-year dataset from the Santa Cruz Mountains (aka CC-N), they found similar patterns. The leading cause of death was retaliatory killing, which most often occurred at night near intermediate levels of human development. The authors found that despite mountain lions avoiding humans and human infrastructure during the daytime, they often selected those same areas at night, likely to move between habitat patches (Nisi et al., 2022). Despite mountain lions moving through an area of seemingly less risk at night due to less human activity, the mountain lions would end up in an ecological trap of more conflict and therefore more retaliatory killings.

There are numerous scientific studies that provide insights on the profound impacts human activities and infrastructure have on mountain lion survival, and they emphasize the need to adequately assess and mitigate impacts to these CESA candidate species in the Project area. These studies add to the accumulating evidence that mountain lions require a habitat mosaic that provides sufficient room to roam away from human-disturbed areas and connected to expansive, intact, heterogeneous habitats (Beier et al., 1995; Dickson et al., 2005; Dickson & Beier, 2002; Kertson et al., 2011; Zeller et al., 2017). Continued construction of roads and development in mountain lion habitat with little regard for their movement and behavioral needs has direct and indirect lethal and sublethal impacts that threaten the persistence of

[3] These data are from before CDFW implemented the 3-step depredation policy throughout the state. Although that policy applied to pumas in the Santa Ana and Santa Monica mountains starting in 2017, it only applied across the state starting in April 2020.

Southern California and Central Coast puma populations. And as noted in the Center's report entitled *California Connections: How Wildlife Connectivity Can Fight Extinction and Protect Public Safety*, a lack of wildlife connectivity and wise land use planning harms both people and wildlife (Yap, Rose, Anderson, et al., 2021). The EIR has no analysis of how the Project will impair movement and behavior needs for mountain lions, nor on the cumulative impact of this Project when combined with other projects that have gone forward over the past two decades (or projects still in planning).

Mountain lions are a key indicator species of wildlife connectivity and healthy ecosystems. As the last remaining wide-ranging large carnivore in Southern California, the ability to move through large swaths of interconnected habitat is vital for genetic connectivity and their long-term survival. Local extinction of mountain lions in the region could have severe ecological consequences. Many scavengers, including many raptors, foxes, and numerous insects, would lose a reliable food source (Barry et al., 2019; Elbroch et al., 2017; Ruth & Elbroch, 2014). Fish, birds, amphibians, reptiles, rare native plants, and butterflies could potentially diminish if this apex predator were lost (Ripple et al., 2014; Ripple & Beschta, 2006, 2008). Loss of this ecosystem engineer and important predator-prey dynamics could have cascading effects on other plant and animal species, potentially leading to a decrease in biodiversity and diminished overall ecosystem function (Barry et al., 2019; Benson, Mahoney, et al., 2020; Elbroch et al., 2017; Ripple et al., 2014).

C. *The 2005 EIR for the Project Does Not Address the Project's Impacts to Mountain Lions.*

Virtually all of the studies cited above regarding the extinction vortex faced by mountain lions in Southern California were conducted and released after the EIR was certified for the Project in 2005. As such, the 2005 EIR does not—and cannot—adequately analyze or mitigate impacts of the Project on mountain lions, a CESA provisionally-listed species. This fact alone necessitates recirculation of a new EIR before the City undergoes any approvals or issuance of any type of permits for the Project. Here, a subsequent EIR for the Project can and should contain analysis of how the Project can improve wildlife movement by removing obstacles to wildlife movement (e.g., by restoring or enhancing culverts, implementing overcrossings and/or underpasses, and conserving, restoring, and adaptively managing in perpetuity land adjacent to such areas). The subsequent EIR should also document the presence of mountain lions in the Project area. There is already documented evidence of mountain lions using the Project area, such as M317.

The new EIR must also consider alternatives to the Project that do not harm mountain lions and adopt all feasible mitigation measures to reduce impacts.

D. *New Information Regarding Wildfire Risk Necessitates a New EIR.*

New information regarding the risk of building new large-scale development in fire zones has emerged since certification of the EIR in 2005 which necessitates preparation of a subsequent EIR. By way of background, CEQA requires an EIR to identify and analyze a project's significant environmental impacts, including those impacts caused or exacerbated "by bringing development and people into the area affected." (Pub. Resources Code, §§ 21002, 21002.1, subd. (a); CEQA Guidelines, § 15126.2, subd. (a).) The impacts of development in areas prone to wildfire specifically require consideration: "the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, *wildfire risk areas*), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazard areas." (CEQA Guidelines, § 15126.2, subd. (a), emphasis added.)

In 2018, the State officially recognized that introduction of development in the wildland urban interface increases ignition risk. (OPR 2018 Final Statement of Reasons – Update to CEQA Guidelines Checklist]; see also *Clews Land & Livestock, LLC v. City of San Diego* (2017) 19 Cal.App.5th 161, 193 [recognizing potential for significant environment effects when project brings new development to a wildfire prone area].) Moreover, as discussed in a 2021 Center Report, "*Built to Burn: California's Wildlands Developments are Playing with Fire*," policymakers must reckon with California's wildfire history and acknowledge that reckless land-use policies are increasing wildfire risk and putting more people in harm's way (Yap, Rose, Broderick, et al., 2021).

Recent studies have revealed that almost all (95-97%) contemporary wildfires in California have been unintentionally caused by people, including powerlines, car sparks, arson, etc. (Balch et al., 2017; Radeloff et al., 2018; Syphard et al., 2007; Syphard & Keeley, 2020). For example, the 2019 Kincade Fire, 2018 Camp and Woolsey fires, and 2017 Tubbs and Thomas fires were sparked by powerlines or electrical equipment. And although many of the 2020 fires were sparked by a lightning storm, the Apple Fire was caused by sparks from a vehicle, the El Dorado Fire was caused by pyrotechnics at a gender-reveal celebration, the Blue Ridge Fire was likely caused by a house fire, and electrical equipment is suspected to have ignited the Silverado and Zogg fires.

The Project will bring more people and increased human activity into fire-prone landscapes and increase ignition risk. Such a project requires careful and comprehensive analyses of the area's fire history, the various ecosystems' fire ecology, and potential mitigation measures to reduce risk of ignition and fire within and adjacent to the Project area and spreading to nearby communities. The 2005 EIR was certified before these studies outlining the risk of building in fire zones were available, and before year-round wildfires became the "new normal" in California.

Recent wildfires have been exceptionally harmful to people. Between 2015 and 2020 (after the 2005 EIR was certified) almost 200 people in the state were killed in wildfires, more than 50,000 structures burned, hundreds of thousands of people had to evacuate their homes and endure power outages, and millions were exposed to unhealthy levels of smoke and air pollution. Human-caused wildfires at the wildland urban interface that burn through developments are becoming more common with housing and human infrastructure extending into fire-prone habitats, and homes and structures can add fuel to fires and increase spread (Knapp et al., 2021). This is increasing the frequency and toxicity of emissions near communities in and downwind of the fires. 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). This has been shown with the 2018 Camp Fire that burned 19,000 structures; the smoke caused dangerously high levels of air pollution in the Sacramento Valley and Bay Area and CARB found that high levels of heavy metals like lead and zinc traveled more than 150 miles (CARB, 2021).

Wildfire impacts disproportionately affect low-income and minority communities. As discussed in the Center's 2021 Built to Burn report (Yap, Rose, Broderick, et al., 2021):

> Past environmental hazards have shown that those in at-risk populations (*e.g.,* low-income, elderly, disabled, non-English-speaking, homeless) often have limited resources for disaster planning and preparedness (Richards, 2019). Vulnerable groups also have fewer resources to have cars to evacuate, buy fire insurance, implement defensible space around their homes, or rebuild, and they have less access to disaster relief during recovery (Davis, 2018; Fothergill & Peak, 2004; Harnett, 2018; Morris, 2019; Richards, 2019).
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> In addition, emergency services often miss at-risk individuals when disasters happen because of limited capacity or language constraints (Richards, 2019). For example, evacuation warnings are often not conveyed to disadvantaged communities (Davies et al., 2018). In the aftermath of wildfires and other environmental disasters, news stories have repeatedly documented the lack of multilingual evacuation warnings leaving non-English speakers in danger. (Axelrod, 2017; Banse, 2018; Gerety, 2015; Richards, 2019). Survivors are left without resources to cope with the death of loved ones, physical injuries and emotional trauma from the chaos that wildfires have inflicted on their communities.
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> Health impacts from wildfires, particularly increased air pollution from fine particulates ($PM_{2.5}$) in smoke, also disproportionately affect vulnerable populations, including low-income communities, people of color, children, the elderly and people with pre-existing medical conditions (Delfino et al., 2009; Hutchinson et al., 2018; Jones et al., 2020; Künzli et al., 2006; Reid et al., 2016).
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> Increased $PM_{2.5}$ levels during wildfire events have been associated with increased respiratory and cardiovascular emergency room visits and hospitalizations, which were disproportionately higher for low socioeconomic status communities and people of color (Hutchinson et al., 2018; Jones et al., 2020; Liu et al., 2017; Reid et al., 2016). Similarly, asthma admissions were found to have increased by 34% due to smoke exposure from the 2003 wildfires in Southern California, with elderly and child age groups being the most affected (Künzli et al., 2006).
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> Farmworkers, who are majority people of color, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as they work. Yet farmworkers often have to continue working while fires burn, and smoke fills the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018).

In addition, there are significant economic impacts of wildfires on residents throughout the state. One study estimated that wildfire damages from California wildfires in 2018 cost $148.5 billion in capital losses, health costs related to air pollution exposure, and indirect losses due to broader economic disruption cascading along with regional and national supply chains (D. Wang et al., 2021). Meanwhile the cost of fire suppression and damages in areas managed by the California Department of Forestry and Fire (Cal Fire) has skyrocketed to more than $23 billion during the 2015-2018 fire seasons.

The 2005 EIR also lacks new information regarding how continued development in California's highly fire-prone shrublands and grasslands results in the continual release of large amounts of carbon into the atmosphere by removing significant carbon sinks, increasing wildfire frequency, and degrading habitats and ecosystem function. The past few decades have seen significant urban growth in natural areas in California's wildland urban interface (*i.e*., the transition zone between human development and wildlands), including more than one million homes built between 1990 and 2010 (Radeloff et al., 2018). And scientists project that at least 640,000 to 1.2 million new homes will be built in the state's highest wildfire risk areas by 2050 under current land use practices (Mann et al., 2014). In addition, the criminalization of Indigenous cultural fire practices and rampant fire suppression and logging since European colonization have led to an increase in wildfire severity and spread when fires ignite (Steel et al., 2018; Williams et al., 2023), which leads to compounding carbon release events (Bradley et al., 2016; Hanson, 2020; Morrison, 2019).

Moreover, the 2005 EIR lacks new information regarding how more extreme weather events due to climate change are making it easier for wildfires to ignite and spread. The number of days with extreme fire weather conditions in California has doubled since 1980, and further climate change will amplify that trend (Goss et al., 2020). Although wildfires are a natural and necessary process in California's landscapes and much of the state's diverse shrubland communities are adapted to a high severity infrequent wildfire regime, increases in fire frequency in these systems disrupt the historical fire regimes they have evolved with. This can lead to the establishment of more flammable non-native grasses that increase fire threat over time (Keeley, 2005, 2006; Safford & Van de Water, 2014; Syphard et al., 2009, 2018, 2019). Other disturbance and associated edge effects from roads and development, such as nitrogen deposition from vehicle emissions, can also lead to the establishment of such invasive grasses (Keeley et al., 2011) as well as reduced native biodiversity (Hernández et al., 2016). Thus, continued development in fire-prone wildlands has the potential to perpetuate a feedback loop of increased carbon release and wildfire that fuels climate change while eliminating and degrading California's native ecosystems. Southern California is especially vulnerable with development pressures to extend the wildland urban interface into adjacent high fire-prone shrublands. The Project as proposed would likely increase the risk of wildfire and contribute to this negative feedback loop. The 2005 EIR does not address the Project's impacts to wildfire risk that have been brought to light in recent studies and through harrowing experiences from the recent deadly and destructive wildfires.

The EIR instead contains the bare conclusion that compliance with existing regulations would reduce any impacts to less than significant. (EIR at 3O-23 – 3O-24.) This unsubstantiated conclusion is at odds with the wide array of studies cited in this letter related to the impacts of the Project on wildfire risk. Moreover, under CEQA, compliance with existing regulations is not sufficient to support a finding of no significant impact. (See *Quail Botanical Gardens Foundation, Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1605-1607 [holding city erred in failing to prepare an EIR when proposed mitigation measures would not clearly reduce adverse view impacts below a level of significance]; *Californians for Alternatives to Toxics v. Department of Food & Agriculture* (2005) 136 Cal.App.4th 1, 17 "[c]ompliance with the law is not enough to support a finding of no significant impact"].)

Keeley and Syphard (2019) discuss a poignant and cautionary example: the 2017 Tubbs Fire and the 1964 Hanly Fire had very similar burned area footprints, yet the Tubbs fire burned over 5500 structures and killed at least 22 people while the 1964 Hanly Fire only burned about 100 structures and no one died. The authors suggest that the increased population and human infrastructure in the area led to an increased chance of human-caused ignitions during an extreme wind event (the Tubbs fire was caused by faulty electrical equipment on private property) and the sprawl development over the decades since 1964 put more people at risk (Keeley & Syphard, 2019). Such an example should be a glaring warning to the City's decisionmakers when development is being proposed in a high fire-prone area where wildfires recently burned. Wildfire experts are now constantly and unambiguously pointing out the dangers of placing communities in high fire-prone areas.

New information regarding the impact of wildfire on Indigenous communities and the importance of cultural burning also is not included in the 2005 EIR. More specifically, the 2005 EIR does not discuss the area's historical fire regimes and the role Indigenous communities likely played in shaping the fire ecology of habitats in and adjacent to the Project area. Indigenous communities should be included in discourse over climate change and wildfire. They are disproportionately impacted by wildfire. Native Americans were found to be six times more likely than other groups to live in high fire-prone areas, and high vulnerability due to socioeconomic barriers makes it more difficult for these communities to recover after a large wildfire (Davies et al., 2018). In addition, farmworkers, who are majority people of color and often include migrant workers that come from Indigenous communities, often have less access to healthcare due to immigration or economic status. They are more vulnerable to the health impacts of poor air quality due to increased exposure to air pollution as they work. Yet farmworkers often have to continue working while fires burn, and smoke fills the air, or risk not getting paid (Herrera, 2018; Kardas-Nelson et al., 2020; Parshley, 2018).

Ramos,(2022) states, "Indigenous communities have often been marginalized in the sciences through research approaches that are not inclusive of their cultures and histories." Traditional ecological knowledge ("TEK") is often excluded from analyses or distilled to conform to Western science (Ramos, 2022). EIRs often fail to acknowledge that Indigenous communities and cultural burning played a role in California's historical fire activity and often only mention previous wildfires in the area in CalFire records. This perpetuates the exclusion and marginalization of Indigenous communities and TEK. Consultation with local Native Tribes and incorporation of Indigenous science, including but not limited to oral histories, ethnographies (that may include burn scars and charcoal records), and archeological data should be incorporated in fire history analysis. As a society, we need to work towards integrative research that "transcends disciplinary boundaries" and employs a range of methodological options to get a deeper understanding of the relationship between people and ecosystems (Ramos, 2022). Doing so will help inform fire management strategies and mitigation measures that work towards reducing harms of wildfire to people while facilitating beneficial fire for the appropriate ecosystems. A new EIR should be prepared to address these issues.

Development in and near high fire-prone areas should be avoided. If unavoidable, mitigation measures should require structures to have ember-resistant vents, fire-resistant roofs, and irrigated defensible space immediately adjacent to structures. External sprinklers with an independent water source could reduce structures' flammability. Rooftop solar and clean energy microgrids could reduce fire risk from utilities' infrastructure during extreme weather. In addition mitigation measures should include equitably retrofitting existing communities near the Project area with similar fire-resilient measures and providing wildfire personal protective equipment (e.g., N95 masks, air purifiers) to nearby communities. Education and awareness for employees, customers, and nearby communities should be provided and include how to reduce ignition risk. The 2005 EIR does not address these issues, nor could it have given that much of this information was unavailable in the years leading up to 2005.

E. *Conclusion*

Ensuring regional wildlife connectivity, protecting local mountain lions, and minimizing wildfire risk will require cooperation from conservation groups and state and local officials. The City now has the opportunity—and indeed the obligation—to consider in light of current circumstances and available science whether development such as the Project is appropriate; at a minimum it must require preparation of a new EIR in order to consider whether the Project should move forward.

We respectfully urge the City to postpone the issuance of any permits on the Project unless and until a new EIR is prepared that thoroughly analyzes the Project's impacts on mountain lions, wildlife connectivity, and wildfire.

Sincerely,

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