July 26, 2021

Sent via email

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Re: Los Angeles County Housing Element Update

Dear Ms. Fung,

These comments are submitted on behalf of the Center for Biological Diversity (the "Center") regarding the Draft Program Environmental Impact Report ("DEIR") for the Los Angeles County Housing Element Update ("Update"). The Center has reviewed the DEIR and Update and provides these comments for consideration to the County of Los Angeles Department of Regional Planning ("Planning").

The Center supports many of the goals of the Update, including providing a wide range of housing types to meet the needs of current and future residents, including extremely low, very low, and low income households. Ensuring those most at risk are given options within their means is critical to tackling the affordable housing crisis. We also strongly support Goal 2—communities with equitable access to employment opportunities, services, and amenities. Too often, ostensibly affordable housing is provided outside the urban core. This results in unequitable access to public services, as well as the personal expenses required to commute to job centers and schools. Furthermore, these housing options are often near known pollution sources like freeways, or vulnerable to other hazards like wildfire.

While we are happy to see that the Rezoning Program excludes wildfire hazard severity areas, we would like to encourage the County to use this Update as an opportunity to ensure *all* future developments reflect these smart growth principles. Beyond the human impact, sprawl development significantly impacts native biodiversity and destroys our natural lands. The 2019 OurCounty Sustainability Plan envisions a more efficient, equitable and resilient county that protects the environment, reduces greenhouse gas emissions, and provides equal access for all communities to open space. As the County works towards ensuring affordability and protecting communities against displacement, the Center urges for a more comprehensive approach to growth that addresses community health as well as the needs of wildlife and habitats that are removed, fragmented, and degraded by sprawl development.

Overall, the Center's comments can be summarized by the following:

- The EIR should analyze the impacts of the entire scope of the Update, not just the proposed zoning program
- The Update should prohibit or limit new residential development in very high and high wildfire hazard severity zones
- The Update should require developers to provide proof of private insurance for the prospective property before a permit to build is approved.
- The Update should include programs for home-hardening against wildfire
- The Update should prohibit new development in key wildlife linkage areas to promote biodiversity conservation and climate resilience, improve driver safety, and reduce costs associated with wildlife vehicle collisions. The Update should also require adoption of a county-wide wildlife connectivity ordinance by the end of 2022.

More detailed comments are provided below.

I. Background on the Center

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 1.7 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 Los Angeles County and throughout California.

I. The DEIR Appears to Analyze Only A Subset of the Project.

Under CEQA, a "project" is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment . . . ." (*Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214, 1222 (citing CEQA Guidelines § 15378, subd. (a).) An "accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." (*Cnty. of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193; (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 655 (project description held unstable and misleading) [hereinafter "*San Joaquin Raptor*"].) "However, a curtailed, enigmatic or unstable project description draws a red herring across the path of public input." (*San Joaquin Raptor*, 149 Cal.App.4th, at 655.).

An inaccurate or truncated project description is prejudicial error because it fails to "adequately apprise all interested parties of the true scope of the project." (*See City of Santee v. Cnty. of San Diego* (1989) 214 Cal.App.3d 1438, 1454-55.) "Only through an accurate view of the project may the public and interested parties and public agencies balance the proposed project's benefits against its environmental cost, consider appropriate mitigation measures, assess the advantages of terminating the proposal and properly weigh other alternatives." (*San Joaquin Raptor*, 149 Cal.App.4th, at 655.)

Here, it is unclear what the true extent of the Project is. On the one hand, the DEIR correctly notes that the role of the Update is to demonstrate that the County has zoned capacity to accommodate development of at least 90,052 units consistent with the Regional Housing Needs Allocation ("RHNA") described in the Regional Transportation Plan/Sustainable Communities Strategy ("RTP") adopted by the Southern California Association of Governments ("SCAG"). (DEIR at 3-1 & 3-2.) The DEIR also correctly defines the Project Area as the unincorporated areas of the Los Angeles County, which is approximately 65% of the total land area of the County. (DEIR at 3-2.) However, the DEIR states that the DEIR's analysis focuses on sites in the Rezoning Program, which is a much smaller (though still significant) portion of the County as demonstrated in Figure 3-5A through 3-5G. (*Id*.)

Moreover, while the DEIR perhaps correctly states that this rezoning program will "not effect" planning areas for the Antelope Valley, Coastal Islands, Santa Clarita Valley, and Santa Monica Mountains, the Update has the potential to result in direct or indirect impacts to these areas by maintaining existing zoning in place. Indeed, the Draft Update includes zoning configurations and allocations of the RHNA for these areas. (See e.g., Draft Update at 168-169.)

The DEIR appears to ignore the potential direct and indirect impacts of the Update by comparing the Update to the *existing zoning* and RHNA allocations throughout the Plan Area instead of to the actual conditions on the ground. This is not permissible under CEQA; CEQA requires the impacts of the project to be measured against the "real conditions on the ground." (*Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 121; *Communities for Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 322 [CEQA requires a project's impacts to be compared to actual, existing pre-project conditions rather than to hypothetical conditions when determining the significance of a Projects impacts].) This means that the DEIR cannot simply compare the Update (and particularly the rezoning program) against hypothetical conditions based on existing RHNA allocations and zoning in the remainder of the Project Area. However, it appears that this is exactly what the DEIR does, in violation of CEQA.

By the same token, the unclear definition of what actually constitutes the "project" (does it include all zoning plans in the unincorporated county, or is the project simply a rezoning program for a fraction of it?) makes it difficult for the public and decisionmakers to ascertain the true impacts of the project and for the DEIR to include appropriate mitigation.

These omissions and lack of clarity are particularly problematic, because, as described below, the Update will pave the way for significant new development in wildfire zones and wildlife habitat needed for connectivity.

II. Wildfire poses a significant threat to the region and the County's stated commitments to addressing the climate crises, protecting habitat, safeguarding human health and increasing access to open space.

According to a report from Governor Gavin Newsom's Office, construction of more homes in the wildland-urban interface is one of the main factors that "magnify the wildfire threat

and place substantially more people and property at risk than ever before" (Governor Newsom's Strike Force, 2019). Syphard et al. (2019) found that housing and human infrastructure in fire-prone wildlands are the main drivers of fire ignitions and structure loss. This is not new information; scientists have been reporting it for many years in scientific, peer-reviewed journals, and firefighters have observed it.

As outlined in the Center's recent report, *Built to Burn*[1], increasing housing development in high fire-risk wildlands is putting more people in harm's way and contributing to a dramatic increase in costs associated with fire suppression and damages. Next 10 and UC Berkeley's recent report, *Rebuilding for a Resilient Recovery: Planning in California's Wildland Urban Interface*[2], likewise found that state and local land use policies are increasing the economic and human cost of wildfire by encouraging rebuilding in the high risk-wildland urban interface instead of focusing development away from fire-prone areas. Sprawl developments with low/intermediate densities extending into habitats that are prone to fire have led to more frequent wildfires caused by human ignitions, like power lines, arson, improperly disposed cigarette butts, debris burning, fireworks, campfires, or sparks from cars or equipment (Balch et al., 2017; Bistinas et al., 2013; Keeley et al., 1999; Keeley & Fotheringham, 2003; Keeley & Syphard, 2018; Radeloff et al., 2018; Syphard et al., 2007, 2012, 2019). Human-caused fires account for 95-97% of all fires in Southern California's Mediterranean habitats (Balch et al., 2017; Syphard et al., 2007). In some Southern California counties, Keeley and Syphard (2018) found that human ignitions were responsible for 98-100% of fires between 1919-2016. Leapfrog developments in high fire-prone areas have the highest predicted fire risk (Syphard et al. 2013), and multiple studies indicate that developments with low/intermediate-density clusters surrounded by fire-dependent vegetation (*i.e.*, grasslands, chaparral, scrub) in areas with a history of fires have the highest chances of burning (Bistinas et al., 2013; Syphard et al., 2012, 2013, 2019). The EIR must clearly outline and summarize the scientific evidence linking development in high fire-prone wildlands with increased fire risk; the Update could result in the placement of more homes, infrastructure, roads, and communities in high fire-prone areas that have burned in the past and will inevitably burn again.

The EIR must acknowledge the potential wildfire hazard from increased human-caused ignitions. By placing people in fire-prone areas, the induced sprawl perpetuated by the Update would increase the number of potential ignition sources, and therefore the risk of wildfires occurring. In addition, power lines and electrical equipment are a significant source of human-caused ignitions (Keeley & Syphard, 2018). The 2017 Thomas Fire, 2017 Tubbs Fire, 2018 Camp Fire, and 2018 Woolsey Fire were found to have been caused by electrical transmission lines and electrical equipment, and the 2019 Kincade Fire is suspected to have been caused by power lines as well. Placing homes and people in high fire-prone areas would only increase the potential likelihood of these ignition sources, as has been documented in multiple scientific studies (Balch et al., 2017; Bistinas et al., 2013; Keeley et al., 1999; Keeley & Fotheringham, 2003; Keeley & Syphard, 2018; Radeloff et al., 2018; Syphard et al., 2007, 2012, 2019).

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[1] Tiffany Yap, et al, *Built to Burn: California's Wildlands Developments Are Playing With Fire* (Feb. 2021), available at https://www.biologicaldiversity.org/programs/urban/pdfs/Built-to-Burn-California-Wildfire-Report-Center-Biological-Diversity.pdf.

[2] Next 10 and UC Berkeley, *Rebuilding for a Resilient Recovery: Planning in California's Wildland Urban Interface* (June 2021), available at https://www.next10.org/sites/default/files/2021-06/Next10-Rebuilding-Resilient-Final.pdf.

Although public utilities companies (*i.e.*, PG&E and Southern California Edison) are altering operations in the form of power outages and blackouts during extreme weather conditions (Callahan et al., 2019; Fry, Dolan, et al., 2019; Krishnakumar et al., 2019), wildfires can still spark and spread quickly towards homes, as evidenced by the wildfires in Moraga (Hernández et al., 2019) and Saddleridge/Sylmar (Fry, Miller, et al., 2019). And the power outages themselves disproportionately burden our most vulnerable communities, including the elderly, poor, and disabled (Chabria & Luna, 2019), and can cause traffic jams and collisions (CBS San Francisco, 2019). Michael Wara, Director of the Climate and Energy Policy Program and a senior research scholar at the Stanford Woods Institute for the Environment, estimated that PG&E's power outage in Northern and Central California could have an economic impact of $2.5 billion in losses, with most of the burden on businesses (Callahan et al., 2019). It is clear that placing more homes in known fire-prone areas and wind corridors is irresponsible and can lead to deadly and costly consequences.

In addition, such sprawl developments disrupt the natural fire regime and lead to a dangerous feedback loop of deadly fires and habitat destruction. Native California habitats are adapted to infrequent (every 30 to 150 years or more), large, high-intensity crown fire regimes (Keeley & Fotheringham, 2001). However, if these regimes are disrupted, the habitats become degraded (Keeley, 2005, 2006; 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, 2006; Safford & Van de Water, 2014; Syphard et al., 2009, 2018). This could have serious consequences for special-status species in the region that rely on these native habitats for survival, like California red-legged frogs and Least Bell's vireoc. In addition, large-scale landscape changes due to vegetation-type conversion from shifts in natural fire regimes could impact wide-ranging species like mountain lions (Jennings, 2018), whose populations are already struggling in the area due to lack of connectivity and genetic isolation (Dellinger, 2019; Gustafson et al., 2018).

Furthermore, this increase in wildfire results in higher frequency and toxicity of smoke exposure to communities in and downwind of the fires. 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).

Increased fire frequency due to human activity and ill-placed developments lead to increased occurrences of poor outdoor and indoor air quality from smoke (*e.g.*, Phuleria et al. 2005), which can have public health effects. Hospital visits for respiratory symptoms (*e.g.*, asthma, acute bronchitis, pneumonia, or chronic obstructive pulmonary disease) and cardiovascular symptoms have been shown to increase during and/or after fire events (Delfino et al., 2009; Künzli et al., 2006; Liu et al., 2015; Rappold et al., 2012; Reid et al., 2016; Viswanathan et al., 2006). Children, elderly, and those with underlying chronic disease are the most vulnerable to the harmful health effects of increases in wildfire smoke. The EIR does not

include sufficient analysis of the RTP/SCS's potential impacts of increased smoke exposure due to increased human-caused ignitions.

Finally, The DEIR does not adequately consider the impacts on firefighters and first responders of the growth induced by the Update in high fire-prone natural areas subject to intermittent wildfires. Adding more development to these wild areas will necessitate significant firefighting costs from both state and local authorities. Cal Fire is primarily responsible for addressing wildfires when they occur, and its costs have continued to increase as wildfires in the wildland urban interface have grown more destructive. During the 2017-2018 and the 2018-2019 fiscal years, Cal Fire's fire suppression costs were $773 million and an estimated $635 million, respectively (Cal Fire, 2019). Note that this does not include the cost of lives lost, property damage, or clean up during these years, which is estimated to be billions of dollars. The vast majority of wildfires in southern California are caused by humans (Balch et al., 2017; Keeley & Syphard, 2018), and inducing sprawl development in high fire hazard areas will increase the frequency and likelihood of such fires (Radeloff et al., 2018; Syphard et al., 2012, 2013, 2019). LA County should not be approving an Update that will induce unsustainable sprawl in high fire-prone areas and burden future generations of California with the costs of defending and recovering even more cities from dangerous blazes.

According to Captain Michael Feyh of the Sacramento Fire Department, California no longer has a fire season (Simon, 2018); wildfires in California are now year-round because of increased human ignitions in fire-prone areas. Emergency calls to fire departments have tripled since the 1980s (Gutierrez & Cassidy, 2018), and firefighters (and equipment) are being spread thin throughout the state. Firefighters often work 24- to 36-hour shifts for extended periods of time (often weeks at a time), and they are being kept away from their homes and families for more and more days out of the year (Ashton et al., 2018; Bransford et al., 2018; Del Real & Kang, 2018; Gutierrez, 2018; Simon, 2018). In addition, the firefighting force often must rely on volunteers to battle fires year-round.

The extended fire season is taking a toll on the physical, mental, and emotional health of firefighters, as well as the emotional health of their families (Ashton et al., 2018; Del Real & Kang, 2018; Simon, 2018). The physical and mental fatigue of endlessly fighting fires and experiencing trauma can lead to exhaustion, which can cause mistakes in life-or-death situations while on duty, and the constant worry and aftermath that family members endure when their loved ones are away working in life-threatening conditions can be harrowing (Ashton et al., 2018). According to psychologist Dr. Nancy Bohl-Penrod, the strain of fighting fires without having sufficient breaks can impact firefighters' interactions with their families, their emotions, and their personalities (Bransford et al., 2018). There have also been reports that suicide rates and substance abuse have been increasing among firefighters (Greene, 2018; Simon, 2018). This is not sustainable.

Given the well-known impacts of siting new development in fire-prone areas, the proposed "Community Planning Assistance for Wildfire Ordinance" (Program 4, Page 19 of the Update) should include a policy prohibiting new discretionary residential development in very high and high fire hazard severity zones or state responsibilities areas. At a minimum, to preserve public health and the environment and consistent with the principles in the CEQA

Guidelines, Policy 11.4 should prohibit such development if there is substantial evidence in the record that the development will

a. expose people or structures, including existing and nearby communities, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires;
b. substantially impair an adopted emergency response plan or emergency evacuation plan;
c. due to slope, prevailing winds, and other factors, exacerbate wildfire risks, including risk of ignition and/or spread, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
d. require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
e. expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Moreover, Policy 11.4 should require that during the entitlement process for a new development of 5 units or more in a very high or high fire hazard severity zone or state responsibility area, the applicant must provide sufficient documentation that (1) private insurance currently exists that will insure the proposed homes for all hazards, including wildfire; or (2) the applicant must provide a plan and adequate funding to self-insure them.

Any new development in a very high or high fire hazard severity zone has the potential to cause a significant impact, as described in the numerous scientific studies referenced in the Wildfire Report. In addition, as the Wildfire Report notes, even homes built to current standards still are not fireproof, and more human activities and infrastructure have the potential to cause additional unintentional ignitions. Therefore, it is imperative that **this Update include restrictions for new development in these wildfire hazard severity zones, and at a minimum, ensure that these new properties will be able to obtain insurance on the private market before they are built because homeowners deserve this security in their investment**.

III. Home-hardening existing communities should be a central component of the "Community Planning Assistance for Wildfire Ordinance"

For homes already in high fire-risk areas, home-hardening is important to minimize the chances of human ignitions and fire spread. It is estimated that more than 2 million homes are located in high fire-risk areas (Verisk, 2020). Investing resources primarily in fire suppression without adequately addressing the human-related cause of the fires will not reduce wildfire losses (Stephens et al., 2009). State funds must be equitably distributed to retrofit existing communities in fire-prone areas to reduce the chances of unintentional ignitions and minimize spread should a fire ignite.

The proposed policy 8.2 (Page 19 of the Update), which would maintain adequate neighborhood infrastructure, community facilities, and services as a means of sustaining the overall livability of neighborhoods and protecting the health, safety, and welfare of the community, **should provide a plan for specific retrofits including**:

1. Ember-resistant vents;
2. Fire-resistant roofs;
3. Irrigated defensible space within 100 feet of structures;
4. External sprinklers with an independent water source; and
5. Clean energy microgrids including rooftop solar

Although such features do not make homes fireproof, they have been shown to either reduce a community risk of ignition and/or improve the chances of structure survival in fires (Syphard et al., 2014, 2017). For example, external sprinklers with an independent water source have been proven to reduce flammability of structures (California Chaparral Institute, 2018). Although external sprinklers are not required by law, water-protected structures are much less likely to burn compared to dry structures, thus the DEIR should require external sprinkler systems for any new development in wildfire zones. In addition, local solar power paired with batteries could reduce power flow (and therefore reduce extreme temperatures) in electricity lines, which would reduce the need for power outages during extreme weather conditions and provide power for communities when outages are necessary (A. Lee, 2019). Michael Wara argues that solar power and batteries for homes and "microgrids" linking business districts would help make communities in high fire risk areas safer because it would provide backup power for medical devices, refrigerators, and the internet to run while allowing the main power grid to get shut down (Wara, 2018).

The county must also engage, prepare and train homeowners to harden their homes, reduce the risk of fire ignitions and spread, and be ready to safely defend their homes or evacuate early when needed (Stephens et al., 2009). As communities rebuild from recent wildfire destruction, now is the time to instill a culture of coexistence with wildfire. LA County can help our region meet this crucial challenge. Strong land use policies that consider the county's diverse fire history and ecology will help improve our relationship with wildfire and ensure a safer and healthier future for both humans and wildlife.

IV. Protecting wildlife connectivity in the region is essential to preserving native biodiversity, mitigating against the climate crisis and prioritizing human health.

The EIR must analyze the potential impacts of the Update on wildlife connectivity. Roads and development create barriers that lead to habitat loss and fragmentation, which harms native wildlife, plants, and people. As barriers to wildlife movement, poorly-planned development and roads can affect an animal's behavior, movement patterns, reproductive success, and physiological state, which can lead to significant impacts on individual wildlife, populations, communities, landscapes, and ecosystem function (Brehme et al., 2013; Ceia-Hasse et al., 2018;

Haddad et al., 2015; Marsh & Jaeger, 2015; Mitsch & Wilson, 1996; Trombulak & Frissell, 2000; van der Ree et al., 2011). For example, as noted above, habitat fragmentation from roads and development has been shown to cause mortalities and harmful genetic isolation in mountain lions in southern California (Ernest et al., 2014; Riley et al., 2014; Vickers et al., 2015), increase local extinction risk in amphibians and reptiles (Brehme et al., 2018; Cushman, 2006), cause high levels of avoidance behavior and mortality in birds and insects (Benítez-López et al., 2010; Kantola et al., 2019; Loss et al., 2014), and alter pollinator behavior and degrade habitats (Aguilar et al., 2008; Goverde et al., 2002; Trombulak & Frissell, 2000). Habitat fragmentation also severely impacts plant communities. An 18-year study found that reconnected landscapes had nearly 14% more plant species compared to fragmented habitats, and that number is likely to continue to rise as time passes (Damschen et al., 2019). The authors conclude that efforts to preserve and enhance connectivity will pay off over the long-term (Damschen et al., 2019). In addition, connectivity between high quality habitat areas in heterogeneous landscapes is important to allow for range shifts and species migrations as climate changes (Cushman et al., 2013; Heller & Zavaleta, 2009; Krosby et al., 2018). Loss of wildlife connectivity decreases biodiversity and degrades ecosystems. Unfortunately, it does not appear that the DEIR includes any such analysis.

Edge effects of development in and adjacent to open space will likely impact key, wide-ranging predators, such as mountain lions and bobcats (Crooks, 2002; Delaney et al., 2010; J. S. Lee et al., 2012; Riley et al., 2006; Smith et al., 2015, 2017; Vickers et al., 2015; Wang et al., 2017), as well as smaller species with poor dispersal abilities, such as song birds, small mammals, and herpetofauna (Benítez-López et al., 2010; Cushman, 2006; Kociolek et al., 2011; Slabbekoorn & Ripmeester, 2008). Limiting movement and dispersal can affect species' ability to find food, shelter, mates, and refugia after disturbances like fires or floods. Individuals can die off, populations can become isolated, sensitive species can become locally extinct, and important ecological processes like plant pollination and nutrient cycling can be lost. Negative edge effects from human activity, such as traffic, lighting, noise, domestic pets, pollutants, invasive weeds, and increased fire frequency, have been found to be biologically significant up to 300 meters (~1000 feet) away from anthropogenic features in terrestrial systems (Environmental Law Institute, 2003)

The EIR must also consider corridor redundancy (*i.e*. the availability of alternative pathways for movement) because it allows for improved functional connectivity and resilience. Compared to a single pathway, multiple connections between habitat patches increase the probability of movement across landscapes by a wider variety of species, and they provide more habitat for low-mobility species while still allowing for their dispersal (Mcrae et al., 2012; Olson & Burnett, 2008; Pinto & Keitt, 2008). In addition, corridor redundancy provides resilience to uncertainty, impacts of climate change, and extreme events, like flooding or wildfires, by providing alternate escape routes or refugia for animals seeking safety (Cushman et al., 2013; Mcrae et al., 2008; Mcrae et al., 2012; Olson & Burnett, 2008; Pinto & Keitt, 2008).

Corridor redundancy is critical when considering the impacts of climate change on wildlife movement and habitat connectivity. Climate change is increasing stress on species and ecosystems, causing changes in distribution, phenology, physiology, vital rates, genetics, ecosystem structure and processes, and increasing species extinction risk (Warren et al., 2010). A

2016 analysis found that climate-related local extinctions are already widespread and have occurred in hundreds of species, including almost half of the 976 species surveyed (Wiens, 2016). A separate study estimated that nearly half of terrestrial non-flying threatened mammals and nearly one-quarter of threatened birds may have already been negatively impacted by climate change in at least part of their distribution (Pacifici et al., 2017). A 2016 meta-analysis reported that climate change is already impacting 82 percent of key ecological processes that form the foundation of healthy ecosystems and on which humans depend for basic needs (Scheffers et al., 2016). Genes are changing, species' physiology and physical features such as body size are changing, species are moving to try to keep pace with suitable climate space, species are shifting their timing of breeding and migration, and entire ecosystems are under stress (Cahill et al., 2012; Chen et al., 2011; Maclean & Wilson, 2011; Parmesan, 2006; Parmesan & Yohe, 2003; Root et al., 2003; Warren et al., 2010).

The DEIR must also analyze the Update's potential impacts to riparian corridors. Riparian ecosystems have long been recognized as biodiversity hotspots performing important ecological functions in a transition zone between freshwater systems and upland habitats. Many species that rely on these aquatic habitats also rely on the adjacent upland habitats (*e.g.*, riparian areas along streams, and grassland habitat adjacent to wetlands). In fact, 60% of amphibian species, 16% of reptiles, 34% of birds and 12% of mammals in the Pacific Coast ecoregion depend on riparian-stream systems for survival (Kelsey and West 1998). Many other species, including mountain lions and bobcats, often use riparian areas and natural ridgelines as migration corridors or foraging habitat (Dickson et al, 2005; Hilty & Merenlender, 2004; Jennings & Lewison, 2013; Jennings & Zeller, 2017). Additionally, fish rely on healthy upland areas to influence suitable spawning habitat (Lohse et al. 2008), and agricultural encroachment on these habitats and over-aggressive removal of riparian areas have been identified as a major driver of declines in freshwater and anadromous fish (e.g., Stillwater Sciences 2002; Lohse et al. 2008; Moyle et al. 2011). Therefore, buffers that allow for connectivity between the aquatic resource and upland habitat is vital for many species to persist.

It is estimated that 90-95% of historic riparian habitat in the state has been lost (Bowler, 1989; Riparian Habitat Joint Venture, 2009). Using 2002 land cover data from CalFire, the Riparian Habitat Joint Venture estimated that riparian vegetation makes up less than 0.5% of California's total land area at about 360,000 acres (Riparian Habitat Joint Venture, 2004). This is alarming because riparian habitats perform a number of biological and physical functions that benefit wildlife, plants, and humans, and loss of what little is left will have severe, harmful impacts on special-status species, overall biodiversity, and ecosystem function. California cannot afford to lose more riparian corridors. Unfortunately, the DEIR contains barely any analysis of the Update's potential impacts on riparian habitat, and instead only contains conclusory analysis related to the rezoning program as opposed to the Update. (DEIR at 4.4-14.)

A literature review found that recommended buffers for wildlife often far exceeded 100 meters (~325 feet), well beyond the largest buffers implemented in practice (Robins, 2002). For example, Kilgo et al. (1998) recommend more than 1,600 feet of riparian buffer to sustain bird diversity. In addition, amphibians, which are considered environmental health indicators, have been found to migrate over 1,000 feet between aquatic and terrestrial habitats through multiple life stages (Cushman, 2006; Fellers & Kleeman, 2007; Semlitsch & Bodie, 2003; Trenham &

Shaffer, 2005). Accommodating the more long-range dispersers is vital for continued survival of species populations and/or recolonization following a local extinction (Cushman, 2006; Semlitsch & Bodie, 2003). In addition, more extensive buffers provide resiliency in the face of climate change-driven alterations to these habitats, which will cause shifts in species ranges and distributions (Cushman et al., 2013; Heller & Zavaleta, 2009; Warren et al., 2011). This emphasizes the need for sizeable riparian and upland buffers around streams and wetlands in and adjacent to any project included in the Update, as well as connectivity corridors between heterogeneous habitats. Again, the EIR must adequately assess and mitigate impacts to local, regional, and global wildlife movement and habitat connectivity.

In short, the DEIR's biological resources impacts only focuses on impacts associated with the rezoning program, and fails to include analysis of other impacts (and even the impacts of the rezoning program are only discussed in a conclusory fashion). (DEIR at 4.4-1.) This is impermissible as demonstrated by the cases cited above. CEQA requires that the EIR adopt all feasible mitigation measures to reduce impacts on wildlife connectivity. Nonetheless, the DEIR also fails to offer any real protections for wildlife connectivity, and simply cites to a general policy promoting connectivity in a pre-existing portion of the general plan. (DEIR at 4.4-11.) **The Center urges the County to revise the Update and DEIR to include a goal to develop and adopt a wildlife connectivity ordinance by the end of 2022. The L.A. County Sustainability Plan already contains such a long-term goal, but given the continued development pressure in the County, such an ordinance must be developed and adopted as soon as possible.**

In incorporating such measures into future drafts of the EIR and Update, it is important to consider that different species have different behaviors and needs that affect how they move. For example, smaller species with poor dispersal abilities, like rodents and herpetofauna, would require more frequent intervals of crossings compared to larger wide-ranging species, like mountain lions or coyotes, to increase their chances of finding a crossing. Gunson et al. (2016) recommend that crossing structures generally be spaced about 300m (~0.19mi) apart for small animals when transportation infrastructure bisects large expanses of continuous habitat, though they recognize that some amphibians may need more frequent crossings no more than 50m (~0.03mi) apart. And for many amphibian and reptile species, undercrossings should have grated tops so that the light and moisture inside the crossings are similar to that of the ambient environment. Brehme and Fisher (2020) also provides additional guidance regarding amphibian crossings. Therefore, multiple crossings designed for different target species may be required. In-depth analyses that include on-the-ground movement studies of which species are moving in the area and their home range area, habitat use, and patterns of movement are needed to determine how to best implement such crossings. In addition, associated crossing infrastructure (*e.g.*, exclusionary fencing appropriate for target species, berms to buffer crossings from sound and light) should be included to improve chances of wildlife using crossings, and such crossings and associated infrastructure should be designed and built in consultation with local and regional experts, including agency biologists. And to improve the effectiveness of any wildlife crossings, there should be protected habitat on both sides of the crossing; therefore, mitigation should also include acquiring unprotected lands on both sides of the roads where a wildlife crossing would be implemented, again, in consultation with local conservation organizations and stakeholders, and preserving and managing those lands in perpetuity to ensure that the wildlife crossings and

associated infrastructure remain functional over time. Given that impacts of noise, light, and vibration can affect the use of wildlife crossings, even if crossings are designed with adequate parameters and fencing, the crossings should be built with wildlife responsive design; crossings should have sound and light berms to minimize light and sound at the entrance/exit as well as on/in/under the crossings structures, and they should be well-maintained on both sides of the crossing for animals to use them (Shillincg 2020; Vickers 2020).

In addition to the scientific evidence provided above, the County has a legal obligation under state law to protect endangered or threatened animal populations, and not approve projects or plans that may jeopardize the survival of such populations. The mountain lions of the Santa Monica mountains and San Gabriel mountains are provisionally listed under the California Endangered Species Act and are presently at risk of extinction, primarily due to loss of habitat connectivity and open space caused by poorly sited development and lack of wildlife crossings (Gustafson et al. 2018; Benson et al. 2016; Benson et al. 2019). The County has an obligation not to push this population closer to extinction by allowing further degradation of existing wildlife corridors through poorly planned development. Because the Update provides a plan to accommodate new development in mountain lion habitat and connectivity areas, it must analyze and fully mitigate the impacts of such development. As currently written, the DEIR fails to mention—let alone analyze or mitigate—any of the updates of the Plan.

V. Conclusion

We urge the Update to include policies that restrict new development in wildfire hazard severity zones as well as wildlife linkage areas. In addition, the EIR must include an assessment of the significant impact of wildfire to human health and wildlife and include science-based mitigation efforts to minimize this threat. Prohibiting new development in wildfire zones would prioritize human health and safety as well as the protection of the City's biodiversity.

Thank you for your consideration of these comments.

Sincerely,

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