September 26, 2022

Sent via email, with references via FTP site

Brian Oh
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Permit Sonoma
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Re: Sonoma Developmental Center Specific Plan Draft Environmental Impact Report (SCH 2022020222)

Dear Brian Oh,

On behalf of the Center for Biological Diversity, we are writing to express our concerns regarding the Draft Environmental Impact Report ("DEIR") for the proposed Sonoma Developmental Center Specific Plan ("Project").

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 Sonoma County.

The DEIR fails to adequately assess and mitigate impacts to sensitive habitats and special-status species, wildlife connectivity, and wildfire risk. As mentioned in the Center's March 4, 2022 comments on the Notice of Preparation ("NOP"), incorporated herein by reference, the Project would sever the last remaining artery of ecosystem connectivity in the area and result in harm to sensitive and imperiled species, loss of biodiversity, reduced resilience to climate change, and increased wildfire risk.

I. The DEIR fails to adequately describe, analyze, and mitigate the Project's significant impacts to wildlife connectivity and special-status species.

The DEIR downplays the Project's impacts to special-status species and wildlife connectivity, stating that "Development under the Proposed Plan is anticipated to take place primarily within the developed footprint of the Planning Area, limiting the potential for adverse impacts on special-status species and sensitive natural communities" (DEIR at 241). This ignores the fact that the Sonoma Developmental Center has been unoccupied by people since 2018 and likely serves as both live-in and move-through habitat for numerous species, whether they were

present pre-development, while people were using the campus, or have established or re-established there since the campus became vacant. Placing development in this critical connectivity area, even if it is within an existing (but vacant) development footprint, will undoubtedly have significant impacts to wildlife connectivity and sensitive and imperiled species in the area, from mountain lions to California red-legged frogs. New development that includes commercial and industrial facilities and new roads and infrastructure will fortify existing barriers, increase human activities, and severely degrade this already constrained connectivity area, which will result in both direct and indirect effects to species and ecosystems and reduce climate resilience.

The Project's impacts to wildlife connectivity will consequently have significant adverse effects on the many special-status species that rely on such connectivity for live-in and move-through habitat to support population health and long-term survival. Although the DEIR acknowledges the Project area as a "regionally important wildlife corridor" (DEIR at 235), it severely underplays the Project area's importance for wildlife connectivity. The Project is located in the last remaining wildlife connectivity area linking protected open space across Sonoma Valley from Jack London State Park and Sonoma Mountain to the Mayacamas Mountains and beyond. CDFW identifies the Project area as an "Irreplaceable and Essential Corridor" with high levels of biodiversity[1] and the Conservation Lands Network designates it as an "Area Essential to Conservation Goals."[2] The area is important for terrestrial and riparian connectivity essential for both wildlife movement and climate resilience (Gray et al., 2018). It is also immediately adjacent to an important undercrossing under State Route 12. The Sonoma Land Trust has identified multiple wide-ranging species, including deer, bobcats, coyotes, and river otters, that actively use and move through the area. Its riparian corridors are important for numerous special-status species, many of which are currently present in the Project area. Despite the Center's extensive description of these critical habitat resources in its NOP comments, the DEIR omitted this information. The omission undermines the DEIR's analysis of these impacts, and also yields an inadequate description of the baseline physical conditions present on the project site and vicinity, which is required by CEQA and the CEQA Guidelines.

The DEIR erroneously concludes that "Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites" (DEIR at 254, Impact 3.4-4). Similarly, the DEIR states that the Project would not have "a substantial adverse effect" on riparian or other sensitive habitats, arguing that future development would take place "previously developed portions of the Planning Area, limiting the potential for disruption to undeveloped habitat areas" (DEIR at 251). Among other shortcomings, this approach omits consideration of the Project's "edge effects," which will result in habitat loss and induced human presence, traffic, and growth that will further degrade the Project area's connectivity value in this critical connectivity pinch point. Given the importance of riparian corridors for both local and regional wildlife connectivity, the DEIR's Policy 2-25, which requires 50-foot buffers along Sonoma and Mill Creeks (DEIR at 239) and

[1] CDFW Areas of Conservation Emphasis available at https://apps.wildlife.ca.gov/ace/ (Accessed February 18, 2022)
[2] CLN Explorer Reporting Tool available at: https://www.bayarealands.org/explorer-v2 (Accessed February 18, 2022).

other policies and best management practices are insufficient to mitigate impacts to these important riparian corridors and the special-status species that occur or have the potential to occur in these habitats to less than significant.

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 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, establishing large buffers that allow for connectivity between the aquatic resource and upland habitat in riparian areas is vital for many species to persist. The Project's inadequate mitigation will deteriorate the riparian habitat and connectivity value for federally threatened steelhead, chinook salmon, California giant salamanders, foothill yellow-legged frogs, western pond turtles, and the many other species that occur or have the potential to occur in and around the Project area.

A literature review found that recommended buffers around aquatic resources for wildlife often far exceeded 100 meters (~325 feet) (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). For example, California red-legged frogs have been found to migrate about 600 feet between breeding ponds and non-breeding upland habitat and streams, with some individuals roaming over 4,500 feet from the water (Fellers & Kleeman, 2007). Newts have been documented traveling up to a mile from breeding ponds (Trenham, 1998). Western pond turtle nests have been found up to 1,919 feet from aquatic habitats and individuals have been documented to move regularly between aquatic habitats with long-distance movements of up to 2,018 feet (Sloan, 2012). 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). Therefore, even the best management practices that require 300-foot buffers from streams, ponds, and other wetlands from Oct 31-June 1 for reptiles and amphibians (BIO-9 – BIO-11) are insufficient for minimizing impacts to these and other species.

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). With the driest 22-year period in 1,200 years in the western US and drought conditions that will likely continue (Williams et al., 2022) climate change refugia and resilience provided by ecosystems like

riparian areas will be ever more critical for species survival and ecosystem health. This emphasizes the need for sizeable upland buffers around streams and other aquatic resources, as well as connectivity corridors between heterogeneous habitats. The DEIR fails to adequately assess and mitigate impacts to local and regional wildlife movement and habitat connectivity.

Edge effects of development in and adjacent to open space, like the proposed Project, will likely impact key, wide-ranging predators, such as mountain lions and bobcats (Crooks, 2002; Delaney et al., 2010; Lee et al., 2012; Riley et al., 2006; J. A. Smith et al., 2015, 2017; Vickers et al., 2015; Y. 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; Delaney et al., 2010; Gray, 2017; Kociolek et al., 2011; Slabbekoorn & Ripmeester, 2008). Limiting movement and dispersal can affect species' ability to find food, shelter, mates, and refugia, especially 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). For example, field observations and controlled laboratory experiments have shown that traffic noise can significantly degrade habitat value for migrating songbirds (Ware et al., 2015). Subjects exposed to 55 and 61 dBA (simulated traffic noise) exhibited decreased feeding behavior and duration, as well as increased vigilance behavior (Ware et al. 2015). Such behavioral shifts increase the risk of starvation, thus decreasing survival rates. Policies like 2-13 and 2-14 that require signage and fencing to the wildlife corridor and creek corridor (with unspecified boundaries) and restrict off-leash pets, respectively (DEIR at 238), will not reduce the impacts of increased human activity, traffic, noise, light, etc. And although Policy 2-26 prohibits "the use of all pesticides, rodenticides, and poisons in materials and procedures used in landscaping, construction, and site maintenance within the Planning Area" (DEIR at 132), there is no mechanism of enforcement for this (or other best management practices) provided. The DEIR does not provide substantial evidence, as CEQA requires, that its proposed mitigation will reduce the Project's biological impacts to less than significant.

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.

II. The DEIR fails to adequately describe, assess, and mitigate the Project's significant impacts to wildfire risk.

The DEIR ignores important wildfire history and therefore fails to adequately describe, assess, and mitigate the Project's impacts to wildfire risk. The DEIR fails to mention or 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. Wildfires due to lightning strikes and Indigenous cultural burning have occurred on California's landscapes for millennia. They're a natural and necessary process for many of California's ecosystems. But some of the recent fires have been exceptionally harmful to communities. In the past 200 years since European colonization, forced relocation and cultural genocide of Native Tribes, fire suppression and poor land management combined with poor land-use planning have shifted historical fire regimes throughout the heterogeneous ecosystems of the state. In addition, hotter, drier and more extreme weather conditions due to climate change make the landscape more conducive to wildfire ignitions and spread. Almost all (95-97%) contemporary wildfires are caused by humans and/or human infrastructure (Balch et al., 2017); therefore, the placement of new roads and development in and/or adjacent to high and very high fire hazard severity zones 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 the Project area and spreading to nearby communities. The DEIR falls tragically short in this respect.

Decision-makers, including the County, must work to include Indigenous communities in climate change and wildfire discourse and planning. These communities are disproportionately affected 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).

"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). The DEIR fails to acknowledge that Indigenous communities and cultural burning played a role in California's historical fire regime. 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. The DEIR fails to adequately describe, assess, and mitigate the Project's impacts to wildfire risk and therefore fails to comply with CEQA.

The DEIR also fails to provide adequate mitigation to reduce wildfire risk to less than significant. For example, the DEIR points to the Mayacamas Volunteer Fire Department and the construction of a new fire station to "meet the needs of the population under buildout" and

therefore "would not substantially impair [] emergency response procedures" (DEIR at 511). However, it is unclear if human and monetary capital will be sufficient to sustain and maintain the new fire station. The DEIR does not specify how the Applicant will ensure the fire station will be adequately staffed so that quick response times are possible, nor is there assurances that there will be funding to operate and maintain the fire station. As such, it is too vague, unenforceable, and unsupported by evidence to qualify as adequate mitigation under CEQA.

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 and 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 and Kang 2018; Gutierrez 2018; Simon 2018).

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 and 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. And California's firefighter shortage is getting worse while more extreme heat waves due to climate change are making firefighting even more dangerous (Alexander, 2022; H. Smith & Mejia, 2022)(Smith and Mejia 2022; Alexander 2022).

Recent wildfires have been exceptionally harmful to people. Between 2015 and 2020 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 urban wildland 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).

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 DEIR fails to acknowledge that development and human infrastructure in high fire-prone areas increases the risk of igniting wildfires. As detailed in a 2021 Center Report (Yap, Rose, Broderick, et al., 2021), development in highly fire-prone areas increases unintentional ignitions, places more people at risk (within and downwind of the Project area), and destroys native shrubland habitats that support high levels of biodiversity. Almost all contemporary wildfires in California (95-97%) are caused by humans in the wildland urban interface (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. Roads and energy infrastructure are sources of wildfire ignitions, and the Project will be placing both in high and very high fire hazard severity zones.

Policy 2-31 is grossly insufficient to mitigate the Project's impacts to wildfire risk. The proposal to construct a "managed landscape buffer along western and eastern edges of the Core Campus to aid in fire defense consisting of a shaded fuel break in wooded areas and grazed or mown grassland" and bulldozing shrubland and chaparral within the buffer (DEIR at 507) is vague and not based on sound science or substantial evidence. The DEIR disclosed neither the size of the buffer nor its exact location. And the DEIR provides no evidence that such a buffer would reduce ignition risk or prevent the spread of a wildfire either into or out of the Project area. The DEIR is also silent on what the environmental impacts (e.g., additional habitat destruction) will be from implementation of this measure. (CEQA Guidelines § 15126.4(a)(1)(D).)

The DEIR fails to adequately mitigate the Project's impacts to wildfire ignition risk, and fails to consider feasible mitigation measures. New infrastructure in 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 (Knapp et al., 2021; Syphard et al., 2014; Syphard & Keeley, 2020). 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. The County should commit to evidence-based mitigation measures that 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. Transmission lines could be placed underground. In addition, education and awareness for

residents, visitors, and nearby communities should be provided and include how to reduce ignition risk.

In addition, wildfire mitigation must include emergency services and evacuation plans that are inclusive and consider diverse populations and vulnerable groups. Wildfire impacts disproportionately affect low-income and minority communities. As discussed in the Center's 2021 Built to Burn report (Yap 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).

The DEIR fails to adequately assess and mitigate the Project's impacts to wildfire risk, including evacuation and community safety.

III. Conclusion

We are in the midst of a global extinction crisis, with species going extinct at a rate of over 1,000 times the background rate and more than one million species on track to become extinct over the coming decades (Pimm et al., 2014). We are also in the midst of a climate crisis in which intensifying climate change is contributing to increasing extreme fire weather, longer fire seasons, and more area burned annually (Abatzoglou & Williams, 2016). The County should work to safeguard the region's biodiversity, remaining wildlife habitat, and climate change resilience by preserving remaining wildlife connectivity areas, particularly where special-status species are known to occur, like the Project area. The DEIR fails to adequately assess and mitigate the Project's impacts to special-status species, sensitive habitats, wildlife connectivity, and wildfire risk. The County should recirculate a revised EIR that remedies the deficiencies identified in this letter, and recirculate it for public review and comment.

Thank you for the opportunity to submit comments on the DEIR. Please include the Center on your notice list for all future updates to the Project and do not hesitate to contact the Center with any questions at the email addresses listed below.

Sincerely,

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(*Provided via OneDrive*)

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