Justification/Reason for Appeal

Sunset and Everett Project

(CPC-2023-5528-DB-SPR-MCUP-HCA, ENV-2023-5529-SCEA)

I. REASON FOR THE APPEAL

The Sustainable Communities Environmental Assessment ("SCEA") prepared for the Sunset and Everett Project (CPC-2023-5528-DB-SPR-MCUP-HCA, ENV-2023-5529-SCEA) ("Project") fails to comply with the California Environmental Quality Act ("CEQA"). Furthermore, the approval of the Site Plan Review entitlements (CPC-2023-5528-DB-SPR-MCUP-HCA) was in error because (1) the City of Los Angeles ("City") must fully comply with CEQA prior to any approvals in furtherance of the Project and (2) the findings are not supported by substantial evidence. Therefore, the City of Los Angeles ("City") must set aside the Site Plan Review entitlements and prepare and circulate an environmental impact report ("EIR") prior to considering approvals for the Project.

II. SPECIFICALLY THE POINTS AT ISSUE

For the specific reasons set forth in the attached comment letters dated April 15, 2024 and July 8, 2024, the SCEA fails as an informational document and fails to impose all feasible mitigation measures to reduce the Project's impacts. Furthermore, proper CEQA review must be complete *before* the City approves the Project's entitlements. (*Orinda Ass'n. v. Bd. of Supervisors* (1986) 182 Cal.App.3d 1145, 1171 ["No agency may approve a project subject to CEQA until the entire CEQA process is completed and the overall project is lawfully approved."].) As such, the approval of the Project's Site Plan Review entitlements was in error. Additionally, by failing to properly conduct environmental review under CEQA, the City lacks substantial evidence to support its findings for the Site Plan Review entitlements.

III. HOW YOU ARE AGGRIEVED BY THE DECISION

Members of appellant Supporters Alliance for Environmental Responsibility ("SAFER") live and/or work in the vicinity of the proposed Project. They breathe the air, suffer traffic congestion, and will suffer other environmental impacts of the Project unless it is properly mitigated.

IV. WHY YOU BELIEVE THE DECISION-MAKER ERRED OR ABUSED THEIR DISCRETION

On July 11, 2024, the Los Angeles City Planning Commission approved the Site Plan Review and adopted the SCEA for the Project, despite substantial evidence in the record that SCEA fails to adequately analyze the Project's environmental impacts and fails to incorporate all feasible mitigation measures to reduce the Project's impacts. The City should have prepared an initial study followed by an EIR or negative declaration in accordance with CEQA prior to consideration of approvals for the Project. The City is not permitted to approve the Project's entitlements until proper CEQA review has been completed.

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Via Email

April 15, 2024

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Re: Comment on Sustainable Communities Environmental Assessment, Sunset and Everett Project (ENV-2023-5529-SCEA)

Dear Ms. Ahn:

This comment is submitted on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") regarding the Sustainable Communities Environmental Assessment ("SCEA") prepared for the Sunset and Everett Project (ENV-2023-5529-SCEA) ("Project"), which proposes construction of two 7 story mixed-use residential and commercial buildings with a total of 327 residential units and 263 on-site parking spaces: one subterranean, one partially subterranean, and one at-ground and above-grade level on a vacant asphalted parcel located at 1185 Sunset Boulevard; 1185, 1187, 1193, 1195, 1197, 1201, 1205, 1207, 1211, 1215, 1221, 1225,1229, 1233, 1239, 1243, 1245, 1247 W. Sunset Boulevard and 917 N. Everett Street in the City of Los Angeles.

SAFER is concerned that the SCEA fails to adequately analyze the Project's potentially significant environmental impacts, and fails to impose all feasible mitigation measures to reduce the Project's impacts. SAFER requests the Plannning Development Department prepare an environmental impact report ("EIR") for the Project rather than a SCEA.

SAFER reserves the right to supplement these comments throughout the administrative process. *Galante Vineyards v. Monterey Peninsula Water Management Dist*., 60 Cal. App. 4th 1109, 1121 (1997).

I. LEGAL BACKGROUND

Sustainable Communities Environmental Assessment under SB 375.

CEQA allows for the streamlining of environmental review for "transit priority projects" meeting certain criteria. Pub. Res. Code §§ 21155, 21155.1, 21155.2. To qualify as a transit priority project, a project must

> (1) contain at least 50 percent residential use, based on total building square footage and, if the project contains between 26 percent and 50 percent nonresidential uses, a floor area ratio of not less than 0.75;
> (2) provide a minimum net density of at least 20 dwelling units per acre; and
> (3) be within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan.

Pub. Res. Code § 21155(b). A transit priority project is eligible for CEQA's streamlining provisions where,

> [The project] is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, for which the State Air Resources Board . . . has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets.

Pub. Res. Code § 21155(a). In 2020, the Regional Council for the Southern California Association of Governments ("SCAG") formally adopted the Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy ("2020 RTP/SCS"), which was accepted by CARB on October 30, 2020.

If "all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports and adopted in findings made pursuant to Section 21081" are applied to a transit priority project, the project is eligible to conduct environmental review using a sustainable communities environmental assessment ("SCEA"). Pub. Res. Code § 21155.2. A SCEA must contain an initial study which "identif[ies] all significant or potentially significant impacts of the transit priority project . . . based on substantial evidence in light of the whole record." Pub. Res. Code § 21155.2(b)(1). The initial study must also "identify any cumulative effects that have been adequately addressed and mitigated pursuant to the requirements of this division in prior applicable certified environmental impact reports." *Id*. The SCEA must then "contain measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study." Pub. Res. Code §21155(b)(2). The

SCEA is not required to discuss growth inducing impacts or any project specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network. Pub. Res. Code § 21159.28(a).

After circulating the SCEA for public review and considering all comments, a lead agency may approve the SCEA with findings that all potentially significant impacts have been identified and mitigated to a less-than-significant level. Pub. Res. Code § 21155(b)(3), (b)(4), (b)(5). A lead agency's approval of a SCEA must be supported by substantial evidence. Pub. Res. Code §21155(b)(7).

II. DISCUSSION

A. The City May Not Rely on the SCEA Because the Project is Not Consistent with the General Plan.

The City may only rely on a SCEA if [The project] is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area. Pub. Res. Code § 21155(a).

The Project is not consistent with the general plan density and building intensity. The zoning allows a floor area ratio (FAR) of 1.5:1. However the Project has a FAR of 3:1 – double the FAR allowed by the zoning. (SCEA p. 3-12).

The zoning allows a maximum building height of 57-feet. The Project is proposed to be 91-feet in height. (SCEA p. 2-13).

Since the Project is not consistent with the General Plan and zoning, the City may not rely on a SCEA.

B. The City May Not Rely on the SCEA Because the Project is Inconsistent with the SCS.

If "all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports and adopted in findings made pursuant to Section 21081" are applied to a transit priority project, the project is eligible to conduct environmental review using a sustainable community environmental assessment ("SCEA"). Pub. Res. Code § 21155.2.

The Project fails to implement mitigation measures and performance standards required by the Sustainable Communities Strategy (SCS).

SCS Goal 5 is to reduce greenhouse gases (GHGs) and improve Air Quality. (SECA p. 4-20). The SCS requires projects to promote low emission technologies such as electric vehicles (EVs). (SCEA p. 4-19). The SCS requires projects to include solar energy and power storage. (SCEA p. 4-20).

Solar Panels: Despite these requirements, the Project includes only a "solar-ready" roof. This means that the roof can support solar photo-voltaic panels, but no such panels will necessarily be installed. Installing solar panels is clearly feasible, and so should be required for the Project to be consistent with the SCS.

EV Charging: Despite the above policies in the SCS, the Project only includes the bare minimum 10% electric vehicle charging. (SCEA p. 3-17). While additional parking spaces are EV-ready, they will not be equipped with EV charging stations. 100% EV charging is feasible and should be required. Not only would this comply with SCS Goal 5, but also SCS Goal 8: Leverage new transportation technologies. (SCEA p. 4-19).

Battery Storage: Despite the above SCS policies, the Project does not appear to include any battery storage. The SCS requires solar energy and power storage. (SCEA p. 4-20). Battery storage is feasible and should be included in the Project along with solar PV.

Heat Island: The SCS requires projects to reduce the heat island effect. (SCEA p. 4-21). The Project does not include standard measures to reduce heat island, such as low albedo roofs and parking areas. Such measures are feasible and should be included in the Project.

Wildlife Connectivity: The SCS requires projects to preserve and enhance wildlife connectivity. (SCEA p. 4-21). The SCEA contends that this goal is not relevant because the Project is located in an urban area. This is simply untrue. The Project site is a vacant parcel in an urban area. As discussed by wildlife biologist, Dr. Shawn Smallwood, Ph.D., such parcels are critical to wildlife connectivity, particularly for avian (bird) species. The few bits of open space in urban areas provide important resting and stopover habitat for avian species. the SCEA fails to analyze this impact at all. Dr. Smallwood concludes that the Project would adversely affect wildlife connectivity. Thus, the Project does not "preserve and enhance" wildlife connectivity, and is inconsistent with the SCS.

C. The City May Not Rely on the SCEA Because the Project has Significant Impacts Unique to the Project and Not Addressed in the SCS.

1. Project-Level CEQA Review is Required for Impacts that were not Mitigated to Insignificance in the SCS EIR.

The SCEA must "contain measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study." Pub. Res. Code §21155(b)(2). Thus, to the extent that the SCS EIR admitted significant unmitigated impacts, further project-level CEQA review is required to analyze and mitigate those impacts on a project level because these impacts were not "mitigated to a level of insignificance" in the Connect SoCal EIR.

In the case of *Communities for a Better Environment v. Cal. Resources Agency* (2002) 103 Cal.App.4th 98, 122-125, the court of appeal held that when a "first tier" EIR admits a significant, unavoidable environmental impact, then the agency must prepare second tier EIRs for later phases of the project to ensure that those unmitigated impacts are "mitigated or avoided." (Id. citing CEQA Guidelines §15152(f)) The court reasoned that the unmitigated impacts were not "adequately addressed" in the first tier EIR since they were not "mitigated or avoided." (Id.) Thus, significant effects disclosed in first tier EIRs will trigger second tier EIRs unless such effects have been "adequately addressed," in a way that ensures the effects will be "mitigated or avoided." (Id.) Such a second tier EIR is required, even if the impact still cannot be fully mitigated and a statement of overriding considerations will be required. The court explained, "The requirement of a statement of overriding considerations is central to CEQA's role as a public accountability statute; it requires public officials, in approving environmental detrimental projects, to justify their decisions based on counterbalancing social, economic or other benefits, and to point to substantial evidence in support." (Id. at 124-125)

The EIR for the SCS admitted significant and unavoidable impacts in several areas, including:

Aesthetic (Connect SoCal Draft PEIR, p. 2.0-18);
Agricultural Resources (Id., p. 2.0-20);
Air Quality (Id. p. 2.0-23);
Biological Resources (Id. p. 2.0-25);
Cultural Resources (Id. p. 2.0-34);
Geology and Soils (Id. p. 2.0-37);
Greenhouse Gases (Id. p. 2.0-40);
Hazards and Hazardous Materials (Id. p. 2.0-43);
Hydrology and Water Quality (Id. p. 2.0-49);
Land Use (Id. p. 2.0-52);
Mineral Resources (Id. p. 2.0-54);
Noise (Id. p. 2.0-55);
Population and Housing (Id. p. 2.0-58);
Fire Services (Id. p. 2.0-59);
Police Services (Id. p. 2.0-60);
Schools (Id. p. 2.0-61);
Library Services (Id. p. 2.0-61);
Recreation (Id. p. 2.0-61);
Transportation, Traffic and Safety (Id. p. 2.0-63);
Tribal Cultural Resources (Id. p. 2.0-66);
Solid Waste (Id. p. 2.0-67);
Wastewater (Id. p. 2.0-68);
Water Supply (Id. p. 2.0-69);
Wildfire (Id. p. 2.0-70);

CEQA review is required to analyze and mitigate the above impacts at the project level because they were not mitigated to a level of insignificance in the Connect SoCal EIR.

2. Substantial Evidence Shows that the Project Will Likely Have Significant Air Quality Impacts.

Air quality experts Matt Hagemann, P.G., C.Hg. and Dr. Paul E. Rosenfeld, Ph.D. of the environmental consulting firm SWAPE reviewed the SCEA and concluded that the Project will likely have significant air quality impacts due to diesel particulate matter (DPM) emissions. SWAPE's comments and expert CVs are attached as Exhibit A. As discussed above, the SCS EIR did not mitigate air quality impacts to less than significant levels, therefore project-specific CEQA review is required.

The SCEA fails to address potential health-related impacts resulting from the Project's likely air emissions. This is problematic because operation of construction equipment during construction of the proposed Project, as well as daily truck trips during future operations, will release diesel particulate matter ("DPM") emissions into the air, affecting local and regional air quality. DPM is a known human carcinogen which poses unique health risks to nearby sensitive receptors. Importantly, CEQA requires a quantified analysis to determine whether a Project's toxic air contaminant ("TAC") emissions—including DPM emissions—will have potentially adverse impacts on human health. *Sierra Club v. Cty. of Fresno* (2018) 6 Cal. 5th 502, 518 (an EIR must make "a reasonable effort to substantively connect a project's air quality impacts to likely health consequences.")

Current guidance by the Office of Environmental Health Hazard Assessment ("OEHHA"), the agency responsible for setting statewide standards to measure health risks under CEQA, recommends that a quantified Health Risk Assessment ("HRA") be prepared to evaluate potential cancer risks for any short-term construction project lasting more than two months, and for the lifetime of any long-term project lasting more than six months. OEHHA guidance also recommends that an exposure duration of 30 years should be used to estimate the individual cancer risk affecting the maximally exposed individual resident ("MEIR") near a proposed Project site. (*Id*., p. 7.) A project's creation of health risks for impacted MEIRs must be further evaluated according to various sensitive receptors' age and pregnancy status. (*Id*., p. 11.)

Construction of the proposed Project is expected to last 30 months, and it is reasonable to assume, in the absence of any contrary assertion by the SCEA, that future building operations will continue for at least 30 years, during which time there will be ongoing emissions from delivery trucks, passenger vehicles, water heaters, cooking appliances and other sources. (SWAPE, p. 3).

Contrary to this established regulatory framework, however, the SCEA failed to prepare a quantified HRA for the Project's planned construction and operations. The SCEA also improperly relied on South Coast Air Quality Management District's ("SCAQMD") localized significance thresholds ("LSTs") to evaluate the Project's construction-related

health risk impacts. This approach is incorrect, however, because LSTs only evaluate emissions of criteria air pollutants—NOx, CO, PM_{10}, and $PM_{2.5}$—but do not measure the effect of TAC emissions, including DPM emissions, upon sensitive receptors. (*Id*., p. 2.) As such, the SCEA fails to present substantial evidence showing that the Project will not have a significant health impact. The SCEA additionally "fails to compare the Project's excess cancer risk" as it compares to the South Coast Air Quality Management District's ("SCAQMD") established significance threshold of 10 per million. (*Id*., p. 2.)

DPM has been listed as a known human carcinogen by the California Office of Health Hazard Assessment ("OEHHA"). DPM contains 40 toxic chemicals, including benzene, arsenic and lead. (www.p65warnings.ca.gov/fact-sheets/diesel-engine-exhaust.) DPM is listed separately by the State of California as a toxic air contaminant known to cause cancer in humans. (https://oehha.ca.gov/media/downloads/proposition-65//p65chemicalslistsinglelisttable2021p.pdf.) According to the U.S. Environmental Protection Agency, "Exposure to diesel exhaust can lead to serious health conditions like asthma and respiratory illnesses and can worsen existing heart and lung disease, especially in children and the elderly. These conditions can result in increased numbers of emergency room visits, hospital admissions, absences from work and school, and premature deaths." (https://www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera).

As explained above, the SCEA used LSTs to evaluate the Project's construction-related health risk impacts. However, LSTs analyze only criteria air pollutants, not toxic air contaminants (TACs). Although LSTs analyze localized impacts of PM-10 and PM-2.5, there is no LST for DPM – the pollutant that forms the basis of SWAPE's analysis. Although PM-2.5 is a constituent of DPM, it is only one of 40 toxic chemicals in DPM. PM-2.5 itself is not listed by the State as a cancer-causing chemical.

Therefore, SWAPE found that the SCEA's evaluation of the Project's potential health risk impacts, as well its conclusion that the Project will have a less-than-significant air quality impact conclusion, are methodologically flawed and are thus not supported by substantial evidence. (*Id*., p. 2.) As such, the City must prepare a revised SCEA or conduct an initial study to more accurately characterize the significance of the Project's impacts. Unless and until the City can present substantial evidence showing that the Project's impacts are less than significant, the use of a SCEA is improper. Pub. Res. Code §21155(b)(1)-(2).

SWAPE conducted a screening-level risk assessment using AERSCREEN, a modeling tool which is recommended by both OEHHA and the California Air Pollution Control Officers Association ("CAPCOA") for the development of Level 2 Health Risk Screening Assessments ("Level 2 HRSA"). According to SWAPE, "A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project." (*Id*., pp. 3-4.)

Following this recommended approach for modeling potential future health risks, SWAPE presented substantial evidence showing that Project construction and operations would result in excess cancer risks for pregnant individuals during the third trimester of pregnancy, as well as for infants, children, and adults when those individuals are maximally exposed to Project-related emissions, or located approximately 75 meters from the Project site. (*Id*., p. 5.) SWAPE calculates that the excess cancer risks for the 3rd trimester of pregnancy, infants, children, and adults at the MEIR located approximately 75 meters away, over the course of Project construction and operation, are approximately 18.0, 388, 25.5, and 2.83 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) is approximately 434 in one million. The 3rd trimester, infant, child, and lifetime cancer risks exceed the SCAQMD threshold of 10 in one million, resulting in a potentially significant impact not previously addressed or identified by the SCEA. (Id. p. 7).

Therefore, SWAPE concludes that the "screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact," and as such, "a revised SCEA should be prepared to include a refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation." (*Id*., p. 8.) SWAPE proposes numerous mitigation measures to reduce the Project's DPM impacts, which should be considered in a project-level EIR. (Id. pp. 8-11).

3. Substantial Evidence Shows that the Project Will Likely Have Significant Biological Impacts.

Wildlife biologists, Dr. Shawn Smallwood, Ph.D. and Noriko Smallwood, M.S., conclude that the Project will have significant biological impacts on special status speices. Dr. Smallwood's comments and expert CVs are attached as Exhibit B. As discussed above, the SCS EIR did not mitigate biological impacts to less than significant levels, therefore project-specific CEQA review is required.

Noriko Smallwood conducted a site visit on April 7, 2024. Noriko detected 30 species of vertebrate wildlife at or adjacent to the project site, including four species with special status. Noriko saw Cooper's hawk and red-tailed hawk (Photos 4 and 5), California gull (Photo 6), Allen's hummingbird and hooded oriole (Photos 7 and 8), Cassin's kingbird and California scrub-jay (Photos 9 and 10), house sparrow and California towhee (Photos 11 and 12), white-throated swift and barn swallow (Photos 13 and 14), lesser goldfinch (Photos 15 and 16), mourning dove and Eurasian collared-dove (Photos 17 and 18), house finch and northern mockingbird (Photos 19 and 20), Canada goose (Photo 21), European starling (Photo 22), acorn woodpecker and common raven (Photo 23 and 24), California ground squirrel (Photo 25), among the other species listed in Table 1.

Signs of breeding on and near the site abounded. California towhee, house finch, and house sparrow were actively gathering nest material from the site for nests on and near the site. Lesser goldfinches were paired up and will likely nest on or near the site. Northern mockingbirds were very territorial and will likely nest on or near the site. An Allen's

hummingbird displayed to another Allen's hummingbird and was very territorial, indicating they will likely nest on or near the site. Cassin's kingbirds chased each other indicating they will likely nest soon. Birds were very busy on site and the site has a large capacity to support nesting and foraging birds.

Dr. Smallwood states,

> Based on Noriko's survey findings, I am certain that at least four sensitive species of vertebrate wildlife occur at the project site. Making direct use of the trees and shrubs on the project site were special-status species including Allen's hummingbird and red-tailed hawk. The project site is habitat of these species.
>
> California gull, Cooper's hawk, Allen's hummingbird, and red-tailed hawk made use of that portion of the aerosphere that the proposed buildings would displace. The aerosphere of the project site is habitat of these species.
>
> (Smallwood Letter, p. 11).

Dr. Smallwood concludes that the Project will adversely affect these species through direct habitat loss, (Id., p. 19), interference with wildlife movement (Id. p. 20), window collisions due to extensive glazing, (Id., p. 21), and cumulative impacts with other projects. (Id. p. 24). Dr. Smallwood predicts that the Project will cause 760 bird deaths annually due to window collisions alone. (Id.).

Dr. Smallwood proposes several mitigation measures that could reduce the Project's impacts to sensitive species, including the use of bird-safe glass, pre-construction surveys to detect species, worker training programs, funding for wildlife rehabilitation facilities and other measures. (Id. 24-28). These impacts and mitigation measures should be analyzed in a project-specific CEQA document.

CONCLUSION

The SCEA fails to comply with CEQA because it fails to incorporate "all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports," namely, the 2020 Connect SoCal Program EIR. The SCEA is additionally improper because it lacks substantial evidence to support its conclusions that the Project will have less than significant impacts to air quality and biological impacts. Therefore, the City must prepare an initial study to determine the appropriate level of environmental review for the Project. Thank you for considering these comments.

Sincerely,

Richard Drury
Lozeau Drury LLP

EXHIBIT A

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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April 12, 2024

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Subject: Comments on the Sunset and Everett Project (SCH No. 2024030517)

Dear Mr. Drury,

We have reviewed the March 2024 Sustainable Communities Environmental Assessment ("SCEA") for the Sunset and Everett Project ("Project") located in the City of Los Angeles ("City"). The Project proposes to construct a mixed-use building comprised of 327 residential units and approximately 9,462-square-feet ("SF") of commercial space, as well as 263 parking spaces, on the 2.459-acre site.

Our review concludes that the SCEA fails to adequately evaluate the Project's health risk impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. A revised SCEA should be prepared to adequately assess and mitigate the potential health risk impacts that the project may have on the environment.

Air Quality

Diesel Particulate Matter Emissions Inadequately Evaluated

The SCEA concludes that the Project would have a less-than-significant health risk impact without conducting a quantified construction or operational health risk analysis ("HRA"). Regarding the health risk impacts associated with the Project construction and operation, the SCEA states:

> "As discussed above, construction and operation of the Project would result in less than significant impacts relative to both regional and localized air pollution emissions. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations. In addition, Project construction activities would comply with SCAQMD Rule 403 regarding the

control of fugitive dust and other specified dust control measures. As such, impacts to off-site sensitive receptors would be less than significant, and no mitigation measures are required…

The Project would not include any sources of TACs such as generators, boilers or any other combustion sources. As the Project would not contain substantial TAC sources and is consistent with the CARB and SCAQMD guidelines, the Project would not result in the exposure of off-site sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0, and potential TAC impacts would be less than significant.

The SCAQMD recommends Health Risk Assessments (HRAs) for substantial sources of diesel particulate matter such as warehouse distribution and cold storage facilities. No such facilities are located in proximity to the Project Site, and the Project does not propose any such uses. As such, a HRA was not required for the Project. Based on the above, the Project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant" (p. 5-49 – 5-50).

As demonstrated above, the SCEA claims that the Project would not generate substantial pollutant concentrations because the Project's anticipated criteria air pollutant emissions would not exceed regional and localized standard thresholds ("LSTs"), in addition to the fact that the Project does not include any sources of toxic air contaminants ("TACs"). However, the SCEA's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for four reasons.

First, the use of a LST analysis to determine the health risk impacts posed to nearby, existing sensitive receptors as a result of the Project's construction and operational TACs emissions is incorrect. While the LST method assesses the impact of pollutants at a local level, it only evaluates impacts from criteria air pollutants. According to the *Final Localized Significance Threshold Methodology* document prepared by the South Coast Air Quality Management District ("SCAQMD"), LST analyses are only applicable to NO_x, CO, PM_{10}, and $PM_{2.5}$ emissions, which are collectively referred to as criteria air pollutants.[1] Because LST methods can only be applied to criteria air pollutants, they cannot be used to determine whether emissions from TACs, specifically diesel particulate matter ("DPM"), a known human carcinogen, would result in a significant health risk impact to nearby sensitive receptors. As a result, health impacts during Project construction and operation, from exposure to TACs, such as DPM, were not analyzed, therefore leaving a gap in the SCEA's analysis.

Second, by failing to prepare a quantified construction and operational HRA, the Project is inconsistent with CEQA's requirement to make "a reasonable effort to substantively connect a project's air quality

[1] "Final Localized Significance Threshold Methodology." South Coast Air Quality Management District (SCAQMD), Revised July 2008, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf.

impacts to likely health consequences." [2] This poses a problem, as construction of the Project would produce DPM emissions through the exhaust stacks of construction equipment over a duration of approximately 30 months (p. 3-22). According to the SCEA, the operation of the Project is anticipated to generate 809 daily vehicle trips, which would produce additional exhaust emissions and continue to expose nearby, existing sensitive receptors to DPM emissions (p. 5-240). However, the SCEA fails to evaluate the TAC emissions associated with Project construction and operation or indicate the concentrations at which such pollutants would trigger adverse health effects. Without making a reasonable effort to connect the Project's TAC emissions to the potential health risks posed to nearby receptors, the SCEA is inconsistent with CEQA's requirement to correlate Project-generated emissions with potential adverse impacts on human health.

Third, the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* in February 2015. This guidance document describes the types of projects that warrant the preparation of an HRA. Specifically, OEHHA recommends that all short-term projects lasting at least 2 months assess cancer risks.[3] Additionally, according to OEHHA:

> "Exposure from projects lasting more than 6 months should be evaluated for the duration of the project. In all cases, for assessing risk to residential receptors, the exposure should be assumed to start in the third trimester to allow for the use of the ASFs (OEHHA, 2009)."[4]

As the Project's anticipated construction duration exceeds the 2-month and 6-month requirements set forth by OEHHA, construction of the Project meets the threshold warranting a quantified HRA under OEHHA guidance and should be evaluated for the entire 30-month construction period. Furthermore, OEHHA recommends that an exposure duration of 30 years should be used to estimate the individual cancer risk at the maximally exposed individual resident ("MEIR").[5] While the SCEA fails to provide the expected lifetime of the proposed Project, we can reasonably assume that the Project would operate for at least 30 years, if not more. Therefore, operation of the Project also exceeds the 2-month and 6-month requirements set forth by OEHHA and should be evaluated for the entire 30-year residential exposure duration, as indicated by OEHHA guidance. These recommendations reflect the most recent state health risk policies, and as such, a revised SCEA should be prepared to include an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated DPM emissions.

Fourth, by claiming a less-than-significant impact without conducting a quantified construction or operational HRA for nearby, existing sensitive receptors, the SCEA fails to compare the Project's excess

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[2] "Sierra Club v. County of Fresno." Supreme Court of California, December 2018, a*vailable at:* https://ceqaportal.org/decisions/1907/Sierra%20Club%20v.%20County%20of%20Fresno.pdf.
[3] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18.
[4] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18.
[5] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 2-4.

cancer risk to the SCAQMD's specific numeric threshold of 10 in one million.[6] In accordance with the most relevant guidance, an assessment of the health risk posed to nearby, existing receptors as a result of Project construction and operation should be conducted.

Screening-Level Analysis Demonstrates Potentially Significant Health Risk Impact

In order to conduct our screening-level risk assessment we relied upon AERSCREEN, which is a screening level air quality dispersion model.[7] AERSCREEN is included in the OEHHA and the California Air Pollution Control Officers Associated ("CAPCOA") guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs").[8, 9] A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach should be conducted prior to approval of the Project.

We prepared a preliminary HRA of the Project's construction-related health risk impact to residential sensitive receptors using the annual PM_{10} exhaust estimates from the SCEA's CalEEMod output files. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life.[10] The SCEA's CalEEMod model indicates that construction activities will generate approximately 759 pounds of DPM over the 738-day construction period.[11] The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{759.1\ lbs}{738\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.00540\ g/s}$$

Using this equation, we estimated a construction emission rate of 0.00540 grams per second ("g/s"). Subtracting the 738-day construction period from the total residential duration of 30 years, we assumed that after Project construction, the sensitive receptor would be exposed to the Project's operational DPM for an additional 27.98 years. The SCEA's operational CalEEMod emissions indicate that operational activities will generate approximately 20 net pounds of DPM per year throughout operation. Applying

[6] "South Coast AQMD Air Quality Significance Thresholds." SCAQMD, March 2023, *available at*: https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25.
[7] "Air Quality Dispersion Modeling - Screening Models," U.S. EPA, *available at:* https://www.epa.gov/scram/air-quality-dispersion-modeling-screening-models.
[8] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.
[9] "Health Risk Assessments for Proposed Land Use Projects." CAPCOA, July 2009, *available at:* http://www.valleyair.org/transportation/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.
[10] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18.
[11] See Attachment C for health risk calculations.

the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{20.0\ lbs}{365\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = 0.000288\ \boldsymbol{g/s}$$

Using this equation, we estimated an operational emission rate of 0.000288 g/s. Construction and operation were simulated as a 2.459-acre rectangular area source in AERSCREEN, with approximate dimensions of 141- by 71-meters. A release height of three meters was selected to represent the height of stacks of operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution. The population of Los Angeles was obtained from U.S. 2021 Census data.[12]

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project Site. The U.S. EPA suggests that the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10% in screening procedures.[13] The SCEA indicates that the nearest sensitive receptors are residential buildings as close as 5 feet, or 1.5 meters, to the Project site (p. 5-49). However, review of the AERSCREEN output files demonstrates that the *maximally* exposed individual receptor ("MEIR") is located approximately 75 meters from the Project site. Thus, the single-hour concentration estimated by AERSCREEN for Project construction is approximately 13.23 µg/m^3 DPM at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 1.323 µg/m^3 for Project construction at the MEIR. For Project operation, the single-hour concentration estimated by AERSCREEN is 0.7047 µg/m^3 DPM at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.07047 µg/m^3 for Project operation at the MEIR.

We calculated the excess cancer risk to the nearest sensitive receptor using applicable HRA methodologies prescribed by OEHHA, as recommended by SCAQMD. Specifically, guidance from OEHHA and the California Air Resources Board ("CARB") recommends the use of a standard point estimate approach, including high-point estimate (i.e. 95th percentile) breathing rates and age sensitivity factors ("ASF") in order to account for the increased sensitivity to carcinogens during early-in-life exposure and accurately assess risk for susceptible subpopulations such as children. The residential exposure parameters, such as the daily breathing rates ("BR/BW"), exposure duration ("ED"), ASFs, fraction of time at home ("FAH"), and exposure frequency ("EF") utilized for the various age groups in our screening-level HRA are as follows:

[12] "Los Angeles." U.S. Census Bureau, 2021, *available at:* https://datacommons.org/place/geoId/0603791750.
[13] "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." U.S. EPA, October 1992, *available at:* http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf.

Exposure Assumptions for Residential Individual Cancer Risk						
Age Group	**Breathing Rate** (L/kg-day)[14]	**Age Sensitivity Factor**[15]	**Exposure Duration** (years)	**Fraction of Time at Home**[16]	**Exposure Frequency** (days/year)[17]	**Exposure Time** (hours/day)
3rd Trimester	361	10	0.25	0.85	350	24
Infant (0 – 2)	1090	10	2	0.85	350	24
Child (2 – 16)	572	3	14	0.72	350	24
Adult (16 – 30)	261	1	14	0.73	350	24

For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the cancer potency factor ("CPF") in units of inverse dose expressed in milligrams per kilogram per day ($mg/kg/day^{-1}$) to derive the cancer risk estimate. Therefore, to assess exposures, we utilized the following dose algorithm:

$$Dose_{AIR,per\ age\ group} = C_{air} \times EF \times \left[\frac{BR}{BW}\right] \times A \times CF$$

where:

$Dose_{AIR}$ = dose by inhalation (mg/kg/day), per age group
C_{air} = concentration of contaminant in air (µg/m3)
EF = exposure frequency (number of days/365 days)
BR/BW = daily breathing rate normalized to body weight (L/kg/day)
A = inhalation absorption factor (default = 1)
CF = conversion factor (1x10-6, µg to mg, L to m3)

To calculate the overall cancer risk, we used the following equation for each appropriate age group:

[14] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act." SCAQMD, October 2020, available at: http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf?sfvrsn=19, p. 19; see also "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[15] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-5 Table 8.3.

[16] "Risk Assessment Procedures." SCAQMD, August 2017, available at: http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7.

[17] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 5-24.

$$Cancer\ Risk_{AIR} = Dose_{AIR} \times CPF \times ASF \times FAH \times \frac{ED}{AT}$$

where:

$Dose_{AIR}$ = dose by inhalation (mg/kg/day), per age group
CPF = cancer potency factor, chemical-specific $(mg/kg/day)^{-1}$
ASF = age sensitivity factor, per age group
FAH = fraction of time at home, per age group (for residential receptors only)
ED = exposure duration (years)
AT = averaging time period over which exposure duration is averaged (always 70 years)

Consistent with the 738-day construction schedule, the annualized average concentration for construction was used for the entire third trimester of pregnancy (0.25 years) and the first 1.77 years of the infantile stage of life (0 – 2 years). The annualized average concentration for operation was used for the remainder of the 30-year exposure period, which makes up the latter 0.23 years of the infantile stage of life, as well as the entire child (2 – 16 years) and adult (16 – 30 years) stages of life. The results of our calculations are shown in the table below.

The Maximally Exposed Individual at an Existing Residential Receptor

Age Group	Emissions Source	**Duration** (years)	**Concentration** (ug/m3)	Cancer Risk
3rd Trimester	Construction	0.25	1.323	1.80E-05
	Construction	*1.77*	*1.323*	*3.85E-04*
	Operation	*0.23*	*0.07047*	*2.64E-06*
Infant (0 - 2)	Total	2		3.88E-04
Child (2 - 16)	Operation	14	0.07047	2.55E-05
Adult (16 - 30)	Operation	14	0.07047	2.83E-06
Lifetime		**30**		**4.34E-04**

As demonstrated in the table above, the excess cancer risks for the 3rd trimester of pregnancy, infants, children, and adults at the MEIR located approximately 75 meters away, over the course of Project construction and operation, are approximately 18.0, 388, 25.5, and 2.83 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) is approximately 434 in one million. The 3rd trimester, infant, child, and lifetime cancer risks exceed the SCAQMD threshold of 10 in one million, resulting in a potentially significant impact not previously addressed or identified by the SCEA.

Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. The purpose of the screening-level HRA is to demonstrate the potential link between Project-generated emissions and adverse health risk impacts. According to the U.S. EPA:

> "EPA's Exposure Assessment Guidelines recommend completing exposure assessments iteratively using a tiered approach to 'strike a balance between the costs of adding detail and refinement to an assessment and the benefits associated with that additional refinement' (U.S. EPA, 1992).
>
> In other words, an assessment using basic tools (e.g., simple exposure calculations, default values, rules of thumb, conservative assumptions) can be conducted as the first phase (or tier) of the overall assessment (i.e., a screening-level assessment).
>
> The exposure assessor or risk manager can then determine whether the results of the screening-level assessment warrant further evaluation through refinements of the input data and exposure assumptions or by using more advanced models."

As demonstrated above, screening-level analyses warrant further evaluation in a refined modeling approach. As our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, a revised SCEA should be prepared to include a refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation. If the refined analysis similarly concludes that the Project would result in a significant health risk impact, then mitigation measures should be incorporated, as described below in the "Feasible Mitigation Measures Available to Reduce Emissions" section.

Mitigation

Feasible Mitigation Measures Available to Reduce Emissions

Our analysis demonstrates that the Project would result in potentially significant health risk impacts that may need to be mitigated further. In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. To reduce the Project's emissions, we recommend consideration of SCAG's 2020 *RTP/SCS* PEIR's Air Quality Project Level Mitigation Measures ("PMM-AQ-1"), as described below: [18]

[18] "4.0 Mitigation Measures." Connect SoCal Program Environmental Impact Report Addendum #1, September 2020, available at: https://scag.ca.gov/sites/main/files/file-attachments/fpeir_connectsocal_addendum_4_mitigationmeasures.pdf?1606004420, p. 4.0-2 – 4.0-10; 4.0-19 – 4.0-23; See also: "Certified Final Connect SoCal Program Environmental Impact Report." Southern California Association of Governments (SCAG), May 2020, *available at:* https://scag.ca.gov/peir.

SCAG RTP/SCS 2020-2045
Air Quality Project Level Mitigation Measures – PMM-AQ-1: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to violating air quality standards. Such measures may include the following or other comparable measures identified by the Lead Agency:
a) Minimize land disturbance.
b) Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes.
c) Cover trucks when hauling dirt.
d) Stabilize the surface of dirt piles if not removed immediately.
e) Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.
f) Minimize unnecessary vehicular and machinery activities.
g) Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
h) Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.
i) On Caltrans projects, Caltrans Standard Specifications 10-Dust Control, 17-Watering, and 18-Dust Palliative shall be incorporated into project specifications.
j) Require contractors to assemble a comprehensive inventory list (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that could be used an aggregate of 40 or more hours for the construction project. Prepare a plan for approval by the applicable air district demonstrating achievement of the applicable percent reduction for a CARB-approved fleet.
k) Ensure that all construction equipment is properly tuned and maintained.
l) Minimize idling time to 5 minutes—saves fuel and reduces emissions.
m) Provide an operational water truck on-site at all times. Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas. Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
n) Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
o) Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
p) As appropriate require that portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, obtain CARB Portable Equipment Registration with the state or a local district permit. Arrange appropriate consultations with the CARB or the District to determine registration and permitting requirements prior to equipment operation at the site.
q) Require projects within 500 feet of residences, hospitals, or schools to use Tier 4 equipment for all engines above 50 horsepower (hp) unless the individual project can demonstrate that Tier 4 engines would not be required to mitigate emissions below significance thresholds.
r) Projects located within the South Coast Air Basin should consider applying for South Coast AQMD “SOON” funds which provides funds to applicable fleets for the purchase of commercially available low-emission heavy-duty engines to achieve near-term reduction of NOx emissions from in-use off-road diesel vehicles.

s) Projects located within AB 617 communities should review the applicable Community Emissions Reduction Plan (CERP) for additional mitigation that can be applied to individual projects.

t) Where applicable, projects should provide information about air quality related programs to schools, including the Environmental Justice Community Partnerships (EJCP), Clean Air Ranger Education (CARE), and Why Air Quality Matters programs.

u) Projects should work with local cities and counties to install adequate signage that prohibits truck idling in certain locations (e.g., near schools and sensitive receptors).

y) Projects that will introduce sensitive receptors within 500 feet of freeways and other sources should consider installing high efficiency of enhanced filtration units, such as Minimum Efficiency Reporting Value (MERV) 13 or better. Installation of enhanced filtration units can be verified during occupancy inspection prior to the issuance of an occupancy permit.

z) Develop an ongoing monitoring, inspection, and maintenance program for the MERV filters.

aa) Consult the SCAG Environmental Justice Toolbox for potential measures to address impacts to low-income and/or minority communities.

bb) The following criteria related to diesel emissions shall be implemented on by individual project sponsors as appropriate and feasible:

- Diesel nonroad vehicles on site for more than 10 total days shall have either (1) engines that meet EPA on road emissions standards or (2) emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%
- Diesel generators on site for more than 10 total days shall be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.
- Nonroad diesel engines on site shall be Tier 2 or higher.
- Diesel nonroad construction equipment on site for more than 10 total days shall have either (1) engines meeting EPA Tier 4 nonroad emissions standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85% for engines for 50 hp and greater and by a minimum of 20% for engines less than 50 hp.
- Emission control technology shall be operated, maintained, and serviced as recommended by the emission control technology manufacturer.
- Diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend approved by the original engine manufacturer with sulfur content of 15 ppm or less.
- The construction contractor shall maintain a list of all diesel vehicles, construction equipment, and generators to be used on site. The list shall include the following:
    i. Contractor and subcontractor name and address, plus contact person responsible for the vehicles or equipment.
    ii. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation.
    iii. For the emission control technology installed: technology type, serial number, make, model, manufacturer, EPA/CARB verification number/level, and installation date and hour-meter reading on installation date.
- The contractor shall establish generator sites and truck-staging zones for vehicles waiting to load or unload material on site. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.
- The contractor shall maintain a monthly report that, for each on road diesel vehicle, nonroad construction equipment, or generator onsite, includes:
    i. Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.
    ii. Any problems with the equipment or emission controls.
    iii. Certified copies of fuel deliveries for the time period that identify:
        1. Source of supply

2. Quantity of fuel
3. Quantity of fuel, including sulfur content (percent by weight)

cc) Project should exceed Title-24 Building Envelope Energy Efficiency Standards (California Building Standards Code). The following measures can be used to increase energy efficiency:

- Provide pedestrian network improvements, such as interconnected street network, narrower roadways and shorter block lengths, sidewalks, accessibility to transit and transit shelters, traffic calming measures, parks and public spaces, minimize pedestrian barriers.
- Provide traffic calming measures, such as:
    i. Marked crosswalks
    ii. Count-down signal timers
    iii. Curb extensions iv. Speed tables
    iv. Raised crosswalks
    v. Raised intersections
    vi. Median islands
    vii. Tight corner radii
    viii. Roundabouts or mini-circles
    ix. On-street parking
    x. Chicanes/chokers
- Create urban non-motorized zones
- Provide bike parking in non-residential and multi-unit residential projects
- Dedicate land for bike trails
- Limit parking supply through:
    i. Elimination (or reduction) of minimum parking requirements
    ii. Creation of maximum parking requirements
    iii. Provision of shared parking
- Require residential area parking permit.
- Provide ride-sharing programs
    i. Designate a certain percentage of parking spacing for ride sharing vehicles
    ii. Designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles
    iii. Providing a web site or messaging board for coordinating rides
    iv. Permanent transportation management association membership and finding requirement.

These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation. A revised SCEA should be prepared to include all feasible mitigation measures, as well as include an updated health risk analysis to ensure that the necessary mitigation measures are implemented to reduce emissions to the maximum extent feasible. The revised SCEA should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was

reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

Matt Hagemann, P.G., C.Hg.

Paul E. Rosenfeld, Ph.D.

Attachment A: Updated Health Risk Calculations
Attachment B: AERSCREEN Output Files
Attachment C: Matt Hagemann CV
Attachment D: Paul Rosenfeld CV

Construction

2024	
Annual Emissions (tons/year)	0.005
Daily Emissions (lbs/day)	0.02739726
Construction Duration (days)	8
Total DPM (lbs)	0.219178082
Total DPM (g)	99.41917808
Start Date	12/24/2024
End Date	1/1/2025
Construction Days	8
2025	
Annual Emissions (tons/year)	0.15
Daily Emissions (lbs/day)	0.821917808
Construction Duration (days)	365
Total DPM (lbs)	300
Total DPM (g)	136080
Start Date	1/1/2025
End Date	1/1/2026
Construction Days	365
2026	
Annual Emissions (tons/year)	0.19
Daily Emissions (lbs/day)	1.04109589
Construction Duration (days)	365
Total DPM (lbs)	380
Total DPM (g)	172368
Start Date	1/1/2026
End Date	1/1/2027
Construction Days	365
2027	
Annual Emissions (tons/year)	0.08
Daily Emissions (lbs/day)	0.438356164
Construction Duration (days)	180
Total DPM (lbs)	78.90410959
Total DPM (g)	35790.90411
Start Date	1/1/2027
End Date	6/30/2027
Construction Days	180

Total	
Total DPM (lbs)	759.1232877
Total DPM (g)	344338.3233
Emission Rate (g/s)	0.005400267
Release Height (meters)	3
Total Acreage	2.459
Max Horizontal (meters)	141.08
Min Horizontal (meters)	70.54
Initial Vertical Dimension (meters)	1.5
Setting	U
Population	2,550,009
Start Date	12/24/2024
End Date	1/1/2027
Total Construction Days	738
Total Years of Construction	2.02
Total Years of Operation	27.98

Operation

Emission Rate	
Annual Emissions (tons/year)	0.01
Daily Emissions (lbs/day)	0.054794521
Total DPM (lbs)	20
Emission Rate (g/s)	0.000287671
Release Height (meters)	3
Total Acreage	2.459
Max Horizontal (meters)	141.08
Min Horizontal (meters)	70.54
Initial Vertical Dimension (meters)	1.5
Setting	U
Population	2,550,009

AERSCREEN 21112 / AERMOD 21112 02/09/24
15:34:21

TITLE: Sunset and Everett Construction

********** AREA PARAMETERS **********

SOURCE EMISSION RATE:	0.540E-02	g/s	0.429E-01	lb/hr
AREA EMISSION RATE:	0.543E-06	g/(s-m2)	0.431E-05	lb/(hr-m2)
AREA HEIGHT:	3.00	meters	9.84	feet
AREA SOURCE LONG SIDE:	141.08	meters	462.86	feet
AREA SOURCE SHORT SIDE:	70.54	meters	231.43	feet
INITIAL VERTICAL DIMENSION:	1.50	meters	4.92	feet
RURAL OR URBAN:	URBAN			
POPULATION:	2550009			
INITIAL PROBE DISTANCE =	5000.	meters	16404.	feet

********** BUILDING DOWNWASH PARAMETERS **********

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

********** FLOW SECTOR ANALYSIS **********

25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	13.23	15	75.0	WIN

* = worst case diagonal

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50
ROUGHNESS LENGTH: 1.000 (meters)

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	10	10	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50

HT	REF TA	HT
10.0	310.0	2.0

********** AERSCREEN AUTOMATED DISTANCES **********
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	10.49	2525.00	0.8074E-01

25.00	11.84	2550.00	0.7966E-01
50.00	12.82	2575.00	0.7860E-01
75.00	13.23	2600.00	0.7757E-01
100.00	7.555	2625.00	0.7656E-01
125.00	5.312	2650.00	0.7557E-01
150.00	4.045	2675.00	0.7460E-01
175.00	3.231	2700.00	0.7366E-01
200.00	2.665	2725.00	0.7274E-01
225.00	2.254	2750.00	0.7183E-01
250.00	1.943	2775.00	0.7095E-01
275.00	1.698	2800.00	0.7008E-01
300.00	1.504	2825.00	0.6923E-01
325.00	1.346	2850.00	0.6840E-01
350.00	1.214	2875.00	0.6759E-01
375.00	1.103	2900.00	0.6679E-01
400.00	1.009	2925.00	0.6601E-01
425.00	0.9277	2950.00	0.6525E-01
450.00	0.8571	2975.00	0.6450E-01
475.00	0.7954	2999.99	0.6376E-01
500.00	0.7412	3025.00	0.6304E-01
525.00	0.6931	3050.00	0.6234E-01
550.00	0.6501	3075.00	0.6165E-01
575.00	0.6116	3100.00	0.6097E-01
600.00	0.5769	3125.00	0.6030E-01
625.00	0.5453	3150.00	0.5964E-01
650.00	0.5166	3174.99	0.5900E-01
675.00	0.4905	3199.99	0.5837E-01
700.00	0.4666	3225.00	0.5775E-01
725.00	0.4447	3250.00	0.5715E-01
750.00	0.4244	3275.00	0.5655E-01
775.00	0.4058	3300.00	0.5597E-01
800.00	0.3885	3325.00	0.5539E-01
825.00	0.3725	3350.00	0.5482E-01
850.00	0.3576	3375.00	0.5427E-01
875.00	0.3437	3400.00	0.5372E-01
900.00	0.3308	3425.00	0.5319E-01
925.00	0.3187	3450.00	0.5266E-01
950.00	0.3073	3475.00	0.5214E-01
975.00	0.2965	3500.00	0.5163E-01
1000.00	0.2864	3525.00	0.5113E-01
1025.00	0.2769	3550.00	0.5064E-01
1050.00	0.2679	3575.00	0.5016E-01
1075.00	0.2594	3600.00	0.4968E-01
1100.00	0.2513	3625.00	0.4921E-01
1125.00	0.2437	3650.00	0.4875E-01
1150.00	0.2364	3675.00	0.4830E-01
1175.00	0.2295	3700.00	0.4785E-01
1200.00	0.2230	3725.00	0.4741E-01
1225.00	0.2168	3750.00	0.4698E-01
1250.00	0.2108	3775.00	0.4656E-01

1275.00	0.2052	3800.00	0.4614E-01
1300.00	0.1998	3825.00	0.4573E-01
1325.00	0.1954	3849.99	0.4532E-01
1350.00	0.1904	3875.00	0.4492E-01
1375.00	0.1857	3900.00	0.4453E-01
1400.00	0.1812	3925.00	0.4414E-01
1425.00	0.1768	3950.00	0.4376E-01
1450.00	0.1726	3975.00	0.4338E-01
1475.00	0.1686	4000.00	0.4301E-01
1500.00	0.1648	4025.00	0.4265E-01
1525.00	0.1611	4050.00	0.4229E-01
1550.00	0.1576	4075.00	0.4193E-01
1575.00	0.1541	4100.00	0.4158E-01
1600.00	0.1508	4125.00	0.4124E-01
1625.00	0.1477	4150.00	0.4090E-01
1650.00	0.1446	4175.00	0.4056E-01
1675.00	0.1417	4200.00	0.4023E-01
1700.00	0.1388	4225.00	0.3991E-01
1725.00	0.1361	4250.00	0.3959E-01
1750.00	0.1334	4275.00	0.3927E-01
1775.00	0.1308	4300.00	0.3896E-01
1800.00	0.1283	4325.00	0.3865E-01
1825.00	0.1259	4350.00	0.3835E-01
1850.00	0.1236	4375.00	0.3805E-01
1875.00	0.1214	4400.00	0.3775E-01
1900.00	0.1192	4425.00	0.3746E-01
1925.00	0.1171	4450.00	0.3717E-01
1950.00	0.1150	4475.00	0.3689E-01
1975.00	0.1130	4500.00	0.3661E-01
2000.00	0.1111	4525.00	0.3633E-01
2025.00	0.1092	4550.00	0.3606E-01
2050.00	0.1074	4575.00	0.3579E-01
2075.00	0.1056	4600.00	0.3552E-01
2100.00	0.1039	4625.00	0.3526E-01
2125.00	0.1023	4650.00	0.3500E-01
2150.00	0.1006	4675.00	0.3475E-01
2175.00	0.9905E-01	4700.00	0.3449E-01
2200.00	0.9751E-01	4725.00	0.3425E-01
2224.99	0.9601E-01	4750.00	0.3400E-01
2250.00	0.9455E-01	4775.00	0.3376E-01
2275.00	0.9313E-01	4800.00	0.3352E-01
2300.00	0.9175E-01	4825.00	0.3328E-01
2325.00	0.9040E-01	4850.00	0.3304E-01
2350.00	0.8908E-01	4875.00	0.3281E-01
2375.00	0.8780E-01	4900.00	0.3258E-01
2400.00	0.8655E-01	4925.00	0.3236E-01
2425.00	0.8533E-01	4950.00	0.3213E-01
2449.99	0.8414E-01	4975.00	0.3191E-01
2475.00	0.8298E-01	5000.00	0.3169E-01
2500.00	0.8185E-01		

********** AERSCREEN MAXIMUM IMPACT SUMMARY **********

3-hour, 8-hour, and 24-hour scaled
concentrations are equal to the 1-hour concentration as referenced in
SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY
IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	13.42	13.42	13.42	13.42	N/A
DISTANCE FROM SOURCE	74.00 meters				
IMPACT AT THE AMBIENT BOUNDARY	10.49	10.49	10.49	10.49	N/A
DISTANCE FROM SOURCE	1.00 meters				

TITLE: Sunset and Everett Operation

********** AREA PARAMETERS **********

SOURCE EMISSION RATE:	0.288E-03	g/s	0.228E-02	lb/hr
AREA EMISSION RATE:	0.289E-07	g/(s-m2)	0.229E-06	lb/(hr-m2)
AREA HEIGHT:	3.00	meters	9.84	feet
AREA SOURCE LONG SIDE:	141.08	meters	462.86	feet
AREA SOURCE SHORT SIDE:	70.54	meters	231.43	feet
INITIAL VERTICAL DIMENSION:	1.50	meters	4.92	feet
RURAL OR URBAN:	URBAN			
POPULATION:	2550009			
INITIAL PROBE DISTANCE =	5000.	meters	16404.	feet

********** BUILDING DOWNWASH PARAMETERS **********

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

********** FLOW SECTOR ANALYSIS **********

25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	0.7047	15	75.0	WIN

* = worst case diagonal

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50
ROUGHNESS LENGTH: 1.000 (meters)

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	10	10	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-1.30	0.043	-9.000	0.020	-999.	21.	6.0	1.000	1.50	0.35	0.50

HT	REF TA	HT
10.0	310.0	2.0

********** AERSCREEN AUTOMATED DISTANCES **********
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	0.5589	2525.00	0.4302E-02

25.00	0.6306	2550.00	0.4244E-02
50.00	0.6829	2575.00	0.4188E-02
75.00	0.7047	2600.00	0.4133E-02
100.00	0.4026	2625.00	0.4079E-02
125.00	0.2830	2650.00	0.4026E-02
150.00	0.2155	2675.00	0.3975E-02
175.00	0.1721	2700.00	0.3925E-02
200.00	0.1420	2725.00	0.3875E-02
225.00	0.1201	2750.00	0.3827E-02
250.00	0.1035	2775.00	0.3780E-02
275.00	0.9049E-01	2800.00	0.3734E-02
300.00	0.8016E-01	2825.00	0.3689E-02
325.00	0.7171E-01	2850.00	0.3645E-02
350.00	0.6467E-01	2875.00	0.3601E-02
375.00	0.5876E-01	2900.00	0.3559E-02
400.00	0.5376E-01	2925.00	0.3517E-02
425.00	0.4943E-01	2950.00	0.3476E-02
450.00	0.4567E-01	2975.00	0.3437E-02
475.00	0.4238E-01	3000.00	0.3397E-02
500.00	0.3949E-01	3025.00	0.3359E-02
525.00	0.3693E-01	3050.00	0.3321E-02
550.00	0.3464E-01	3075.00	0.3284E-02
575.00	0.3259E-01	3100.00	0.3248E-02
600.00	0.3074E-01	3125.00	0.3213E-02
625.00	0.2905E-01	3150.00	0.3178E-02
650.00	0.2753E-01	3174.99	0.3144E-02
675.00	0.2613E-01	3200.00	0.3110E-02
700.00	0.2486E-01	3225.00	0.3077E-02
725.00	0.2369E-01	3250.00	0.3045E-02
750.00	0.2261E-01	3275.00	0.3013E-02
775.00	0.2162E-01	3300.00	0.2982E-02
800.00	0.2070E-01	3325.00	0.2951E-02
825.00	0.1985E-01	3350.00	0.2921E-02
850.00	0.1905E-01	3375.00	0.2892E-02
875.00	0.1831E-01	3400.00	0.2862E-02
900.00	0.1762E-01	3425.00	0.2834E-02
925.00	0.1698E-01	3450.00	0.2806E-02
950.00	0.1637E-01	3475.00	0.2778E-02
975.00	0.1580E-01	3500.00	0.2751E-02
1000.00	0.1526E-01	3525.00	0.2724E-02
1025.00	0.1476E-01	3550.00	0.2698E-02
1050.00	0.1428E-01	3575.00	0.2672E-02
1075.00	0.1382E-01	3600.00	0.2647E-02
1100.00	0.1339E-01	3625.00	0.2622E-02
1125.00	0.1298E-01	3650.00	0.2598E-02
1150.00	0.1260E-01	3675.00	0.2573E-02
1175.00	0.1223E-01	3700.00	0.2550E-02
1200.00	0.1188E-01	3724.99	0.2526E-02
1225.00	0.1155E-01	3750.00	0.2503E-02
1250.00	0.1123E-01	3775.00	0.2481E-02

1275.00	0.1093E-01	3800.00	0.2458E-02
1300.00	0.1065E-01	3825.00	0.2436E-02
1325.00	0.1041E-01	3849.99	0.2415E-02
1350.00	0.1015E-01	3875.00	0.2393E-02
1375.00	0.9894E-02	3900.00	0.2372E-02
1400.00	0.9652E-02	3925.00	0.2352E-02
1425.00	0.9420E-02	3950.00	0.2331E-02
1450.00	0.9198E-02	3975.00	0.2311E-02
1475.00	0.8985E-02	4000.00	0.2292E-02
1500.00	0.8780E-02	4025.00	0.2272E-02
1525.00	0.8584E-02	4050.00	0.2253E-02
1550.00	0.8394E-02	4075.00	0.2234E-02
1575.00	0.8212E-02	4100.00	0.2216E-02
1600.00	0.8037E-02	4125.00	0.2197E-02
1625.00	0.7868E-02	4149.99	0.2179E-02
1650.00	0.7705E-02	4175.00	0.2161E-02
1675.00	0.7548E-02	4200.00	0.2144E-02
1700.00	0.7396E-02	4225.00	0.2126E-02
1725.00	0.7249E-02	4250.00	0.2109E-02
1750.00	0.7108E-02	4275.00	0.2092E-02
1775.00	0.6971E-02	4300.00	0.2076E-02
1800.00	0.6839E-02	4325.00	0.2059E-02
1825.00	0.6710E-02	4350.00	0.2043E-02
1850.00	0.6587E-02	4375.00	0.2027E-02
1875.00	0.6467E-02	4400.00	0.2011E-02
1900.00	0.6350E-02	4425.00	0.1996E-02
1924.99	0.6238E-02	4450.00	0.1981E-02
1950.00	0.6128E-02	4475.00	0.1965E-02
1975.00	0.6022E-02	4500.00	0.1951E-02
2000.00	0.5919E-02	4525.00	0.1936E-02
2025.00	0.5820E-02	4550.00	0.1921E-02
2050.00	0.5723E-02	4575.00	0.1907E-02
2075.00	0.5629E-02	4600.00	0.1893E-02
2100.00	0.5537E-02	4625.00	0.1879E-02
2125.00	0.5448E-02	4650.00	0.1865E-02
2150.00	0.5361E-02	4675.00	0.1851E-02
2175.00	0.5277E-02	4700.00	0.1838E-02
2200.00	0.5195E-02	4725.00	0.1825E-02
2224.99	0.5115E-02	4750.00	0.1811E-02
2250.00	0.5038E-02	4775.00	0.1799E-02
2275.00	0.4962E-02	4800.00	0.1786E-02
2300.00	0.4888E-02	4825.00	0.1773E-02
2325.00	0.4817E-02	4850.00	0.1761E-02
2350.00	0.4746E-02	4875.00	0.1748E-02
2375.00	0.4678E-02	4900.00	0.1736E-02
2400.00	0.4612E-02	4925.00	0.1724E-02
2425.00	0.4547E-02	4950.00	0.1712E-02
2449.99	0.4483E-02	4975.00	0.1700E-02
2475.00	0.4421E-02	5000.00	0.1689E-02
2500.00	0.4361E-02		

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Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.7151	0.7151	0.7151	0.7151	N/A
DISTANCE FROM SOURCE	74.00 meters				
IMPACT AT THE AMBIENT BOUNDARY	0.5589	0.5589	0.5589	0.5589	N/A
DISTANCE FROM SOURCE	1.00 meters				

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 100 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9.

Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific

principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F**. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examinations, 2009-2011.

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Focus on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years of experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, industrial, military and agricultural sources, unconventional oil drilling operations, and locomotive and construction engines. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities. Dr. Rosenfeld has also successfully modeled exposure to contaminants distributed by water systems and via vapor intrusion.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, creosote, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at sites and has testified as an expert witness on numerous cases involving exposure to soil, water and air contaminants from industrial, railroad, agricultural, and military sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Rosenfeld P. E., Spaeth K., Hallman R., Bressler R., Smith, G., (2022) Cancer Risk and Diesel Exhaust Exposure Among Railroad Workers. *Water Air Soil Pollution.* **233,** 171.

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health.* 18:48

Simons, R.A., Seo, Y. **Rosenfeld, P**., (2015) Modeling the Effect of Refinery Emission On Residential Property Value. Journal of Real Estate Research. 27(3):321-342

Chen, J. A, Zapata A. R., Sutherland A. J., Molmen, D.R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.,** Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermod and Empirical Data. *American Journal of Environmental Science*, 8(6), 622-632.

Rosenfeld, P.E. & Feng, L. (2011). *The Risks of Hazardous Waste.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences*. 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health*. 73(6), 34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*. Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution,* 123 (17), 319-327.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research*. 105, 194-197.

Rosenfeld, P.E., J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

Rosenfeld, P. E., M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities.* Boston Massachusetts: Elsevier Publishing

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.

Rosenfeld P. E., J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004.* New Orleans, October 2-6, 2004.

Rosenfeld, P.E., and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49(9), 171-178.

Rosenfeld, P. E., Grey, M. A., Sellew, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research*. 76(4), 310-315.

Rosenfeld, P.E., Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office*, Publications Clearinghouse (MS–6), Sacramento, CA Publication #442-02-008.

Rosenfeld, P.E., and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.

Rosenfeld, P.E., and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality.* 29, 1662-1668.

Rosenfeld, P.E., C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research*. 73(4), 363-367.

Rosenfeld, P.E., and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.

Rosenfeld, P.E., and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research*. 131(1-4), 247-262.

Chollack, T. and **P. Rosenfeld. (**1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.

Rosenfeld, P. E. (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).

Rosenfeld, P. E. (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).

Rosenfeld, P. E. (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

Rosenfeld, P. E. (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.

Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

Presentations:

Rosenfeld, P.E., "The science for Perfluorinated Chemicals (PFAS): What makes remediation so hard?" Law Seminars International, (May 9-10, 2018) 800 Fifth Avenue, Suite 101 Seattle, WA.

Rosenfeld, P.E., Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society.* Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution.* Lecture conducted from Boston, MA.

Rosenfeld, P.E. (April 19-23, 2009). Perfluoroctanoic Acid (PFOA) and Perfluoroactane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

Rosenfeld, P.E. (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States" Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23rd Annual International Conferences on Soils Sediment and Water.* Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The *23rd Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting.* Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition.* Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference.* Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference.* Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference.* Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference.* Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants*.. Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conferenc*e. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E, C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University.
Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the Superior Court of the State of California, County of San Bernardino
Billy Wildrick, Plaintiff vs. BNSF Railway Company
Case No. CIVDS1711810
Rosenfeld Deposition 10-17-2022

In the State Court of Bibb County, State of Georgia
Richard Hutcherson, Plaintiff vs Norfolk Southern Railway Company
Case No. 10-SCCV-092007
Rosenfeld Deposition 10-6-2022

In the Civil District Court of the Parish of Orleans, State of Louisiana
Millard Clark, Plaintiff vs. Dixie Carriers, Inc. et al.
Case No. 2020-03891
Rosenfeld Deposition 9-15-2022

In The Circuit Court of Livingston County, State of Missouri, Circuit Civil Division
Shirley Ralls, Plaintiff vs. Canadian Pacific Railway and Soo Line Railroad
Case No. 18-LV-CC0020
Rosenfeld Deposition 9-7-2022

In The Circuit Court of the 13th Judicial Circuit Court, Hillsborough County, Florida Civil Division
Jonny C. Daniels, Plaintiff vs. CSX Transportation Inc.
Case No. 20-CA-5502
Rosenfeld Deposition 9-1-2022

In The Circuit Court of St. Louis County, State of Missouri
Kieth Luke et. al. Plaintiff vs. Monsanto Company et. al.
Case No. 19SL-CC03191
Rosenfeld Deposition 8-25-2022

In The Circuit Court of the 13th Judicial Circuit Court, Hillsborough County, Florida Civil Division
Jeffery S. Lamotte, Plaintiff vs. CSX Transportation Inc.
Case No. NO. 20-CA-0049
Rosenfeld Deposition 8-22-2022

In State of Minnesota District Court, County of St. Louis Sixth Judicial District
Greg Bean, Plaintiff vs. Soo Line Railroad Company
Case No. 69-DU-CV-21-760
Rosenfeld Deposition 8-17-2022

In United States District Court Western District of Washington at Tacoma, Washington
John D. Fitzgerald Plaintiff vs. BNSF
Case No. 3:21-cv-05288-RJB
Rosenfeld Deposition 8-11-2022

In Circuit Court of the Sixth Judicial Circuit, Macon Illinois
Rocky Bennyhoff Plaintiff vs. Norfolk Southern
Case No. 20-L-56
Rosenfeld Deposition 8-3-2022

In Court of Common Pleas, Hamilton County Ohio
Joe Briggins Plaintiff vs. CSX
Case No. A2004464
Rosenfeld Deposition 6-17-2022

In the Superior Court of the State of California, County of Kern
George LaFazia vs. BNSF Railway Company.
Case No. BCV-19-103087
Rosenfeld Deposition 5-17-2022

In the Circuit Court of Cook County Illinois
Bobby Earles vs. Penn Central et. al.
Case No. 2020-L-000550
Rosenfeld Deposition 4-16-2022

In United States District Court Easter District of Florida
Albert Hartman Plaintiff vs. Illinois Central
Case No. 2:20-cv-1633
Rosenfeld Deposition 4-4-2022

In the Circuit Court of the 4th Judicial Circuit, in and For Duval County, Florida
Barbara Steele vs. CSX Transportation
Case No.16-219-Ca-008796
Rosenfeld Deposition 3-15-2022

In United States District Court Easter District of New York
Romano et al. vs. Northrup Grumman Corporation
Case No. 16-cv-5760
Rosenfeld Deposition 3-10-2022

In the Circuit Court of Cook County Illinois
Linda Benjamin vs. Illinois Central
Case No. No. 2019 L 007599
Rosenfeld Deposition 1-26-2022

In the Circuit Court of Cook County Illinois
Donald Smith vs. Illinois Central
Case No. No. 2019 L 003426
Rosenfeld Deposition 1-24-2022

In the Circuit Court of Cook County Illinois
Jan Holeman vs. BNSF
Case No. 2019 L 000675
Rosenfeld Deposition 1-18-2022

In the State Court of Bibb County State of Georgia
Dwayne B. Garrett vs. Norfolk Southern
Case No. 20-SCCV-091232
Rosenfeld Deposition 11-10-2021

In the Circuit Court of Cook County Illinois
Joseph Ruepke vs. BNSF
Case No. 2019 L 007730
Rosenfeld Deposition 11-5-2021

In the United States District Court For the District of Nebraska
Steven Gillett vs. BNSF
Case No. 4:20-cv-03120
Rosenfeld Deposition 10-28-2021

In the Montana Thirteenth District Court of Yellowstone County
James Eadus vs. Soo Line Railroad and BNSF
Case No. DV 19-1056
Rosenfeld Deposition 10-21-2021

In the Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al.cvs. Cerro Flow Products, Inc.
Case No. 0i9-L-2295
Rosenfeld Deposition 5-14-2021
Trial October 8-4-2021

In the Circuit Court of Cook County Illinois
Joseph Rafferty vs. Consolidated Rail Corporation and National Railroad Passenger Corporation d/b/a AMTRAK,
Case No. 18-L-6845
Rosenfeld Deposition 6-28-2021

In the United States District Court For the Northern District of Illinois
Theresa Romcoe vs. Northeast Illinois Regional Commuter Railroad Corporation d/b/a METRA Rail
Case No. 17-cv-8517
Rosenfeld Deposition 5-25-2021

In the Superior Court of the State of Arizona In and For the Cunty of Maricopa
Mary Tryon et al. vs. The City of Pheonix v. Cox Cactus Farm, L.L.C., Utah Shelter Systems, Inc.
Case No. CV20127-094749
Rosenfeld Deposition 5-7-2021

In the United States District Court for the Eastern District of Texas Beaumont Division
Robinson, Jeremy et al vs. CNA Insurance Company et al.
Case No. 1:17-cv-000508
Rosenfeld Deposition 3-25-2021

In the Superior Court of the State of California, County of San Bernardino
Gary Garner, Personal Representative for the Estate of Melvin Garner vs. BNSF Railway Company.
Case No. 1720288
Rosenfeld Deposition 2-23-2021

In the Superior Court of the State of California, County of Los Angeles, Spring Street Courthouse
Benny M Rodriguez vs. Union Pacific Railroad, A Corporation, et al.
Case No. 18STCV01162
Rosenfeld Deposition 12-23-2020

In the Circuit Court of Jackson County, Missouri
Karen Cornwell, Plaintiff, vs. Marathon Petroleum, LP, Defendant.
Case No. 1716-CV10006
Rosenfeld Deposition 8-30-2019

In the United States District Court For The District of New Jersey
Duarte et al, Plaintiffs, vs. United States Metals Refining Company et. al. Defendant.
Case No. 2:17-cv-01624-ES-SCM
Rosenfeld Deposition 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" Defendant.
Case No. 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No. BC615636
Rosenfeld Deposition 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No. BC646857
Rosenfeld Deposition 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiffs vs. The 3M Company et al., Defendants
Case No. 1:16-cv-02531-RBJ
Rosenfeld Deposition 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No. 1923
Rosenfeld Deposition 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintifs vs. Chevron Corporation, et al., Defendants
Cause No. C12-01481
Rosenfeld Deposition 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition 8-23-2017

In United States District Court For The Southern District of Mississippi
Guy Manuel vs. The BP Exploration et al., Defendants
Case No. 1:19-cv-00315-RHW
Rosenfeld Deposition 4-22-2020

In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No. LC102019 (c/w BC582154)
Rosenfeld Deposition 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., Plaintiffs, vs. Meritor Inc., et al., Defendants
Case No. 4:16-cv-52-DMB-JVM
Rosenfeld Deposition July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No. RG14711115
Rosenfeld Deposition September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No. LALA002187
Rosenfeld Deposition August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action No. 14-C-30000
Rosenfeld Deposition June 2015

In The Iowa District Court for Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No. 4980
Rosenfeld Deposition May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case No. CACE07030358 (26)
Rosenfeld Deposition December 2014

In the County Court of Dallas County Texas
Lisa Parr et al, Plaintiff, vs. Aruba et al, Defendant.
Case No. cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., Plaintiffs, vs. Republic Services, Inc., et al., Defendants
Case No. 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition October 2012

In the United States District Court for the Middle District of Alabama, Northern Division
James K. Benefield, et al., Plaintiffs, vs. International Paper Company, Defendant.
Civil Action No. 2:09-cv-232-WHA-TFM
Rosenfeld Deposition July 2010, June 2011

In the Circuit Court of Jefferson County Alabama
Jaeanette Moss Anthony, et al., Plaintiffs, vs. Drummond Company Inc., et al., Defendants
Civil Action No. CV 2008-2076
Rosenfeld Deposition September 2010

In the United States District Court, Western District Lafayette Division
Ackle et al., Plaintiffs, vs. Citgo Petroleum Corporation, et al., Defendants.
Case No. 2:07CV1052
Rosenfeld Deposition July 2009

EXHIBIT B

Shawn Smallwood, PhD
3108 Finch Street
Davis, CA 95616

Richard Drury
Lozeau Drury LLP
1939 Harrison Street, Suite 150
Oakland, CA 94612

11 April 2024

RE: Sunset and Everett Project

Dear Mr. Drury,

I write to comment on a Sustainable Communities Environmental Assessment (SCEA) prepared by City of Los Angeles (2024) for a proposed project at Sunset Boulevard and Everett Street, where I understand 86- and 91-foot-tall buildings would include 327 residential units on 321,200 square feet of floor space, all on 2.5 acres.

My qualifications for preparing expert comments are the following. I hold a Ph.D. degree in Ecology from University of California at Davis, where I also worked as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research has been on animal density and distribution, habitat selection, wildlife interactions with the anthrosphere, and conservation of rare and endangered species. I authored many papers on these and other topics. I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and Raptor Research Foundation, and I've lectured part-time at California State University, Sacramento. I was Associate Editor of wildlife biology's premier scientific journal, The Journal of Wildlife Management, as well as of Biological Conservation, and I was on the Editorial Board of Environmental Management. I have performed wildlife surveys in California for thirty-seven years. My CV is attached.

SITE VISIT

On my behalf Noriko Smallwood, who is a wildlife biologist with a Master's Degree from California State University Los Angeles, visited the site of the proposed project for 2.82 hours from 06:45 to 109:34 hours on 7 April 2024. She walked the site's perimeter, stopping to scan for wildlife with use of binoculars. Noriko recorded all species of vertebrate wildlife she detected, including those whose members flew over the site or were seen nearby, off the site. Animals of uncertain species identity were either omitted or, if possible, recorded to the Genus or higher taxonomic level.

Conditions were partly cloudy with a slight north wind and 46° to 55° F. The site contained concrete pads of previous buildings, but was mostly overgrown with native and non-native shrubs, trees, and annual grass (Photos 1–3). These trees and shrubs and the overlying airspace of the project site support many species of vertebrate wildlife.

Photos 1–3. *Views of the project site, 7 April 2024. Photos by Noriko Smallwood.*

Noriko detected 30 species of vertebrate wildlife at or adjacent to the project site, including four species with special status (Table 1). Noriko saw Cooper's hawk and red-tailed hawk (Photos 4 and 5), California gull (Photo 6), Allen's hummingbird and hooded oriole (Photos 7 and 8), Cassin's kingbird and California scrub-jay (Photos 9 and 10), house sparrow and California towhee (Photos 11 and 12), white-throated swift and barn swallow (Photos 13 and 14), lesser goldfinch (Photos 15 and 16), mourning dove and Eurasian collared-dove (Photos 17 and 18), house finch and northern mockingbird

(Photos 19 and 20), Canada goose (Photo 21), European starling (Photo 22), acorn woodpecker and common raven (Photo 23 and 24), California ground squirrel (Photo 25), among the other species listed in Table 1.

Signs of breeding on and near the site abounded. California towhee, house finch, and house sparrow were actively gathering nest material from the site for nests on and near the site. Lesser goldfinches were paired up and will likely nest on or near the site. Northern mockingbirds were very territorial and will likely nest on or near the site. An Allen's hummingbird displayed to another Allen's hummingbird and was very territorial, indicating they will likely nest on or near the site. Cassin's kingbirds chased each other indicating they will likely nest soon. Birds were very busy on site and the site has a large capacity to support nesting and foraging birds.

Noriko Smallwood certifies that the foregoing and following survey results are true and accurately reported.

Noriko Smallwood

Photos 4 and 5. *Cooper's hawk soaring over the project site (left) and red-tailed hawk flying from one branch to another on the project site (right), 7 April 2024. Photos by Noriko Smallwood. Note the Cooper's hawk is looking down to search the site for prey items.*

Photo 6. *California gulls flying over the project site, 7 April 2024. Photo by Noriko Smallwood.*

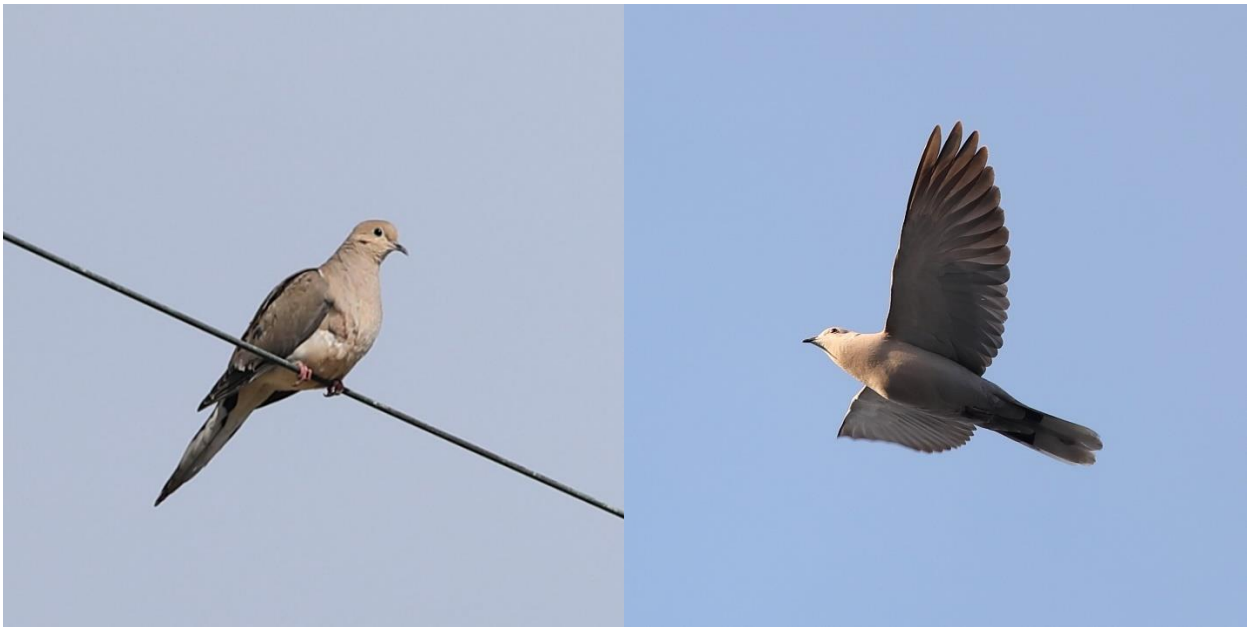
Photos 7 and 8. *Allen's hummingbird (left) and hooded oriole (right), on the project site, 7 April 2024. Photos by Noriko Smallwood.*


Photos 9 and 10. *Cassin's kingbird on the project site (left), and California scrub-jay right next to the project site (right), 7 April 2024. Photos by Noriko Smallwood.*


Photos 11 and 12. *House sparrow with nest material (left) and California towhee (right), on the project site, 7 April 2024. Photos by Noriko Smallwood.*

Photos 13 and 14. *White-throated swifts (left) and barn swallow (right), on the project site, 7 April 2024. Photos by Noriko Smallwood.*

Photos 15 and 16. *Lesser goldfinch male (left) and female (right) foraging on plants on the project site, 7 April 2024. Photos by Noriko Smallwood.*

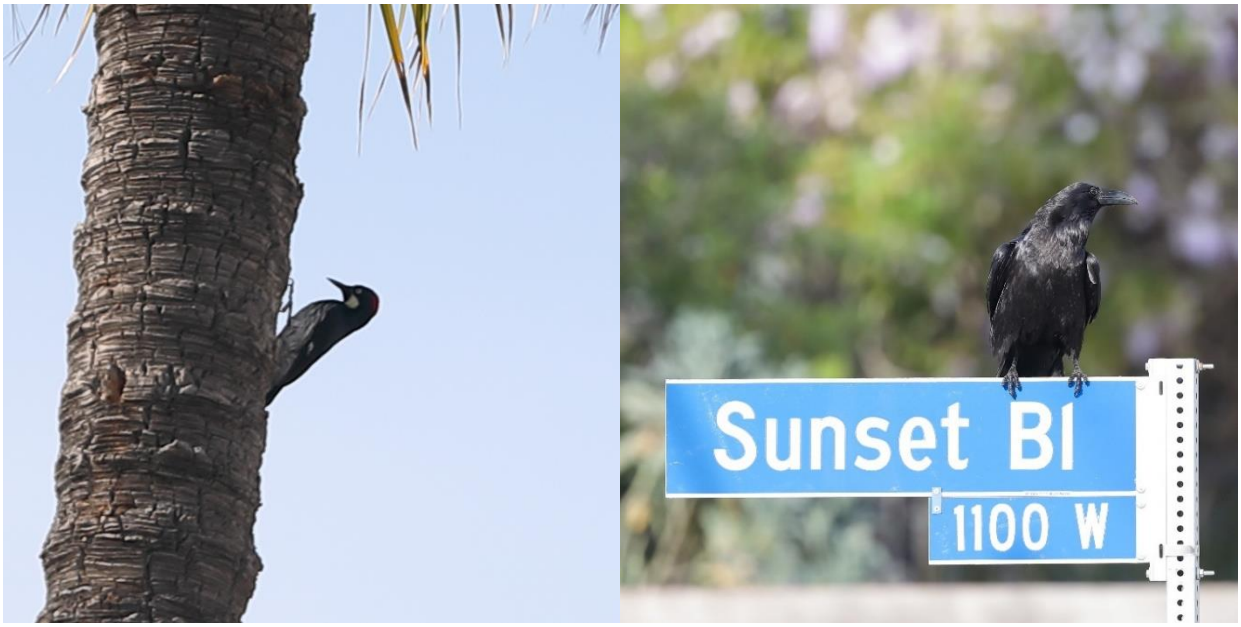


Photos 17 and 18. *Mourning dove (left) and Eurasian collared-dove (right), on the project site, 7 April 2024. Photos by Noriko Smallwood.*

Photos 19 and 20. *House finch (left) and northern mockingbird (right), on the project site, 7 April 2024. Photos by Noriko Smallwood.*

Photo 21. *Canada goose flying over the project site, 7 April 2024. Photo by Noriko Smallwood.*

Photo 22. *European starling on the project site, 7 April 2024. Photo by Noriko Smallwood.*



Photos 23 and 24. *Acorn woodpecker (left) and common raven (right), right next to the project site, 7 April 2024. Photos by Noriko Smallwood.*

Photo 25. *California ground squirrel on the project site, 7 April 2024. Photo by Noriko Smallwood.*

Table 1. *Species of wildlife Noriko observed during 2.82 hours of survey on 7 April 2024.*

Common name	***Species name***	**Status**[1]	**Notes**
Canada goose	*Branta canadensis*		Two flew over
Rock pigeon	*Columba livia*	Non-native	Utilized site throughout survey
Eurasian collared-dove	*Streptopelia decaocto*	Non-native	Flew over
Mourning dove	*Zenaida macroura*		Perched
White-throated swift	*Aeronautes saxatalis*		Foraged over site
Anna's hummingbird	*Calypte anna*		Perched, territorial
Allen's hummingbird	*Selasphorus sasin*	BCC	Perched, territorial
California gull	*Larus californicus*	BCC, TWL	Flew over, calling
Cooper's hawk	*Accipiter cooperii*	TWL, BOP	Flew low over site then circled
Red-tailed hawk	*Buteo jamaicensis*	BOP	Perched on pole and trees on site, flew low over site
Acorn woodpecker	*Melanerpes formicivorus*		Next to site on palm tree
Cassin's kingbird	*Tyrannus vociferans*		Perched on palm trees, chased each other
Black phoebe	*Sayornis nigricans*		Perched on tree
California scrub-jay	*Aphelocoma californica*		Perched on tree next to site
American crow	*Corvus brachyrhynchos*		Perched, flew over, socialized
Common raven	*Corvus corax*		Perched, flew over, foraged
Barn swallow	*Hirundo rustica*		Flew over
Bushtit	*Psaltriparus minimus*		Foraged in trees
House wren	*Troglodytes aedon*		Sang from trees
Northern mockingbird	*Mimus polyglottos*		Perched, sang, territorial
European starling	*Sturnus vulgaris*	Non-native	Perched, flew over
House sparrow	*Passer domesticus*	Non-native	Gathered nest material
House finch	*Haemorphous mexicanus*		Gathered nest material
Lesser goldfinch	*Spinus psaltria*		Foraged on plants
California towhee	*Melozone crissalis*		Gathered nest material
Hooded oriole	*Icterus cucullatus*		Perched on palm trees
House cat	*Felis catus*	Non-native	Near a house next to the site
Eastern fox squirrel	*Sciurus niger*	Non-native	On wires and trees
California ground squirrel	*Otospermophilus beecheyi*		One in dumpster with sticks
Botta's pocket gopher	*Thomomys bottae*		Burrows next to site

[1] Listed as BCC = U.S. Fish and Wildlife Service Bird of Conservation Concern, TWL = Taxa to Watch List (Shuford and Gardali 2008), and BOP = Birds of Prey (California Fish and Game Code 3503.5).

Based on Noriko's survey findings, I am certain that at least four sensitive species of vertebrate wildlife occur at the project site. Making direct use of the trees and shrubs on the project site were special-status species including Allen's hummingbird and red-tailed hawk. The project site is habitat of these species.

California gull, Cooper's hawk, Allen's hummingbird, and red-tailed hawk made use of that portion of the aerosphere that the proposed buildings would displace. The aerosphere of the project site is habitat of these species.

Based on habitat associations, special-status species I expect to use the project site as habitat, but which have yet to be detected there, include monarch, rufous hummingbird, Costa's hummingbird, sharp-shinned hawk, red-shouldered hawk, Peregrine falcon, Nuttall's woodpecker, Bullock's oriole, western gull, Vaux swift, and at least several of the bat species in Table 2. The project site most likely is habitat of these special-status species, and of others in Table 2.

Considering Noriko's brief time at the project site, many species of wildlife were detected. The species Noriko detected included four special-status species, all of which are sensitive species whose presence obligates my determination that sensitive species occur on the project site. They do. Species listed by the US Fish and Wildlife Service as Birds of Conservation Concern and the Taxa to Watch List were prevalent on site, and species protected by California as Birds of Prey were utilizing the site as hunting grounds. Most of the birds in Table 1 are protected by the Migratory Bird Treaty Act and by the California Bird Protection Act, largely because birds are sensitive to disturbances to their nest attempts. The evidence is overwhelming that the project site provides habitat for protected species identified as candidate, sensitive, or species of special status by state or federal agencies, and fully protected species.

However, I must point out that the species of wildlife Noriko detected at the project site comprised only a sampling of the species that were present during her survey. I fit a nonlinear regression model to the cumulative number of vertebrate species detected with time into Noriko's 7 April 2024 survey to predict the number of species that she would have detected with a longer survey or perhaps with additional biologists available to assist. The model is a logistic growth model which reaches an asymptote that corresponds with the maximum number of vertebrate wildlife species that could have been detected during the survey. In this case, the model predicts many more species of vertebrate wildlife were available to be detected had Noriko's survey effort increased on the morning of 7 April 2024 (Figure 1). Unfortunately, I do not know the identities of the undetected species, but the pattern in Noriko's data indicates relatively high use of the project site compared to 10 surveys at other sites she and I have completed in southern California relatively near the coast. Compared to models fit to data we collected from other sites in the region between 2019 and 2023, the data from the project site follows along the upper bound of the 95% confidence interval of the rate of accumulated species detections with time into the survey (Figure 1). Importantly, however, the species that Noriko did and did not detect on 7 April 2024 composed only a fraction of the species that would occur at the project site over the period of a year or longer. This is because many species are seasonal in their occurrence.

Table 2. *Occurrence likelihoods of special-status bird species at or near the proposed project site, according to eBird/iNaturalist records (https://eBird.org, https://www.inaturalist.org) and on-site survey findings, where 'Very close' indicates within 1.5 miles of the site, "nearby" indicates within 1.5 and 4 miles, and "in region" indicates within 4 and 30 miles, and 'in range' means the species' geographic range overlaps the site. Entries in bold font identify species observed by Noriko.*

Common name	***Species name***	**Status[1]**	**Databases, Site visit**
Monarch	*Danaus plexippus*	FC	Very close
Crotch's bumble bee	*Bombus crotchii*	CCE	Nearby
Blainville's horned lizard	*Phrynosoma blainvillii*	SSC	In region
Coastal whiptail	*Aspidoscelis tigris stejnegeri*	SSC	In region
San Diegan legless lizard	*Anniella stebbinsi*	SSC	Nearby
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	SSC	In region
Two-striped gartersnake	*Thamnophis hammondii*	SSC	In region
South coast gartersnake	*Thamnophis sirtalis pop. 1*	SSC	In range
Fulvous whistling-duck	*Dendrocygna bicolor*	SSC1	In region
Brant	*Branta bernicla*	SSC2	In region
Cackling goose (Aleutian)	*Branta hutchinsii leucopareia*	WL	Nearby
Redhead	*Aythya americana*	SSC2	Very close
Western grebe	*Aechmophorus occidentalis*	BCC	Very close
Clark's grebe	*Aechmophorus clarkii*	BCC	Nearby
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FT, CE, BCC	In region
Black swift	*Cypseloides niger*	SSC3, BCC	Nearby
Vaux's swift	*Chaetura vauxi*	SSC2, BCC	Very close
Costa's hummingbird	*Calypte costae*	BCC	Very close
Rufous hummingbird	*Selasphorus rufus*	BCC	Very close
Allen's hummingbird	*Selasphorus sasin*	BCC	**On site**
Whimbrel[2]	*Numenius phaeopus*	BCC	Nearby
Long-billed curlew	*Numenius americanus*	WL	In region
Marbled godwit	*Limosa fedoa*	BCC	In region
Short-billed dowitcher	*Limnodromus griseus*	BCC	In region
Willet	*Tringa semipalmata*	BCC	Nearby
American avocet[2]	*Recurvirostra americana*	BCC	Nearby
Laughing gull	*Leucophaeus atricilla*	WL	In region
Heermann's gull	*Larus heermanni*	BCC	In region
Western gull	*Larus occidentalis*	BCC	Very close
California gull	*Larus californicus*	BCC, WL	**On site**
California least tern	*Sternula antillarum browni*	FE, CE, FP	In region
Black tern	*Chlidonias niger*	SSC2, BCC	In region
Elegant tern	*Thalasseus elegans*	BCC, WL	Nearby
Common loon	*Gavia immer*	SSC	Nearby
Double-crested cormorant	*Phalacrocorax auritus*	WL	Very close
American white pelican	*Pelacanus erythrorhynchos*	SSC1, BCC	Very close
Least bittern	*Ixobrychus exilis*	SSC2	In region

Common name	***Species name***	**Status[1]**	**Databases, Site visit**
White-faced ibis	*Plegadis chihi*	WL	Very close
Turkey vulture	*Cathartes aura*	BOP	Very close
Osprey	*Pandion haliaetus*	WL, BOP	Very close
White-tailed kite	*Elanus luecurus*	CFP, BOP	Very close
Golden eagle	*Aquila chrysaetos*	BGEPA, CFP, BOP, WL	Very close
Northern harrier	*Circus cyaneus*	BCC, SSC3, BOP	Very close
Sharp-shinned hawk	*Accipiter striatus*	WL, BOP	Very close
Cooper's hawk	*Accipiter cooperii*	WL, BOP	**On site**
Bald eagle	*Haliaeetus leucocephalus*	CE, BGEPA, CFP	Very close
Red-shouldered hawk	*Buteo lineatus*	BOP	Very close
Swainson's hawk	*Buteo swainsoni*	CT, BOP	Very close
Red-tailed hawk	*Buteo jamaicensis*	BOP	**On site**
Ferruginous hawk	*Buteo regalis*	WL, BOP	Nearby
Zone-tailed hawk	*Buteo albonotatus*	BOP	Nearby
Harris' hawk	*Parabuteo unicinctus*	WL, BOP	In region
Barn owl	*Tyto alba*	BOP	Very close
Western screech-owl	*Megascops kennicotti*	BOP	Very close
Great horned owl	*Bubo virginianus*	BOP	Very close
Burrowing owl	*Athene cunicularia*	BCC, SSC2, BOP	Very close
Long-eared owl	*Asio otus*	BCC, SSC3, BOP	In region
Short-eared owl	*Asia flammeus*	BCC, SSC3, BOP	In region
Lewis's woodpecker	*Melanerpes lewis*	BCC	Very close
Nuttall's woodpecker	*Picoides nuttallii*	BCC	Very close
American kestrel	*Falco sparverius*	BOP	Very close
Merlin	*Falco columbarius*	WL, BOP	Very close
Peregrine falcon	*Falco peregrinus*	BOP	Very close
Prairie falcon	*Falco mexicanus*	WL, BOP	In region
Olive-sided flycatcher	*Contopus cooperi*	BCC, SSC2	Very close
Willow flycatcher	*Empidonax trailii*	CE	Very close
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE, CE	In region
Vermilion flycatcher	*Pyrocephalus rubinus*	SSC2	Nearby
Least Bell's vireo	*Vireo bellii pusillus*	FE, CE	Very close
Loggerhead shrike	*Lanius ludovicianus*	SSC2	Very close
Oak titmouse	*Baeolophus inornatus*	BCC	Very close
California horned lark	*Eremophila alpestris actia*	WL	Nearby
Bank swallow	*Riparia riparia*	CT	Nearby
Purple martin	*Progne subis*	SSC2	Nearby
Wrentit	*Chamaea fasciata*	BCC	Very close
California gnatcatcher	*Polioptila c. californica*	FT, SSC2	In region
California thrasher	*Toxostoma redivivum*	BCC	Very close
Cassin's finch	*Haemorhous cassinii*	BCC	In region
Lawrence's goldfinch	*Spinus lawrencei*	BCC	Very close

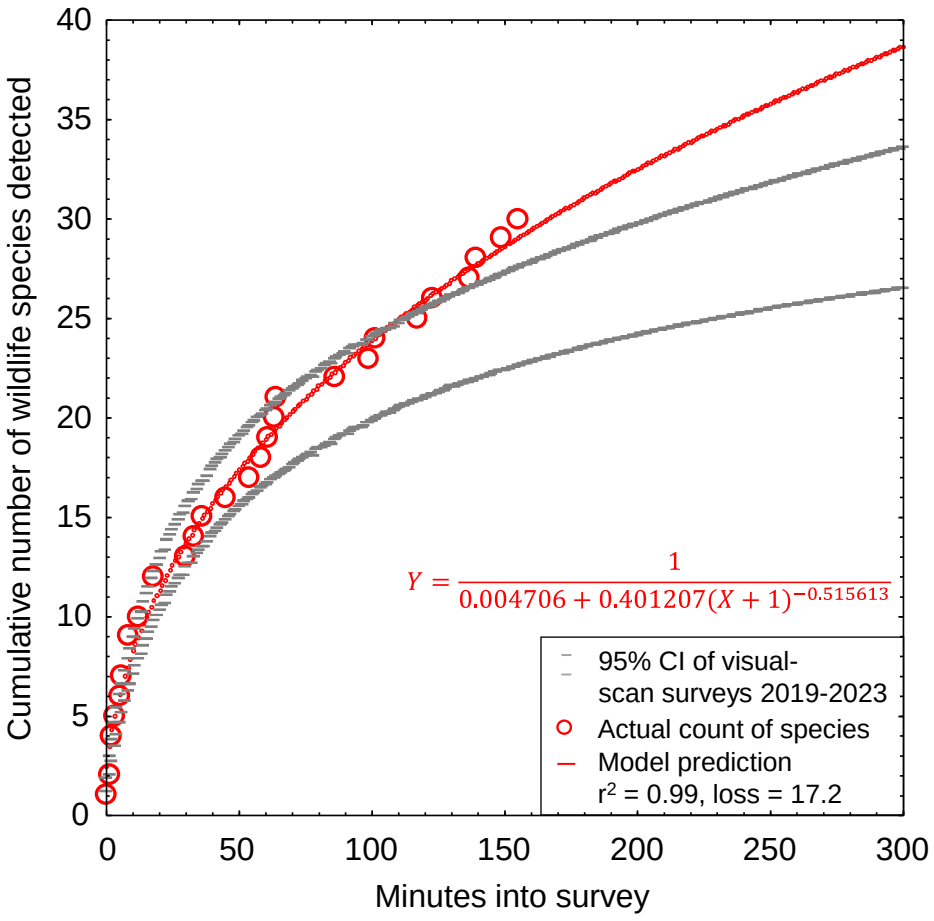
Common name	***Species name***	**Status[1]**	**Databases, Site visit**
Grasshopper sparrow	*Ammodramus savannarum*	SSC2	Nearby
Black-chinned sparrow	*Spizella atrogularis*	BCC	In region
Gray-headed junco	*Junco hyemalis caniceps*	WL	Very close
Bell's sparrow	*Amphispiza b. belli*	WL	In region
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	WL	Very close
Yellow-breasted chat	*Icteria virens*	SSC3	Nearby
Yellow-headed blackbird	*X. xanthocephalus*	SSC3	Very close
Bullock's oriole	*Icterus bullockii*	BCC	Very close
Tricolored blackbird	*Agelaius tricolor*	CT, BCC, SSC1	Very close
Lucy's warbler	*Leiothlypis luciae*	SSC3, BCC	Very close
Virginia's warbler	*Leiothlypis virginiae*	WL, BCC	Very close
Yellow warbler	*Setophaga petechia*	SSC2	Very close
Summer tanager	*Piranga rubra*	SSC1	Very close
Pallid bat	*Antrozous pallidus*	SSC, WBWG:H	In range
Townsend's big-eared bat	*Corynorhinus townsendii*	SSC, WBWG:H	In range
Silver-haired bat	*Lasionycteris noctivagans*	WBWG:M	Nearby
Spotted bat	*Euderma maculatum*	SSC, WBWG:H	In range
Hoary bat	*Lasiurus cinereus*	WBWG:M	Nearby
Western yellow bat	*Lasiurus xanthinus*	SSC, WBWG:H	In range
Western small-footed myotis	*Myotis cililabrum*	WBWG:M	In range
Miller's myotis	*Myotis evotis*	WBWG:M	In range
Little brown myotis	*Myotis lucifugus*	WBWG:M	In region
Fringed myotis	*Myotis thysanodes*	WBWG:H	In range
Long-legged myotis	*Myotis volans*	WBWG:H	In range
Yuma myotis	*Myotis yumanensis*	WBWG:LM	Nearby
Western mastiff bat	*Eumops perotis*	SSC, WBWG:H	Very close
Mexican free-tailed bat	*Tadarida brasiliensis*	WBWG:L	Very close
Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	SSC	In range
Southern grasshopper mouse	*Onychomys torridus ramona*	SSC	In range

[1] Listed as FT or FE = federal threatened or endangered, FC = federal candidate for listing, BCC = U.S. Fish and Wildlife Service Bird of Conservation Concern, CT or CE = California threatened or endangered, CCT or CCE = Candidate California threatened or endangered, CFP = California Fully Protected (California Fish and Game Code 3511), SSC = California Species of Special Concern (not threatened with extinction, but rare, very restricted in range, declining throughout range, peripheral portion of species' range, associated with habitat that is declining in extent), SSC1, SSC2 and SSC3 = California Bird Species of Special Concern priorities 1, 2 and 3, respectively (Shuford and Gardali 2008), WL = Taxa to Watch List (Shuford and Gardali 2008), and BOP = Birds of Prey (CFG Code 3503.5), and WBWG = Western Bat Working Group with priority rankings, of low (L), moderate (M), and high (H).

[2] Uncertain if BCC based on 2021 Bird of Conservation Concern list.

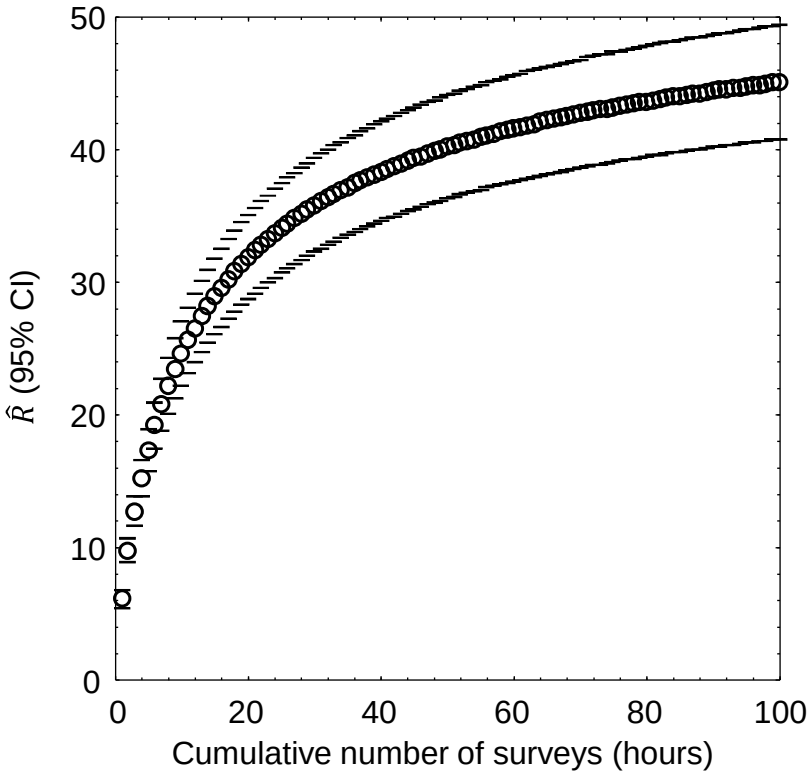
At least a year's worth of surveys would be needed to more accurately report the number of vertebrate species that occur at the project site, but I only have Noriko's one survey. However, by use of an analytical bridge, a modeling effort applied to a large, robust data set from a research site can predict the number of vertebrate wildlife species that likely make use of the site over the longer term. As part of my research, I completed a much larger survey effort across 167 km² of annual grasslands of the Altamont Pass Wind Resource Area, where from 2015 through 2019 I performed 721 1-hour visual-scan surveys, or 721 hours of surveys, at 46 stations. I used binoculars and otherwise the methods were the same as the methods I and other consulting biologists use for surveys at proposed project sites. At each of the 46 survey stations, I tallied new species detected with each sequential survey at that station, and then related the cumulative species detected to the hours (number of surveys, as each survey lasted 1 hour) used to accumulate my counts of species detected. I used combined quadratic and simplex methods of estimation in Statistica to estimate least-squares, best-fit nonlinear models of the number of cumulative species detected regressed on hours of survey (number of surveys) at the station: $\hat{R} = \frac{1}{1/a+b\times(Hours)^c}$, where $\hat{R}$ represented cumulative species richness detected. The coefficients of determination, r^2, of the models ranged 0.88 to 1.00, with a mean of 0.97 (95% CI: 0.96, 0.98); or in other words, the models were excellent fits to the data.

Figure 1. *Actual and predicted relationships between the number of vertebrate wildlife species detected and the elapsed survey time based on Noriko's visual-scan survey on 7 April 2024. Note that the relationship would differ if the survey was based on another method or during another season.*



I projected the predictions of each model to thousands of hours to find predicted asymptotes of wildlife species richness. The mean model-predicted asymptote of species richness was 57 after 11,857 hours of visual-scan surveys among the 46 stations of my research site. I also averaged model predictions of species richness at each incremental increase of number of surveys, i.e., number of hours (Figure 2). On average I would have detected 12.2 species over my first 2.82 hours of surveys at my research site in the Altamont Pass (2.82 hours to match the 2.82 hours Noriko surveyed at the project site on 7 April 2024), which composed 37.2% of the predicted total number of species I would detect with a much larger survey effort at the research site. Given the example illustrated in Figure 2, the 30 species Noriko detected after 2.82 hours of survey at the project site on 7 April 2024 likely represented 37.2% of the species to be detected after many more visual-scan surveys over another year or longer. With many more repeat surveys through the year, Noriko would likely detect $^{30}/_{0.372} = 81$ species of vertebrate wildlife at the site. Assuming Noriko's ratio of special-status to non-special-status species was to hold through the detections of all 81 predicted species, then continued surveys would eventually detect 11 special-status species of vertebrate wildlife.

Figure 2. *Mean (95% CI) predicted wildlife species richness, $\hat{R}$, as a nonlinear function of hour-long survey increments across 46 visual-scan survey stations across the Altamont Pass Wind Resource Area, Alameda and Contra Costa Counties, 2015–2019. Note that the location of the study is largely irrelevant to the utility of the graph to the interpretation of survey outcomes at the project site. It is the pattern in the data that is relevant, because the pattern is typical of the pattern seen elsewhere.*



Because my prediction of 81 species of vertebrate wildlife, including11 special-status species of vertebrate wildlife, is derived from daytime visual-scan surveys, and would detect few nocturnal mammals such as bats, the true number of species composing the wildlife community of the site must be larger. Noriko's reconnaissance survey should serve only as a starting point toward characterization of the site's wildlife community, but it certainly cannot alone inform of the inventory of species that use the site. More surveys are needed than hers to inventory use of the project site by wildlife.

EXISTING ENVIRNMENTAL SETTING

The first step in analysis of potential project impacts to biological resources is to accurately characterize the existing environmental setting, including the biological species that use the site, their relative abundances, how they use the site, key ecological relationships, and known and ongoing threats to those species with special status. A reasonably accurate characterization of the environmental setting can provide the basis for determining whether the site holds habitat value to wildlife, as well as a baseline against which to analyze potential project impacts. For these reasons, characterization of the environmental setting, including the project site's regional setting, is one of CEQA's essential analytical steps. Methods to achieve this first step typically include (1) surveys of the site for biological resources, and (2) reviews of literature, databases and local experts for documented occurrences of special-status species. In the case of the proposed project, these needed steps were not completed.

Environmental Setting informed by Field Surveys

To CEQA's primary objective to disclose potential environmental impacts of a proposed project, the analysis should be informed of which biological species are known to occur at the proposed project site, which special-status species are likely to occur, as well as the limitations of the survey effort directed to the site. Analysts need this information to characterize the environmental setting as a basis for opining on, or predicting, potential project impacts to biological resources.

The City of Los Angeles did not have the project site surveyed for wildlife. The City simply assumed that wildlife are absent from the site. According to the City (page 5-55), "the Project Site is vacant (all previous uses and buildings have been removed) and situated within an urban environment, and therefore no known occupied habitat, potentially suitable habitat, or designated critical habitat exists on the Project Site or in the surrounding area." The conclusion fails to flow logically from the implied premise that patches of open space within an urban environment cannot support wildlife. The premise is false, and therefore so is the conclusion. Noriko's survey of the site utterly refutes the City's premise and its conclusion.

Environmental Setting informed by Desktop Review

The purpose of literature and database review and of consulting with local experts is to inform the field survey, and to augment interpretation of its outcome. Analysts need this information to identify which species are known to have occurred at or near the project site, and to identify which other special-status species could conceivably occur at the site due to geographic range overlap and migration flight paths.

The City of Los Angeles did not perform a desktop review, or at least the findings of a desktop review is not reported. No species occurrence database was consulted. No wildlife expert was consulted. This important CEQA step was skipped.

At page 5-66, the SCEA reports that the site is vacant and also covered in weeds and hundreds of invasive tree of heaven. However, the SCEA does not explain how the vegetation on the site prevents wildlife, and it does not.

In my assessment based on database reviews and site visits, 108 special-status species of wildlife are known to occur near enough to the site to warrant analysis of occurrence potential (Table 2). Of these 108 species, 4 (4%) were recorded on the project site, and another 46 (42%) species have been documented within 1.5 miles of the site ('Very close'), another 21 (20%) within 1.5 and 4 miles ('Nearby'), and another 26 (24%) within 4 to 30 miles ('In region'). Two thirds (66%) of the species in Table 2 have been reportedly seen within 4 miles of the project site. The site therefore supports multiple special-status species of wildlife and carries the potential for supporting many more special-status species of wildlife based on proximity of recorded occurrences.

At page 5-67, the SCEA reports "Due to the urbanized and disturbed nature of the Project Site and the surrounding areas, and lack of large expanses of open space areas, species likely to occur on-site are limited to small terrestrial and avian species typically found in urbanized developed settings." However, had the City of Los Angeles had professional biologists survey the site, it would have seen that this statement is unsupportable. Noriko detected various species on the site, including red-tailed hawk, Cooper's hawk, California gull, white-throated swifts, acorn woodpecker and California ground squirrels – not the types of species normally found in residential backyards.

Regarding bats, the SCEA (page 5-68) states, "While none have been identified on the Project Site, it is possible that bats or bat roosts are present in on-site trees or in building cavities." However, City of Los Angeles did not have anyone search for bats on the project site. It is therefore misleading to state that no bats have been identified on the project site. Whereas it might be true that none have been identified, that none have been identified is meaningless if no surveys were conducted.

There is at least a fair argument to be made for the need to prepare an EIR to accurately characterize the existing environmental setting and to appropriately analyze the project impacts to wildlife from habitat fragmentation and from bird-glass collision mortality.

POTENTIAL BIOLOGICAL IMPACTS

An impacts analysis should consider whether and how a proposed project would affect members of a species, larger demographic units of the species, the whole of a species, and ecological communities. The accuracy of this analysis depends on an accurate characterization of the existing environmental setting. In the case of the proposed project, the existing environmental setting has not been accurately characterized, and several important types of potential project impacts have been inadequately analyzed. These types of impacts include habitat loss, interference with wildlife movement, and wildlife-automobile collision mortality.

HABITAT LOSS AND HABITAT FRAGMENTATION

City of Los Angeles (2024:4-21) claims that the 2020-2045 RTP/SCS strategy/measure to **"**Preserve, enhance, and restore regional wildlife connectivity "does not apply to the project site because it "does not serve as a regional wildlife connector…" However, the 30 species of vertebrate wildlife than Noriko detected within less than three hours indicate otherwise. All of the animals that Noriko saw at the site could not have been there had they not either traveled to the site from elsewhere or had their population not been sustained by other animals having earlier arrived to the site. The last remaining patches of open space and the residential yards and gardens maintained in trees and native plants enable wildlife to move across and to live within the greater Los Angeles megacity (Wood and Esaian 2020, Smallwood and Wood 2022).

The project site is one of the last remaining patches of open space in the region, as the region has undergone severe habitat fragmentation. Therefore, the habitat value of the site is especially high to species of wildlife that find breeding, refuge, and foraging opportunities there, as well as opportunities for stop-over during migration or dispersal across Los Angeles. The loss of the habitat on the project site would result in substantial reductions in species richness and the number of wild animals in the area (Smallwood and Smallwood 2023).

To measure the impacts of habitat loss to wildlife caused by development projects, Noriko Smallwood and I revisited 80 sites of proposed projects that we had originally surveyed in support of comments on CEQA review documents (Smallwood and Smallwood 2023). We revisited the sites to repeat the survey methods at the same time of year, the same start time in the day, and the same methods and survey duration in order to measure the effects of mitigated development on wildlife. We structured the experiment in a before-after, control-impact experimental design, as some of the sites had been developed since our initial survey and some had remained undeveloped. All of the developed sites had included mitigation measures to avoid, minimize or compensate for impacts to wildlife. Nevertheless, we found that mitigated development resulted in a 66% loss of species on site, and 48% loss of species in the project area. Counts of vertebrate animals declined 90%. "Development impacts measured by the mean number of species detected per survey were greatest for amphibians (-100%), followed by mammals (-86%), grassland birds (-75%), raptors (-53%), special-status species (-49%), all birds as a group (-48%), non-native birds (-44%), and synanthropic birds (-28%). Our results indicated that urban development substantially reduced vertebrate species richness and numerical abundance, even after richness and abundance had likely already been depleted by the cumulative effects of loss, fragmentation, and degradation of habitat in the urbanizing environment," and despite all of the mitigation measures and existing policies and regulations. We also found that impacts to wildlife were most severe at infill project sites, where wildlife lacked habitat options on adjacent land areas.

Habitat loss not only results in the immediate numerical decline of wildlife, but it also results in permanent loss of productive capacity. Habitat fragmentation multiplies the negative effects of habitat loss on the productive capacities of biological species (Smallwood 2015). None of these impacts, however, are specifically addressed in the

SCEA. In the case of birds, two methods exist for estimating the loss of productive capacity that would be caused by the project. One method would involve surveys to count the number of bird nests and chicks produced. The alternative method is to infer productive capacity from estimates of total nest density elsewhere. Two study sites in grassland-wetland-woodland complexes had total bird nesting densities of 32.8 and 35.8 nests per acre (Young 1948, Yahner 1982). These densities, however, are probably too high for the project site, which lacks wetlands. Assuming the total nest density of the project site is half of the estimates reported by Young (1948) and Yahner (1982), then I predict 17 nest sites per acre. Assuming 1.39 broods per nest site based on Noriko's review of 322 North American bird species, which averaged 1.39 broods per year, then I predict the project supports 24 nest attempts/year. Assuming Young's (1948) study result2.9 fledglings per year typifies productivity on the project site, then I predict 70 fledglings are produced annually on the project site. Assuming an average bird generation time of 5 years, the lost capacity of both breeders and annual fledgling production can be estimated from an equation in Smallwood (2022): {(nests/year × chicks/nest × number of years) + (2 adults/nest × nests/year) × (number of years ÷ years/generation)} ÷ (number of years) = 80 birds per year denied to California.

The impacts of habitat loss are not analyzed by City of Los Angeles (2024), because the City concluded without evidence that the site does not support wildlife. However, wildlife *do* occur on the site because the site provides habitat. It is my opinion that the impacts of habitat loss would be significant. A fair argument can be made for the need to prepare and EIR to appropriately analyze the impacts of habitat loss and to formulate appropriate mitigation measures.

INTERFERENCE WITH WILDLIFE MOVEMENT

One of CEQA's principal concerns regarding potential project impacts is whether a proposed project would interfere with wildlife movement in the region. Unfortunately, City of Los Angeles concludes without evidence that the site is unimportant to wildlife movement in the region. The City conducted no program of observation to characterize wildlife movement on or around the project site. The City did not have a wildlife survey performed in any fashion at all. No evidence has been made available in support of the City's conclusion, and the evidence Noriko collected refutes the City's conclusion.

The SCEA (page 5-71) claims that adherence to its mitigation requirements "would ensure that the Project would not interfere substantially with the movement of any native resident or migratory … wildlife species…" However, the insertion of a long reach of 85-91-foot-tall glass-fronted buildings onto existing stopover and fly-through habitat would most certainly interfere with wildlife movement. Not only would the buildings present birds, bats and butterflies with substantial barriers to volant movement, but interior lighting would escape the large-panel windows, which would distract many avian nocturnal migrants, and which would increase bird collision risk. Depictions of the buildings appear to highlight the project's emissions of interior light (Figure 3). The project would interfere with wildlife movement while also introducing considerable bird-window collision risk.

Figure 3*. One of the proposed buildings of the project, showing a lengthy barrier to bird flights, and abundant glass and interior lighting, both features of which increase bird-window collision risk. The image is from https://la.urbanize.city/post/mixed-use-project-inches-forward-1185-w-sunset-boulevard-echo-park.*

BIRD-WINDOW COLLISIONS

The SCEA fails to consider impacts on wildlife from window collision. The project would add two seven-story buildings, 85 and 91 feet tall, totaling 321,300-square-feet of floor space. Based on the buildings' circumferences and heights and simulated depictions, I estimate the façades would be about 75% structural glass, not including all the glass railings. I estimate the project would add about 10,395 m^2 of glass, but again not including the railings.

Many special-status species of birds have been recorded at or near the aerosphere of the project site. My database review and Noriko's site visit indicates there are 83 special-status species of birds with potential to use the site's aerosphere (Table 2). All of the birds of species in Table 2 can quickly fly from wherever they have been documented to the project site, so they would all be within brief flights to the proposed project's windows.

Window collisions are often characterized as either the second or third largest source or human-caused bird mortality. The numbers behind these characterizations are often attributed to Klem's (1990) and Dunn's (1993) estimates of about 100 million to 1 billion bird fatalities in the USA, or more recently by Loss et al.'s (2014) estimate of 365-988 million bird fatalities in the USA or Calvert et al.'s (2013) and Machtans et al.'s (2013)

estimates of 22.4 million and 25 million bird fatalities in Canada, respectively. The proposed project would impose windows in the airspace normally used by birds.

Glass-façades of buildings intercept and kill many birds, but these façades are differentially hazardous to birds based on spatial extent, contiguity, orientation, and other factors. At Washington State University, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a three-story glass walkway (no fatality adjustments attempted). Prior to marking the windows to warn birds of the collision hazard, the collision rate was 84.7 per year. At that rate, and not attempting to adjust the fatality estimate for the proportion of fatalities not found, 4,574 birds were likely killed over the 54 years since the start of their study, and that's at a relatively small building façade. Accounting for the proportion of fatalities not found, the number of birds killed by this walkway over the last 54 years would have been about 14,270. And this is just for one 3-story, glass-sided walkway between two college campus buildings.

Klem's (1990) estimate was based on speculation that 1 to 10 birds are killed per building per year, and this speculated range was extended to the number of buildings estimated by the US Census Bureau in 1986. Klem's speculation was supported by fatality monitoring at only two houses, one in Illinois and the other in New York. Also, the basis of his fatality rate extension has changed greatly since 1986. Whereas his estimate served the need to alert the public of the possible magnitude of the bird-window collision issue, it was highly uncertain at the time and undoubtedly outdated more than three decades hence. Indeed, by 2010 Klem (2010) characterized the upper end of his estimated range – 1 billion bird fatalities – as conservative. Furthermore, the estimate lumped species together as if all birds are the same and the loss of all birds to windows has the same level of impact.

By the time Loss et al. (2014) performed their effort to estimate annual USA bird-window fatalities, many more fatality monitoring studies had been reported or were underway. Loss et al. (2014) incorporated many more fatality rates based on scientific monitoring, and they were more careful about which fatality rates to include. However, they included estimates based on fatality monitoring by homeowners, which in one study were found to detect only 38% of the available window fatalities (Bracey et al. 2016). Loss et al. (2014) excluded all fatality records lacking a dead bird in hand, such as injured birds or feather or blood spots on windows. Loss et al.'s (2014) fatality metric was the number of fatalities per building (where in this context a building can include a house, low-rise, or high-rise structure), but they assumed that this metric was based on window collisions. Because most of the bird-window collision studies were limited to migration seasons, Loss et al. (2014) developed an admittedly assumption-laden correction factor for making annual estimates. Also, only 2 of the studies included adjustments for carcass persistence and searcher detection error, and it was unclear how and to what degree fatality rates were adjusted for these factors. Although Loss et al. (2014) attempted to account for some biases as well as for large sources of uncertainty mostly resulting from an opportunistic rather than systematic sampling data source, their estimated annual fatality rate across the USA was highly uncertain and vulnerable to multiple biases, most of which would have resulted in fatality estimates biased low.

In my review of bird-window collision monitoring, I found that the search radius around homes and buildings was very narrow, usually 2 meters. Based on my experience with bird collisions in other contexts, I would expect that a large portion of bird-window collision victims would end up farther than 2 m from the windows, especially when the windows are higher up on tall buildings. In my experience, searcher detection rates tend to be low for small birds deposited on ground with vegetation cover or woodchips or other types of organic matter. Also, vertebrate scavengers entrain on anthropogenic sources of mortality and quickly remove many of the carcasses, thereby preventing the fatality searcher from detecting these fatalities. Adjusting fatality rates for these factors – search radius bias, searcher detection error, and carcass persistence rates – would greatly increase nationwide estimates of bird-window collision fatalities.

Buildings can intercept many nocturnal migrants as well as birds flying in daylight. As mentioned above, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a four-story glass walkway at Washington State University (no adjustments attempted for undetected fatalities). Somerlot (2003) found 21 bird fatalities among 13 buildings on a university campus within only 61 days. Monitoring twice per week, Hager at al. (2008) found 215 bird fatalities of 48 species, or 55 birds/building/year, and at another site they found 142 bird fatalities of 37 species for 24 birds/building/year. Gelb and Delacretaz (2009) recorded 5,400 bird fatalities under buildings in New York City, based on a decade of monitoring only during migration periods, and some of the high-rises were associated with hundreds of fatalities each. Klem et al. (2009) monitored 73 building façades in New York City during 114 days of two migratory periods, tallying 549 collision victims, nearly 5 birds per day. Borden et al. (2010) surveyed a 1.8 km route 3 times per week during 12-month period and found 271 bird fatalities of 50 species. Parkins et al. (2015) found 35 bird fatalities of 16 species within only 45 days of monitoring under 4 building façades. From 24 days of survey over a 48-day span, Porter and Huang (2015) found 47 fatalities under 8 buildings on a university campus. Sabo et al. (2016) found 27 bird fatalities over 61 days of searches under 31 windows. In San Francisco, Kahle et al. (2016) found 355 collision victims within 1,762 days under a 5-story building. Ocampo-Peñuela et al. (2016) searched the perimeters of 6 buildings on a university campus, finding 86 fatalities after 63 days of surveys. One of these buildings produced 61 of the 86 fatalities, and another building with collision-deterrent glass caused only 2 of the fatalities, thereby indicating a wide range in impacts likely influenced by various factors. There is ample evidence available to support my prediction that the proposed project would result in many collision fatalities of birds.

Project Impact Prediction

By the time of these comments, I had reviewed and processed results of bird collision monitoring at 213 buildings and façades for which bird collisions per m^2 of glass per year could be calculated and averaged (Johnson and Hudson 1976, O'Connell 2001, Somerlot 2003, Hager et al. 2008, Borden et al. 2010, Hager et al. 2013, Porter and Huang 2015, Parkins et al. 2015, Kahle et al. 2016, Ocampo-Peñuela et al. 2016, Sabo et al. 2016, Barton et al. 2017, Gomez-Moreno et al. 2018, Schneider et al. 2018, Loss et al.

2019, Brown et al. 2020, City of Portland Bureau of Environmental Services and Portland Audubon 2020, Riding et al. 2020). These study results averaged 0.073 bird deaths per m^2 of glass per year (95% CI: 0.042-0.102). This average and its 95% confidence interval provide a robust basis for predicting fatality rates at a proposed new project.

As noted above, I estimate the project would expose birds to 10,395 m^2 of glass. Given this much exposure, I predict annual bird deaths of 760 (95% CI: 451–10,069). The vast majority of these predicted deaths would be of birds protected under the Migratory Bird Treaty Act and under the California Migratory Bird Protection Act, thus causing significant unmitigated impacts. Given the predicted level of bird-window collision mortality, and the lack of any proposed mitigation, it is my opinion that the proposed project would result in significant adverse biological impacts, including the unmitigated take of both terrestrial and aerial habitat of birds and other sensitive species. There is at least a fair argument for the need to prepare an EIR to appropriately analyze the impact of bird-glass collisions that might be caused by the project.

CUMULATIVE IMPACTS

The SCEA presents a flawed cumulative impacts analysis. At page 5-73, it claims "Neither the Project Site nor any of the Related Projects are located on designated open space, conservation land, wildlife habitat, or riparian or wetland areas, and therefore no cumulative impacts associated with these designated areas would occur." In fact, the project site is located on wildlife habitat. Noriko detected 30 species of vertebrae wildlife in less than three hours of survey. It is wildlife habitat.

The SCEA adds, "In addition, the Project and the Related Projects would comply with applicable regulatory requirements and mitigation measures regarding biological resources and protected species, including the Migratory Bird Treaty Act, California Fish and Game Code, and the City's regulations regarding protected trees and the removal of street trees. As such, no significant cumulative impacts regarding biological resources would occur." However, according to CEQA Guidelines §15064(h)(3), "a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project." And "When relying on a plan, regulation or program, the lead agency should explain how implementing the particular requirements in the plan, regulation or program ensure that the project's incremental contribution to the cumulative effect is not cumulatively considerable." The SCEA provides no explanation of how implementing the regulations would minimize, avoid or offset the project's contributions to cumulative impacts. Furthermore, if compliance with existing regulations truly prevented cumulative impacts, then Smallwood and Smallwood (2023) would not have found large declines in species richness and wildlife abundance among project sites where development proceeded where the same regulations apply.

INADEQUATE MITIGATION

PMM BIO-1: Mitigation measures that can and should be implemented to reduce substantial adverse effects related to threatened and endangered species. This measure includes a list of what appears to be aspirational measures, most of which the City of Los Angeles (2024) asserts do not apply to the project.

Because wildlife occur on the project site, including special-status species, consistency with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines requires that:

a) Project design avoids occupied habitat, potentially suitable habitat, and designated critical habitat, wherever practicable and feasible.

d) Temporary access roads and staging areas will not be located within areas containing sensitive plants, wildlife species or native habitat wherever feasible, so as to avoid or minimize impacts to these species.

e) A Worker Environmental Awareness Program should be developed and implemented (environmental education) to inform project workers of their responsibilities to avoid and minimize impacts on sensitive biological resources.

f) Retain a qualified botanist to document the presence or absence of special status plants before project implementation.

g) A qualified biologist be appointed to monitor construction activities that may occur in or adjacent to occupied sensitive species' habitat to facilitate avoidance of resources not permitted for impact.

h) A qualified biologist be appointed to monitor implementation of mitigation measures.

i) Schedule construction activities to avoid sensitive times for biological resources (e.g. steelhead spawning periods during the winter and spring, nesting bird season) and to avoid the rainy season when erosion and sediment transport is increased.

l) Conduct pre-construction surveys to delineate occupied sensitive species' habitat to facilitate avoidance.

m) Where projects are determined to be within suitable habitat and may impact listed or sensitive species that have specific field survey protocols or guidelines outlined by the USFWS, CDFW, or other local agency, conduct preconstruction surveys that follow applicable protocols and guidelines and are conducted by qualified and/or certified personnel.

PMM BIO-4: Wildlife Movement

Because wildlife occur on the project site, including special-status species, consistency with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the State CEQA Guidelines requires that:

d) A survey be conducted to identify active raptor and other migratory nongame bird nests by a qualified biologist at least two weeks before the start of construction at project sites from February 1 through August 31.

e) Construction activities be prohibited within 300 feet of occupied nest of birds afforded protection pursuant to the Migratory Bird Treaty Act, during the breeding season.

f) Ensure that suitable nesting sites for migratory nongame native bird species protected under the Migratory Bird Treaty Act and/or trees with unoccupied raptor nests should only be removed prior to February 1, or following the nesting season.

h) Conduct site-specific analyses of opportunities to preserve or improve habitat linkages with areas on and off-site.

j) Review of construction drawings and habitat connectivity mapping by a qualified biologist to determine the risk of habitat fragmentation.

Because the City of Los Angeles has decided not to implement most of the above measures, the SCEA is not consistent with the Sustainable Communities Strategy. The project's impacts to wildlife would be inadequately mitigated. A fair argument can be made for the need to prepare and EIR to appropriately formulate mitigation measures.

PROPOSED MEASURES

MM-BIO-1: *The Project Applicant/contractor would conduct all demolition, construction, ground disturbance, and vegetation clearing activities, including removal of the existing trees, outside of the avian breeding and nesting season (February 1–August 31) to the extent feasible. … If removal of the existing trees on and adjacent to the Project Site must occur during the nesting season, a qualified biologist is required to be present during the removal activities to ensure no active bird nests (those containing eggs or nestlings, or with juvenile birds still dependent on the nest) are impacted. The biologist must determine whether active nests are present within the trees before any actual removal activity takes place. … If any active nests are present within the trees during demolition, construction, ground disturbance, and vegetation clearing activities, the nests shall be avoided until determined by the biologist to no longer be active. The biologist shall determine appropriate avoidance buffers for any active nest based on species, nest location, and types of disturbance proposed in the vicinity of the nest.*

The SCEA misrepresents the avian breeding season; it is now recognized by the CDFW as 1 February through 15 September.

I concur with the implementation of preconstruction surveys for nesting birds, but it should be understood that preconstruction surveys are no substitute for detection surveys. It should be understood that preconstruction surveys, although warranted, actually achieve very little because most nesting birds are very difficult to locate. Preconstruction, take-avoidance surveys consist of two steps, both of which are very difficult. First, the biologist(s) performing the survey must identify birds that are breeding. Second, the biologist(s) must locate the breeding birds' nests. The first step is typically completed by observing bird behaviors such as food deliveries and nest territory defense. These types of observations typically require many surveys on many dates spread throughout the breeding season.

Finally, the mitigation language allows a single individual to make a subjective decision, outside the public's view, to determine the buffer area for any given species. This measure lacks objective criteria, and is unenforceable.

RTP/SCS Mitigation Measures

PMM BIO-1(g): *Appoint a qualified biologist to monitor construction activities that may occur in or adjacent to occupied sensitive species' habitat to facilitate avoidance of resources not permitted for impact.*

This measure is proposed to mitigate impacts to bats. However, the measure lacks specificity to bats, would likely be implemented at the wrong time of day (not at night), and would be implemented too late to avoid impacts to bats. To be effective, a detection survey for bats needs to be completed long before construction monitoring.

PMM BIO-1(i): *Schedule construction activities to avoid sensitive times for biological resources (e.g., steelhead spawning periods during the winter and spring, nesting bird season) and to avoid the rainy season when erosion and sediment transport is increased.*

This measure is inconsistent with MM-BIO-1, because MM-BIO-1 allows for construction to commence during the avian breeding season. For these measures to be consistent, MM-BIO-1 needs to be revised to very clearly prohibit construction during the avian breeding season.

RECOMMENDED MEASURES

Guidelines on Building Design to Minimize Bird-Window Collisions: If the Project goes forward, it should adhere to available Bird-Safe Guidelines, such as those prepared by American Bird Conservancy and New York and San Francisco. The American Bird Conservancy (ABC) produced an excellent set of guidelines recommending actions to: (1) Minimize use of glass; (2) Placing glass behind some type of screening (grilles, shutters, exterior shades); (3) Using glass with inherent properties

to reduce collisions, such as patterns, window films, decals or tape; and (4) Turning off lights during migration seasons (Sheppard and Phillips 2015). The City of San Francisco (San Francisco Planning Department 2011) also has a set of building design guidelines, based on the excellent guidelines produced by the New York City Audubon Society (Orff et al. 2007). The ABC document and both the New York and San Francisco documents provide excellent alerting of potential bird-collision hazards as well as many visual examples.

New research results inform of the efficacy of marking windows. Whereas Klem (1990) found no deterrent effect from decals on windows, Johnson and Hudson (1976) reported a fatality reduction of about 69% after placing decals on windows. In an experiment of opportunity, Ocampo-Peñuela et al. (2016) found only 2 of 86 fatalities at one of 6 buildings – the only building with windows treated with a bird deterrent film. At the building with fritted glass, bird collisions were 82% lower than at other buildings with untreated windows. Kahle et al. (2016) added external window shades to some windowed façades to reduce fatalities 82% and 95%. Brown et al. (2020) reported an 84% lower collision probability among fritted glass windows and windows treated with ORNILUX R UV. City of Portland Bureau of Environmental Services and Portland Audubon (2020) reduced bird collision fatalities 94% by affixing marked Solyx window film to existing glass panels of Portland's Columbia Building. Many external and internal glass markers have been tested experimentally, some showing no effect and some showing strong deterrent effects (Klem 1989, 1990, 2009, 2011; Klem and Saenger 2013; Rössler et al. 2015). For example, Feather Friendly® circular adhesive markers applied in a grid pattern across all windows reduced bird-window collision mortality by 95% in one study (Riggs et al. 2023) and by 95% in another (de Groot et al. 2021). Another study tested the efficacy of two filmshades to be applied exteriorly to windows prior to installations: BirdShades increased bird-window avoidance by 47% and Haverkamp increased avoidance by 39% (Swaddle et al. 2023).

Monitoring and the use of compensatory mitigation should be incorporated at any new building project because the measures recommended in the available guidelines remain of uncertain efficacy, and even if these measures are effective, they will not reduce collision fatalities to zero. The only way to assess mitigation efficacy and to quantify post-construction fatalities is to monitor newly constructed buildings or homes for fatalities.

Fund Wildlife Rehabilitation Facilities: Compensatory mitigation ought also to include funding contributions to wildlife rehabilitation facilities to cover the costs of injured animals that will be delivered to these facilities for care. Many animals would likely be injured by collisions with automobiles and windows and by depredation attempts by house cats and dogs.

Thank you for your attention,

Shawn Smallwood, Ph.D.

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Photo 26. *House finch on the project site, 7 April 2024. Photo by Noriko Smallwood.*

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Curriculum Vitae

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Born May 3, 1963 in
Sacramento, California.
Married, father of two.

Ecologist

Expertise

- Finding solutions to controversial problems related to wildlife interactions with human industry, infrastructure, and activities;
- Wildlife monitoring and field study using GPS, thermal imaging, behavior surveys;
- Using systems analysis and experimental design principles to identify meaningful ecological patterns that inform management decisions.

Education

Ph.D. Ecology, University of California, Davis. September 1990.
M.S. Ecology, University of California, Davis. June 1987.
B.S. Anthropology, University of California, Davis. June 1985.
Corcoran High School, Corcoran, California. June 1981.

Experience

- 668 professional publications, including:
- 88 peer reviewed publications
- 24 in non-reviewed proceedings
- 554 reports, declarations, posters and book reviews
- 8 in mass media outlets
- 87 public presentations of research results

Editing for scientific journals: Guest Editor, *Wildlife Society Bulletin*, 2012-2013, of invited papers representing international views on the impacts of wind energy on wildlife and how to mitigate the impacts. Associate Editor, *Journal of Wildlife Management*, March 2004 to 30 June 2007. Editorial Board Member, *Environmental Management*, 10/1999 to 8/2004. Associate Editor, *Biological Conservation*, 9/1994 to 9/1995.

Member, Alameda County Scientific Review Committee (SRC), August 2006 to April 2011. The five-member committee investigated causes of bird and bat collisions in the Altamont Pass Wind Resource Area, and recommended mitigation and monitoring measures. The SRC reviewed the science underlying the Alameda County Avian Protection Program, and advised

the County on how to reduce wildlife fatalities.

Consulting Ecologist, 2004-2007, California Energy Commission (CEC). Provided consulting services as needed to the CEC on renewable energy impacts, monitoring and research, and produced several reports. Also collaborated with Lawrence-Livermore National Lab on research to understand and reduce wind turbine impacts on wildlife.

Consulting Ecologist, 1999-2013, U.S. Navy. Performed endangered species surveys, hazardous waste site monitoring, and habitat restoration for the endangered San Joaquin kangaroo rat, California tiger salamander, California red-legged frog, California clapper rail, western burrowing owl, salt marsh harvest mouse, and other species at Naval Air Station Lemoore; Naval Weapons Station, Seal Beach, Detachment Concord; Naval Security Group Activity, Skaggs Island; National Radio Transmitter Facility, Dixon; and, Naval Outlying Landing Field Imperial Beach.

Part-time Lecturer, 1998-2005, California State University, Sacramento. Instructed Mammalogy, Behavioral Ecology, and Ornithology Lab, Contemporary Environmental Issues, Natural Resources Conservation.

Senior Ecologist, 1999-2005, BioResource Consultants. Designed and implemented research and monitoring studies related to avian fatalities at wind turbines, avian electrocutions on electric distribution poles across California, and avian fatalities at transmission lines.

Chairman, Conservation Affairs Committee, The Wildlife Society--Western Section, 1999-2001. Prepared position statements and led efforts directed toward conservation issues, including travel to Washington, D.C. to lobby Congress for more wildlife conservation funding.

Systems Ecologist, 1995-2000, Institute for Sustainable Development. Headed ISD's program on integrated resources management. Developed indicators of ecological integrity for large areas, using remotely sensed data, local community involvement and GIS.

Associate, 1997-1998, Department of Agronomy and Range Science, University of California, Davis. Worked with Shu Geng and Mingua Zhang on several studies related to wildlife interactions with agriculture and patterns of fertilizer and pesticide residues in groundwater across a large landscape.

Lead Scientist, 1996-1999, National Endangered Species Network. Informed academic scientists and environmental activists about emerging issues regarding the Endangered Species Act and other environmental laws. Testified at public hearings on endangered species issues.

Ecologist, 1997-1998, Western Foundation of Vertebrate Zoology. Conducted field research to determine the impact of past mercury mining on the status of California red-legged frogs in Santa Clara County, California.

Senior Systems Ecologist, 1994-1995, EIP Associates, Sacramento, California. Provided consulting services in environmental planning, and quantitative assessment of land units for their conservation and restoration opportunities basedon ecological resource requirements of 29 special-status species. Developed ecological indicators for prioritizing areas within Yolo County

to receive mitigation funds for habitat easements and restoration.

Post-Graduate Researcher, 1990-1994, Department of Agronomy and Range Science*, U.C. Davis*. Under Dr. Shu Geng's mentorship, studied landscape and management effects on temporal and spatial patterns of abundance among pocket gophers and species of Falconiformes and Carnivora in the Sacramento Valley. Managed and analyzed a data base of energy use in California agriculture. Assisted with landscape (GIS) study of groundwater contamination across Tulare County, California.

Work experience in graduate school: Co-taught Conservation Biology with Dr. Christine Schonewald, 1991 & 1993, UC Davis Graduate Group in Ecology; Reader for Dr. Richard Coss's course on Psychobiology in 1990, UC Davis Department of Psychology; Research Assistant to Dr. Walter E. Howard, 1988-1990, UC Davis Department of Wildlife and Fisheries Biology, testing durable baits for pocket gopher management in forest clearcuts; Research Assistant to Dr. Terrell P. Salmon, 1987-1988, UC Wildlife Extension, Department of Wildlife and Fisheries Biology, developing empirical models of mammal and bird invasions in North America, and a rating system for priority research and control of exotic species based on economic, environmental and human health hazards in California. Student Assistant to Dr. E. Lee Fitzhugh, 1985-1987, UC Cooperative Extension, Department of Wildlife and Fisheries Biology, developing and implementing statewide mountain lion track count for long-term monitoring.

Fulbright Research Fellow, Indonesia, 1988. Tested use of new sampling methods for numerical monitoring of Sumatran tiger and six other species of endemic felids, and evaluated methods used by other researchers.

Projects

Repowering wind energy projects through careful siting of new wind turbines using map-based collision hazard models to minimize impacts to volant wildlife. Funded by wind companies (principally NextEra Renewable Energy, Inc.), California Energy Commission and East Bay Regional Park District, I have collaborated with a GIS analyst and managed a crew of five field biologists performing golden eagle behavior surveys and nocturnal surveys on bats and owls. The goal is to quantify flight patterns for development of predictive models to more carefully site new wind turbines in repowering projects. Focused behavior surveys began May 2012 and continue. Collision hazard models have been prepared for seven wind projects, three of which were built. Planning for additional repowering projects is underway.

Test avian safety of new mixer-ejector wind turbine (MEWT). Designed and implemented a before-after, control-impact experimental design to test the avian safety of a new, shrouded wind turbine developed by Ogin Inc. (formerly known as FloDesign Wind Turbine Corporation). Supported by a $718,000 grant from the California Energy Commission's Public Interest Energy Research program and a 20% match share contribution from Ogin, I managed a crew of seven field biologists who performed periodic fatality searches and behavior surveys, carcass detection trials, nocturnal behavior surveys using a thermal camera, and spatial analyses with the collaboration of a GIS analyst. Field work began 1 April 2012 and ended 30 March 2015 without Ogin installing its MEWTs, but we still achieved multiple important scientific advances.

Reduce avian mortality due to wind turbines at Altamont Pass. Studied wildlife impacts caused by 5,400 wind turbines at the world's most notorious wind resource area. Studied how impacts are perceived by monitoring and how they are affected by terrain, wind patterns, food resources, range management practices, wind turbine operations, seasonal patterns, population cycles, infrastructure management such as electric distribution, animal behavior and social interactions.

Reduce avian mortality on electric distribution poles. Directed research toward reducing bird electrocutions on electric distribution poles, 2000-2007. Oversaw 5 founds of fatality searches at 10,000 poles from Orange County to Glenn County, California, and produced two large reports.

Cook *et al*. v. Rockwell International *et al*., No. 90-K-181 (D. Colorado). Provided expert testimony on the role of burrowing animals in affecting the fate of buried and surface-deposited radioactive and hazardous chemical wastes at the Rocky Flats Plant, Colorado. Provided expert reports based on four site visits and an extensive document review of burrowing animals. Conducted transect surveys for evidence of burrowing animals and other wildlife on and around waste facilities. Discovered substantial intrusion of waste structures by burrowing animals. I testified in federal court in November 2005, and my clients were subsequently awarded a $553,000,000 judgment by a jury. After appeals the award was increased to two billion dollars.

Hanford Nuclear Reservation Litigation. Provided expert testimony on the role of burrowing animals in affecting the fate of buried radioactive wastes at the Hanford Nuclear Reservation, Washington. Provided three expert reports based on three site visits and extensive document review. Predicted and verified a certain population density of pocket gophers on buried waste structures, as well as incidence of radionuclide contamination in body tissue. Conducted transect surveys for evidence of burrowing animals and other wildlife on and around waste facilities. Discovered substantial intrusion of waste structures by burrowing animals.

Expert testimony and declarations on proposed residential and commercial developments, gas-fired power plants, wind, solar and geothermal projects, water transfers and water transfer delivery systems, endangered species recovery plans, Habitat Conservation Plans and Natural Communities Conservation Programs. Testified before multiple government agencies, Tribunals, Boards of Supervisors and City Councils, and participated with press conferences and depositions. Prepared expert witness reports and court declarations, which are summarized under Reports (below).

Protocol-level surveys for special-status species. Used California Department of Fish and Wildlife and US Fish and Wildlife Service protocols to search for California red-legged frog, California tiger salamander, arroyo southwestern toad, blunt-nosed leopard lizard, western pond turtle, giant kangaroo rat, San Joaquin kangaroo rat, San Joaquin kit fox, western burrowing owl, Swainson's hawk, Valley elderberry longhorn beetle and other special-status species.

Conservation of San Joaquin kangaroo rat. Performed research to identify factors responsible for the decline of this endangered species at Lemoore Naval Air Station, 2000-2013, and implemented habitat enhancements designed to reverse the trend and expand the population.

Impact of West Nile Virus on yellow-billed magpies. Funded by Sacramento-Yolo Mosquito and Vector Control District, 2005-2008, compared survey results pre- and post-West Nile Virus epidemic for multiple bird species in the Sacramento Valley, particularly on yellow-billed magpie and American crow due to susceptibility to WNV.

Workshops on HCPs. Assisted Dr. Michael Morrison with organizing and conducting a 2-day workshop on Habitat Conservation Plans, sponsored by Southern California Edison, and another 1-day workshop sponsored by PG&E. These Workshops were attended by academics, attorneys, and consultants with HCP experience. We guest-edited a Proceedings published in Environmental Management.

Mapping of biological resources along Highways 101, 46 and 41. Used GPS and GIS to delineate vegetation complexes and locations of special-status species along 26 miles of highway in San Luis Obispo County, 14 miles of highway and roadway in Monterey County, and in a large area north of Fresno, including within reclaimed gravel mining pits.

GPS mapping and monitoring at restoration sites and at Caltrans mitigation sites. Monitored the success of elderberry shrubs at one location, the success of willows at another location, and the response of wildlife to the succession of vegetation at both sites. Also used GPS to monitor the response of fossorial animals to yellow star-thistle eradication and natural grassland restoration efforts at Bear Valley in Colusa County and at the decommissioned Mather Air Force Base in Sacramento County.

Mercury effects on Red-legged Frog. Assisted Dr. Michael Morrison and US Fish and Wildlife Service in assessing the possible impacts of historical mercury mining on the federally listed California red-legged frog in Santa Clara County. Also measured habitat variables in streams.

Opposition to proposed No Surprises rule. Wrote a white paper and summary letter explaining scientific grounds for opposing the incidental take permit (ITP) rules providing ITP applicants and holders with general assurances they will be free of compliance with the Endangered Species Act once they adhere to the terms of a "properly functioning HCP." Submitted 188 signatures of scientists and environmental professionals concerned about No Surprises rule US Fish and Wildlife Service, National Marine Fisheries Service, all US Senators.

Natomas Basin Habitat Conservation Plan alternative. Designed narrow channel marsh to increase the likelihood of survival and recovery in the wild of giant garter snake, Swainson's hawk and Valley Elderberry Longhorn Beetle. The design included replication and interspersion of treatments for experimental testing of critical habitat elements. I provided a report to Northern Territories, Inc.

Assessments of agricultural production system and environmental technology transfer to China. Twice visited China and interviewed scientists, industrialists, agriculturalists, and the Directors of the Chinese Environmental Protection Agency and the Department of Agriculture to assess the need and possible pathways for environmental clean-up technologies and trade opportunities between the US and China.

Yolo County Habitat Conservation Plan. Conducted landscape ecology study of Yolo County to spatially prioritize allocation of mitigation efforts to improve ecosystem functionality within the County from the perspective of 29 special-status species of wildlife and plants. Used a hierarchically structured indicators approach to apply principles of landscape and ecosystem ecology, conservation biology, and local values in rating land units. Derived GIS maps to help guide the conservation area design, and then developed implementation strategies.

Mountain lion track count. Developed and conducted a carnivore monitoring program throughout California since 1985. Species counted include mountain lion, bobcat, black bear, coyote, red and gray fox, raccoon, striped skunk, badger, and black-tailed deer. Vegetation and land use are also monitored. Track survey transect was established on dusty, dirt roads within randomly selected quadrats.

Sumatran tiger and other felids. Upon award of Fulbright Research Fellowship, I designed and initiated track counts for seven species of wild cats in Sumatra, including Sumatran tiger, fishing cat, and golden cat. Spent four months on Sumatra and Java in 1988, and learned Bahasa Indonesia, the official Indonesian language.

Wildlife in agriculture. Beginning as post-graduate research, I studied pocket gophers and other wildlife in 40 alfalfa fields throughout the Sacramento Valley, and I surveyed for wildlife along a 200 mile road transect since 1989 with a hiatus of 1996-2004. The data are analyzed using GIS and methods from landscape ecology, and the results published and presented orally to farming groups in California and elsewhere. I also conducted the first study of wildlife in cover crops used on vineyards and orchards.

Agricultural energy use and Tulare County groundwater study. Developed and analyzed a data base of energy use in California agriculture, and collaborated on a landscape (GIS) study of groundwater contamination across Tulare County, California.

Pocket gopher damage in forest clear-cuts. Developed gopher sampling methods and tested various poison baits and baiting regimes in the largest-ever field study of pocket gopher management in forest plantations, involving 68 research plots in 55 clear-cuts among 6 National Forests in northern California.

Risk assessment of exotic species in North America. Developed empirical models of mammal and bird species invasions in North America, as well as a rating system for assigning priority research and control to exotic species in California, based on economic, environmental, and human health hazards.

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Comments on Environmental Documents (Year; pages)

I was retained or commissioned to comment on environmental planning and review documents, including:

- Replies on UCSF Comprehensive Parnassus Heights Plan EIR (2021; 13);
- 14 Charles Hill Circle Design Review (2021; 11);
- SDG Commerce 217 Warehouse IS, American Canyon (2021; 26);
- Mulqueeney Ranch Wind Repowering Project DSEIR (2021; 98);
- Clawiter Road Industrial Project IS/MND, Hayward (2021; 18);
- Garnet Energy Center Stipulations, New York (2020);
- Heritage Wind Energy Project, New York (2020: 71);
- Ameresco Keller Canyon RNG Project IS/MND, Martinez (2020; 11);

- Cambria Hotel Project Staff Report, Dublin (2020; 19);
- Central Pointe Mixed-Use Staff Report, Santa Ana (2020; 20);
- Oak Valley Town Center EIR Addendum, Calimesa (2020; 23);
- Coachillin Specific Plan MND Amendment, Desert Hot Springs (2020; 26);
- Stockton Avenue Hotel and Condominiums Project Tiering to EIR, San Jose (2020; 19);
- Cityline Sub-block 3 South Staff Report, Sunyvale (2020; 22);
- Station East Residential/Mixed Use EIR, Union City (2020; 21);
- Multi-Sport Complex & Southeast Industrial Annexation Suppl. EIR, Elk Grove (2020; 24);
- Sun Lakes Village North EIR Amendment 5, Banning, Riverside County (2020; 27);
- 2nd comments on 1296 Lawrence Station Road, Sunnyvale (2020; 4);
- 1296 Lawrence Station Road, Sunnyvale (2020; 16);
- Mesa Wind Project EA, Desert Hot Springs (2020; 31);
- 11th Street Development Project IS/MND, City of Upland (2020; 17);
- Vista Mar Project IS/MND, Pacifica (2020; 17);
- Emerson Creek Wind Project Application, Ohio (2020; 64);
- Replies on Wister Solar Energy Facility EIR, Imperial County (2020; 12);
- Wister Solar Energy Facility EIR, Imperial County (2020; 28);
- Crimson Solar EIS/EIR, Mojave Desert (2020, 35) not submitted;
- Sakioka Farms EIR tiering, Oxnard (2020; 14);
- 3440 Wilshire Project IS/MND, Los Angeles (2020; 19);
- Replies on 2400 Barranca Office Development Project EIR, Irvine (2020; 8);
- 2400 Barranca Office Development Project EIR, Irvine (2020; 25);
- Replies on Heber 2 Geothermal Repower Project IS/MND, El Centro (2020; 4);
- 2nd comments on Heber 2 Geothermal Repower Project IS/MND, El Centro (2020; 8);
- Heber 2 Geothermal Repower Project IS/MND, El Centro (2020; 3);
- Lots 4-12 Oddstad Way Project IS/MND, Pacifica (2020; 16);
- Declaration on DDG Visalia Warehouse project (2020; 5);
- Terraces of Lafayette EIR Addendum (2020; 24);
- AMG Industrial Annex IS/MND, Los Banos (2020; 15);
- Replies to responses on Casmalia and Linden Warehouse (2020; 15);
- Clover Project MND, Petaluma (2020; 27);
- Ruby Street Apartments Project Env. Checklist, Hayward (2020; 20);
- Replies to responses on 3721 Mt. Diablo Boulevard Staff Report (2020; 5);
- 3721 Mt. Diablo Boulevard Staff Report (2020; 9);
- Steeno Warehouse IS/MND, Hesperia (2020; 19);
- UCSF Comprehensive Parnassus Heights Plan EIR (2020; 24);
- North Pointe Business Center MND, Fresno (2020; 14);
- Casmalia and Linden Warehouse IS, Fontana (2020; 15);
- Rubidoux Commerce Center Project IS/MND, Jurupa Valley (2020; 27);
- Haun and Holland Mixed Use Center MND, Menifee (2020; 23);
- First Industrial Logistics Center II, Moreno Valley IS/MND (2020; 23);
- GLP Store Warehouse Project Staff Report (2020; 15);
- Replies on Beale WAPA Interconnection Project EA & CEQA checklist (2020; 29);
- 2nd comments on Beale WAPA Interconnection Project EA & CEQA checklist (2020; 34);

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- Levine-Fricke Softball Field Improvement Addendum, UC Berkeley (2020; 16);
- Greenlaw Partners Warehouse and Distribution Center Staff Report, Palmdale (2020; 14);
- Humboldt Wind Energy Project DEIR (2019; 25);
- Sand Hill Supplemental EIR, Altamont Pass (2019; 17);
- 1700 Dell Avenue Office Project, Campbell (2019, 28);
- 1180 Main Street Office Project MND, Redwood City (2019; 19:
- Summit Ridge Wind Farm Request for Amendment 4, Oregon (2019; 46);
- Shafter Warehouse Staff Report (2019; 4);
- Park & Broadway Design Review, San Diego (2019; 19);
- Pinnacle Pacific Heights Design Review, San Diego (2019; 19);
- Pinnacle Park & C Design Review, San Diego (2019; 19);
- Preserve at Torrey Highlands EIR, San Diego (2019; 24);
- Santana West Project EIR Addendum, San Jose (2019; 18);
- The Ranch at Eastvale EIR Addendum, Riverside County (2020; 19);
- Hageman Warehouse IS/MND, Bakersfield (2019; 13);
- Oakley Logistics Center EIR, Antioch (2019; 22);
- 27 South First Street IS, San Jose (2019; 23);
- 2nd replies on Times Mirror Square Project EIR, Los Angeles (2020; 11);
- Replies on Times Mirror Square Project EIR, Los Angeles (2020; 13);
- Times Mirror Square Project EIR, Los Angeles (2019; 18);
- East Monte Vista & Aviator General Plan Amend EIR Addendum, Vacaville (2019; 22);
- Hillcrest LRDP EIR, La Jolla (2019; 36);
- 555 Portola Road CUP, Portola Valley (2019; 11);
- Johnson Drive Economic Development Zone SEIR, Pleasanton (2019; 27);
- 1750 Broadway Project CEQA Exemption, Oakland (2019; 19);
- Mor Furniture Project MND, Murietta Hot Springs (2019; 27);
- Harbor View Project EIR, Redwood City (2019; 26);
- Visalia Logistics Center (2019; 13);
- Cordelia Industrial Buildings MND (2019; 14);
- Scheu Distribution Center IS/ND, Rancho Cucamonga (2019; 13);
- Mills Park Center Staff Report, San Bruno (2019; 22);
- Site visit to Desert Highway Farms IS/MND, Imperial County (2019; 9);
- Desert Highway Farms IS/MND, Imperial County (2019; 12);
- ExxonMobil Interim Trucking for Santa Ynez Unit Restart SEIR, Santa Barbara (2019; 9);
- Olympic Holdings Inland Center Warehouse Project MND, Rancho Cucamonga (2019; 14);
- Replies to responses on Lawrence Equipment Industrial Warehouse, Banning (2019; 19);
- PARS Global Storage MND, Murietta (2019; 13);
- Slover Warehouse EIR Addendum, Fontana (2019; 16);
- Seefried Warehouse Project IS/MND, Lathrop (2019; 19)
- World Logistics Center Site Visit, Moreno Valley (2019; 19);
- Merced Landfill Gas-To-Energy Project IS/MND (2019; 12);
- West Village Expansion FEIR, UC Davis (2019; 11);
- Site visit, Doheny Ocean Desalination EIR, Dana Point (2019; 11);

- Replies to responses on Avalon West Valley Expansion EIR, San Jose (2019; 10);
- Avalon West Valley Expansion EIR, San Jose (2019; 22);
- Sunroad – Otay 50 EIR Addendum, San Diego (2019; 26);
- Del Rey Pointe Residential Project IS/MND, Los Angeles (2019; 34);
- 1 AMD Redevelopment EIR, Sunnyvale (2019; 22);
- Lawrence Equipment Industrial Warehouse IS/MND, Banning (2019; 14);
- SDG Commerce 330 Warehouse IS, American Canyon (2019; 21);
- PAMA Business Center IS/MND, Moreno Valley (2019; 23);
- Cupertino Village Hotel IS (2019; 24);
- Lake House IS/ND, Lodi (2019; 33);
- Campo Wind Project DEIS, San Diego County (DEIS, (2019; 14);
- Stirling Warehouse MND site visit, Victorville (2019; 7);
- Green Valley II Mixed-Use Project EIR, Fairfield (2019; 36);
- We Be Jammin rezone MND, Fresno (2019; 14);
- Gray Whale Cove Pedestrian Crossing IS/ND, Pacifica (2019; 7);
- Visalia Logistics Center & DDG 697V Staff Report (2019; 9);
- Mather South Community Masterplan Project EIR (2019; 35);
- Del Hombre Apartments EIR, Walnut Creek (2019; 23);
- Otay Ranch Planning Area 12 EIR Addendum, Chula Vista (2019; 21);
- The Retreat at Sacramento IS/MND (2019; 26);
- Site visit to Sunroad – Centrum 6 EIR Addendum, San Diego (2019; 9);
- Sunroad – Centrum 6 EIR Addendum, San Diego (2018; 22);
- North First and Brokaw Corporate Campus Buildings EIR Addendum, San Jose (2018; 30);
- South Lake Solar IS, Fresno County (2018; 18);
- Galloo Island Wind Project Application, New York (not submitted) (2018; 44);
- Doheny Ocean Desalination EIR, Dana Point (2018; 15);
- Stirling Warehouse MND, Victorville (2018; 18);
- LDK Warehouse MND, Vacaville (2018; 30);
- Gateway Crossings FEIR, Santa Clara (2018; 23);
- South Hayward Development IS/MND (2018; 9);
- CBU Specific Plan Amendment, Riverside (2018; 27);
- 2nd replies to responses on Dove Hill Road Assisted Living Project MND (2018; 11);
- Replies to responses on Dove Hill Road Assisted Living Project MND (2018; 7);
- Dove Hill Road Assisted Living Project MND (2018; 12);
- Deer Ridge/Shadow Lakes Golf Course EIR, Brentwood (2018; 21);
- Pyramid Asphalt BLM Finding of No Significance, Imperial County (2018; 22);
- Amáre Apartments IS/MND, Martinez (2018; 15);
- Petaluma Hill Road Cannabis MND, Santa Rosa (2018; 21);
- 2nd comments on Zeiss Innovation Center IS/MND, Dublin (2018: 12);
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- City of Hope Campus Plan EIR, Duarte (2018; 21);
- Palo Verde Center IS/MND, Blythe (2018; 14);
- Logisticenter at Vacaville MND (2018; 24);
- IKEA Retail Center SEIR, Dublin (2018; 17);

- Merge 56 EIR, San Diego (2018; 15);
- Natomas Crossroads Quad B Office Project P18-014 EIR, Sacramento (2018; 12);
- 2900 Harbor Bay Parkway Staff Report, Alameda (2018; 30);
- At Dublin EIR, Dublin (2018; 25);
- Fresno Industrial Rezone Amendment Application No. 3807 IS (2018; 10);
- Nova Business Park IS/MND, Napa (2018; 18);
- Updated Collision Risk Model Priors for Estimating Eagle Fatalities, USFWS (2018; 57);
- 750 Marlborough Avenue Warehouse MND, Riverside (2018; 14);
- Replies to responses on San Bernardino Logistics Center IS (2018; 12);
- San Bernardino Logistics Center IS (2018; 19);
- CUP2017-16, Costco IS/MND, Clovis (2018; 11);
- Desert Land Ventures Specific Plan EIR, Desert Hot Springs (2018; 18);
- Ventura Hilton IS/MND (2018; 30);
- North of California Street Master Plan Project IS, Mountain View (2018: 11);
- Tamarind Warehouse MND, Fontana (2018; 16);
- Lathrop Gateway Business Park EIR Addendum (2018; 23);
- Centerpointe Commerce Center IS, Moreno Valley (2019; 18);
- Amazon Warehouse Notice of Exemption, Bakersfield (2018; 13);
- CenterPoint Building 3 project Staff Report, Manteca (2018; 23);
- Cessna & Aviator Warehouse IS/MND, Vacaville (2018; 24);
- Napa Airport Corporate Center EIR, American Canyon (2018, 15);
- 800 Opal Warehouse Initial Study, Mentone, San Bernardino County (2018; 18);
- 2695 W. Winton Ave Industrial Project IS, Hayward (2018; 22);
- Trinity Cannabis Cultivation and Manufacturing Facility DEIR, Calexico (2018; 15);
- Shoe Palace Expansion IS/MND, Morgan Hill (2018; 21);
- Newark Warehouse at Morton Salt Plant Staff Report (2018; 15);
- Northlake Specific Plan FEIR “Peer Review”, Los Angeles County (2018; 9);
- Replies to responses on Northlake Specific Plan SEIR, Los Angeles County (2018; 13);
- Northlake Specific Plan SEIR, Los Angeles County (2017; 27);
- Bogle Wind Turbine DEIR, east Yolo County (2017; 48);
- Ferrante Apartments IS/MND, Los Angeles (2017; 14);
- The Villages of Lakeview EIR, Riverside (2017; 28);
- Data Needed for Assessing Trail Management Impacts on Northern Spotted Owl, Marin County (2017; 5);
- Notes on Proposed Study Options for Trail Impacts on Northern Spotted Owl (2017; 4);
- Pyramid Asphalt IS, Imperial County (Declaration) (2017; 5);
- San Gorgonio Crossings EIR, Riverside County (2017; 22);
- Replies to responses on Jupiter Project IS and MND, Apple Valley (2017; 12);
- Proposed World Logistics Center Mitigation Measures, Moreno Valley (2017, 2019; 12);
- MacArthur Transit Village Project Modified 2016 CEQA Analysis (2017; 12);
- PG&E Company Bay Area Operations and Maintenance HCP (2017; 45);
- Central SoMa Plan DEIR (2017; 14);
- Suggested mitigation for trail impacts on northern spotted owl, Marin County (2016; 5);
- Colony Commerce Center Specific Plan DEIR, Ontario (2016; 16);

- Fairway Trails Improvements MND, Marin County (2016; 13);
- Review of Avian-Solar Science Plan (2016; 28);
- Replies on Pyramid Asphalt IS, Imperial County (2016; 5);
- Pyramid Asphalt IS, Imperial County (2016; 4);
- Agua Mansa Distribution Warehouse Project Initial Study (2016; 14);
- Santa Anita Warehouse MND, Rancho Cucamonga (2016; 12);
- CapRock Distribution Center III DEIR, Rialto (2016: 12);
- Orange Show Logistics Center IS/MND, San Bernardino (2016; 9);
- City of Palmdale Oasis Medical Village Project IS/MND (2016; 7);
- Comments on proposed rule for incidental eagle take, USFWS (2016, 49);
- Replies on Grapevine Specific and Community Plan FEIR, Kern County (2016; 25);
- Grapevine Specific and Community Plan DEIR, Kern County (2016; 15);
- Clinton County Zoning Ordinance for Wind Turbine siting (2016);
- Hallmark at Shenandoah Warehouse Project Initial Study, San Bernardino (2016; 6);
- Tri-City Industrial Complex Initial Study, San Bernardino (2016; 5);
- Hidden Canyon Industrial Park Plot Plan 16-PP-02, Beaumont (2016; 12);
- Kimball Business Park DEIR (2016; 10);
- Jupiter Project IS and MND, Apple Valley, San Bernardino County (2016; 9);
- Revised Draft Giant Garter Snake Recovery Plan of 2015 (2016, 18);
- Palo Verde Mesa Solar Project EIR, Blythe (2016; 27);
- Reply on Fairview Wind Project Natural Heritage Assessment, Ontario, Canada (2016; 14);
- Fairview Wind Project Natural Heritage Assessment, Ontario, Canada (2016; 41);
- Reply on Amherst Island Wind Farm Natural Heritage Assessment, Ontario (2015, 38);
- Amherst Island Wind Farm Natural Heritage Assessment, Ontario (2015, 31);
- Second Reply on White Pines Wind Farm, Ontario (2015, 6);
- Reply on White Pines Wind Farm Natural Heritage Assessment, Ontario (2015, 10);
- White Pines Wind Farm Natural Heritage Assessment, Ontario (2015, 9);
- Proposed Section 24 Specific Plan Agua Caliente Band of Cahuilla Indians DEIS (2015, 9);
- Replies on 24 Specific Plan Agua Caliente Band of Cahuilla Indians FEIS (2015, 6);
- Willow Springs Solar Photovoltaic Project DEIR, Rosamond (2015; 28);
- Sierra Lakes Commerce Center Project DEIR, Fontana (2015, 9);
- Columbia Business Center MND, Riverside (2015; 8);
- West Valley Logistics Center Specific Plan DEIR, Fontana (2015, 10);
- Willow Springs Solar Photovoltaic Project DEIR (2015, 28);
- Alameda Creek Bridge Replacement Project DEIR (2015, 10);
- World Logistic Center Specific Plan FEIR, Moreno Valley (2015, 12);
- Elkhorn Valley Wind Power Project Impacts, Oregon (2015; 143);
- Bay Delta Conservation Plan EIR/EIS, Sacramento (2014, 21);
- Addison Wind Energy Project DEIR, Mojave (2014, 32);
- Replies on the Addison Wind Energy Project DEIR, Mojave (2014, 15);
- Addison and Rising Tree Wind Energy Project FEIR, Mojave (2014, 12);
- Palen Solar Electric Generating System FSA (CEC), Blythe (2014, 20);
- Rebuttal testimony on Palen Solar Energy Generating System (2014, 9);
- Seven Mile Hill and Glenrock/Rolling Hills impacts + Addendum, Wyoming (2014; 105);

- Rising Tree Wind Energy Project DEIR, Mojave (2014, 32);
- Replies on the Rising Tree Wind Energy Project DEIR, Mojave (2014, 15);
- Soitec Solar Development Project PEIR, Boulevard, San Diego County (2014, 18);
- Oakland Zoo expansion on Alameda whipsnake and California red-legged frog (2014; 3);
- Alta East Wind Energy Project FEIS, Tehachapi Pass (2013, 23);
- Blythe Solar Power Project Staff Assessment, California Energy Commission (2013, 16);
- Clearwater and Yakima Solar Projects DEIR, Kern County (2013, 9);
- West Antelope Solar Energy Project IS/MND, Antelope Valley (2013, 18);
- Cuyama Solar Project DEIR, Carrizo Plain (2014, 19);
- Desert Renewable Energy Conservation Plan (DRECP) EIR/EIS (2015, 49);
- Kingbird Solar Photovoltaic Project EIR, Kern County (2013, 19);
- Lucerne Valley Solar Project IS/MND, San Bernardino County (2013, 12);
- Tule Wind project FEIR/FEIS (Declaration) (2013; 31);
- Sunlight Partners LANDPRO Solar Project MND (2013; 11);
- Declaration in opposition to BLM fracking (2013; 5);
- Blythe Energy Project (solar) CEC Staff Assessment (2013;16);
- Rosamond Solar Project EIR Addendum, Kern County (2013; 13);
- Pioneer Green Solar Project EIR, Bakersfield (2013; 13);
- Replies on Soccer Center Solar Project MND (2013; 6);
- Soccer Center Solar Project MND, Lancaster (2013; 10);
- Plainview Solar Works MND, Lancaster (2013; 10);
- Alamo Solar Project MND, Mojave Desert (2013; 15);
- Replies on Imperial Valley Solar Company 2 Project (2013; 10);
- Imperial Valley Solar Company 2 Project (2013; 13);
- FRV Orion Solar Project DEIR, Kern County (PP12232) (2013; 9);
- Casa Diablo IV Geothermal Development Project (2013; 6);
- Reply on Casa Diablo IV Geothermal Development Project (2013; 8);
- Alta East Wind Project FEIS, Tehachapi Pass (2013; 23);
- Metropolitan Air Park DEIR, City of San Diego (2013;);
- Davidon Homes Tentative Subdivision Rezoning Project DEIR, Petaluma (2013; 9);
- Oakland Zoo Expansion Impacts on Alameda Whipsnake (2013; 10);
- Campo Verde Solar project FEIR, Imperial Valley (2013; 11pp);
- Neg Dec comments on Davis Sewer Trunk Rehabilitation (2013; 8);
- North Steens Transmission Line FEIS, Oregon (Declaration) (2012; 62);
- Summer Solar and Springtime Solar Projects Ism Lancaster (2012; 8);
- J&J Ranch, 24 Adobe Lane Environmental Review, Orinda (2012; 14);
- Replies on Hudson Ranch Power II Geothermal Project and Simbol Calipatria Plant II (2012; 8);
- Hudson Ranch Power II Geothermal Project and Simbol Calipatria Plant II (2012; 9);
- Desert Harvest Solar Project EIS, near Joshua Tree (2012; 15);
- Solar Gen 2 Array Project DEIR, El Centro (2012; 16);
- Ocotillo Sol Project EIS, Imperial Valley (2012; 4);
- Beacon Photovoltaic Project DEIR, Kern County (2012; 5);
- Butte Water District 2012 Water Transfer Program IS/MND (2012; 11);

- Mount Signal and Calexico Solar Farm Projects DEIR (2011; 16);
- City of Elk Grove Sphere of Influence EIR (2011; 28);
- Sutter Landing Park Solar Photovoltaic Project MND, Sacramento (2011; 9);
- Rabik/Gudath Project, 22611 Coleman Valley Road, Bodega Bay (CPN 10-0002) (2011; 4);
- Ivanpah Solar Electric Generating System (ISEGS) (Declaration) (2011; 9);
- Draft Eagle Conservation Plan Guidance, USFWS (2011; 13);
- Niles Canyon Safety Improvement Project EIR/EA (2011; 16);
- Route 84 Safety Improvement Project (Declaration) (2011; 7);
- Rebuttal on Whistling Ridge Wind Energy Power DEIS, Skamania County, (2010; 6);
- Whistling Ridge Wind Energy Power DEIS, Skamania County, Washington (2010; 41);
- Klickitat County's Decisions on Windy Flats West Wind Energy Project (2010; 17);
- St. John's Church Project DEIR, Orinda (2010; 14);
- Results Radio Zone File #2009-001 IS/MND, Conaway site, Davis (2010; 20);
- Rio del Oro Specific Plan Project FEIR, Rancho Cordova (2010;12);
- Results Radio Zone File #2009-001, Mace Blvd site, Davis (2009; 10);
- Answers to Questions on 33% RPS Implementation Analysis Preliminary Results Report (2009; 9);
- SEPA Determination of Non-significance regarding zoning adjustments for Skamania County, Washington (Second Declaration) (2008; 17);
- Draft 1A Summary Report to CAISO (2008; 10);
- Hilton Manor Project Categorical Exemption, County of Placer (2009; 9);
- Protest of CARE to Amendment to the Power Purchase and Sale Agreement for Procurement of Eligible Renewable Energy Resources Between Hatchet Ridge Wind LLC and PG&E (2009; 3);
- Tehachapi Renewable Transmission Project EIR/EIS (2009; 142);
- Delta Shores Project EIR, south Sacramento (2009; 11 + addendum 2);
- Declaration in Support of Care's Petition to Modify D.07-09-040 (2008; 3);
- The Public Utility Commission's Implementation Analysis December 16 Workshop for the Governor's Executive Order S-14-08 to implement a 33% Renewable Portfolio Standard by 2020 (2008; 9);
- The Public Utility Commission's Implementation Analysis Draft Work Plan for the Governor's Executive Order S-14-08 to implement a 33% Renewable Portfolio Standard by 2020 (2008; 11);
- Draft 1A Summary Report to California Independent System Operator for Planning Reserve Margins (PRM) Study (2008; 7.);
- SEPA Determination of Non-significance regarding zoning adjustments for Skamania County, Washington (Declaration) (2008; 16);
- Colusa Generating Station, California Energy Commission PSA (2007; 24);
- Rio del Oro Specific Plan Project Recirculated DEIR, Mather (2008: 66);
- Replies on Regional University Specific Plan EIR, Roseville (2008; 20);
- Regional University Specific Plan EIR, Roseville (2008: 33);
- Clark Precast, LLC's "Sugarland" project, ND, Woodland (2008: 15);
- Cape Wind Project DEIS, Nantucket (2008; 157);
- Yuba Highlands Specific Plan EIR, Spenceville, Yuba County (2006; 37);
- Replies to responses on North Table Mountain MND, Butte County (2006; 5);

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- Windy Point Wind Farm EIS (2006; 14 and Powerpoint slide replies);
- Shiloh I Wind Power Project EIR, Rio Vista (2005; 18);
- Buena Vista Wind Energy Project NOP, Byron (2004; 15);
- Callahan Estates Subdivision ND, Winters (2004; 11);
- Winters Highlands Subdivision IS/ND (2004; 9);
- Winters Highlands Subdivision IS/ND (2004; 13);
- Creekside Highlands Project, Tract 7270 ND (2004; 21);
- Petition to California Fish and Game Commission to list Burrowing Owl (2003; 10);
- Altamont Pass Wind Resource Area CUP renewals, Alameda County (2003; 41);
- UC Davis Long Range Development Plan: Neighborhood Master Plan (2003; 23);
- Anderson Marketplace Draft Environmental Impact Report (2003; 18);
- Negative Declaration of the proposed expansion of Temple B'nai Tikyah (2003; 6);
- Antonio Mountain Ranch Specific Plan Public Draft EIR (2002; 23);
- Replies on East Altamont Energy Center evidentiary hearing (2002; 9);
- Revised Draft Environmental Impact Report, The Promenade (2002; 7);
- Recirculated Initial Study for Calpine's proposed Pajaro Valley Energy Center (2002; 3);
- UC Merced -- Declaration (2002; 5);
- Replies on Atwood Ranch Unit III Subdivision FEIR (2003; 22);
- Atwood Ranch Unit III Subdivision EIR (2002; 19);
- California Energy Commission Staff Report on GWF Tracy Peaker Project (2002; 20);
- Silver Bend Apartments IS/MND, Placer County (2002; 13);
- UC Merced Long-range Development Plan DEIR and UC Merced Community Plan DEIR (2001; 26);
- Colusa County Power Plant IS, Maxwell (2001; 6);
- Dog Park at Catlin Park, Folsom, California (2001; 5);
- Calpine and Bechtel Corporations' Biological Resources Implementation and Monitoring Program (BRMIMP) for the Metcalf Energy Center (2000; 10);
- Metcalf Energy Center, California Energy Commission FSA (2000);
- US Fish and Wildlife Service Section 7 consultation with the California Energy Commission regarding Calpine and Bechtel Corporations' Metcalf Energy Center (2000; 4);
- California Energy Commission's Preliminary Staff Assessment of the proposed Metcalf Energy Center (2000: 11);
- Site-specific management plans for the Natomas Basin Conservancy's mitigation lands, prepared by Wildlands, Inc. (2000: 7);
- Affidavit of K. Shawn Smallwood in Spirit of the Sage Council, et al. (Plaintiffs) vs. Bruce Babbitt, Secretary, U.S. Department of the Interior, et al. (Defendants), Injuries caused by the No Surprises policy and final rule which codifies that policy (1999: 9).
- California Board of Forestry's proposed amended Forest Practices Rules (1999);
- Sunset Skyranch Airport Use Permit IS/MND (1999);
- Ballona West Bluffs Project Environmental Impact Report (1999; oral presentation);
- Draft Recovery Plan for Giant Garter Snake (Fed. Reg. 64(176): 49497-49498) (1999; 8);
- Draft Recovery Plan for Arroyo Southwestern Toad (1998);
- Pacific Lumber Co. (Headwaters) HCP & EIR, Fortuna (1998; 28);
- Natomas Basin HCP Permit Amendment, Sacramento (1998);

- San Diego Multi-Species Conservation Program FEIS/FEIR (1997; 10);

Comments on other Environmental Review Documents:

- Proposed Regulation for California Fish and Game Code Section 3503.5 (2015: 12);
- Statement of Overriding Considerations related to extending Altamont Winds, Inc.'s Conditional Use Permit PLN2014-00028 (2015; 8);
- Covell Village PEIR, Davis (2005; 19);
- Bureau of Land Management Wind Energy Programmatic EIS Scoping (2003; 7.);
- NEPA Environmental Analysis for Biosafety Level 4 National Biocontainment Laboratory (NBL) at UC Davis (2003: 7);
- Notice of Preparation of UC Merced Community and Area Plan EIR, on behalf of The Wildlife Society—Western Section (2001: 8.);
- Preliminary Draft Yolo County Habitat Conservation Plan (2001; 2 letters totaling 35.);
- Merced County General Plan Revision, notice of Negative Declaration (2001: 2.);
- Notice of Preparation of Campus Parkway EIR/EIS (2001: 7.);
- Draft Recovery Plan for the bighorn sheep in the Peninsular Range (*Ovis candensis*) (2000);
- Draft Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*), on behalf of The Wildlife Society—Western Section (2000: 10.);
- Sierra Nevada Forest Plan Amendment Draft Environmental Impact Statement, on behalf of The Wildlife Society—Western Section (2000: 7.);
- State Water Project Supplemental Water Purchase Program, Draft Program EIR (1997);
- Davis General Plan Update EIR (2000);
- Turn of the Century EIR (1999: 10);
- Proposed termination of Critical Habitat Designation under the Endangered Species Act (Fed. Reg. 64(113): 31871-31874) (1999);
- NOA Draft Addendum to the Final Handbook for Habitat Conservation Planning and Incidental Take Permitting Process, termed the HCP 5-Point Policy Plan (Fed. Reg. 64(45): 11485 - 11490) (1999; 2 + attachments);
- Covell Center Project EIR and EIR Supplement (1997).

Position Statements I prepared the following position statements for the Western Section of The Wildlife Society, and one for nearly 200 scientists:

- Recommended that the California Department of Fish and Game prioritize the extermination of the introduced southern water snake in northern California. The Wildlife Society--Western Section (2001);
- Recommended that The Wildlife Society—Western Section appoint or recommend members of the independent scientific review panel for the UC Merced environmental review process (2001);
- Opposed the siting of the University of California's 10th campus on a sensitive vernal pool/grassland complex east of Merced. The Wildlife Society--Western Section (2000);
- Opposed the legalization of ferret ownership in California. The Wildlife Society--Western Section (2000);
- Opposed the Proposed "No Surprises," "Safe Harbor," and "Candidate Conservation Agreement" rules, including permit-shield protection provisions (Fed. Reg. Vol. 62, No.

103, pp. 29091-29098 and No. 113, pp. 32189-32194). This statement was signed by 188 scientists and went to the responsible federal agencies, as well as to the U.S. Senate and House of Representatives.

Posters at Professional Meetings

Leyvas, E. and K. S. Smallwood. 2015. Rehabilitating injured animals to offset and rectify wind project impacts. Conference on Wind Energy and Wildlife Impacts, Berlin, Germany, 9-12 March 2015.

Smallwood, K. S., J. Mount, S. Standish, E. Leyvas, D. Bell, E. Walther, B. Karas. 2015. Integrated detection trials to improve the accuracy of fatality rate estimates at wind projects. Conference on Wind Energy and Wildlife Impacts, Berlin, Germany, 9-12 March 2015.

Smallwood, K. S. and C. G. Thelander. 2005. Lessons learned from five years of avian mortality research in the Altamont Pass WRA. AWEA conference, Denver, May 2005.

Neher, L., L. Wilder, J. Woo, L. Spiegel, D. Yen-Nakafugi, and K.S. Smallwood. 2005. Bird's eye view on California wind. AWEA conference, Denver, May 2005.

Smallwood, K. S., C. G. Thelander and L. Spiegel. 2003. Toward a predictive model of avian fatalities in the Altamont Pass Wind Resource Area. Windpower 2003 Conference and Convention, Austin, Texas.

Smallwood, K.S. and Eva Butler. 2002. Pocket Gopher Response to Yellow Star-thistle Eradication as part of Grassland Restoration at Decommissioned Mather Air Force Base, Sacramento County, California. White Mountain Research Station Open House, Barcroft Station.

Smallwood, K.S. and Michael L. Morrison. 2002. Fresno kangaroo rat (*Dipodomys nitratoides*) Conservation Research at Resources Management Area 5, Lemoore Naval Air Station. White Mountain Research Station Open House, Barcroft Station.

Smallwood, K.S. and E.L. Fitzhugh. 1989. Differentiating mountain lion and dog tracks. Third Mountain Lion Workshop, Prescott, AZ.

Smith, T. R. and K. S. Smallwood. 2000. Effects of study area size, location, season, and allometry on reported *Sorex* shrew densities. Annual Meeting of the Western Section of The Wildlife Society.

Presentations at Professional Meetings and Seminars

Dog detections of bat and bird fatalities at wind farms in the Altamont Pass Wind Resource Area. East Bay Regional Park District 2019 Stewardship Seminar, Oakland, California, 13 November 2019.

Repowering the Altamont Pass. Altamont Symposium, The Wildlife Society – Western Section, 5 February 2017.

Developing methods to reduce bird mortality in the Altamont Pass Wind Resource Area, 1999-

2007. Altamont Symposium, The Wildlife Society – Western Section, 5 February 2017.

Conservation and recovery of burrowing owls in Santa Clara Valley. Santa Clara Valley Habitat Agency, Newark, California, 3 February 2017.

Mitigation of Raptor Fatalities in the Altamont Pass Wind Resource Area. Raptor Research Foundation Meeting, Sacramento, California, 6 November 2015.

From burrows to behavior: Research and management for burrowing owls in a diverse landscape. California Burrowing Owl Consortium meeting, 24 October 2015, San Jose, California.

The Challenges of repowering. Keynote presentation at Conference on Wind Energy and Wildlife Impacts, Berlin, Germany, 10 March 2015.

Research Highlights Altamont Pass 2011-2015. Scientific Review Committee, Oakland, California, 8 July 2015.

Siting wind turbines to minimize raptor collisions: Altamont Pass Wind Resource Area. US Fish and Wildlife Service Golden Eagle Working Group, Sacramento, California, 8 January 2015.

Evaluation of nest boxes as a burrowing owl conservation strategy. Sacramento Chapter of the Western Section, The Wildlife Society. Sacramento, California, 26 August 2013.

Predicting collision hazard zones to guide repowering of the Altamont Pass. Conference on wind power and environmental impacts. Stockholm, Sweden, 5-7 February 2013.

Impacts of Wind Turbines on Wildlife. California Council for Wildlife Rehabilitators, Yosemite, California, 12 November 2012.

Impacts of Wind Turbines on Birds and Bats. Madrone Audubon Society, Santa Rosa, California, 20 February 2012.

Comparing Wind Turbine Impacts across North America. California Energy Commission Staff Workshop: Reducing the Impacts of Energy Infrastructure on Wildlife, 20 July 2011.

Siting Repowered Wind Turbines to Minimize Raptor Collisions. California Energy Commission Staff Workshop: Reducing the Impacts of Energy Infrastructure on Wildlife, 20 July 2011.

Siting Repowered Wind Turbines to Minimize Raptor Collisions. Alameda County Scientific Review Committee meeting, 17 February 2011

Comparing Wind Turbine Impacts across North America. Conference on Wind energy and Wildlife impacts, Trondheim, Norway, 3 May 2011.

Update on Wildlife Impacts in the Altamont Pass Wind Resource Area. Raptor Symposium, The Wildlife Society—Western Section, Riverside, California, February 2011.

Siting Repowered Wind Turbines to Minimize Raptor Collisions. Raptor Symposium, The Wildlife

Society - Western Section, Riverside, California, February 2011.

Wildlife mortality caused by wind turbine collisions. Ecological Society of America, Pittsburgh, Pennsylvania, 6 August 2010.

Map-based repowering and reorganization of a wind farm to minimize burrowing owl fatalities. California burrowing Owl Consortium Meeting, Livermore, California, 6 February 2010.

Environmental barriers to wind power. Getting Real About Renewables: Economic and Environmental Barriers to Biofuels and Wind Energy. A symposium sponsored by the Environmental & Energy Law & Policy Journal, University of Houston Law Center, Houston, 23 February 2007.

Lessons learned about bird collisions with wind turbines in the Altamont Pass and other US wind farms. Meeting with Japan Ministry of the Environment and Japan Ministry of the Economy, Wild Bird Society of Japan, and other NGOs Tokyo, Japan, 9 November 2006.

Lessons learned about bird collisions with wind turbines in the Altamont Pass and other US wind farms. Symposium on bird collisions with wind turbines. Wild Bird Society of Japan, Tokyo, Japan, 4 November 2006.

Responses of Fresno kangaroo rats to habitat improvements in an adaptive management framework. California Society for Ecological Restoration (SERCAL) 13th Annual Conference, UC Santa Barbara, 27 October 2006.

Fatality associations as the basis for predictive models of fatalities in the Altamont Pass Wind Resource Area. EEI/APLIC/PIER Workshop, 2006 Biologist Task Force and Avian Interaction with Electric Facilities Meeting, Pleasanton, California, 28 April 2006.

Burrowing owl burrows and wind turbine collisions in the Altamont Pass Wind Resource Area. The Wildlife Society - Western Section Annual Meeting, Sacramento, California, February 8, 2006.

Mitigation at wind farms. Workshop: Understanding and resolving bird and bat impacts. American Wind Energy Association and Audubon Society. Los Angeles, CA. January 10 and 11, 2006.

Incorporating data from the California Wildlife Habitat Relationships (CWHR) system into an impact assessment tool for birds near wind farms. Shawn Smallwood, Kevin Hunting, Marcus Yee, Linda Spiegel, Monica Parisi. Workshop: Understanding and resolving bird and bat impacts. American Wind Energy Association and Audubon Society. Los Angeles, CA. January 10 and 11, 2006.

Toward indicating threats to birds by California's new wind farms. California Energy Commission, Sacramento, May 26, 2005.

Avian collisions in the Altamont Pass. California Energy Commission, Sacramento, May 26, 2005.

Ecological solutions for avian collisions with wind turbines in the Altamont Pass Wind Resource Area. EPRI Environmental Sector Council, Monterey, California, February 17, 2005.

Ecological solutions for avian collisions with wind turbines in the Altamont Pass Wind Resource Area. The Wildlife Society—Western Section Annual Meeting, Sacramento, California, January 19, 2005.

Associations between avian fatalities and attributes of electric distribution poles in California. The Wildlife Society - Western Section Annual Meeting, Sacramento, California, January 19, 2005.

Minimizing avian mortality in the Altamont Pass Wind Resources Area. UC Davis Wind Energy Collaborative Forum, Palm Springs, California, December 14, 2004.

Selecting electric distribution poles for priority retrofitting to reduce raptor mortality. Raptor Research Foundation Meeting, Bakersfield, California, November 10, 2004.

Responses of Fresno kangaroo rats to habitat improvements in an adaptive management framework. Annual Meeting of the Society for Ecological Restoration, South Lake Tahoe, California, October 16, 2004.

Lessons learned from five years of avian mortality research at the Altamont Pass Wind Resources Area in California. The Wildlife Society Annual Meeting, Calgary, Canada, September 2004.

The ecology and impacts of power generation at Altamont Pass. Sacramento Petroleum Association, Sacramento, California, August 18, 2004.

Burrowing owl mortality in the Altamont Pass Wind Resource Area. California Burrowing Owl Consortium meeting, Hayward, California, February 7, 2004.

Burrowing owl mortality in the Altamont Pass Wind Resource Area. California Burrowing Owl Symposium, Sacramento, November 2, 2003.

Raptor Mortality at the Altamont Pass Wind Resource Area. National Wind Coordinating Committee, Washington, D.C., November 17, 2003.

Raptor Behavior at the Altamont Pass Wind Resource Area. Annual Meeting of the Raptor Research Foundation, Anchorage, Alaska, September, 2003.

Raptor Mortality at the Altamont Pass Wind Resource Area. Annual Meeting of the Raptor Research Foundation, Anchorage, Alaska, September, 2003.

California mountain lions. Ecological & Environmental Issues Seminar, Department of Biology, California State University, Sacramento, November, 2000.

Intra- and inter-turbine string comparison of fatalities to animal burrow densities at Altamont Pass. National Wind Coordinating Committee, Carmel, California, May, 2000.

Using a Geographic Positioning System (GPS) to map wildlife and habitat. Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.

Suggested standards for science applied to conservation issues. Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.

The indicators framework applied to ecological restoration in Yolo County, California. Society for Ecological Restoration, September 25, 1999.

Ecological restoration in the context of animal social units and their habitat areas. Society for Ecological Restoration, September 24, 1999.

Relating Indicators of Ecological Health and Integrity to Assess Risks to Sustainable Agriculture and Native Biota. International Conference on Ecosystem Health, August 16, 1999.

A crosswalk from the Endangered Species Act to the HCP Handbook and real HCPs. Southern California Edison, Co. and California Energy Commission, March 4-5, 1999.

Mountain lion track counts in California: Implications for Management. Ecological & Environmental Issues Seminar, Department of Biological Sciences, California State University, Sacramento, November 4, 1998.

"No Surprises" -- Lack of science in the HCP process. California Native Plant Society Annual Conservation Conference, The Presidio, San Francisco, September 7, 1997.

In Your Interest. A half hour weekly show aired on Channel 10 Television, Sacramento. In this episode, I served on a panel of experts discussing problems with the implementation of the Endangered Species Act. Aired August 31, 1997.

Spatial scaling of pocket gopher (*Geomyidae*) density. Southwestern Association of Naturalists 44th Meeting, Fayetteville, Arkansas, April 10, 1997.

Estimating prairie dog and pocket gopher burrow volume. Southwestern Association of Naturalists 44th Meeting, Fayetteville, Arkansas, April 10, 1997.

Ten years of mountain lion track survey. Fifth Mountain Lion Workshop, San Diego, February 27, 1996.

Study and interpretive design effects on mountain lion density estimates. Fifth Mountain Lion Workshop, San Diego, February 27, 1996.

Small animal control. Session moderator and speaker at the California Farm Conference, Sacramento, California, Feb. 28, 1995.

Small animal control. Ecological Farming Conference, Asylomar, California, Jan. 28, 1995.

Habitat associations of the Swainson's Hawk in the Sacramento Valley's agricultural landscape. 1994 Raptor Research Foundation Meeting, Flagstaff, Arizona.

Alfalfa as wildlife habitat. Seed Industry Conference, Woodland, California, May 4, 1994.

Habitats and vertebrate pests: impacts and management. Managing Farmland to Bring Back Game Birds and Wildlife to the Central Valley. Yolo County Resource Conservation District, U.C. Davis, February 19, 1994.

Management of gophers and alfalfa as wildlife habitat. Orland Alfalfa Production Meeting and Sacramento Valley Alfalfa Production Meeting, February 1 and 2, 1994.

Patterns of wildlife movement in a farming landscape. Wildlife and Fisheries Biology Seminar Series: Recent Advances in Wildlife, Fish, and Conservation Biology, U.C. Davis, Dec. 6, 1993.

Alfalfa as wildlife habitat. California Alfalfa Symposium, Fresno, California, Dec. 9, 1993.

Management of pocket gophers in Sacramento Valley alfalfa. California Alfalfa Symposium, Fresno, California, Dec. 8, 1993.

Association analysis of raptors in a farming landscape. Plenary speaker at Raptor Research Foundation Meeting, Charlotte, North Carolina, Nov. 6, 1993.

Landscape strategies for biological control and IPM. Plenary speaker, International Conference on Integrated Resource Management and Sustainable Agriculture, Beijing, China, Sept. 11, 1993.

Landscape Ecology Study of Pocket Gophers in Alfalfa. Alfalfa Field Day, U.C. Davis, July 1993.

Patterns of wildlife movement in a farming landscape. Spatial Data Analysis Colloquium, U.C. Davis, August 6, 1993.

Sound stewardship of wildlife. Veterinary Medicine Seminar: Ethics of Animal Use, U.C. Davis. May 1993.

Landscape ecology study of pocket gophers in alfalfa. Five County Grower's Meeting, Tracy, California. February 1993.

Turbulence and the community organizers: The role of invading species in ordering a turbulent system, and the factors for invasion success. Ecology Graduate Student Association Colloquium, U.C. Davis. May 1990.

Evaluation of exotic vertebrate pests. Fourteenth Vertebrate Pest Conference, Sacramento, California. March 1990.

Analytical methods for predicting success of mammal introductions to North America. The Western Section of the Wildlife Society, Hilo, Hawaii. February 1988.

A state-wide mountain lion track survey. Sacramento County Dept Parks and Recreation. April 1986.

The mountain lion in California. Davis Chapter of the Audubon Society. October 1985.

Ecology Graduate Student Seminars, U.C. Davis, 1985-1990: Social behavior of the mountain lion;

Mountain lion control; Political status of the mountain lion in California.

Other forms of Participation at Professional Meetings

- Scientific Committee, Conference on Wind energy and Wildlife impacts, Berlin, Germany, March 2015.

- Scientific Committee, Conference on Wind energy and Wildlife impacts, Stockholm, Sweden, February 2013.

- Workshop co-presenter at Birds & Wind Energy Specialist Group (BAWESG) Information sharing week, Bird specialist studies for proposed wind energy facilities in South Africa, Endangered Wildlife Trust, Darling, South Africa, 3-7 October 2011.

- Scientific Committee, Conference on Wind energy and Wildlife impacts, Trondheim, Norway, 2-5 May 2011.

- Chair of Animal Damage Management Session, The Wildlife Society, Annual Meeting, Reno, Nevada, September 26, 2001.

- Chair of Technical Session: Human communities and ecosystem health: Comparing perspectives and making connection. Managing for Ecosystem Health, International Congress on Ecosystem Health, Sacramento, CA August 15-20, 1999.

- Student Awards Committee, Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.

- Student Mentor, Annual Meeting of the Western Section of The Wildlife Society, Riverside, CA, January, 2000.

Printed Mass Media

Smallwood, K.S., D. Mooney, and M. McGuinness. 2003. We must stop the UCD biolab now. Op-Ed to the Davis Enterprise.

Smallwood, K.S. 2002. Spring Lake threatens Davis. Op-Ed to the Davis Enterprise.

Smallwood, K.S. Summer, 2001. Mitigation of habitation. The Flatlander, Davis, California.

Entrikan, R.K. and K.S. Smallwood. 2000. Measure O: Flawed law would lock in new taxes. Op-Ed to the Davis Enterprise.

Smallwood, K.S. 2000. Davis delegation lobbies Congress for Wildlife conservation. Op-Ed to the Davis Enterprise.

Smallwood, K.S. 1998. Davis Visions. The Flatlander, Davis, California.

Smallwood, K.S. 1997. Last grab for Yolo's land and water. The Flatlander, Davis, California.

Smallwood, K.S. 1997. The Yolo County HCP. Op-Ed to the Davis Enterprise.

Radio/Television

PBS News Hour,

FOX News, Energy in America: Dead Birds Unintended Consequence of Wind Power Development, August 2011.

KXJZ Capital Public Radio -- Insight (Host Jeffrey Callison). Mountain lion attacks (with guest Professor Richard Coss). 23 April 2009;

KXJZ Capital Public Radio -- Insight (Host Jeffrey Callison). Wind farm Rio Vista Renewable Power. 4 September 2008;

KQED QUEST Episode #111. Bird collisions with wind turbines. 2007;

KDVS Speaking in Tongues (host Ron Glick), Yolo County HCP: 1 hour. December 27, 2001;

KDVS Speaking in Tongues (host Ron Glick), Yolo County HCP: 1 hour. May 3, 2001;

KDVS Speaking in Tongues (host Ron Glick), Yolo County HCP: 1 hour. February 8, 2001;

KDVS Speaking in Tongues (host Ron Glick & Shawn Smallwood), California Energy Crisis: 1 hour. Jan. 25, 2001;

KDVS Speaking in Tongues (host Ron Glick), Headwaters Forest HCP: 1 hour. 1998;

Davis Cable Channel (host Gerald Heffernon), Burrowing owls in Davis: half hour. June, 2000;

Davis Cable Channel (hosted by Davis League of Women Voters), Measure O debate: 1 hour. October, 2000;

KXTV 10, In Your Interest, The Endangered Species Act: half hour. 1997.

Reviews of Journal Papers (Scientific journals for whom I've provided peer review)

Journal	**Journal**
American Naturalist	Journal of Animal Ecology
Journal of Wildlife Management	Western North American Naturalist
Auk	Journal of Raptor Research
Biological Conservation	National Renewable Energy Lab reports
Canadian Journal of Zoology	Oikos
Ecosystem Health	The Prairie Naturalist
Environmental Conservation	Restoration Ecology

Journal	Journal
Environmental Management	Southwestern Naturalist
Functional Ecology	The Wildlife Society--Western Section Trans.
Journal of Zoology (London)	Proc. Int. Congress on Managing for Ecosystem Health
Journal of Applied Ecology	Transactions in GIS
Ecology	Tropical Ecology
Wildlife Society Bulletin	Peer J
Biological Control	The Condor

Committees

- Scientific Review Committee, Alameda County, Altamont Pass Wind Resource Area
- Ph.D. Thesis Committee, Steve Anderson, University of California, Davis
- MS Thesis Committee, Marcus Yee, California State University, Sacramento

Other Professional Activities or Products

Testified in Federal Court in Denver during 2005 over the fate of radio-nuclides in the soil at Rocky Flats Plant after exposure to burrowing animals. My clients won a judgment of $553,000,000. I have also testified in many other cases of litigation under CEQA, NEPA, the Warren-Alquist Act, and other environmental laws. My clients won most of the cases for which I testified.

Testified before Environmental Review Tribunals in Ontario, Canada regarding proposed White Pines, Amherst Island, and Fairview Wind Energy projects.

Testified in Skamania County Hearing in 2009 on the potential impacts of zoning the County for development of wind farms and hazardous waste facilities.

Testified in deposition in 2007 in the case of O'Dell et al. vs. FPL Energy in Houston, Texas.

Testified in Klickitat County Hearing in 2006 on the potential impacts of the Windy Point Wind Farm.

Memberships in Professional Societies

The Wildlife Society
Raptor Research Foundation

Honors and Awards

Fulbright Research Fellowship to Indonesia, 1987
J.G. Boswell Full Academic Scholarship, 1981 college of choice
Certificate of Appreciation, The Wildlife Society—Western Section, 2000, 2001
Northern California Athletic Association Most Valuable Cross Country Runner, 1984
American Legion Award, Corcoran High School, 1981, and John Muir Junior High, 1977
CIF Section Champion, Cross Country in 1978
CIF Section Champion, Track & Field 2 mile run in 1981
National Junior Record, 20 kilometer run, 1982
National Age Group Record, 1500 meter run, 1978

Community Activities

District 64 Little League Umpire, 2003-2007
Dixon Little League Umpire, 2006-07
Davis Little League Chief Umpire and Board member, 2004-2005
Davis Little League Safety Officer, 2004-2005
Davis Little League Certified Umpire, 2002-2004
Davis Little League Scorekeeper, 2002
Davis Visioning Group member
Petitioner for Writ of Mandate under the California Environmental Quality Act against City of Woodland decision to approve the Spring Lake Specific Plan, 2002
Served on campaign committees for City Council candidates

Representative Clients/Funders

Law Offices of Stephan C. Volker
Blum Collins, LLP
Eric K. Gillespie Professional Corporation
Law Offices of Berger & Montague
Lozeau | Drury LLP
Law Offices of Roy Haber
Law Offices of Edward MacDonald
Law Office of John Gabrielli
Law Office of Bill Kopper
Law Office of Donald B. Mooney
Law Office of Veneruso & Moncharsh
Law Office of Steven Thompson
Law Office of Brian Gaffney
California Wildlife Federation
Defenders of Wildlife
Sierra Club
National Endangered Species Network
Spirit of the Sage Council
The Humane Society
Hagens Berman LLP
Environmental Protection Information Center
Goldberg, Kamin & Garvin, Attorneys at Law
Californians for Renewable Energy (CARE)
Seatuck Environmental Association
Friends of the Columbia Gorge, Inc.
Save Our Scenic Area
Alliance to Protect Nantucket Sound
Friends of the Swainson's Hawk
Alameda Creek Alliance
Center for Biological Diversity
California Native Plant Society
Endangered Wildlife Trust
and BirdLife South Africa
AquAlliance
Oregon Natural Desert Association
Save Our Sound
G3 Energy and Pattern Energy
Emerald Farms
Pacific Gas & Electric Co.
Southern California Edison Co.
Georgia-Pacific Timber Co.
Northern Territories Inc.
David Magney Environmental Consulting
Wildlife History Foundation
NextEra Energy Resources, LLC
Ogin, Inc.
EDF Renewables
National Renewable Energy Lab
Altamont Winds LLC
Salka Energy
Comstocks Business (magazine)
BioResource Consultants
Tierra Data
Black and Veatch
Terry Preston, Wildlife Ecology Research Center
EcoStat, Inc.
US Navy
US Department of Agriculture
US Forest Service
US Fish & Wildlife Service
US Department of Justice
California Energy Commission
California Office of the Attorney General
California Department of Fish & Wildlife
California Department of Transportation
California Department of Forestry
California Department of Food & Agriculture
Ventura County Counsel
County of Yolo
Tahoe Regional Planning Agency
Sustainable Agriculture Research & Education Program
Sacramento-Yolo Mosquito and Vector Control District
East Bay Regional Park District
County of Alameda
Don & LaNelle Silverstien
Seventh Day Adventist Church
Escuela de la Raza Unida
Susan Pelican and Howard Beeman
Residents Against Inconsistent Development, Inc.
Bob Sarvey
Mike Boyd
Hillcroft Neighborhood Fund
Joint Labor Management Committee, Retail Food Industry
Lisa Rocca
Kevin Jackson
Dawn Stover and Jay Letto
Nancy Havassy
Catherine Portman (for Brenda Cedarblade)
Ventus Environmental Solutions, Inc.
Panorama Environmental, Inc.
Adams Broadwell Professional Corporation

Representative special-status species experience

Common name	Species name	Description
Field experience		
California red-legged frog	*Rana aurora draytonii*	Protocol searches; Many detections
Foothill yellow-legged frog	*Rana boylii*	Presence surveys; Many detections
Western spadefoot	*Spea hammondii*	Presence surveys; Few detections
California tiger salamander	*Ambystoma californiense*	Protocol searches; Many detections
Coast range newt	*Taricha torosa torosa*	Searches and multiple detections
Blunt-nosed leopard lizard	*Gambelia sila*	Detected in San Luis Obispo County
California horned lizard	*Phrynosoma coronatum frontale*	Searches; Many detections
Western pond turtle	*Clemmys marmorata*	Searches; Many detections
San Joaquin kit fox	*Vulpes macrotis mutica*	Protocol searches; detections
Sumatran tiger	*Panthera tigris*	Track surveys in Sumatra
Mountain lion	*Puma concolor californicus*	Research and publications
Point Arena mountain beaver	*Aplodontia rufa nigra*	Remote camera operation
Giant kangaroo rat	*Dipodomys ingens*	Detected in Cholame Valley
San Joaquin kangaroo rat	*Dipodomys nitratoides*	Monitoring & habitat restoration
Monterey dusky-footed woodrat	*Neotoma fuscipes luciana*	Non-target captures and mapping of dens
Salt marsh harvest mouse	*Reithrodontomys raviventris*	Habitat assessment, monitoring
Salinas harvest mouse	*Reithrodontomys megalotus distichlus*	Captures; habitat assessment
Bats		Thermal imaging surveys
California clapper rail	*Rallus longirostris*	Surveys and detections
Golden eagle	*Aquila chrysaetos*	Numerical & behavioral surveys
Swainson's hawk	*Buteo swainsoni*	Numerical & behavioral surveys
Northern harrier	*Circus cyaeneus*	Numerical & behavioral surveys
White-tailed kite	*Elanus leucurus*	Numerical & behavioral surveys
Loggerhead shrike	*Lanius ludovicianus*	Large area surveys
Least Bell's vireo	*Vireo bellii pusillus*	Detected in Monterey County
Willow flycatcher	*Empidonax traillii extimus*	Research at Sierra Nevada breeding sites
Burrowing owl	*Athene cunicularia hypugia*	Numerical & behavioral surveys
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	Monitored success of relocation and habitat restoration
Analytical		
Arroyo southwestern toad	*Bufo microscaphus californicus*	Research and report.
Giant garter snake	*Thamnophis gigas*	Research and publication
Northern goshawk	*Accipiter gentilis*	Research and publication
Northern spotted owl	*Strix occidentalis*	Research and reports
Alameda whipsnake	*Masticophis lateralis euryxanthus*	Expert testimony

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July 8, 2024

Via Email

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Elizabeth Zamora, Vice President
Maria Cabildo, Commissioner
Caroline Chloe, Commissioner
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Re: Comment on Sustainable Communities Environmental Assessment, Sunset and Everett Project (ENV-2023-5529-SCEA) (Construction of Mixed-Use Residential and Commercial Development); July 11, 2024, City Planning Commission Meeting - Agenda Item No. 7

Dear President Lawshe, Vice President Zamora, Honorable Commissioners, and Planner Ahn:

This comment is submitted on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") regarding the Sustainable Communities Environmental Assessment ("SCEA") prepared for the Sunset and Everett Project (ENV-20230-5529-SCEA) ("Project"), which proposes the construction of two 7-story mixed-use residential and commercial buildings with a total of 327 residential units and 263 on-site parking spaces: one subterranean, one partially subterranean, and one at-ground and above-grade level on a vacant asphalted parcel located at 1185 Sunset Boulevard; 1185, 1187, 1193, 1195, 1197, 1201, 1205, 1207, 1211, 1215, 1221, 1225,1229, 1233, 1239, 1243, 1245, 1247 W. Sunset Boulevard and 917 N. Everett Street in the City of Los Angeles.

On April 15, 2024, SAFER submitted comments ("April 15 Letter") regarding the SCEA's failure to adequately analyze the Project's significant environmental impacts as well as

a failure to impose all feasible mitigation measures to reduce the Project's impacts.[1] On July 2, 2024, the Department of City Planning issued a Recommendation Report, which included a response to SAFER's April 15 Letter. SAFER remains concerned that the SCEA fails to comply with CEQA.

LEGAL BACKGROUND

Sustainable Communities Environmental Assessment under SB 375.

CEQA allows for the streamlining of environmental review for "transit priority projects" meeting certain criteria. Pub. Res. Code §§ 21155, 21155.1, 21155.2. To qualify as a transit priority project, a project must

> (1) contain at least 50 percent residential use, based on total building square footage and, if the project contains between 26 percent and 50 percent nonresidential uses, a floor area ratio of not less than 0.75;
> (2) provide a minimum net density of at least 20 dwelling units per acre; and
> (3) be within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan.

Pub. Res. Code § 21155(b). A transit priority project is eligible for CEQA's streamlining provisions where,

> [The project] is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, for which the State Air Resources Board . . . has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets.

Pub. Res. Code § 21155(a). In 2020, the Regional Council for the Southern California Association of Governments ("SCAG") formally adopted the Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy ("2020 RTP/SCS"), which was accepted by CARB on October 30, 2020.

If "all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports and adopted in findings made pursuant to Section 21081" are applied to a transit priority project, the project is eligible to conduct environmental review using a sustainable communities environmental assessment ("SCEA"). Pub. Res. Code § 21155.2. A SCEA must contain an initial study which "identif[ies] all significant or potentially

[1] SAFER's April 15 Letter is attached as Exhibit A

significant impacts of the transit priority project . . . based on substantial evidence in light of the whole record." Pub. Res. Code § 21155.2(b)(1). The initial study must also "identify any cumulative effects that have been adequately addressed and mitigated pursuant to the requirements of this division in prior applicable certified environmental impact reports." *Id*. The SCEA must then "contain measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study." Pub. Res. Code §21155(b)(2). The SCEA is not required to discuss growth inducing impacts or any project specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network. Pub. Res. Code § 21159.28(a).

After circulating the SCEA for public review and considering all comments, a lead agency may approve the SCEA with findings that all potentially significant impacts have been identified and mitigated to a less-than-significant level. Pub. Res. Code § 21155(b)(3), (b)(4), (b)(5). A lead agency's approval of a SCEA must be supported by substantial evidence. Pub. Res. Code §21155(b)(7).

DISCUSSION

Comment 3

In the City's response to Comment 3, it contends that SAFER misconstrues the qualifying criteria for the use of a SCEA. However, it is the City that misunderstands the qualifying criteria for the use of a SCEA. The City may only rely on a SCEA if "[the project] is consistent with the general use, designation, building intensity, and applicable policies specified for the project area." (Pub. Res. Code § 21155(a).)

Here, the Project is not consistent with building intensity and density. It has a floor area ratio ("FAR") of 3.0, double the allowed 1.5 FAR, and a height of 91-feet, far above the allowed 57-feet. The City contends that the additional density is allowed under the Density Bonus Law. While this may be true, it does not mean that the City can rely on a SCEA. The SCEA is a streamlined CEQA process allowed only for projects that comply with otherwise allowed density and building intensity, which this project does not.

The City cannot rely on a SCEA because waivers may be required under the Density Bonus Law. The Project was simply not analyzed in the prior EIR because the prior EIR did not analyze projects of this height and density. As such, supplemental CEQA review is required. (*See Save Our Access v. City of San Diego* (2023) 92 Cal. App. 5th 819 [supplemental CEQA review required for project that exceeded heights analyzed in program EIR].)

To the extent that the City relies on the *Wollmer v. City of Berkeley* (2011) 193 Cal. App. 4th 1329 case, that case is inapposite. In that case, the court held that the city could rely on the CEQA infill exemption, despite the fact that the project received waivers under the Density

Bonus Law. Unlike the case here, that case did not rely on tiering off of a prior EIR. This case is similar to *Save Our Access* because the SCS EIR did not analyze project impacts for the height and density for this Project.

Additionally, *Wollmer* addressed a CEQA Guideline, which is a regulation. The court held that the Density Bonus Law effectively trumped local zoning. (193 Cal. App. 4th at 1345.) In this case, the SCEA law and the Density Bonus Law are both statutory provisions. A SCEA may only be used for projects that comply with the density and intensity allowed by the general plan and zoning. (Pub. Res. Code § 21155(a).) The Density Bonus Law does not purport to preempt the SCEA law, or vice-versa. In such situations, the courts are clear that both laws must be afforded equal weight and must be harmonized. It is a basic rule of statutory construction that statutes should be interpreted to harmonize rather than to conflict whenever reasonably possible. "To overcome the strong presumption against the implied repeal of conflicting statutes, the two statutes 'must be irreconcilable, clearly repugnant, and so inconsistent that the two cannot have concurrent operation. The courts are bound, if possible, to maintain the integrity of both statutes if the two may stand together.'" (7 Witkin, Summary of Calif. Law, p. 57, §94(d), quoting, *Stop Youth Addiction v. Lucky Stores* (1998) 17 Cal.4th 553, 569.) Thus, the City must comply with both the Density Bonus Law, CEQA and the SCEA law. This is easily done. The City must grant the requested waivers under the Density Bonus Law. However, as a result of those waivers, the Project does not qualify for a SCEA because it does not comply with the density and intensity allowed by the general plan and zoning. Therefore, subsequent CEQA review is required, and the city may not rely on the SCEA. In this way, the Project may still proceed under the Density Bonus Law, but the city must analyze and mitigate its environmental impacts under CEQA. This interpretation harmonizes the statutes and gives each statute equal dignity.

Comment 4

In the City's response to Comment 4, it ignores the plain language of the statute. Under Pub. Res. Code § 21155.2 if "all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports and adopted in findings made pursuant to Section 21081" are applied to a transit priority project, the project is eligible to conduct environmental review using a sustainable community environmental assessment ("SCEA"). The statute is clear that in order for a project to be eligible for a SCEA, the project must implement all feasible mitigation measures, yet the Project fails to implement mitigation measures and performance standards required by the Sustainable Communities Strategy ("SCS"). (Pub. Res. Code § 21155.2.)

Here, the City does not dispute that it failed to implement the mitigation measures in the SCS, but instead argues that it is not required to implement these measures. While the City may exercise its discretion to abandon mitigation measures set forth in the SCS, under the plain

language of the SCEA statute, if it does so, it may not rely on a SCEA, and must instead prepare a CEQA document for the project.

Comment 5-9

Again, the City ignores the plain language of the SCEA statute. Goal 5 of the SCS is to reduce greenhouse gases ("GHGs") and requires projects to promote low emission technologies such as electric vehicles ('EVs"). (SCEA p. 4-20; 4-19). The SCS also requires projects to include solar energy and power storage. (SCEA p. 4-20). By failing to implement plainly feasible GHG reduction measures, it fails to comply with the SCS. While the Project includes a "solar-ready" roof, the Project must install solar panels to be consistent with the SCS, which is clearly feasible. As such, the city may not rely on the SCEA and must prepare a project-specific CEQA document. Furthermore, the City ignores the recent case of *Nat. Res. Def. Council, Inc. v. City of Los Angeles* (2023) 98 Cal. App. 5th 1176, review denied (Apr. 24, 2024), which held that an agency must implement mitigation measures unless the city provides substantial evidence that the mitigation measures are infeasible. Here, the City provides no evidence of any kind that the proposed measures are infeasible. As such, the city must implement the measures.

Comment 11

In its response to Comment 11, the City simply ignores the law. The SCEA must "contain measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study." (Pub. Res. Code § 21155(b)(2).) Thus, to the extent that the SCS EIR admitted significant unmitigated impacts, further project-level CEQA review is required to analyze and mitigate those impacts on a project level because these impacts were not "mitigated to a level of insignificance" in the SCS EIR. Here, the SCEA failed to mitigate numerous impacts to a level of insignificance. Under the plain language of the statute, project level CEQA review is required to analyze and mitigate these impacts.

Furthermore, the fact that *Communities for a Better Environment v. Cal. Resources Agency* (2002) 103 Cal.App.4th 98 concerned a different statute is irrelevant. The language and principles at issue are the same. The City cannot rely on a prior CEQA document that did not mitigate impacts adequately, and project level CEQA review is required. This requirement is set forth clearly in the SCEA statute.

CONCLUSION

The SCEA fails to incorporate "all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports, namely the 2020 Connect SoCal EIR. Therefore, SAFER respectfully requests that the Planning Commission recommend that the Project undergo CEQA review so as to ensure compliance with CEQA.

July 8, 2024
Comment on Sustainable Communities Environmental Assessment, Sunset and Everett Project (ENV-2023-5529-SCEA)
City Planning Commission Agenda Item No. 7

Sincerely,

Kylah Staley
Lozeau Drury LLP

EXHIBIT A

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Via Email

April 15, 2024

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Re: Comment on Sustainable Communities Environmental Assessment, Sunset and Everett Project (ENV-2023-5529-SCEA)

Dear Ms. Ahn:

This comment is submitted on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") regarding the Sustainable Communities Environmental Assessment ("SCEA") prepared for the Sunset and Everett Project (ENV-2023-5529-SCEA) ("Project"), which proposes construction of two 7 story mixed-use residential and commercial buildings with a total of 327 residential units and 263 on-site parking spaces: one subterranean, one partially subterranean, and one at-ground and above-grade level on a vacant asphalted parcel located at 1185 Sunset Boulevard; 1185, 1187, 1193, 1195, 1197, 1201, 1205, 1207, 1211, 1215, 1221, 1225,1229, 1233, 1239, 1243, 1245, 1247 W. Sunset Boulevard and 917 N. Everett Street in the City of Los Angeles.

SAFER is concerned that the SCEA fails to adequately analyze the Project's potentially significant environmental impacts, and fails to impose all feasible mitigation measures to reduce the Project's impacts. SAFER requests the Plannning Development Department prepare an environmental impact report ("EIR") for the Project rather than a SCEA.

SAFER reserves the right to supplement these comments throughout the administrative process. *Galante Vineyards v. Monterey Peninsula Water Management Dist*., 60 Cal. App. 4th 1109, 1121 (1997).

I. LEGAL BACKGROUND

Sustainable Communities Environmental Assessment under SB 375.

CEQA allows for the streamlining of environmental review for "transit priority projects" meeting certain criteria. Pub. Res. Code §§ 21155, 21155.1, 21155.2. To qualify as a transit priority project, a project must

> (1) contain at least 50 percent residential use, based on total building square footage and, if the project contains between 26 percent and 50 percent nonresidential uses, a floor area ratio of not less than 0.75;
> (2) provide a minimum net density of at least 20 dwelling units per acre; and
> (3) be within one-half mile of a major transit stop or high-quality transit corridor included in a regional transportation plan.

Pub. Res. Code § 21155(b). A transit priority project is eligible for CEQA's streamlining provisions where,

> [The project] is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, for which the State Air Resources Board . . . has accepted a metropolitan planning organization's determination that the sustainable communities strategy or the alternative planning strategy would, if implemented, achieve the greenhouse gas emission reduction targets.

Pub. Res. Code § 21155(a). In 2020, the Regional Council for the Southern California Association of Governments ("SCAG") formally adopted the Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy ("2020 RTP/SCS"), which was accepted by CARB on October 30, 2020.

If "all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports and adopted in findings made pursuant to Section 21081" are applied to a transit priority project, the project is eligible to conduct environmental review using a sustainable communities environmental assessment ("SCEA"). Pub. Res. Code § 21155.2. A SCEA must contain an initial study which "identif[ies] all significant or potentially significant impacts of the transit priority project . . . based on substantial evidence in light of the whole record." Pub. Res. Code § 21155.2(b)(1). The initial study must also "identify any cumulative effects that have been adequately addressed and mitigated pursuant to the requirements of this division in prior applicable certified environmental impact reports." *Id*. The SCEA must then "contain measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study." Pub. Res. Code §21155(b)(2). The

SCEA is not required to discuss growth inducing impacts or any project specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network. Pub. Res. Code § 21159.28(a).

After circulating the SCEA for public review and considering all comments, a lead agency may approve the SCEA with findings that all potentially significant impacts have been identified and mitigated to a less-than-significant level. Pub. Res. Code § 21155(b)(3), (b)(4), (b)(5). A lead agency's approval of a SCEA must be supported by substantial evidence. Pub. Res. Code §21155(b)(7).

II. DISCUSSION

A. The City May Not Rely on the SCEA Because the Project is Not Consistent with the General Plan.

The City may only rely on a SCEA if [The project] is consistent with the general use designation, density, building intensity, and applicable policies specified for the project area. Pub. Res. Code § 21155(a).

The Project is not consistent with the general plan density and building intensity. The zoning allows a floor area ratio (FAR) of 1.5:1. However the Project has a FAR of 3:1 – double the FAR allowed by the zoning. (SCEA p. 3-12).

The zoning allows a maximum building height of 57-feet. The Project is proposed to be 91-feet in height. (SCEA p. 2-13).

Since the Project is not consistent with the General Plan and zoning, the City may not rely on a SCEA.

B. The City May Not Rely on the SCEA Because the Project is Inconsistent with the SCS.

If "all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports and adopted in findings made pursuant to Section 21081" are applied to a transit priority project, the project is eligible to conduct environmental review using a sustainable community environmental assessment ("SCEA"). Pub. Res. Code § 21155.2.

The Project fails to implement mitigation measures and performance standards required by the Sustainable Communities Strategy (SCS).

SCS Goal 5 is to reduce greenhouse gases (GHGs) and improve Air Quality. (SECA p. 4-20). The SCS requires projects to promote low emission technologies such as electric vehicles (EVs). (SCEA p. 4-19). The SCS requires projects to include solar energy and power storage. (SCEA p. 4-20).

Solar Panels: Despite these requirements, the Project includes only a "solar-ready" roof. This means that the roof can support solar photo-voltaic panels, but no such panels will necessarily be installed. Installing solar panels is clearly feasible, and so should be required for the Project to be consistent with the SCS.

EV Charging: Despite the above policies in the SCS, the Project only includes the bare minimum 10% electric vehicle charging. (SCEA p. 3-17). While additional parking spaces are EV-ready, they will not be equipped with EV charging stations. 100% EV charging is feasible and should be required. Not only would this comply with SCS Goal 5, but also SCS Goal 8: Leverage new transportation technologies. (SCEA p. 4-19).

Battery Storage: Despite the above SCS policies, the Project does not appear to include any battery storage. The SCS requires solar energy and power storage. (SCEA p. 4-20). Battery storage is feasible and should be included in the Project along with solar PV.

Heat Island: The SCS requires projects to reduce the heat island effect. (SCEA p. 4-21). The Project does not include standard measures to reduce heat island, such as low albedo roofs and parking areas. Such measures are feasible and should be included in the Project.

Wildlife Connectivity: The SCS requires projects to preserve and enhance wildlife connectivity. (SCEA p. 4-21). The SCEA contends that this goal is not relevant because the Project is located in an urban area. This is simply untrue. The Project site is a vacant parcel in an urban area. As discussed by wildlife biologist, Dr. Shawn Smallwood, Ph.D., such parcels are critical to wildlife connectivity, particularly for avian (bird) species. The few bits of open space in urban areas provide important resting and stopover habitat for avian species. the SCEA fails to analyze this impact at all. Dr. Smallwood concludes that the Project would adversely affect wildlife connectivity. Thus, the Project does not "preserve and enhance" wildlife connectivity, and is inconsistent with the SCS.

C. The City May Not Rely on the SCEA Because the Project has Significant Impacts Unique to the Project and Not Addressed in the SCS.

1. Project-Level CEQA Review is Required for Impacts that were not Mitigated to Insignificance in the SCS EIR.

The SCEA must "contain measures that either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project required to be identified in the initial study." Pub. Res. Code §21155(b)(2). Thus, to the extent that the SCS EIR admitted significant unmitigated impacts, further project-level CEQA review is required to analyze and mitigate those impacts on a project level because these impacts were not "mitigated to a level of insignificance" in the Connect SoCal EIR.

In the case of *Communities for a Better Environment v. Cal. Resources Agency* (2002) 103 Cal.App.4th 98, 122-125, the court of appeal held that when a "first tier" EIR admits a significant, unavoidable environmental impact, then the agency must prepare second tier EIRs for later phases of the project to ensure that those unmitigated impacts are "mitigated or avoided." (Id. citing CEQA Guidelines §15152(f)) The court reasoned that the unmitigated impacts were not "adequately addressed" in the first tier EIR since they were not "mitigated or avoided." (Id.) Thus, significant effects disclosed in first tier EIRs will trigger second tier EIRs unless such effects have been "adequately addressed," in a way that ensures the effects will be "mitigated or avoided." (Id.) Such a second tier EIR is required, even if the impact still cannot be fully mitigated and a statement of overriding considerations will be required. The court explained, "The requirement of a statement of overriding considerations is central to CEQA's role as a public accountability statute; it requires public officials, in approving environmental detrimental projects, to justify their decisions based on counterbalancing social, economic or other benefits, and to point to substantial evidence in support." (Id. at 124-125)

The EIR for the SCS admitted significant and unavoidable impacts in several areas, including:

Aesthetic (Connect SoCal Draft PEIR, p. 2.0-18);
Agricultural Resources (Id., p. 2.0-20);
Air Quality (Id. p. 2.0-23);
Biological Resources (Id. p. 2.0-25);
Cultural Resources (Id. p. 2.0-34);
Geology and Soils (Id. p. 2.0-37);
Greenhouse Gases (Id. p. 2.0-40);
Hazards and Hazardous Materials (Id. p. 2.0-43);
Hydrology and Water Quality (Id. p. 2.0-49);
Land Use (Id. p. 2.0-52);
Mineral Resources (Id. p. 2.0-54);
Noise (Id. p. 2.0-55);
Population and Housing (Id. p. 2.0-58);
Fire Services (Id. p. 2.0-59);
Police Services (Id. p. 2.0-60);
Schools (Id. p. 2.0-61);
Library Services (Id. p. 2.0-61);
Recreation (Id. p. 2.0-61);
Transportation, Traffic and Safety (Id. p. 2.0-63);
Tribal Cultural Resources (Id. p. 2.0-66);
Solid Waste (Id. p. 2.0-67);
Wastewater (Id. p. 2.0-68);
Water Supply (Id. p. 2.0-69);
Wildfire (Id. p. 2.0-70);

CEQA review is required to analyze and mitigate the above impacts at the project level because they were not mitigated to a level of insignificance in the Connect SoCal EIR.

2. Substantial Evidence Shows that the Project Will Likely Have Significant Air Quality Impacts.

Air quality experts Matt Hagemann, P.G., C.Hg. and Dr. Paul E. Rosenfeld, Ph.D. of the environmental consulting firm SWAPE reviewed the SCEA and concluded that the Project will likely have significant air quality impacts due to diesel particulate matter (DPM) emissions. SWAPE's comments and expert CVs are attached as Exhibit A. As discussed above, the SCS EIR did not mitigate air quality impacts to less than significant levels, therefore project-specific CEQA review is required.

The SCEA fails to address potential health-related impacts resulting from the Project's likely air emissions. This is problematic because operation of construction equipment during construction of the proposed Project, as well as daily truck trips during future operations, will release diesel particulate matter ("DPM") emissions into the air, affecting local and regional air quality. DPM is a known human carcinogen which poses unique health risks to nearby sensitive receptors. Importantly, CEQA requires a quantified analysis to determine whether a Project's toxic air contaminant ("TAC") emissions—including DPM emissions—will have potentially adverse impacts on human health. *Sierra Club v. Cty. of Fresno* (2018) 6 Cal. 5th 502, 518 (an EIR must make "a reasonable effort to substantively connect a project's air quality impacts to likely health consequences.")

Current guidance by the Office of Environmental Health Hazard Assessment ("OEHHA"), the agency responsible for setting statewide standards to measure health risks under CEQA, recommends that a quantified Health Risk Assessment ("HRA") be prepared to evaluate potential cancer risks for any short-term construction project lasting more than two months, and for the lifetime of any long-term project lasting more than six months. OEHHA guidance also recommends that an exposure duration of 30 years should be used to estimate the individual cancer risk affecting the maximally exposed individual resident ("MEIR") near a proposed Project site. (*Id*., p. 7.) A project's creation of health risks for impacted MEIRs must be further evaluated according to various sensitive receptors' age and pregnancy status. (*Id*., p. 11.)

Construction of the proposed Project is expected to last 30 months, and it is reasonable to assume, in the absence of any contrary assertion by the SCEA, that future building operations will continue for at least 30 years, during which time there will be ongoing emissions from delivery trucks, passenger vehicles, water heaters, cooking appliances and other sources. (SWAPE, p. 3).

Contrary to this established regulatory framework, however, the SCEA failed to prepare a quantified HRA for the Project's planned construction and operations. The SCEA also improperly relied on South Coast Air Quality Management District's ("SCAQMD") localized significance thresholds ("LSTs") to evaluate the Project's construction-related

health risk impacts. This approach is incorrect, however, because LSTs only evaluate emissions of criteria air pollutants—NOx, CO, PM_{10}, and $PM_{2.5}$—but do not measure the effect of TAC emissions, including DPM emissions, upon sensitive receptors. (*Id*., p. 2.) As such, the SCEA fails to present substantial evidence showing that the Project will not have a significant health impact. The SCEA additionally "fails to compare the Project's excess cancer risk" as it compares to the South Coast Air Quality Management District's ("SCAQMD") established significance threshold of 10 per million. (*Id*., p. 2.)

DPM has been listed as a known human carcinogen by the California Office of Health Hazard Assessment ("OEHHA"). DPM contains 40 toxic chemicals, including benzene, arsenic and lead. (www.p65warnings.ca.gov/fact-sheets/diesel-engine-exhaust.) DPM is listed separately by the State of California as a toxic air contaminant known to cause cancer in humans. (https://oehha.ca.gov/media/downloads/proposition-65//p65chemicalslistsinglelisttable2021p.pdf.) According to the U.S. Environmental Protection Agency, "Exposure to diesel exhaust can lead to serious health conditions like asthma and respiratory illnesses and can worsen existing heart and lung disease, especially in children and the elderly. These conditions can result in increased numbers of emergency room visits, hospital admissions, absences from work and school, and premature deaths." (https://www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera).

As explained above, the SCEA used LSTs to evaluate the Project's construction-related health risk impacts. However, LSTs analyze only criteria air pollutants, not toxic air contaminants (TACs). Although LSTs analyze localized impacts of PM-10 and PM-2.5, there is no LST for DPM – the pollutant that forms the basis of SWAPE's analysis. Although PM-2.5 is a constituent of DPM, it is only one of 40 toxic chemicals in DPM. PM-2.5 itself is not listed by the State as a cancer-causing chemical.

Therefore, SWAPE found that the SCEA's evaluation of the Project's potential health risk impacts, as well its conclusion that the Project will have a less-than-significant air quality impact conclusion, are methodologically flawed and are thus not supported by substantial evidence. (*Id*., p. 2.) As such, the City must prepare a revised SCEA or conduct an initial study to more accurately characterize the significance of the Project's impacts. Unless and until the City can present substantial evidence showing that the Project's impacts are less than significant, the use of a SCEA is improper. Pub. Res. Code §21155(b)(1)-(2).

SWAPE conducted a screening-level risk assessment using AERSCREEN, a modeling tool which is recommended by both OEHHA and the California Air Pollution Control Officers Association ("CAPCOA") for the development of Level 2 Health Risk Screening Assessments ("Level 2 HRSA"). According to SWAPE, "A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project." (*Id*., pp. 3-4.)

Following this recommended approach for modeling potential future health risks, SWAPE presented substantial evidence showing that Project construction and operations would result in excess cancer risks for pregnant individuals during the third trimester of pregnancy, as well as for infants, children, and adults when those individuals are maximally exposed to Project-related emissions, or located approximately 75 meters from the Project site. (*Id*., p. 5.) SWAPE calculates that the excess cancer risks for the 3rd trimester of pregnancy, infants, children, and adults at the MEIR located approximately 75 meters away, over the course of Project construction and operation, are approximately 18.0, 388, 25.5, and 2.83 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) is approximately 434 in one million. The 3rd trimester, infant, child, and lifetime cancer risks exceed the SCAQMD threshold of 10 in one million, resulting in a potentially significant impact not previously addressed or identified by the SCEA. (Id. p. 7).

Therefore, SWAPE concludes that the "screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact," and as such, "a revised SCEA should be prepared to include a refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation." (*Id*., p. 8.) SWAPE proposes numerous mitigation measures to reduce the Project's DPM impacts, which should be considered in a project-level EIR. (Id. pp. 8-11).

3. Substantial Evidence Shows that the Project Will Likely Have Significant Biological Impacts.

Wildlife biologists, Dr. Shawn Smallwood, Ph.D. and Noriko Smallwood, M.S., conclude that the Project will have significant biological impacts on special status speices. Dr. Smallwood's comments and expert CVs are attached as Exhibit B. As discussed above, the SCS EIR did not mitigate biological impacts to less than significant levels, therefore project-specific CEQA review is required.

Noriko Smallwood conducted a site visit on April 7, 2024. Noriko detected 30 species of vertebrate wildlife at or adjacent to the project site, including four species with special status. Noriko saw Cooper's hawk and red-tailed hawk (Photos 4 and 5), California gull (Photo 6), Allen's hummingbird and hooded oriole (Photos 7 and 8), Cassin's kingbird and California scrub-jay (Photos 9 and 10), house sparrow and California towhee (Photos 11 and 12), white-throated swift and barn swallow (Photos 13 and 14), lesser goldfinch (Photos 15 and 16), mourning dove and Eurasian collared-dove (Photos 17 and 18), house finch and northern mockingbird (Photos 19 and 20), Canada goose (Photo 21), European starling (Photo 22), acorn woodpecker and common raven (Photo 23 and 24), California ground squirrel (Photo 25), among the other species listed in Table 1.

Signs of breeding on and near the site abounded. California towhee, house finch, and house sparrow were actively gathering nest material from the site for nests on and near the site. Lesser goldfinches were paired up and will likely nest on or near the site. Northern mockingbirds were very territorial and will likely nest on or near the site. An Allen's

hummingbird displayed to another Allen's hummingbird and was very territorial, indicating they will likely nest on or near the site. Cassin's kingbirds chased each other indicating they will likely nest soon. Birds were very busy on site and the site has a large capacity to support nesting and foraging birds.

Dr. Smallwood states,

> Based on Noriko's survey findings, I am certain that at least four sensitive species of vertebrate wildlife occur at the project site. Making direct use of the trees and shrubs on the project site were special-status species including Allen's hummingbird and red-tailed hawk. The project site is habitat of these species.
>
> California gull, Cooper's hawk, Allen's hummingbird, and red-tailed hawk made use of that portion of the aerosphere that the proposed buildings would displace. The aerosphere of the project site is habitat of these species.
>
> (Smallwood Letter, p. 11).

Dr. Smallwood concludes that the Project will adversely affect these species through direct habitat loss, (Id., p. 19), interference with wildlife movement (Id. p. 20), window collisions due to extensive glazing, (Id., p. 21), and cumulative impacts with other projects. (Id. p. 24). Dr. Smallwood predicts that the Project will cause 760 bird deaths annually due to window collisions alone. (Id.).

Dr. Smallwood proposes several mitigation measures that could reduce the Project's impacts to sensitive species, including the use of bird-safe glass, pre-construction surveys to detect species, worker training programs, funding for wildlife rehabilitation facilities and other measures. (Id. 24-28). These impacts and mitigation measures should be analyzed in a project-specific CEQA document.

CONCLUSION

The SCEA fails to comply with CEQA because it fails to incorporate "all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable environmental impact reports," namely, the 2020 Connect SoCal Program EIR. The SCEA is additionally improper because it lacks substantial evidence to support its conclusions that the Project will have less than significant impacts to air quality and biological impacts. Therefore, the City must prepare an initial study to determine the appropriate level of environmental review for the Project. Thank you for considering these comments.

Sincerely,

Richard Drury
Lozeau Drury LLP