



MEMORANDUM

TO: Department of City Planning
Planning and Land Use Management Committee

FROM: Brad J. Napientek, M.S., Eystone Environmental

DATE: August 1, 2024

RE: 1360 Vine—Lozeau Drury LLP June 28, 2024, PLUM Comment Letter

This memorandum is in response to the letter from Lozeau Drury (hereafter referred to as the commenter) on the 1360 Vine Project dated June 28, 2024. The first portion of the letter consisting of the introduction and Sections I through VI, as well as Exhibits A, B, and C, reiterate the commenter's interpretation of CEQA and previous comments made at various stages of the entitlement process that have already been responded to and does not contain any significant new information. Refer to Section II, Responses to Comments, of the Final EIR; the Responses to Comments Received on the Final EIR dated October 2023; the Responses to Appeals and Letters Received on the Final EIR dated November 2023; and the Response to 2nd Level Appeals dated April 2024, for a detailed discussion of issues raised by the commenter. As demonstrated therein, the commenter has repeatedly failed to provide substantial evidence that the EIR was inadequate.

The remainder of this memorandum therefore addresses new comments related to biological resources made by the commenter and Dr. Shawn Smallwood. Because Section VII of the commenter's letter generally summarizes Dr. Smallwood's letter included as Exhibit D of the comment letter, this discussion focuses on Exhibit D. As demonstrated below, the commenter's assertion that the Project would result in previously undisclosed impacts to biological resources is not supported by credible evidence, and recirculation of the EIR is not warranted.

Before addressing specific issues raised by Dr. Smallwood, there are a few overarching issues that should be mentioned. First, the Project's evaluation of potential impacts related to biological resources was first provided in the Initial Study prepared for the Project and released for public review on June 22, 2017, over seven years ago. Prior to the submittal of Dr. Smallwood's letter, no member of the public, including the commenter, identified any issues related to the Project's evaluation of biological resources, in writing nor during

MEMORANDUM

August 1, 2024

Page 2

multiple public review periods, hearings, and commission meetings. Second, as the commenter is claiming they have now identified potential impacts under CEQA, it is critical to reiterate the CEQA Guidelines Appendix G thresholds applicable to biological resources so the comments may be viewed through that lens. The Appendix G thresholds are as follows:

Would the project:

- (a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- (b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- (c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, or hydrological interruption, or other means?
- (d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- (e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- (f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

As discussed in the Initial Study, and reiterated in Section VI, Other CEQA Considerations, of the Draft EIR, the Project Site is located in a highly urbanized area and is fully developed with commercial and residential uses. Existing landscaping is limited, consisting of ornamental landscaping, including seven on-site trees within portions of the Project Site.

MEMORANDUM

August 1, 2024

Page 3

Due to the improved nature of the Project Site and the surrounding areas, and lack of large expanses of open space areas in the vicinity, species likely to occur on-site are limited to small terrestrial and avian species typically found in developed settings. Therefore, the Project would not have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS). There are no riparian or other sensitive natural communities, or federally protected wetlands as defined by Section 404 of the Clean Water Act on the Project Site or in the surrounding area. In addition, there are no established native resident or migratory wildlife corridors on the Project Site or in the vicinity. Accordingly, development of the Project would not significantly impact any regional wildlife corridors or native wildlife nursery sites. Furthermore, no water bodies that could serve as habitat for fish exist on the Project Site or in the vicinity. In addition, there are no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved habitat conservation plans applicable to the Project Site.

(1) Site Survey and Environmental Setting (Exhibit D)

Section 1 of Exhibit D summarizes the findings of the site visit conducted by Dr. Smallwood's assistant and uses a nonlinear regression model to suggest that additional species may be present. First, none of the species identified during the survey are listed or candidate species identified by either CDFW or USFWS, which is noted by Dr. Smallwood in Table 1. Only Allen's hummingbird is identified as a USFWS Bird of Conservation Concern, a designation that bears no regulatory weight, but "is intended to stimulate coordinated, collaborative and proactive conservation actions among international, federal, state, tribal and private partners."¹ Moreover, the Birds of Concern "makes no finding" with regard to whether the birds on the list "warrant consideration for ESA listing."² It is also noted that the International Union for Conservation of Nature identifies the species as "low concern," and Audubon states that Allen's hummingbird "[h]as adapted fairly well to suburban habitats."³ The remaining species, including, but not limited to, the rock pigeon,

¹ USFWS, Birds of Conservation Concern 2021, 2021.

² USFWS, Birds of Conservation Concern 2021, 2021.

³ Audubon, Allen's Hummingbird, www.audubon.org/field-guide/bird/allens-hummingbird, accessed July 1, 2024.

MEMORANDUM

August 1, 2024

Page 4

mourning dove, and eastern fox squirrel, fit squarely in the definition of “small terrestrial and avian species typically found in developed settings” as noted above. The remainder of this discussion focuses on the results of Dr. Smallwood’s nonlinear regression model, which is based on his past research in the Altamont Pass Wind Resource Area, a largely undeveloped area over 300 miles northwest of Los Angeles that bears no resemblance to the Project Site in biological terms. Nevertheless, Dr. Smallwood’s model predicts only two additional species to be present, and Dr. Smallwood acknowledges “I do not know the identities of the 2 undetected species,” rendering the results meaningless from an analytical standpoint and not credible evidence that additional species are at or near the Project Site. Based on the results of his work in the San Francisco Bay Area in the Altamont Pass Wind Resource Area, Dr. Smallwood further stretches the results of the site survey and his model and concludes that with additional surveys as many as 86 additional species may be detected including 6 special status species. This determination is purely speculative for the reasons outlined above and is not credible evidence of a significant impact.

Section 2 of Exhibit D states that 76 special-status species occur near the Project Site (Table 3), with “near” referring to a radius of up to 30 miles, and relies upon sources aggregating data provided by the public rather than CDFW, USFWS, or any other potentially applicable regulatory agency. Typically, a one-mile radius is applied to searches because this radius includes the immediate vicinity of the Project Site and the surrounding area that supports the same habitat type.⁴ The Project Site and vicinity are not identified as or otherwise known to be wildlife or migratory corridors or within a special-status species critical habitat.

Dr. Smallwood further states that the Project Site is located near the Bear Divide (a segment of the San Gabriel Mountains separating the Simi Valley and Mojave Desert) and Pacific Flyway. On page 15, Dr. Smallwood states “[h]eaded to and from Bear Divide, these birds would have been similarly channeled by terrain in and around the Los Angeles Metropolitan Area. Many of these birds likely pass through the US 101 gap through the Santa Monica Mountains on their way to or from the Los Angeles River, a pathway that would take birds right across the site of the proposed project (Figure 3).” As stated in

⁴ City of Los Angeles, Times Mirror Appeal Responses, February 2020.

MEMORANDUM

August 1, 2024

Page 5

Section II, Project Description, of the Draft EIR, US 101 is located approximately 0.7 miles from the Project Site, which is located in an area with existing and proposed high-rise buildings within the vicinity that range height from approximately 185 feet to over 300 feet. As discussed further below, Dr. Smallwood has failed to provide any credible documentation that these high-rise buildings experience an unusually high rate of bird collisions. As it relates to the Pacific Flyway, neither the Project Site nor the developed, urbanized portions of the Los Angeles basin provide important habitat for migrating birds in the Pacific Flyway.⁵ The Pacific Flyway is a large bird migration corridor between Alaska and South America approximately 4,000 miles in length and 1,000 miles across that encompasses states of the intermountain west and those that border the Pacific Ocean, in the United States including all of California, Oregon, Washington, Idaho, Utah, Nevada, Alaska, and Hawaii, as well as parts of Montana, Wyoming, Colorado, and New Mexico. Bird migration along the Pacific Flyway occurs in a north-south direction. Primary migration routes in California occur along the coast for ocean-going species, and through the Central Valley and eastern deserts of southern California. Important bird habitat within these areas includes large open space areas that provide a safe location for feeding during the north-south migration, none of which is located near the Project Site.

(2) Bird-Window Collisions

Dr. Smallwood claims that the proposed Project would result in collision fatalities of birds and that the EIR was not prepared with the benefit of survey visits by wildlife biologists. To support this claim, several sources are provided regarding bird collisions and fatalities; however, none of these sources contain specific information regarding the Project Site or its vicinity.

CEQA requires an analysis of impacts on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. As noted above, the analysis of biological resources for the Project has been publicly available for over seven years. As discussed in the Initial Study included as Appendix A of the Draft EIR; Section VI, Other CEQA Considerations, of the Draft EIR; and restated above, the Project Site

⁵ Audubon, California IBA Map, <https://audubon.maps.arcgis.com/apps/webappviewer/index.html?id=4e13561a76304c0687ec273a32bea3a2>, accessed July 1, 2024.

MEMORANDUM

August 1, 2024

Page 6

is located in a highly urbanized area and is developed with commercial and residential uses. Landscaping is limited, consisting of ornamental landscaping including seven on-site trees within portions of the Project Site. Due to the improved 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 developed settings. Therefore, the Project would not have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by CDFW or USFWS. There are no riparian or other sensitive natural communities, or federally protected wetlands as defined by Section 404 of the Clean Water Act on the Project Site or in the surrounding area. In addition, there are no established native resident or migratory wildlife corridors on the Project Site or in the vicinity. Accordingly, development of the Project would not significantly impact any regional wildlife corridors or native wildlife nursery sites. Furthermore, no water bodies that could serve as habitat for fish exist on the Project Site or in the vicinity. There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved habitat conservation plans applicable to the Project Site. As demonstrated herein, Dr. Smallwood has not provided credible evidence that any of these conclusions are incorrect. The only impact related to birds identified is the removal of trees that could provide nesting sites for migratory birds. However, any trees removed as part of the Project would comply with the Migratory Bird Treaty Act (MBTA), which regulates vegetation removal during the nesting season to ensure that significant impacts to migratory birds would not occur. Regulatory compliance with the MBTA would ensure that the impacts of tree removal would be less than significant. In addition, new trees would be planted within the Project Site in accordance with LAMC requirements.

Regarding the summarized fatality numbers provided by Dr. Smallwood, while these numbers were taken from multiple sources across the United States, only one of those sources was focused within California, and it was focused on a building within a large, urbanized park and not located in a downtown area. Furthermore, the majority of the sources provided had monitoring that was conducted in rural or suburban landscapes and, thus, are not representative of an urban environment such as Hollywood, where there is less likelihood for special-status avian species to be present. Lastly, the USFWS provides the following regarding the effects of tall buildings versus other buildings:

MEMORANDUM

August 1, 2024

Page 7

Annual bird mortality resulting from window collisions in the U.S. is estimated to be between 365–988 million birds (Loss et al. 2014). While most people consider bird/glass collisions an urban phenomenon involving tall, mirrored-glass skyscrapers, the reality is that 56% of collision mortality occurs at low-rise (i.e., one to three story) buildings, 44% at urban and rural residences, and <1% at high-rises (Loss et al. 2014).⁶

Therefore, the analysis and assumptions provided by Dr. Smallwood is not credible evidence that the Project would result in a significant number of collision fatalities of birds or special-status avian species. The analysis provided in the Initial Study and Draft EIR is correct and accurate, and no additional analysis is warranted.

(a) Project Impact Prediction

Dr. Smallwood suggests that the Project will result in large numbers of avian annual window collision fatalities based on personal anecdotal evidence and scientific articles, without specifying how they relate to the Project location. As discussed throughout the EIR, the Project Site is entirely developed and has been operating as an urban use for decades. As noted above, the summarized fatality numbers provided by Dr. Smallwood were taken from multiple sources across the United States; only one of those sources was within California, and none were focused on the Project Site and its vicinity. The majority of the sources provided had monitoring that was conducted in rural or suburban landscapes and, thus, are not representative of an urban environment such as central Hollywood. Therefore, there is no credible evidence that an urbanized location with already existing skyscrapers could increase collision fatalities of birds or evidence of an avian migration corridor existing within the Project Site. To the contrary, as noted above, the USFW has determined that less than one percent of avian collisions involve high rises. Given the lack of substantial evidence of a potential impact, no further analysis is required.

Summarizing data from multiple articles without accounting for the lack of avian observations at the Project Site (especially migrating passerine species, which have been documented to have the highest window collision mortality) and the preexisting urbanized

⁶ USFWS, Reducing Bird Collisions with Buildings and Building Glass: Best Practices, January 2016.

MEMORANDUM

August 1, 2024

Page 8

landscape does not provide credible evidence to calculate an accurate average collision rate. Furthermore, Dr. Smallwood acknowledges that the study of window collisions remains in its early state and that the predictions of Project impacts are uncertain without the benefit of more advanced understanding of window collisions factors, which indicates the speculative and uncertain nature of the comment with respect to this specific Project Site and its surrounding context. Moreover, Dr. Smallwood does not show that the bird fatalities from window collisions would significantly impact the populations of the species of birds allegedly involved. Therefore, the estimates provided by the commenter are neither credible nor accurate and do not appropriately represent the Project.

(3) Traffic Impacts to Wildlife

Dr. Smallwood also maintains that Project-related traffic would result in a substantial increase in wildlife deaths. Once again, Dr. Smallwood cites studies conducted far outside the Project Site vicinity (i.e., Contra Costa County, Canada). Canada is one of the largest countries in the world and has one of the smallest populations, resulting in one of the lowest population densities in the world (10 persons per square mile). As such, the results of this study are unrepresentative of the Project Site located in Hollywood, which has a population density of over 20,000 persons per square mile, that no further discussion is warranted. The cited study in Contra Costa County was performed on a remote 2.5-mile stretch of Vasco Road crossing the Diablo Range separating the San Francisco Bay area from the Central Valley. The approximately 20 mile stretch of Vasco Road between Ulmar, California and Brentwood, California is almost entirely undeveloped and, like the Canadian study, is unrepresentative of the Project Site. Dr. Smallwood's application of data from the Vasco Road study to the Project's anticipated number of vehicle miles traveled is clearly inappropriate, so he provides an adjustment and arbitrarily assumes 10 percent of his projections from the Vasco Road study. He provides no explanation or factual support as to how he arrived at this number. Nor does he provide any data specific to the Project Site or area or identify any candidate, sensitive, or special status species that would attempt to traverse the heavily trafficked roadways in the middle of densely developed Hollywood. Moreover, Dr. Smallwood does not show that the vertebrate species that would be allegedly involved in such collisions would significantly impact the populations of the species involved. As such, the resulting number of annual wildlife deaths related to Project traffic is entirely speculative and is not credible evidence that Project traffic would have a substantial adverse effect, on any species identified as a candidate, sensitive, or special status species.

MEMORANDUM

August 1, 2024

Page 9

(4) Cumulative Impacts

Dr. Smallwood claims that the Project will have a cumulative impact on birds and wildlife caused by window and traffic collisions. As noted above, the Project would have a less than significant impact on biological resources, and Dr. Smallwood does not provide substantial evidence that there would be wildlife fatalities related to window or traffic collisions at the Project Site or at the sites of related projects. Moreover, specific to bird collisions, many of the related projects in the Project vicinity are high rise buildings, which as noted experience only a small percentage of bird collisions. Therefore, cumulative impacts would be less than significant, and the Project's contribution would not be considerable. No further analysis is warranted.

(5) Recommended Measures

As discussed in the EIR and demonstrated above, the Project would result in less than significant impacts to biological resources, and Dr. Smallwood has not provided any credible evidence to the contrary. Therefore, the recommended mitigation measures (i.e., implementing guidelines on building design to minimize bird-window collisions, providing compensatory mitigation for traffic-related wildlife deaths, and funding wildlife rehabilitation facilities) are not warranted. Nevertheless, a discussion is provided below to provide a complete record for the City decision-makers.

(a) Guidelines on Building Design to Minimize Bird-Window Collisions

The EIR's analysis of biological resources considered the potential impacts of Project construction and operation, including construction and operational lighting, on birds and other wildlife species. The analysis was informed by the Project design criteria. Dr. Smallwood recommended mitigation measures to reduce bird collisions drawn from design guidelines developed for the City of San Francisco (San Francisco Planning Department 2011) and City of New York (New York City Audubon Society 2007). Guidelines for these cities were developed because they are in geographical areas with a high likelihood of bird collisions. The City of San Francisco design standards apply to location related hazards (i.e., buildings within 300 feet of an urban bird refuge) and buildings with feature-related hazards (i.e., a large area of uninterrupted windows). The City of New York adopted a new local law effective for the year 2020 to incorporate bird friendly design and construction requirements into the building code. While these

MEMORANDUM

August 1, 2024

Page 10

guidelines apply to all buildings, most of the design and siting features are specific to areas near important bird habitat and open space areas used by migrating birds. Even though the Project is not located in an area of increased bird collision hazard, it includes the design elements listed below that are consistent with the bird hazard reduction design requirements of the City of San Francisco and City of New York. In addition, the Project is not located near any important bird habitat or open space areas used by migrating birds.

The design elements included in the Project were selected to meet other environmental criteria and local code requirements. They were not selected because the Project poses a risk to birds. However, they have the ancillary benefit of also reducing the likelihood of bird collisions. The Project design criteria include those listed below. Consistency with guidelines for reducing bird collisions is noted.

- **Building and Windows.** Design guidelines for reducing bird collisions include the break-up of large expanses of glass, window treatments, and the types of glass used (San Francisco Planning Department 2011, New York City Audubon Society 2007). The guidelines are broad and allow for a project proponent to select from a suite of options. The Project design includes design features consistent with the referenced guidelines, including anti-reflective glass treatments and overhangs and balconies that break-up large expanses of glass. They are specified in the EIR and Letters of Determination as follows:
 - The following glare and reflectivity conditions were included in the City's letters of determination for the Residential Option (CPC-2016-3777, conditions 48 and 49) and the Office Option (CPC-2016-5003, conditions 44 and 45):
 - **Glare.** The exterior of the proposed structure shall be constructed of materials such as, but not limited to, high-performance and/or non-reflective tinted glass (no mirror-like tints or films) and pre-cast concrete or fabricated wall surfaces to minimize glare and reflected heat.
 - **Reflectivity.** Glass used in building façades shall be low-reflective or treated with a low-reflective coating in order to minimize glare from reflected sunlight.
 - (Q) Qualified Condition 1 to the Residential Option requires that option to be developed in substantial conformance with the plans and elevations

MEMORANDUM

August 1, 2024

Page 11

submitted with the application and marked Exhibit “A”, dated October 12, 2023, and attached to the subject case file.

- (Q) Qualified Condition 1 to the Office Option requires that option to be developed in substantial conformance with the plans and elevations submitted with the application and marked Exhibit “A,” dated October 12, 2023, and attached to the subject case file. Both sets of plans and elevations depict design elements, including overhangs and balconies, that have the effect of breaking up large expanses of glass on the Project.
- **Lighting.** Design guidelines for reducing bird collisions include the shielding of lighting (San Francisco Planning Department 2011, New York City Audubon Society 2007). The Project design includes the following design feature consistent with the referenced guidelines.
 - All lighting would be designed and located to be compatible with the architecture and landscaping of the Project, and would be directed on-site and shielded as appropriate to avoid light spill over onto adjacent properties (Draft EIR Project Description page II-30; Condition of Approval 51 to the Residential Option and Condition 47 to the Office Option).

CEQA allows for Project design criteria to be considered when determining Project impacts to biological resources. These design features are inclusive design elements that reduce bird collisions as recommended by the guidelines referenced by the commenter. These include the use of window collision solutions such as glass treatment to reduce mirroring, management of nocturnal lighting, and building façade features (e.g., overhangs, balconies). As described above, Dr. Smallwood recommended mitigation measures to reduce bird collisions drawn from design guidelines developed for the City of San Francisco and City of New York. While these are not guidelines utilized by the City of Los Angeles, and the Project is not located in an area of increased bird collision hazard, elements of these guidelines are already incorporated into the Project design, as described above, and would reduce the potential for bird collisions. Given these design elements, the Project would not significantly increase the likelihood of bird collisions as claimed by the commenter and would in fact reduce the potential as compared to projects without such features. Given this, impacts from bird collisions would be considered less than significant.



MEMORANDUM

August 1, 2024

Page 12

(b) Road Mortality and Funding Wildlife Rehabilitation Facilities

Dr. Smallwood suggests compensatory mitigation for bird-window collisions and traffic-related wildlife collisions and states it could take the form of funding wildlife rehabilitation facilities. Given that the Project would have less-significant-impacts on biological resources and, as discussed above, Dr. Smallwood has not provided credible evidence that there would be bird-related fatalities or traffic-related wildlife collisions, no additional mitigation is necessary.

(6) Conclusion

The methodology for evaluating impacts on wildlife was based on environmental setting, project design, wildlife behavior, and habitat use, and the Project Site and the surrounding area provide an appropriate environmental setting in terms of habitat use and composition in the urban environment. As it relates to birds and window strikes, high collision risk provided by high-rise buildings is extant in the current environmental setting. The collision risk is lessened by the Project Site's distance from important habitats and stopovers for migrating birds and its infill development setting. Project conditions and design elements related to glare and reflectivity also decrease the risk of bird collisions with the building. Similarly, traffic-related wildlife impacts are also extant in the current environmental setting. The determination of impact significance was made using Project-specific information and consulting similar resources as provided by Dr. Smallwood; however, the significance conclusions were made using Project-specific information. Thus, based on an evaluation of the existing and future environmental setting, wildlife behavior, and habitat use, the Project would not have a significant impact to biological resources as evaluated under CEQA and the Draft EIR, which includes the Initial Study as Appendix A, provided a sufficient and complete analysis, with appropriate mitigation measures to reduce potential impacts. No further analysis is required or warranted.

Attachment A—Lozeau Drury LLP June 28, 2024, Comment Letter

Attachment B—Brad Napientek Résumé

Attachments

Attachment A

Lozeau Drury LLP June 28, 2024,
Comment Letter



T 510.836.4200
F 510.836.4205

1939 Harrison Street, Ste. 150
Oakland, CA 94612

www.lozeaudrury.com
kylah@lozeaudrury.com

Via Email

June 28, 2024

Planning and Land Use Management Committee
City of Los Angeles
Councilmember Marqueece Harris-Dawson, Chair
Councilmember John S. Lee, Vice Chair
Councilmember Imelda Padilla
Councilmember Katy Yaroslavsky
Councilmember Heather Hutt
John Ferraro Council Chamber
200 N. Spring Street, Room 340
Los Angeles, CA 90012
c/o Candy Rosales, Legislative Assistant
clerk.plumcommittee@lacity.org

Rey Fukuda, City Planner
Department of City Planning
City of Los Angeles
221 N. Figueroa Street, Suite 1350
Los Angeles, CA 90012
rey.fukuda@lacity.org

**Re: Comment on Final Environmental Impact Report, 1360 N. Vine
Street Project (SCH 2017061063; ENV-2016-3778-EIR) -
July 2, 2024, PLUM Committee Hearing, Agenda Item No. 3**

Dear Mr. Fukuda and Planning and Land Use Management Committee:

I am writing on behalf of Supporters Alliance for Environmental Responsibility (“SAFER”) regarding the Final Environmental Impact Report (“FEIR”) prepared for the 1360 N. Vine Street Project (SCH 2017061063; ENV-2016-3778-EIR) (“Project”). SAFER filed a comment letter on December 13, 2023 (“December 13 Letter”) informing the City that it failed to provide a substantive response to SAFER’s comments that were filed on October 2, 2023 (“October 2 Letter”) and October 3, 2023 (“October 3 Letter”).¹ The October 2 Letter was supported by comments from air quality experts Matt Hagemann, P.G., C.Hg. and Paul E. Rosenfeld, Ph.D., of the environmental consulting firm, Soil/Water/Air Protection Enterprise (“SWAPE”). In the October 2 Letter, SAFER informed the City that the FEIR failed to provide an accurate project description. The October 3 Letter was supported by comments from

¹ SAFER’s October 2 Letter, October 3 Letter, and December 13 Letter including expert comments are attached as Exhibits A, B, and C, respectively.

June 28, 2024

Comment on Final Environmental Impact Report
1360 N. Vine Street Project (ENV-2016-3778-EIR)
Page 2 of 11

acoustical engineering firm Wilson Ihrig, which showed that the Project would result in significant noise impacts. The Deputy Advisory Agency issued a letter of determination on October 11, 2023 approving the VTTM for the Project and SAFER filed its appeal on October 19, 2023.

SAFER filed its December 13 Letter in response to the Department of City Planning's December Appeal Report which failed to substantively respond to SAFER's comments. On June 27, 2024, the Department of City Planning issued its most recent Appeal Report ("June Appeal Report"), which again, fails to substantively respond to SAFER's comments, rendering the EIR inadequate. Additionally, we submit herewith new information regarding impacts to biological resources requires an analysis of these impacts and recirculation of the EIR. (Exhibit D). Therefore, the EIR must be revised and recirculated to adequately respond to SAFER's comments and to address significant impacts to biological resources.

LEGAL STANDARD

I. CEQA and Environmental Impact Report

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. (14 CCR § 15002(a)(1).) "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'" (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.) Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures. (14 CCR § 15002(a)(2) and (3); see also *Berkeley Jets Over the Bay Com. v. Board of Port Cmrs.* (2001) 91 Cal.App.4th 1349, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.)

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an Environmental Impact Report (EIR) except in certain limited circumstances. (See, e.g., Pub. Resources Code, § 21100.) The EIR is the very heart of CEQA. (*Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652. The EIR is an "environmental 'alarm bell' whose purpose is to alert the public and its responsible officials to environmental changes before they have reached the ecological points of no return." (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004), 124 Cal.App.4th 1184, 1220.) The EIR also functions as a "document of accountability," intended to "demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." (*Laurel Heights Improvements Assn. v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 392.)

The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to “identify ways that environmental damage can be avoided or significantly reduced.” (14 CCR § 15002(a)(2).) Critical to this purpose, the EIR must contain an “accurate and stable project description.” (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185 at 192-93 (“An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR.”) The project description must contain (a) the precise location and boundaries of the proposed project, (b) a statement of the project objectives, and (c) a general description of the project's technical, economic, and environmental characteristics. (Cal. Code Regs., tit. 14, (“CEQA Guidelines”) § 15124.)

II. Standard of Review

While the courts review an EIR using an “abuse of discretion” standard, “the reviewing court is not to ‘uncritically rely on every study or analysis presented by a project proponent in support of its position. A ‘clearly inadequate or unsupported study is entitled to no judicial deference.’” (*Berkeley Jets*, 91 Cal.App.4th at 1355 [quoting, *Laurel Heights Improvement Assn.*, 47 Cal. 3d at 391, 409, n. 12.]) As the court stated in *Berkeley Jets*, 91 Cal.App.4th at 1355:

A prejudicial abuse of discretion occurs “if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process.” (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946.)

More recently, the California Supreme Court has emphasized that:

When reviewing whether a discussion is sufficient to satisfy CEQA, a court must be satisfied that the EIR (1) includes sufficient detail to enable those who did not participate in its preparation to understand and to consider meaningfully the issues the proposed project raises [citation omitted]....

(*Sierra Club v. Cty. of Fresno* (2018) 6 Cal.5th 502, 510 (2018) [citing *Laurel Heights Improvement Assn.*, 47 Cal.3d at 405].) The Court in *Sierra Club v. Cty. of Fresno* also emphasized that another primary consideration of sufficiency is whether the EIR “makes a reasonable effort to substantively connect a project’s air quality impacts to likely health consequences.” (*Id.* at 510.) “Whether or not the alleged inadequacy is the complete omission of

a required discussion or a patently inadequate one-paragraph discussion devoid of analysis, the reviewing court must decide whether the EIR serves its purpose as an informational document.” (*Id.* at 516.)

Although an agency has discretion to decide the manner of discussing potentially significant effects in an EIR, “a reviewing court must determine whether the discussion of a potentially significant effect is sufficient or insufficient, i.e., whether the EIR comports with its intended function of including ‘detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.’” (*Sierra Club*, 6 Cal.5th at 516, [citing *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197].) “The determination whether a discussion is sufficient is not solely a matter of discerning whether there is substantial evidence to support the agency’s factual conclusions.” (*Id.* at 516.) As the Court emphasized:

[W]hether a description of an environmental impact is insufficient because it lacks analysis or omits the magnitude of the impact is not a substantial evidence question. A conclusory discussion of an environmental impact that an EIR deems significant can be determined by a court to be inadequate as an informational document without reference to substantial evidence.

(*Id.* at 514.)

III. Mitigation Measures

In general, mitigation measures must be designed to minimize, reduce or avoid an identified environmental impact or to rectify or compensate for that impact. (14 CCR § 15370.) Where several mitigation measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. (14 CCR § 15126.4(a)(1)(B).) A lead agency may not make the required CEQA findings unless the administrative record clearly shows that all uncertainties regarding the mitigation of significant environmental impacts have been resolved.

If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has “eliminated or substantially lessened all significant effects on the environment where feasible” and that any unavoidable significant effects on the environment are “acceptable due to overriding concerns.” (Pub. Res. Code, § 21081; 14 CCR § 15092(b)(2)(A) and (B).)

IV. Response to Comments

June 28, 2024

Comment on Final Environmental Impact Report
1360 N. Vine Street Project (ENV-2016-3778-EIR)
Page 5 of 11

When a significant environmental issue is raised in comments that object to the draft EIR's analysis, the response must be detailed and must provide a reasoned, good faith analysis. (14 CCR §15088(c); *Banning Ranch Conservancy v. City of Newport Beach* (2017) 2 Cal.5th 918, 940; *Covington v. Great Basin Unified Air Pollution Control Dist.* (2019) 43 Cal.App.5th 867, 878 [rejecting adequacy of response that did not explain why suggested mitigation was infeasible].) The failure of a lead agency to respond to comments raising significant environmental issues before approving a project frustrates CEQA's informational purpose and may render the EIR legally inadequate. (See *Flanders Found. v. City of Carmel-by-the-Sea* (2012) 202 Cal.App.4th 603, 615; *Rural Landowners Ass'n v. City Council* (1983) 143 Cal.App.3d 1013, 1020.)

V. Recirculation Required for Significant New Information

CEQA Guidelines Section 15088.5 sets the standard for requiring recirculation prior to certification of an EIR. Recirculation of an EIR is required when “significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification [of the Final EIR].” New information added to an EIR is significant when “the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project’s proponents have declined to implement.”

DISCUSSION

VI. The City Failed to Adequately Respond to Comments.

A. The City Disregarded Feasible Mitigation Measures to Address Significant Noise Impacts.

The June Appeal report maintains that all feasible noise mitigation measures were included in the FEIR. However, SAFER’s October 3 Letter, which contains expert comments from the acoustical engineering firm, Wilson Ihrig demonstrates that the FEIR failed to consider feasible mitigation measures.

While the FEIR states that Project construction would result in significant noise impacts, it fails to include feasible mitigation measures. To address significant noise impacts, the FEIR puts forth NOI-MM-1, which would include erecting noise barriers around the site, however, this mitigation measure would “not provide any noise relief to residents on the upper floors of neighboring buildings.” (Ex. B, pp. 3.) Instead of providing additional mitigation measures, the

June 28, 2024

Comment on Final Environmental Impact Report
1360 N. Vine Street Project (ENV-2016-3778-EIR)
Page 6 of 11

FEIR states that it would be infeasible to block construction noise at higher elevations. This is not true. According to Wilson Ihrig, there are three feasible mitigation measures for this impact which include: (1) erecting scaffolding to support construction noise control blankets at the facades of impacted receptors; (2) installing of heavy plexiglass or other clear panels to act as sound barriers; and (3) offering to upgrade windows and exterior doors of those upper floor residential units or hospital rooms which would not be shielded by the sound barriers defined in NOI-MM-1. (*Id.* at pp. 3-4.) None of these mitigation measures were considered in the FEIR.

By disregarding these feasible mitigation measures, the City has failed provide a reasoned good faith analysis, rendering the City's response to SAFER's comments inadequate.

1. The City Cannot Adopt a Statement of Overriding Consideration Until Feasible Mitigation Measures are Implemented.

The City cannot adopt a statement of overriding consideration until it has implemented all feasible mitigation measures. (Pub. Res. Code, § 21081; 14 CCR § 15092(b)(2)(A) and (B).) As SAFER's October 3 Letter explained: the City may not adopt a statement of overriding consideration until it first considers all feasible mitigation measures to address significant noise impacts, such as the measures identified by Wilson Ihrig. (*Covington v. Great Basin Unified Air Pollution Control Dist.* (2019) 43 Cal.App.5th 867; *see also NRDC v. City of Los Angeles* (2023) 98 Cal.App.5th 1176.)

If the City adopts a statement of overriding consideration, it must be supported by substantial evidence in the record. (14 Cal. Code Regs. §15093(b); *Sierra Club v. Contra Costa Co.* (1992) 10 Cal.App.4th 1212, 1223.) The agency must make "a fully informed and publicly disclosed" decision that "specifically identified expected benefits from the project outweigh the policy of reducing or avoiding significant environmental impacts of the project." (15 Cal. Code Regs. §15043(b)). As with all findings, the agency must present an explanation to supply the logical steps between the ultimate finding and the facts in the record. (*Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515).

Key among the findings that the lead agency *must* make is that:

"Specific economic, legal, social, technological, or other considerations, including ***the provision of employment opportunities for highly trained workers***, make infeasible the mitigation measures or alternatives identified in the environmental impact report...[and that those] benefits of the project outweigh the significant effects on the environment."

(Pub. Res. Code §21081(a)(3), (b) [*emphasis added*].)

Thus, should the City proceed with a statement of overriding consideration after implementing all feasible mitigation, it must be supported by substantial evidence with respect to both the environmental impacts of the Project, and the economic benefits including “the provision of employment opportunities for highly trained workers” created.

B. The FEIR’s Project Description Remains Inadequate.

As SAFER has explained in its October 2 Letter, the FEIR fails to provide an accurate, stable and finite project description. In order to provide an accurate project description that allows for meaningful public participation, the City must select a preferred project rather than a range of distinct proposed projects. (*Washoe Meadows Community v. Dept. of Parks and Recreation* (2017) 17 Cal.App.5th 238, 290 [DEIR analyzing a range of significantly different alternatives for a golf course reconfiguration project “without the designation of a stable project was an obstacle to informed public participation” rendering the document legally inadequate.].)

By not selecting a stable project option, the City has provided “conflicting signals to decision makers and the public about the nature and scope of the project” rendering the FEIR fundamentally inadequate and misleading. (*Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036, 1045, (“*Treasure Island*”). While there may be instances where the basic characteristics of a project are provided and certain specifics are left for further review, it does not relieve the lead agency’s responsibility to identify the project being proposed. (See *Washoe Meadows*, 17 Cal.App.5th at 289 [discussing *Treasure Island*, 227 Cal.App.4th 1036.].) Indeed, the Court of Appeal found in *Washoe Meadows*, that it did not matter that the alternative ultimately selected had been thoroughly analyzed in the final EIR. “[T]he problem with an agency’s failure to propose a stable project is not confined to ‘the informative quality of the EIR’s environmental forecasts.’” (*Washoe Meadows*, 17 Cal.App.5th at 288.) Rather, a failure to identify or select a project at all “impairs the public’s right and ability to participate in the environmental review process.” (*Id.*) The failure of the City to identify a preferred alternative has precluded informed decision-making and informed public participation.

The June Appeal Report states that the project description issue was addressed in the December Appeal Report. However, the December Appeal Report failed to adequately respond to this issue. The December Appeal Report stated that dual project options are allowed under *South of Market Community Action Network v. City and County of San Francisco* (2019) 33 Cal.App.5th 321, where the court upheld the DEIR’s project description, despite offering an office and residential building option. While this Project also proposes an office and residential building option, the differences between these options are stark, unlike the project options proposed in *South of Market Community Action Network*. In *South of Market Community Action*

Network, the EIR “described one project—a mixed-use development involving the retention of two historic buildings, the demolition of all other buildings on the site, and the construction of four new buildings and active ground floor space—with two options for different allocations of residential and office units.” (33 Cal.App.5th at 333-334.)

Here, the two building options do not merely offer varying allocations of residential and office units. As an example, the residential option proposes a 33-story building at 361 feet high and the office option proposes a 17-story building at 303 feet high, which will result in differing biological impacts, specifically impacts to birds which were not analyzed in the FEIR and are discussed below. Given that the FEIR’s project description remains inadequate, and the City failed to adequately respond to SAFER’s comments, the FEIR must be revised.

VII. The City Must Recirculate the FEIR Because New Information Shows Significant Impacts to Biological Resources which the FEIR Failed to Analyze and Mitigate.

Expert wildlife biologist, Dr. Shawn Smallwood, Ph.D., found that both project options would result in significant impacts to biological resources. Dr. Smallwood’s comment and CV are attached as Exhibit D. Dr. Smallwood’s findings constitute new information of significant impacts requiring revision and recirculation of the FEIR.

The Guidelines require recirculation when:

- (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project’s proponents decline to adopt it.
- (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (*Mountain Lion Coalition v. Fish and Game Com.* (1989) 214 Cal.App.3d 1043)

The California Supreme Court has stated that:

June 28, 2024

Comment on Final Environmental Impact Report

1360 N. Vine Street Project (ENV-2016-3778-EIR)

Page 9 of 11

the addition of new information to an EIR after the close of the public comment period is not “significant” unless the EIR is changed in a way that (i) deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement.

Laurel Heights Improvement Assn. v. Regents of University of California (1993) 6 Cal.4th 1112, 1129. Among the codified exceptions to this rule is where the draft EIR is so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded:

(a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation include, for example, a disclosure showing that:

...

(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (*Mountain Lion Coalition v. Fish and Game Com.* (1989) 214 Cal.App.3d 1043.)

(CEQA Guidelines § 15088.5(a), (a)(4).)

In this case, the DEIR and FEIR were “so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.” The public could not meaningfully comment on impacts to biological resources because the DEIR merely concluded that there would be no biological impacts, and therefore the subsequent FEIR contained no analysis of these impacts. However, Dr. Smallwood found that the Project would result in potentially significant adverse biological impacts that require additional review and mitigation. (Ex. D, pp. 20.) Even if the Project had already received final approval, which it has

not, a supplemental EIR would be required pursuant to CEQA section 21166 and CEQA Guidelines section 15162.²

Finally, since the EIR fails entirely to analyze biological impacts, these impacts are subject to the fair argument, rather than the substantial evidence standard. Fair argument standard applies even to EIRs if the EIR fails entirely to analyze a particular impact. (*Bakersfield Citizens for Loc. Control v. City of Bakersfield* (2004) 124 Cal. App. 4th 1184, 1208.) Under the fair argument standard, an impact must be analyzed in an EIR whenever substantial evidence in the record supports a “fair argument” that significant impacts may occur.³

1. Bird-Window Collisions

Notably, Dr. Smallwood predicted that the office building option of the Project would result in approximately 1,523 annual bird deaths and the residential building option would result in approximately 1,807 annual bird deaths due to bird-window collisions. (*Id.*) Additionally, Dr. Smallwood determined “that a large number of birds might routinely fly through the aerosphere that would be displaced by the [Project]” due to the Project site likely being near a movement corridor. (*Id.* at pp. 16-17.) Dr. Smallwood’s associate, Noriko Smallwood, also observed Allen’s hummingbird flying through the Project site during a site visit on June 25, 2024. (*Id.* at pp. 3.) Allen’s hummingbird is listed as a Bird of Conservation Concern by the U.S. Fish & Wildlife Service, making it a special status species. (*Id.*) This finding contradicts the DEIR’s conclusion that the Project would not have a substantial adverse effect on special status species. Noriko Smallwood’s sighting of a special status species, and Dr. Smallwood’s finding that the Project would result in a substantial number of bird deaths, constitutes new information that must be considered and analyzed in a recirculated EIR.

2. Traffic Impacts

Based on the Project’s annual estimated VMTs, Dr. Smallwood predicted 5,078 vertebrate wildlife fatalities per year due to project-generated traffic from the office building option, or 6,818 vertebrate wildlife fatalities per year due to project-generated traffic from the residential building option. (*Id.* at pp. 22.) Dr. Smallwood’s findings and analysis demonstrate that the “project-generated traffic would cause substantial, significant impacts to wildlife,” which

² Here, Dr. Smallwood’s analysis and findings constitute “new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete,” showing that “[t]he project will have one or more significant effects not discussed in the previous EIR . . .” (14 Cal. Code Regs. § 15162(a)(3)(A).)

³ CEQA’s unique “fair argument” standard also applies to a reviewing court’s examination of an agency’s decision concerning preparation of an EIR. (*Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1375-76; *Quail Botanical*, 29 Cal.App.4th at 1602.)

June 28, 2024

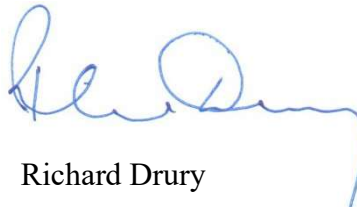
Comment on Final Environmental Impact Report
1360 N. Vine Street Project (ENV-2016-3778-EIR)
Page 11 of 11

the FEIR failed to analyze or mitigate. (*Id.* at pp. 23.) Therefore, traffic-related impacts must be considered and analyzed in a recirculated EIR.

CONCLUSION

SAFER respectfully requests that the Planning and Land Use Management Committee recommend that the City Council deny the tract map until a revised EIR has been circulated to address the issues and deficiencies raised in this comment to ensure compliance with CEQA.

Sincerely,

A handwritten signature in blue ink, appearing to read "Richard Drury", with a long horizontal flourish extending to the right.

Richard Drury

EXHIBIT A



T 510.836.4200
F 510.836.4205

1939 Harrison Street, Ste. 150
Oakland, CA 94612

www.lozeaudrury.com
brian@lozeaudrury.com

Via Email

October 2, 2023

Rey Fukuda, City Planner
City of Los Angeles, Department of City
Planning
221 N. Figueroa Street, Suite 1350
Los Angeles, CA 90012
Em: rey.fukuda@lacity.org

Department of City Planning
City of Los Angeles, Department of City Planning
221 N. Figueroa Street, Suite 1350
Los Angeles, CA 90012

**Re: Comment on Final Environmental Impact Report, 1360 N. Vine Street
Project (SCH 2017061063; ENV-2016-3778-EIR)**

Dear Mr. Fukuda and the Advisory Agency:

I am writing on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") regarding the Final Environmental Impact Report ("FEIR") prepared for the 1360 N. Vine Street Project (SCH 2017061063; ENV-2016-3778-EIR), including all actions related or referring to the proposed construction of a 361-foot high-rise building with four levels of subterranean parking consisting of up to 429 residential units or 303-foot high rise office building with eight levels of subterranean parking and associated bungalows located at 1360 North Vine Street in the City of Los Angeles ("Project").

SAFER previously comments on the DEIR on July 25, 2023 stating that the DEIR failed as an informational document and failed to impose all feasible mitigation measures to reduce the Project's impacts. The purpose of this comment is to clarify the deficiencies previously noted that remain in the FEIR and raise additional issues presented in the FEIR.

SAFER's review of the EIR has been assisted by air quality experts Matt Hagemann, P.G., C.Hg. and Paul E. Rosenfeld, Ph.D., of the environmental consulting firm, Soil/Water/Air Protection Enterprise ("SWAPE") (CV and comments attached as Exhibit A). The expert comments further reveal that the FEIR fails to adequately evaluate the Project's air quality, health, risk, and greenhouse gas impacts and fails to implement all feasible mitigation measures regarding significant and unavoidable noise and vibration impacts.

A revised EIR must be prepared with a finite and stable project description, adequate evaluation of air, health risk, and greenhouse gas impacts, and implements all feasible mitigation measures where risks are significant.

PROJECT DESCRIPTION

The Project proposed to develop a mixed-use building on a 81,050 square-foot site at 1360 North Vine Street located within the Hollywood Community of City of Los Angeles with one of two options: a Residential Option and an Office Option. Both options would demolish 32,844 square feet of commercial and vacant residential uses while retaining and rehabilitating six existing bungalows, which are protected as part of the Afton Square Historic District. That is where the similarities end.

The Residential Option would develop a new 33-story high-rise building with four levels of subterranean parking consisting of up to 429 new residential units, including 36 low income units, a 55,000 square feet (“SF”) grocery store, approximately 5,000 SF of retail uses in addition to the bungalows, which would be stored off-site, relocated, rehabilitated and adapted for restaurant use or as 12 residential units. The Residential Option would provide approximately 484,421 square feet of floor area within the Project Site.

The Office Option would develop a new 17-story high-rise building with eight levels of subterranean parking with approximately 463,521 SF of office uses and 11,914 SF of restaurant uses, as well as the bungalows, which would be stored off-site, relocated, rehabilitated and adapted for restaurant use or as 9 residential units. The Office Option would provide approximately 484,423 square feet of floor area within the Project Site.

Thus, while the Project description lists 2 options, there are in fact four distinct scenarios, each with unique characteristics, uses, and associated project impacts:

- Residential Option with Residential Bungalows
- Residential Option with Restaurant Bungalows
- Office Option with Residential Bungalows
- Office Option with Restaurant Bungalows

LEGAL STANDARD

I. CEQA and Environmental Impact Report

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. (14 CCR § 15002(a)(1).) “Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR ‘protects not only the environment but also informed self-government.’” (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.) Second, CEQA requires public agencies to avoid or reduce environmental damage when “feasible” by requiring “environmentally superior” alternatives and all feasible mitigation measures. (14 CCR § 15002(a)(2) and (3); see also *Berkeley Jets Over the Bay Com. v. Board of Port Cmrs.* (2001) 91 Cal.App.4th

1349,1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.)

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an Environmental Impact Report (EIR) except in certain limited circumstances. (See, e.g., Pub. Resources Code, § 21100.) The EIR is the very heart of CEQA. (*Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652. The EIR is an “environmental ‘alarm bell’ whose purpose is to alert the public and its responsible officials to environmental changes before they have reached the ecological points of no return.” (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004), 124 Cal.App.4th 1184, 1220.) The EIR also functions as a “document of accountability,” intended to “demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.” (*Laurel Heights Improvements Assn. v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 392.)

The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to “identify ways that environmental damage can be avoided or significantly reduced.” (14 CCR § 15002(a)(2).) Critical to this purpose, the EIR must contain an “accurate and stable project description.” (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185 at 192-93 (“An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR.”) The project description must contain (a) the precise location and boundaries of the proposed project, (b) a statement of the project objectives, and (c) a general description of the project's technical, economic, and environmental characteristics. (Cal. Code Regs., tit. 14, (“CEQA Guidelines”) § 15124.)

II. Standard of Review

While the courts review an EIR using an “abuse of discretion” standard, “the reviewing court is not to ‘uncritically rely on every study or analysis presented by a project proponent in support of its position. A ‘clearly inadequate or unsupported study is entitled to no judicial deference.’” (*Berkeley Jets*, 91 Cal.App.4th at 1355 [quoting, *Laurel Heights Improvement Assn.*, 47 Cal. 3d at 391, 409, n. 12.]) As the court stated in *Berkeley Jets*, 91 Cal.App.4th at 1355:

A prejudicial abuse of discretion occurs “if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process.” (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946.)

More recently, the California Supreme Court has emphasized that:

When reviewing whether a discussion is sufficient to satisfy CEQA, a court

must be satisfied that the EIR (1) includes sufficient detail to enable those who did not participate in its preparation to understand and to consider meaningfully the issues the proposed project raises [citation omitted]....

(*Sierra Club v. Cty. of Fresno* (2018) 6 Cal.5th 502, 510 (2018) [citing *Laurel Heights Improvement Assn.*, 47 Cal.3d at 405].) The Court in *Sierra Club v. Cty. of Fresno* also emphasized at another primary consideration of sufficiency is whether the EIR “makes a reasonable effort to substantively connect a project’s air quality impacts to likely health consequences.” (*Id.* at 510.) “Whether or not the alleged inadequacy is the complete omission of a required discussion or a patently inadequate one-paragraph discussion devoid of analysis, the reviewing court must decide whether the EIR serves its purpose as an informational document.” (*Id.* at 516.)

Although an agency has discretion to decide the manner of discussing potentially significant effects in an EIR, “a reviewing court must determine whether the discussion of a potentially significant effect is sufficient or insufficient, i.e., whether the EIR comports with its intended function of including ‘detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.’” (*Sierra Club*, 6 Cal.5th at 516, [citing *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197].) “The determination whether a discussion is sufficient is not solely a matter of discerning whether there is substantial evidence to support the agency’s factual conclusions.” (*Id.* at 516.) As the Court emphasized:

[W]hether a description of an environmental impact is insufficient because it lacks analysis or omits the magnitude of the impact is not a substantial evidence question. A conclusory discussion of an environmental impact that an EIR deems significant can be determined by a court to be inadequate as an informational document without reference to substantial evidence.

(*Id.* at 514.)

III. Mitigation Measures

In general, mitigation measures must be designed to minimize, reduce or avoid an identified environmental impact or to rectify or compensate for that impact. (14 CCR § 15370.) Where several mitigation measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. (14 CCR § 15126.4(a)(1)(B).) A lead agency may not make the required CEQA findings unless the administrative record clearly shows that all uncertainties regarding the mitigation of significant environmental impacts have been resolved.

If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has “eliminated or substantially lessened all significant effects on the environment where feasible” and that any unavoidable significant

effects on the environment are “acceptable due to overriding concerns.” (Pub. Res. Code, § 21081; 14 CCR § 15092(b)(2)(A) and (B).)

IV. Response to comments

When a significant environmental issue is raised in comments that object to the draft EIR's analysis, the response must be detailed and must provide a reasoned, good faith analysis. (14 CCR §15088(c); *Banning Ranch Conservancy v. City of Newport Beach* (2017) 2 Cal.5th 918, 940; *Covington v. Great Basin Unified Air Pollution Control Dist.* (2019) 43 Cal.App.5th 867, 878 [rejecting adequacy of response that did not explain why suggested mitigation was infeasible].) The failure of a lead agency to respond to comments raising significant environmental issues before approving a project frustrates CEQA's informational purpose and may render the EIR legally inadequate. (See *Flanders Found. v. City of Carmel-by-the-Sea* (2012) 202 Cal.App.4th 603, 615; *Rural Landowners Ass'n v. City Council* (1983) 143 Cal.App.3d 1013, 1020.)

DISCUSSION

I. The FEIR Fails to Provide a Stable and Accurate Project Description and is thus Legally Inadequate.

For over forty years the courts have consistently held that an accurate and stable project description is a bedrock requirement of an adequate CEQA document:

Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the “no project” alternative) and weigh other alternatives in the balance. An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR.

(*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185 at 192-93. See also, *id.* at 192 (“A curtailed or distorted project description may stultify the objectives of the [CEQA] process.”))

The project description must contain (a) the precise location and boundaries of the proposed project, (b) a statement of the project objectives, and (c) a general description of the project's technical, economic, and environmental characteristics. (CEQA Guidelines, § 15124.) Courts have repeatedly recognized that “that a project description that gives conflicting signals to decision makers and the public about the nature and scope of the project is fundamentally inadequate and misleading.” (*Washoe Meadows*, 17 Cal.App.5th at 285.)

In order to provide an accurate and stable project description that allows for meaningful public participation, the City must select a preferred project rather than a range of distinct proposed projects. (*See id.* at 290 (DEIR analyzing a range of significantly different alternatives for a golf course reconfiguration project “without the designation of a stable project was an obstacle to informed public participation” rendering the document legally inadequate.) The FEIR, as with the DEIR, fails to provide a stable project description by proposing two alternatives, each with additional alternatives concerning the use of bungalows, amounting to four distinct scenarios. The Residential Option would develop a new 33-story high-rise building of up to 429 new residential units with four levels of subterranean parking, a 55,000 sf grocery store, and only approximately 5,000 sf of retail uses. The Office Option on the other hand is a 17-story high-rise building with eight levels of subterranean parking, 463,521 sf of office uses and 11,914 sf of restaurant uses. The only potential residential uses would be the bungalows, which may be used as restaurants in which case there would be no residential use whatsoever. Aside from the maintenance of the six pre-existing bungalows, these options are completely different in every way. One structure is twice the size and half the subterranean footprint from the other. Beyond the generalized attribute of being “mixed-use,” the designated uses are completely distinct.

The City’s presentation of two completely distinct alternatives without designation of a stable project description or objectives gives “conflicting signals to decision makers and the public about the nature and scope of the project” rendering the FEIR fundamentally inadequate and misleading. (*Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036, 1045, (“*Treasure Island*”). While there may be instances where the basic characteristics of a project are provided and certain specifics are left for further review, it does not relieve the lead agency’s responsibility to identify the project being proposed. *See Washoe Meadows*, 17 Cal.App.5th at 289 (discussing *Treasure Island*, 227 Cal.App.4th 1036.) Indeed, the Court of Appeal found in *Washoe Meadows*, that it did not matter that the alternative ultimately selected had been thoroughly analyzed in the final EIR. “[T]he problem with an agency’s failure to propose a stable project is not confined to ‘the informative quality of the EIR’s environmental forecasts.’” (*Washoe Meadows*, 17 Cal.App.5th at 288.) Rather, a failure to identify or select a project at all “impairs the public’s right and ability to participate in the environmental review process.” (*Id.*) The failure of the City to identify a preferred alternative has precluded informed decision-making and informed public participation.

This issue was raised in the DEIR comments in two instances. (See FEIR Sec. II Response to Comments, Comment No. 4-13 and Comment 8-42). In the first instance, the City, without any supporting authority, responded that “CEQA does not require identification of a preferred option.” (*Id.* at Response to Comments No. 4-13). For the reasons discussed above, this blanket statement is without merit.

Further, the City explained that “Throughout the Draft EIR, the more severe impacts are analyzed to present the most conservative analysis possible.” (*Id.* at Response to Comments No. 4-13). The City previously made this argument related to another

development on Vine Street in *Stopthemillenniumhollywood.com v. City of Los Angeles*, 39 Cal.App.5th 1 (2019) to no avail. In finding that the City had failed to meet CEQA's basic Guidelines requirement, the Court of Appeal emphasized that courts have "roundly rejected" the assertion that so long as the worst-case-scenario environmental effects have been assessed and mitigated, CEQA's purpose has been satisfied. *Stopthemillenniumhollywood.com v. City of Los Angeles*, 39 Cal.App.5th 1, 18 (2019) (Citing *County of Inyo*, and *Washoe Meadows*).

In the second instance that this issue was raised by commenters, the City only responded by discussing requirements pertaining to "environmental superior alternatives." The City failed to respond to the issue raised of the lack a stable and accurate project description under *Washoe Meadows*. (FEIR Sec. II at Response to Comments No. 8-42).

The fact remains that a 33-story high rise, with 5 levels of subterranean parking, a grocery and only 5,000 sf of retail create distinct impacts in type and severity from a 17-story office park with no grocery store. As stated in the comments to the DEIR, the failure to select a preferred alternative presents a "moving target" and prejudicially impairs informed decision-making, in addition to meaningful public participation required by CEQA.

The project options are also distinct, that the EIR provides unique Project Objectives for each option. For example, among other objectives, the Residential option is supporting the demand for housing and affordable housing and locating residential uses close to transit stations; locating residential uses in close proximity to transit stations. (FEIR Project, Page II-12.) The Office Option's objectives on the other hand include locating commercial uses close to transit stations. (*Id.*) Providing alternative Project Objectives with unique objectives pertaining to distinct uses fail to conform with CEQA Guidelines Section 15124.

The FEIR must be set aside and Revised DEIR must be prepared outlining one preferred project to allow for meaningful and informed evaluation among decision makers and adequate public participation.

II. The EIR's Findings on Significance of Air Quality Impacts are Not Supported by Substantial Evidence.

Air quality experts Matt Hagemann, P.G., C.Hg. and Dr. Paul E. Rosenfeld, Ph.D. of the environmental consulting firm SWAPE reviewed the EIR and concluded that the Project will likely have significant air quality, human health, and greenhouse gas impacts. SWAPE's comments and expert CVs are attached as Exhibit A.

a. The City Failed to Provide Complete Output Files Supporting Air Quality Findings.

The California Emissions Estimator Model ("CalEEMOD"), which was used by the City to calculate air quality impacts, provides recommended default values. While these

values can be changed based on project-specific values, the basis for such changes must be justified such that the inputs are supported by substantial evidence as required by CEQA. *See* CalEEMod User's Guide p.13-14.¹ The "Output files" disclose to the reader what parameters were utilized and provide the justification where alternative values are selected. (Ex. A, p. 2.)

The version of CalEEMod used by the City, CalEEMod Version 2022.1, does not provide complete output files, as it fails to provide quantitative counterparts to changes to default values, only providing the characteristic and justification; therefore, the FEIR fails to disclose the exact parameters used to calculate Project emissions. (Ex. A, p.2.) Consequently, neither the assumptions underling the models or the justification for such changes can be verified.

Because the FEIR fails to disclose exact parameters prevents verification of modeling and justification for specific parameters utilized, the FEIR is not supported by substantial evidence. A revised EIR must be prepared to include complete output files to allow for meaningful public participation and comment.

b. Modeling Inputs Utilized to Determine the Project's Air Quality are Not Supported by Substantial Evidence and May Underestimate Significance of Project Impacts.

In the instances where SWAPE was able to identify model inputs despite the failure to provide complete output files, SWAPE found several model inputs that are inconsistent with the information in the DEIR and FEIR such that the FEIR may underestimate air and climate impacts.²

First, the Carbon Intensity factors were adjusted based on State renewable energy goals. (Ex. A, p. 4.) However, the City fails to substantiate this change with any evidence that these goals will be achieved locally on the Project site or the Project's utility company. Without substantial evidence supporting this aspirational figure, the Carbon Intensity Factor should have remained based on currently achieved power mixes. (*Id.*) The unsubstantiated reduction of the Carbon Intensity Factor may result in the model underestimating greenhouse gas impacts and may not be relied upon to determine Project significance.

Second, the model includes substantial changes to the default construction schedule to extend construction time over four years. (*Id.* at 5.) However, the individual construction phases were not extended proportionately to match the total duration intended by the EIR. Thus, there is not substantial evidence supporting the *individual* construction phase lengths used in the models. (*Id.*) By improperly spreading out construction emissions over a longer period of time for some phases disproportionately, the model assumes there are greater

¹ Available at https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/01_user-39-s-guide2020-4-0.pdf?sfvrsn=6

² In the interest of simplicity, SWAPE only reviewed the Residential Detailed Report in its comment, but notes that all models have similar errors and require revision and recirculation of the EIR.

number of days to complete construction activities, thereby assuming less pollution each day. (*Id.*) Without a complete construction schedule, the accuracy of the model is not supported by substantial evidence and may underestimate Project impacts.

Third, the model underestimates demolition required for Project completion. It only includes 29,569 SF of building demolition, while the FEIR states that 32,844 SF of existing buildings would be demolished for the Project. Therefore, demolition is underestimated by 3,275 SF (*Id.* at 9.) Failure to include full demolition figures means that the model underestimate emissions associated with fugitive dust, debris removal, and exhaust from hauling truck traveling to and from the site thereby underestimating the Projects' air quality impacts. (*Id.*)

Fourth, the model reduces default values to account for zero hearths on the Project site without adequate justification. The basis for this change is that hearths are not permitted as part of the Project Design Features ("PDF"). (FEIR Sec. IV, E-47.) It is best practice for design features that are important to environmental impact be included as mitigation measures, as mitigation measures sometimes are the only information accompanying building and construction plans throughout the permit process. (Ex. A, p.10, *citing* Association of Environmental Professionals, *CEQA Portal Topic Paper on Mitigation Measures*.) However, this PDF is not included as a formal mitigation measure and thus may not be guaranteed to be enforced on the Project Site.

Finally, SWAPE identified that the CalEEMod inputs included changes to several additional inputs, including off-road construction equipment parameters, construction trips, and Vehicles Miles Traveled ("VMT") without any explanation whatsoever. (Ex. A, p. 7-8.) Without the specific assumption utilized or any justification for such changes, the modeling parameters are not supported by substantial evidence and prejudicially impair meaningful public comment and informed decision-making.

c. Substantial Evidence Shows That the Project May Have Significant Air Quality Impacts.

SWAPE prepared an updated CalEEMod model using the Project-specific information provided by the FEIR and the DEIR, proportionally altering individual construction phase lengths, including the correct amount of demolition, and omitting unsubstantiated changes to the Carbon Intensity Factor, off-road construction equipment input parameters, trips and VMT, and number of hearths. (Ex. A, p.10.) This updated analysis found that the Project's construction-related VOC and NOx emissions were 127% and 365% greater than estimated by the EIR, respectively. (*Id.* at 11.) Counter to the findings of the DEIR, the updated estimates revealed that the Project's construction-related VOC and NOx emissions would substantially exceed the South Coast Air Quality Management District's ("SCAQMD") threshold of 75- and 100- pounds per day respectively. (*Id.*) Thus, the updated model demonstrates that the Project would result in potentially significant air quality and climate impacts not identified by the FEIR or DEIR. A revised EIR must be

circulated to account for potentially significant impacts and incorporate feasible mitigation measures (*See* Ex. A, Air Quality Project Level Mitigation Measures p.25-28.)

III. The EIR's Finding that the Project's Impact on Human Health is Less Than Significant Is Not Supported by Substantial Evidence.

a. The EIR's Basis for Its Finding Pertaining to the Project's Impact on Human Health is Flawed and Not Based on Adequate Analysis.

The FEIR fails to address potential health-related impacts resulting from the Project's likely air emissions. Operation of construction equipment during construction of the proposed Project, as well as vehicle 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.

The FEIR made no changes or additions to the DEIR with respect to health risk assessment. (FEIR p.III-25.) The DEIR concluded the project would have less than significant health risk impacts without the prepare of a quantified a health risk analysis ("HRA") evaluating impacts resulting from exposure to DPM emissions during Project construction or operation.

SWAPE found that the DEIR's evaluation and finding of no significant impacts is flawed for four reasons. First, the DEIR incorrectly asserts that the Project Site would not exceed 100 trucks per day. (Ex. A, p.12.) The Residential Option with Restaurant Bungalows is expected to generate 5,371 daily vehicle trips and the model's fleet mix is comprised of 7.38% trucks. Therefore, there would be approximately 397 trucks per day, which exceeds SCAQMD's 100 truck per day threshold by almost 4X. (*Id.* at 13.) The Office Option similarly exceeds 100 trucks per day. (*Id.*)

Second, failing to prepare a quantified construction or operational HRA is inconsistent with CEQA's requirement to make "a reasonable effort to substantively connect a project's air quality impacts to likely health consequences." (*Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 510.) The DEIR acknowledges the Project would produce DPM emissions through construction operations over a four-year period, but fails to connect toxic air contaminant ("TAC") emissions to nearby receptors. As such, the EIR fails to comply with CEQA's requirement to correlate Project-generated emissions with potential adverse impacts on human health. (Ex. A, p.14.)

Third, 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.* at 14.) A project’s creation of health risks for impacted MEIRs must be further evaluated according to various sensitive receptors’ age and pregnancy status. (*Id.*)

As discussed above, construction is meant to far exceed 2 months. And, while the DEIR does not specify, it is reasonable to assume, in the absence of any contrary assertion by the EIR, that Project operations will last for at least 30 years. Therefore, as SWAPE observes, the Project should be evaluated for the entire 30-year exposure duration, as recommended by OEHHA guidance. “These recommendations reflect the most recent state health risk policies, and a revised EIR should be prepared to include an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated DPM emissions.” (*Id.*)

Finally, by claiming a less-than-significant impact without conducting a quantified HRA for nearby, existing sensitive receptors, the EIR additionally “fails to compare the Project’s excess cancer risk” as it compares to the SCAQMD’s established significance threshold of 10 per million. (*Id.* at 14-15.)

b. Substantial Evidence Shows That the Project Will Likely Create a Significant Health Risk for Impacted Sensitive Receptors.

In order to analyze the potential for significant health risk impacts, 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.” (Ex. A, p. 15.)

Following this recommended approach for modeling potential future health risks, SWAPE found excess cancer risks to 3rd trimester of pregnancy, infants, children, and adults at the MEIR located approximately 50 meters away, over the course of Project construction and operation are approximately 11.6, 280, 218, and 23.5 in on million, respectively. (*Id.*) The excess cancer risk over the course of a residential lifetime (30 years) is approximately 533 in one million, which exceeds the SCQMD threshold of 10 in one million and thus results in a potentially significant impact not previously identified or addressed by the FEIR or DEIR. (*Id.*)

The findings of potentially significant impacts in the screening-level HRA warrant further evaluation in a refined modeling approach. (*Id.* at 18-19.) A revised EIR including a more refined modeling approach should be circulated to accurately and adequately evaluate

health risk impacts associated with Project construction and operation. (*Id.* at 19.) Should the refined analysis reach similar conclusions of potential health risks as the screening-level HRA, the mitigation measures set forth by SWAPE should be incorporated. (*See Id.* at 25-30.)

IV. The EIR's Finding that the Project's Greenhouse Gas (GHG) Impacts are Less Than Significant Is Not Supported by Substantial Evidence.

a. Modeling Inputs Utilized to Determine the Project's Greenhouse Gas Impacts are Not Supported by Substantial Evidence and May Underestimate Significance of Project Impacts.

The FEIR recalculated the Project's GHG emissions. While the estimated emissions of metric carbon dioxide equivalent (MT CO₂e) from the Project under all four scenarios increased in the recalculation, the FEIR still found no significant GHG impacts. (FEIR II-119.) The finding of no significance is flawed and not supported by substantial evidence.

As discussed above in Section II, the FEIR relies on CalEEMod Version 2022.1, which does not provide complete output files. (Ex. A, p.21-22.) Consequently, neither the parameters or the justification for such changes can be verified.

Further, when reviewing the Projects' model, SWAPE found that several of the values input into the model were not consistent with information disclosed in the project documents and may result in underestimating the Project's GHG impacts. Without complete input files, the findings are not supported by substantial evidence and prevent meaningful public comment.

b. Substantial Evidence Shows That the Project May Have Significant Air Quality Impacts.

The GHG emissions estimates from both the DEIR and FEIR are potentially significant. SWAPE provided two meaningful thresholds for evaluation. First, SCAQMD's 2008 Interim CEQA Significance Threshold for Stationary Sources, Rules, and Plans report sets an interim bright-line threshold of 3,000 MT CO₂e/year for the year 2020. (*Id.* at 22.) The Project's GHG emissions for all scenarios exceed the SCAQMD interim threshold. (*Id.* at 23.) Even the option with the lowest GHG emissions, the Office Option with Residential Bungalows was estimated to generate net annual GHG emissions of 5,704 MT, exceeding this bright-line threshold by nearly 2Xs. (*Id.*) Thus, the Project's air models (even though they may underestimate impacts) indicate potentially significant GHG impacts.

SWAPE also compared the Project's estimated GHG emissions to the SCAQMD 2035 service population efficiency target of 3 MT CO₂e. (*Id.* at 23.) The service population efficiency values for both Residential Options and the Office Option with Restaurant Bungalows exceed the 2035 target. (*Id.* at 24.) By this standard too, the Project's models

indicate potentially significant GHG impacts. A revised EIR must be prepared with an updated GHG analysis incorporating mitigation measures and complete output files. (*See* Ex. A, Greenhouse Gas Project Level Mitigation Measures p.28-30.)

V. The City Lacks Substantial Evidence to Adopt a Statement of Overriding Considerations Because the EIR Fails to Adopt All Feasible Mitigation Measures for the Project's Significant and Unavoidable Noise and Vibration Impacts.

CEQA requires that the City apply all feasible mitigation measures for the Project's significant and unavoidable noise and vibration impacts. When approving a project with significant and unavoidable environmental impacts, the City Council will be required to make findings that additional mitigation measures or alternatives are infeasible. (Pub. Resources Code, § 21081(a); 14 CCR § 15043.) If all feasible mitigation measures have been applied and the City Council finds that "specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment," the Council can adopt a Statement of Overriding Considerations and approve the Project. (Pub. Resources Code, § 21081(b); 14 CCR §§ 15091, 15093.)

The EIR concluded that the Project's noise and vibration impacts would result in a significant and unavoidable impact. (DEIR, p. I-22; IV.H-27; IV.H-42.) The EIR requires mitigation measures NOI-MM-1. (DEIR, p. IV.H-45). However, noise impacts will remain significant and unmitigated. (*Id.* at 47). Construction noise will also remain significant and unmitigated despite imposition of mitigation measures NOI-MM-2. (*Id.* at 52).

Due to the significant and unavoidable cumulative noise and vibration impacts, the City Council is required to determine that "[t]here is no feasible way to lessen or avoid the significant effect." (14 CCR § 15043.) However, there are additional feasible ways to further reduce the Project's excess impacts prior to Project approval.

Regarding on-site construction noise sources, the City should require implementation of the following feasible mitigation measures that have been successfully implemented elsewhere:

- Scaffolding to support construction noise control blankets should be erected at the façades of those receptors which will still have a significant impact due to height limitations of traditional noise barriers, receptors R1 to R3. Clear panels should be implemented as needed to minimize impacts on light or views.
- For the older buildings in the project area, offer to upgrade the windows to acoustically rated insulated window assemblies.
- Offer to temporarily enclose balconies and breezeways of those receivers that still have a significant impact after implementation of NOM-MM-1. These enclosures can be made with clear panels to minimize impact on light or views.

Regarding vibration impacts associated with human annoyance:

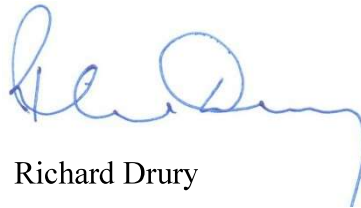
- Offer to relocate persons that either work from home or sleep during daytime hours due to night shift work hours to temporary office spaces or hotel rooms during high vibration activities during construction.

The measures discussed above are all feasible and would reduce the Project's significant noise and vibration impact. Without incorporating some or all of the above measures, the City lacks the substantial evidence needed to make the findings required by CEQA and to adopt a Statement of Overriding Considerations. (Pub. Resources Code, § 21081; 14 CCR §§ 15091, 15093.)

CONCLUSION

SAFER respectfully requests that the Hearing Officer recommend that the Hearing Officer deny the tract map until a revised EIR has been circulated to address the issues and deficiencies raised in this comment to ensure compliance with CEQA.

Sincerely,



Richard Drury

EXHIBIT B



T 510.836.4200
F 510.836.4205

1939 Harrison Street, Ste. 150
Oakland, CA 94612

www.lozeaudrury.com
brian@lozeaudrury.com

Via Email

October 3, 2023

Rey Fukuda, City Planner
City of Los Angeles, Department of City
Planning
221 N. Figueroa Street, Suite 1350
Los Angeles, CA 90012

Em: rey.fukuda@lacity.org

Department of City Planning
City of Los Angeles, Department of City Planning
221 N. Figueroa Street, Suite 1350
Los Angeles, CA 90012

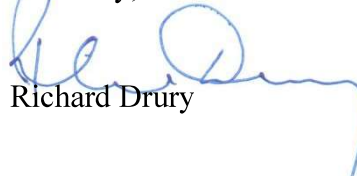
**Re: Comment on Final Environmental Impact Report, 1360 N. Vine Street
Project (SCH 2017061063; ENV-2016-3778-EIR)**

Dear Mr. Fukuda and Advisory Agency:

I am writing on behalf of Supporters Alliance for Environmental Responsibility (“SAFER”) regarding the Final Environmental Impact Report (“FEIR”) prepared for the 1360 N. Vine Street Project (SCH 2017061063; ENV-2016-3778-EIR), including all actions related or referring to the proposed construction of a 361-foot high-rise building with four levels of subterranean parking consisting of up to 429 residential units or 303-foot high rise office building with eight levels of subterranean parking and associated bungalows located at 1360 North Vine Street in the City of Los Angeles (“Project”). This letter supplements our letter dated October 2, 2023, which is incorporated by reference in its entirety.

We submit herewith the comments of Leisa Nalls of the acoustical engineering firm, Wilson Ihrig. Ms. Nalls concludes that the EIR fails to consider feasible mitigation measures that would reduce significant unmitigated noise impacts of the Project. Since the EIR fails to analyze these feasible noise mitigation measures, the City may not adopt a statement of overriding considerations. *Covington v. Great Basin Unified Air Pollution Control Dist.*, 43 Cal. App. 5th 867 (2019). The City may only adopt a statement of overriding considerations if it have implemented all feasible mitigation measures. (Pub. Res. Code, § 21081; 14 CCR § 15092(b)(2)(A) and (B).) Since the City has failed to analyze feasible noise mitigation measures that have been implemented elsewhere, the City may not certify the EIR and may not approve the Project. *Id.*

Sincerely,



Richard Drury



WI #22-004.018

October 3, 2023

Richard Drury, Esq.
Lozeau | Drury LLP
1939 Harrison Street, Suite 150
Oakland, California 94612

Subject: **1360 N Vine Street Project**
Los Angeles, California
Case No. ENV-2016-3778-EIR
Review and Comment on Environmental Noise Study

Dear Mr. Drury,

As requested, we have reviewed the information and noise impact analyses in the following documents:

1360 N. Vine Street Project, Los Angeles, California
Draft Environmental Impact Report ("DEIR")
Case No. ENV-2016-3778-EIR
June 2022

This letter reports our comments on the noise analysis in the subject document.

Wilson Ihrig, Acoustical Consultants, has practiced exclusively in the field of acoustics since 1966. During our 57 years of operation, we have prepared hundreds of noise studies for Environmental Impact Reports and Statements. We have one of the largest technical laboratories in the acoustical consulting industry. We also utilize industry-standard acoustical programs such as Environmental Noise Model (ENM), Traffic Noise Model (TNM), Roadway Construction Noise Model (RCNM), SoundPLAN, and CADNA. In short, we are well qualified to prepare environmental noise studies and review studies prepared by others.

Adverse Effects of Noise¹

Although the health effects of noise are not taken as seriously in the United States as they are in other countries, they are real and, in many parts of the country, pervasive.

Noise-Induced Hearing Loss. If a person is repeatedly exposed to loud noises, he or she may experience noise-induced hearing impairment or loss. In the United States, both the Occupational Health and Safety Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) promote standards and regulations to protect the hearing of people exposed to high levels of industrial noise.

Speech Interference. Another common problem associated with noise is speech interference. In addition to the obvious issues that may arise from misunderstandings, speech interference also leads to problems with concentration fatigue, irritation, decreased working capacity, and automatic stress reactions. For complete speech intelligibility, the sound level of the speech should be 15 to 18 dBA higher than the background noise. Typical indoor speech levels are 45 to 50 dBA at 1 meter, so any noise above 30 dBA begins to interfere with speech intelligibility. The common reaction to higher background noise levels is to raise one's voice. If this is required persistently for long periods of time, stress reactions and irritation will likely result.

Sleep Disturbance. Noise can disturb sleep by making it more difficult to fall asleep, by waking someone after they are asleep, or by altering their sleep stage, e.g., reducing the amount of rapid eye movement (REM) sleep. Noise exposure for people who are sleeping has also been linked to increased blood pressure, increased heart rate, increase in body movements, and other physiological effects. Not surprisingly, people whose sleep is disturbed by noise often experience secondary effects such as increased fatigue, depressed mood, and decreased work performance.

Cardiovascular and Physiological Effects. Human's bodily reactions to noise are rooted in the "fight or flight" response that evolved when many noises signaled imminent danger. These include increased blood pressure, elevated heart rate, and vasoconstriction. Prolonged exposure to acute noises can result in permanent effects such as hypertension and heart disease.

Impaired Cognitive Performance. Studies have established that noise exposure impairs people's abilities to perform complex tasks (tasks that require attention to detail or analytical processes) and it makes reading, paying attention, solving problems, and memorizing more difficult. This is why there are standards for classroom background noise levels and why offices and libraries are designed to provide quiet work environments. One societal change brought about by the COVID-19 pandemic is that many people now routinely work and learn from home, and this has given rise to more noise complaints from loud activities such as construction work.

¹ More information on these and other adverse effects of noise may be found in *Guidelines for Community Noise*, eds B Berglund, T Lindvall, and D Schwela, World Health Organization, Geneva, Switzerland, 1999. (<https://www.who.int/docstore/peh/noise/Comnoise-1.pdf>)

Comments on Construction Noise Mitigation

The construction noise analysis in the DEIR is thorough, transparent, and reasonable. The DEIR correctly concludes that, *sans* mitigation, the on-site construction noise impacts would be significant under CEQA at three nearby noise-sensitive receptors. [DEIR at p. IV.H-27] In Mitigation Measure NOI-MM-1, the DEIR commits to erecting a number of sound barriers around the site to reduce construction noise to levels less than the threshold of significance at ground-level receptors. However, the DEIR preparers recognize that these walls will not provide any noise relief to residents on the upper floors of neighboring buildings:

However, the estimated construction-related noise levels would still exceed the significance thresholds at the sensitive uses represented by receptor locations R1, R2, and R3. In addition, the temporary sound barrier would not be effective in reducing the construction-related noise for the upper levels of the hospital uses (a six-story building), represented by receptor location R3. In order to be effective, the temporary noise barrier would need to be as high as the buildings (i.e., six stories), which would not be feasible. [DEIR at p. IV H-46]

The DEIR states that it is infeasible to build sound barriers at the edge of the Project site that are tall enough to block the construction noise at the higher elevations. I concur with the infeasibility of this noise control methods, however, there are three other options not discussed in the DEIR which may be feasible.

The first option is to erect scaffolding to support construction noise control blankets at the façades of impacted receptors (R1, R2, and R3). R1 is across the street from the Project site to the south, R2 is directly adjacent to the Project site to the east, and R3 is across the street and diagonal to the Project site to the northeast. Because scaffolding attaches directly to the buildings for lateral support, it is reasonably economical to erect tall “sound barrier” walls. The light and aesthetic issues may be somewhat ameliorated by using clear vinyl for at least some of the “panels”. This was done (using standard construction noise control blankets) in San Francisco some years ago to shield the headquarters of a major financial company from noise during construction of a large project nearby. The financial building is 8-stories high. R3 is 6-stories high, which is similar.

A second option which may be feasible would be to install heavy Plexiglass or other clear panels around the edges of balconies and/or breezeways that face the Project site to act as sound barriers without much affecting the light or view. As the photograph in Figure 1 below shows, the breezeway of a residential building near R2 has open railing guardrails, so it would be a matter of fitting Plexiglass to cover the full exposure areas, including over the railings. Because noise would reflect off the bottom of the breezeway above, the panels would likely need to extend from the existing parapet to the roof or breezeway floor above with only a small opening for ventilation. The panels would need to be able to withstand wind loads, and there may be other code requirements. Determining the exact number of balconies and breezeways that would require treatment would require a detailed noise analysis.

A third option which may be feasible would be to offer to upgrade windows and exterior doors of those upper floor residential units or hospital rooms which would not be shielded by the sound barriers as defined in NOI-MM-1. This was done for an adjacent property to a construction project that Wilson Ihrig was involved with assessing the construction noise impacts, so it is not an unprecedented noise mitigation option. The efficacy of this would depend to a large degree on the acoustical insulation provided by the existing windows which is not known at this time. If it is determined that the existing windows do not provide much insulation, determining appropriate acoustical ratings for replacement window and door assemblies would require a detailed noise analysis.

Comments on Construction Vibration Mitigation

The construction vibration analysis in the DEIR is thorough, transparent, and reasonable. The DEIR correctly concludes that, *sans* mitigation, the on-site construction vibration impacts with respect to human annoyance would be significant under CEQA at three nearby noise-sensitive receptors. [DEIR at p. IV.H-50] In Mitigation Measure NOI-MM-2, the DEIR commits to a vibration monitoring program capable of documenting construction related ground vibration levels at adjacent buildings during demolition and grading/excavation phases. The monitoring system will have two triggers, one at a warning level (0.1 PPV) at which level the contractor shall identify the source of vibration and provide reasonable steps to reduce the vibration levels, and the other at the regulatory level (0.12 PPV) at which level the contractor shall halt construction in the area of the buildings being monitored.

This mitigation measures addresses building damage due to on-site construction activities, However, the DEIR preparers recognize that these measures will not mitigate vibration impacts associated with human annoyance from on-site and off-site construction vibration impacts.

Other mitigation measures were considered to reduce vibration impacts from on-site construction activities with respect to human annoyance, including the installation of a wave barrier. However, wave barriers must be very deep and long to be effective and are not considered cost effective for temporary applications, such as construction. In addition, constructing a wave barrier to reduce the Project's construction-related vibration impacts would, in and of itself, generate ground-borne vibration from the excavation equipment. Thus, it is concluded that there are no feasible mitigation measures that could be implemented to reduce the temporary vibration impacts from on-site construction associated with human annoyance to a less-than-significant level. In addition, there are no feasible mitigation measures that would reduce the potential vibration human annoyance impacts associated with the off-site construction trucks. As such, vibration impacts associated with human annoyance from on-site and off-site construction would remain significant. [DEIR at p. IV H-53]

The DEIR states that there are no feasible mitigation measures that could be implemented to reduce the temporary vibration impacts from on-site and off-site construction associated with human annoyance. I concur with the infeasibility of the proposed vibration control methods for reducing

impacts associated with human annoyance, however, there is at least one options not discussed in the DEIR which may be feasible.

An option for addressing vibration impacts associated with human annoyance is to offer to relocate persons who either work from home, have irregular sleep schedules due to night shift work, or other conditions that would cause vibration to unduly disrupt their lives to alternative locations (e.g., temporary office spaces, hotel rooms, etc.) for the duration of heavy construction. This was done, pre-COVID-19, for work-from-home residents in a property adjacent to a construction project in Oakland that Wilson Ihrig advising on construction noise and vibration control, so it is not an unprecedented mitigation option. Determining the exact number of residential units that would require this treatment would require additional information.

Conclusion

The DEIR correctly identifies that Project construction will cause a significant noise impacts to residents in the area, and claims that there are no feasible mitigation measures. I suggest that either scaffolding-supported noise control blankets/panels, temporary Plexiglass barriers on individual balconies/breezeways, or replacement of existing windows and exterior doors may be feasible options as these have been implemented on other projects. Any of these could be made to work from a technical standpoint.

The DEIR also correctly identifies that Project construction, both on-site and off-site, will cause a significant vibration impact associated with human annoyance for residents in the area, and again claims that there is no feasible mitigation. I suggest that those residents that will be impacted by construction-generated vibration be temporarily relocated to facilities suitable for work or sleep as the case may be for the duration of heavy construction.



Please contact me if you have any question about this review of the noise analysis in the *1360 N. Vine Street Project DEIR*.

Very truly yours,

WILSON IHRIG

Leisa Nalls
Associate Principal



Figure 1: Breezeway at residential building near Residential Receptor R2.

2023-09-29_1360 n vine - feir noise - l nalls

EXHIBIT C



T 510.836.4200
F 510.836.4205

1939 Harrison Street, Ste. 150
Oakland, CA 94612

www.lozeaudrury.com
brian@lozeaudrury.com

Via Email

December 13, 2023

Rey Fukuda, City Planner
City of Los Angeles, Department of City
Planning
221 N. Figueroa Street, Suite 1350
Los Angeles, CA 90012
Em: rey.fukuda@lacity.org

Department of City Planning
City of Los Angeles, Department of City Planning
221 N. Figueroa Street, Suite 1350
Los Angeles, CA 90012

**Re: Comment on Final Environmental Impact Report, 1360 N. Vine Street
Project (SCH 2017061063; ENV-2016-3778-EIR)**

Dear Mr. Fukuda and Advisory Agency:

I am writing on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") regarding the Final Environmental Impact Report ("FEIR") prepared for the 1360 N. Vine Street Project (SCH 2017061063; ENV-2016-3778-EIR) ("Project"). SAFER filed a comment letter on October 2, 2023 ("October 2 Letter"), supported by comments from air quality experts Matt Hagemann, P.G., C.Hg. and Paul E. Rosenfeld, Ph.D., of the environmental consulting firm, Soil/Water/Air Protection Enterprise ("SWAPE"), and a supplemental comment letter on October 3, 2023 ("October 3 Letter"), supported by comments from acoustical engineering firm Wilson Ihrig. The Deputy Advisory Agency issued a letter of determination on October 11, 2023 approving the VTTM for the Project. SAFER filed its appeal on October 19, 2023.

The Department of City Planning December Appeal Report provides only a cursory response to SAFER's comments and fails to respond directly to either expert's comments. The City's failure to substantively respond to SAFER's comments renders the EIR legally inadequate.

LEGAL STANDARD

Public participation is an essential part of the CEQA process. Public review of environmental documents serves the following purposes: (a) sharing expertise; (b) disclosing agency analyses; (c) checking for accuracy; (d) detecting omissions; (e) discovering public concerns; and (f) soliciting counter proposals. (CEQA Guidelines, § 15200.) "[T]he 'privileged position' that members of the public hold in the CEQA process . . . is based on a

belief that citizens can make important contributions to environmental protection and on notions of democratic decision making. . . .” (*Concerned Citizens of Costa Mesa, supra*, 42 Cal.3d at 936.)

Evaluation and response to public comments is also essential. An FEIR must include a “detailed” written response to all “significant environmental issues” raised by commenters. As the court stated in *City of Long Beach v. LA USD* (2009) 176 Cal.App.4th 889, 904:

The requirement of a detailed written response to comments helps to ensure that the lead agency will fully consider the environmental consequences of a decision before it is made, that the decision is well informed and open to public scrutiny, and that public participation in the environmental review process is meaningful.

The agency’s responses to comments must be detailed and must provide a reasoned, good faith analysis. (14 CCR §15088(c.)) In addition, an agency’s responses to comments must specifically explain the reasons for rejecting suggestions received in comments and for proceeding with a project despite its environmental impacts. Such explanations must be supported with specific references to empirical information, scientific authority, and/or explanatory information. (*Cleary v. County of Stanislaus* (1981) 118 Cal.App.3d 348, 357.) The responses, moreover, must manifest a good faith, reasoned analysis; conclusory statements unsupported by factual information will not suffice. (*People v. County of Kern* (1974) 39 Cal.App.3d 830, 841; *see also Berkeley Keep Jets Over the Bay Com. v. Board of Port Cmrs.*, (2001) 91 Cal.App.4th 1344, 1367 (“*Berkeley Jets*”) (EIR inadequate due to failure to respond to expert evidence on toxic air contaminants).

Failure to provide a substantive response to comments render the EIR legally inadequate. (*Rural Land Owners Assoc. v. City Council* (1983) 143 Cal.App.3d 1013, 1020.)

DISCUSSION

I. The City Failed to Adequately Respond to Comments.

The City has failed to provide a substantive response to SAFER’s comments and the expert comments of SWAPE and Wilson Ihrig. The Appeal Report only refers to one comment letter and states that the letter was responded to by City Planning Staff during the public hearing and in the Final EIR. Since the October 2 and October 3 Letters were submitted after the FEIR was published, it is impossible for the FEIR to have responded to them. Further, even if it were realistic for the City Planning Staff to have responded specifically to each point of the comments in detail at the public hearing (which it is not), any oral responses would be inadequate as response to comments must be written.

The Appeal Report failed outright to address several air quality impacts issues raised in SAFER’s October 2 Letter including (1) unsubstantiated adjustment of the Carbon Intensity Factors in the FEIR; (2) failure of the FEIR to adequately estimate demolition

impacts; and (3) failure of the FEIR to account for any hearths. (*See* October 2 Letter II.b.) The Appeal Report also failed to address several additional unsubstantiated input adjustments in the FEIR raised by SWAPE in its comments included in the October 2 Letter. (*Id.*) The Appeal Report also fails to address the FEIR's underestimation of truck trips. (*Id.* III. A).

Air quality experts Matt Hagemann, P.G., C.Hg. and Paul E. Rosenfeld, Ph.D., of SWAPE reviewed the Appeal Report and found that the document was insufficient in addressing their concerns regarding the Project's air quality and health risk impacts. They have detailed their concerns in Exhibit A.

II. The City Improperly Discounted Comments Demonstrating the Lack of Substantial Evidence Supporting the FEIR.

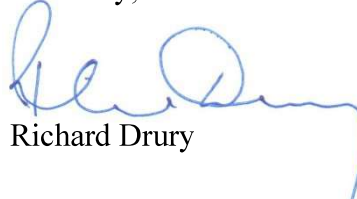
SAFER's October 2 Letter provides detailed comments demonstrating that the FEIR's findings that air quality, health risk, and GHG emissions would remain less than significant were not supported by substantial evidence. In response, the staff response states "The Appellant has not provided substantial evidence to contradict the Draft EIR's finding that air quality, health risk, and GHG emissions would remain less than significant." Appeal Report, A-3. It is incontrovertible that the findings of an FEIR must be supported by substantial evidence. (Ca. Pub. Res. Code § 21168.5; *Sierra Club v. Contra Costa County* (1992) 10 Cal.App.4th 1212, 1222-1224.) The burden is not on the commentor to provide evidence to the contrary. The failure of the agency to support its determination by substantial evidence is a prejudicial abuse of discretion. (*Id.*)

Further, the staff response is patently false. SAFER's comments *do* provide substantial evidence demonstrating potentially significant air quality, health risk and GHG emissions impacts. *See* October 2 Safer Comment II.c, III.b, IV.b. These comments are supported by qualified experts. By definition, expert opinion *is* substantial evidence under CEQA. (CEQA Guidelines, § 15064(f)(5).) The City failed to adequately respond to these points.

CONCLUSION

SAFER respectfully requests that the City Planning Commission grant the appeal and set aside all Project approvals and circulate a revised EIR prior to considering approvals for the Project to ensure compliance with CEQA.

Sincerely,



Richard Drury

EXHIBIT D

Shawn Smallwood, PhD
3108 Finch Street
Davis, CA 95616

Rey Fukuda
City of Los Angeles, Department of City Planning
221 North Figueroa Street, Room 1350
Los Angeles, California, 90012-2639

26 June 2024

RE: 1360 N. Vine Street Project

Dear Mr. Fukuda,

I write to comment on the potential impacts to biological resources that could result from the proposed project at 1360 N. Vine Street, for which a Draft Environmental Impact Report (DEIR) was prepared. The DEIR does not analyze potential impacts to biological resources. I understand the project would add either a >360-foot-tall, 484,421 square-foot residential building, or a 303-foot-tall, 484,423 square-foot office building. I am concerned that the project would cause significant impacts to biological resources that have not been analyzed in the DEIR, which neglects to consider the aerosphere of Los Angeles as avian habitat. According to the DEIR, the project would cause no impacts to special-status species of wildlife because such species do not occur in the urbanized setting of Los Angeles. This argument, however, is flawed and its conclusion demonstrably inaccurate.

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 TO SURVEY FOR WILDLIFE

On my behalf, Noriko Smallwood, a wildlife biologist with a Master's Degree from California State University Los Angeles, visited the site of the proposed project for 2.6 hours from 06:18 to 08:54 hours on 25 June 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 sunny with no wind and temperatures of 66-73° F. The site contained abandoned buildings surrounded by a chain-link fence, with ornamental trees scattered throughout the site (Photos 1, 2, and 3).



Photos 1, 2 and 3. Views of the project site, 25 June 2024. Photos by Noriko Smallwood.

Noriko detected 15 species of vertebrate wildlife at or adjacent to the project site, including one species with special status (Table 1). N Noriko saw Allen's hummingbird (Photos 4 and 5), which is a US Fish and Wildlife Service Bird of Conservation Concern. She also saw black phoebe and northern mockingbird (Photos 6 and 7), California towhee (Photos 8 and 9), mourning dove (Photo 10), American crow and hooded oriole (Photos 11 and 12), house sparrow and house finch (Photos 13, 14, and 15), lesser goldfinch (Photo 16), eastern fox squirrel (Photo 17), among the other species listed in Table 1.

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

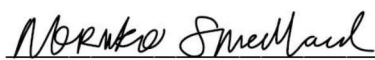
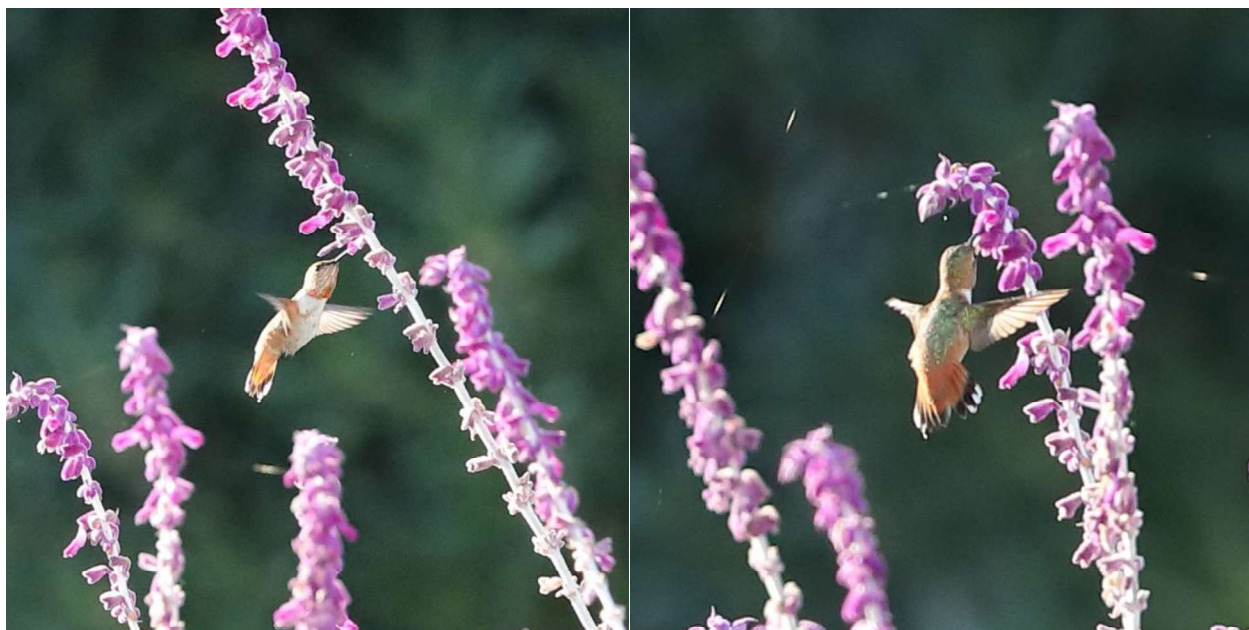

Noriko Smallwood

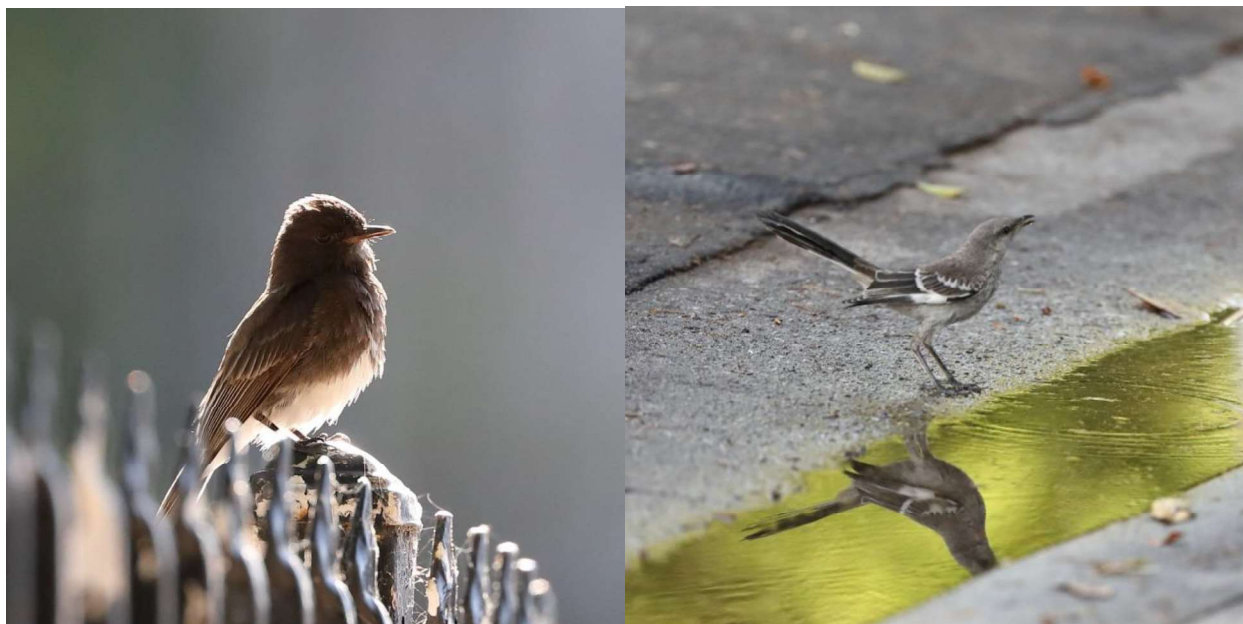
Table 1. Species of wildlife Noriko observed during 2.6 hours of survey on 25 June 2024.

Common name	Species name	Status ¹	Notes
Rock pigeon	<i>Columba livia</i>	Non-native	Perched and flew over
Eurasian collared-dove	<i>Streptopelia decaocto</i>	Non-native	Flew over
Mourning dove	<i>Zenaida macroura</i>		Foraged
Allen's hummingbird	<i>Selasphorus sasin</i>	BCC	Nectared nearby, flew through site
Black phoebe	<i>Sayornis nigricans</i>		Nested on or near site, juvenile foraged nearby
American crow	<i>Corvus brachyrhynchos</i>		Perched and flew over
Common raven	<i>Corvus corax</i>		Flew over
Northern mockingbird	<i>Mimus polyglottos</i>		Nested on or near site, juveniles nearby
House sparrow	<i>Passer domesticus</i>	Non-native	Nested on or near site, juvenile begging for food
House finch	<i>Haemorphous mexicanus</i>		Perched and flew over
Lesser goldfinch	<i>Spinus psaltria</i>		Flew into tree on site
Dark-eyed junco	<i>Junco hyemalis</i>		Nested on or near site, juvenile on site
California towhee	<i>Melozone crissalis</i>		Foraged
Hooded oriole	<i>Icterus cucullatus</i>		Flew to and from palm trees
Eastern fox squirrel	<i>Sciurus niger</i>	Non-native	Many in area

¹ Listed as FT or FE = federal threatened or endangered, CT or CE = California threatened or endangered, CFP = California Fully Protected (CFG Code 3511), SSC = California Species of Special Concern, 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).



Photos 4 and 5. Allen's hummingbird nectaring on Mexican sage next to the project site, 25 June 2024. Photos by Noriko Smallwood.



Photos 6 and 7. Black phoebe (left), and juvenile northern mockingbird (right) next to the project site, 25 June 2024. Photos by Noriko Smallwood.



Photos 8 and 9. California towhee next to the project site, 25 June 2024. Photos by Noriko Smallwood.



Photo 10. Mourning dove foraging on the project site, 25 June 2024. Photo by Noriko Smallwood.



Photos 11 and 12. American crow (left) and hooded oriole (right) on the project site, 25 June 2024. Photos by Noriko Smallwood.



Photos 13 and 14. Juvenile house sparrow begging for food (left), and house finch (right) next to the project site, 25 June 2024. Photos by Noriko Smallwood.



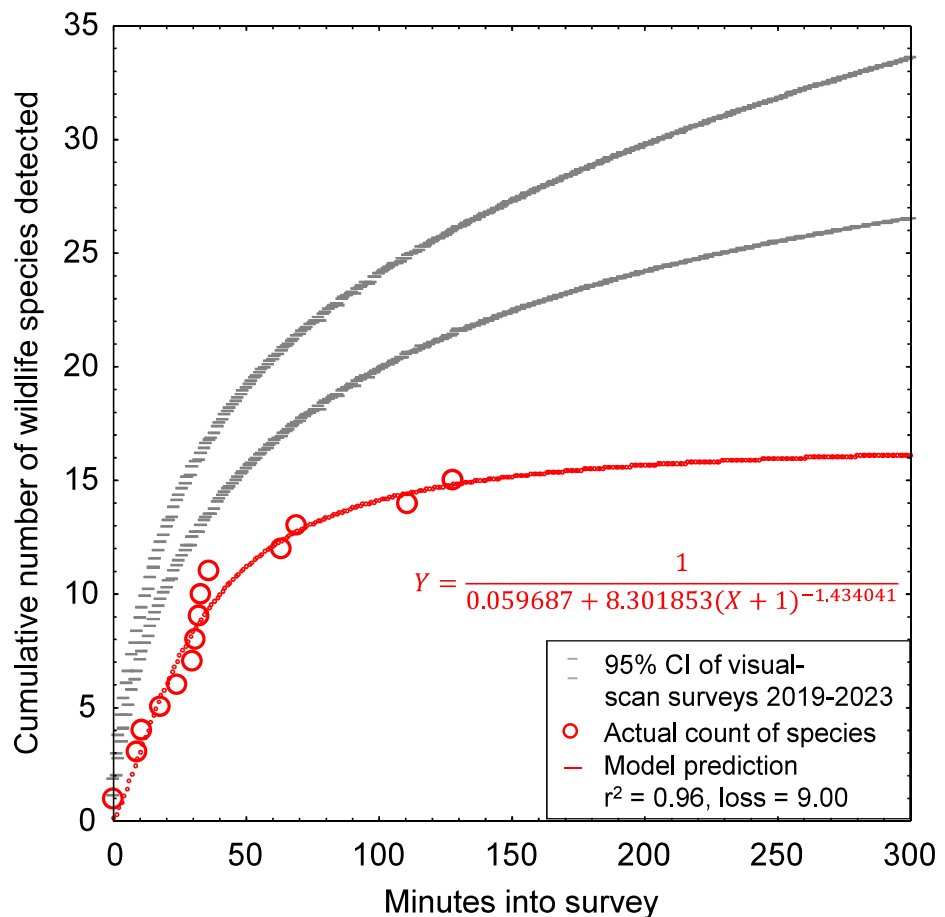
Photos 15 and 16. House sparrow eating cat food (left), and a lesser goldfinch (right) on the project site, 25 June 2024. Photos by Noriko Smallwood.



Photo 17. Eastern fox squirrel with a peanut next to the project site, 25 June 2024. Photo by Noriko Smallwood.

Noriko saw ample evidence of volant wildlife at the project site. Considering Noriko's findings of wildlife in her surveys throughout the urbanized metropolis of greater Los Angeles (Smallwood and Wood 2022), it is of no surprise that Noriko detected 15 species of wildlife during only a brief reconnaissance survey. However, the species of wildlife Noriko detected comprised most but not all 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 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 Noriko's survey. In this case, the model predicts that 17 species of vertebrate wildlife were available to be detected during the morning of the 25th, which numbered 2 more species than Noriko actually detected (Figure 1).

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 25 June 2024. Note that the relationship would differ if the survey was based on another method or during another season.



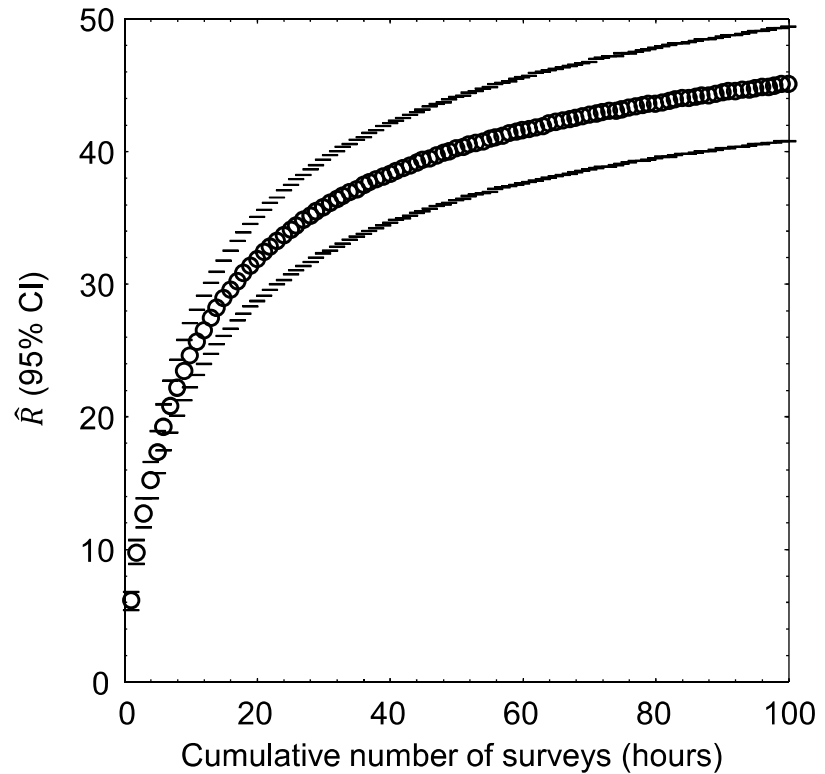
I do not know the identities of the 2 undetected species, but the pattern in Noriko's data indicates that wildlife species richness at the project site is not much lower than species richness we measured at 34 other sites along California's southern coast over the last few years (Figure 1). Compared to models fit to data we collected from other sites in the region between 2019 and 2023, Noriko's data from the project site fall just a little short of the lower 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 25 June 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.

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 my one survey on the site, and only three surveys in the project area. 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.

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 9.9 species over my first 2.6 hours of survey at my research site in the Altamont Pass (2.6 hours to match the 2.6 hours Noriko surveyed at the project site on 25 June 2024), which composed 17.4% 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 15 species Noriko detected after 2.6 hours of survey at the project site on 25 June 2024 likely represented 17.4% 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 $15 / 0.174 = 86$ 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 86 predicted species, then continued surveys would eventually detect 6 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 86 species of vertebrate wildlife, including 6 special-status species of vertebrate wildlife, is derived from a daytime visual-scan survey, 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 demonstrates the presence of a moderate abundance and diversity of wildlife at the project site, including multiple avian species. This survey should serve as a starting point toward characterization of the site’s wildlife community. Additional surveys should be performed, particularly nocturnal surveys, to characterize additional wildlife at the site. An inventory or a reasonable approximation of an inventory is essential for characterizing the existing environmental setting, and for serving as the baseline from which to predict project impacts to wildlife.

In addition to the species detections during her survey, Noriko also recorded heights above ground of flying birds (Table 2). Noriko observed 51 birds in flight across the project site, or nearly 20 birds per hour in flight across/over the site. The birds she saw ranged in height above ground from 5 feet to 70 feet, all of which were within the height domain of the glass façades of either Project option. The weighted mean flight height of birds flying across/over the site was 37 feet. This height would correspond with expansive glass windows of either Project option. Furthermore, at about this height domain, the buildings’ renderings in the DEIR depict the largest degrees of reflected images of trees, neighboring structures, and sky. Window reflectivity is one of the most dangerous aspects of windows to birds.

Table 2. *Birds and their heights above ground observed by Noriko Smallwood during her 2.6-hour visual-scan survey of the project site, 25 June 2024.*

Bird species	Number observed	Height above ground (feet)
Rock pigeon	1	70
Rock pigeon	2	60
Rock pigeon	2	55
American crow	1	50
Hooded oriole	1	50
Rock pigeon	4	50
American crow	1	45
House sparrow	1	45
House sparrow	1	40
House sparrow	2	40
Rock pigeon	3	40
American crow	1	40
House sparrow	2	40
Rock pigeon	8	40
Eurasian collared-dove	1	40
Northern mockingbird	1	35
American crow	1	35
Mourning dove	1	35
House sparrow	1	35
House sparrow	2	35
House sparrow	3	30
House finch	1	30
Dark-eyed junco	1	20
House sparrow	2	20
House sparrow	1	20
House sparrow	1	20
Lesser goldfinch	1	15
House sparrow	2	10
Allen's hummingbird	1	10
Common raven	1	5

EXISTING ENVIRONMENTAL 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. The site should also include that portion of the aerosphere that would be displaced by the project, which in the case of this project would include 494 feet of vertical space extending upward from the project's ground footprint. This displaced airspace is habitat to many species of birds. To understand this part of avian habitat, one must consider the definition of habitat, which is a species' use of the environment (Hall et al. 1997), typically based on measurement (Smallwood 2002). The gaseous atmosphere, or aerosphere, is habitat to many species. It is a principal medium

of life to volant animals such as birds (Davy et al. 2017, Diehl et al. 2017). The aerosphere is where birds and bats and other volant animals with wings migrate, disperse, forage, perform courtship and where some of them mate. Birds are some of the many types of animals that evolved wings as a morphological adaptation to thrive by moving through the medium of the aerosphere. The aerosphere is habitat not just to volant wildlife that fly through it, but to any and every animal that breaths air. Indeed, an entire discipline of ecology has emerged to study this essential aspect of habitat – the discipline of aeroecology (Kunz et al. 2008). The aerosphere is part of the existing environmental setting, and needs to be characterized as such in CEQA review.

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 1360 N. Vine Street Project, neither of these needed steps has been taken.

Environmental Setting informed by Field Surveys

No surveys for birds have been completed at the project site. Surveys are needed to characterize bird flights during both day and night, and the bird flights need to be further attributed by species, heights above ground, flight directions, and specific flight behaviors. The lack of surveys leaves the City of Los Angeles blind to any potential project impacts to birds, because without a survey there is no sound basis for characterizing the existing environmental setting. Going forward with the project without completing appropriate avian surveys would be indefensible, and could result in high costs to birds and to the building's owner if windows require retrofits or window glass needs to be marked for visibility post-construction (see below, under Bird-Window Collisions).

Environmental Setting informed by Desktop Review

The purpose of literature and database review, and of consulting with local experts, is to inform bird surveys, and to augment interpretation of survey outcome. Analysts need this information to identify which species are known to fly through the area.

The DEIR includes no desktop review to assess occurrence likelihoods of birds in or near the airspace that would be displaced by the proposed project. The lack of a desktop review for avian flight paths and for special-status species likely to occur at the project site leaves the City of Los Angeles uninformed of potential project impacts to birds.

In my assessment based on database review, 76 special-status species of volant wildlife are known to occur near enough to the project site to warrant analysis of occurrence potential (Table 3). Of these 76 species, 62 are birds that are capable of flying within the

aerosphere of the project site and would be vulnerable to collision with the building or with loss of energy caused by the need to circumnavigate the building. Of these 76 special-status species, Noriko confirmed 1 on site, and 35 (46%) have been documented within 1.5 miles of the site ('Very close'), 23 (30%) within 1.5 and 4 miles ('Nearby'), and another 11 (14%) within 4 to 30 miles ('In region'). Most (78%) of the species in Table 3 have been reportedly seen within 4 miles of the project site. It is reasonable to conclude, therefore, that the site's airspace carries considerable potential for supporting the travels of many special-status species of volant wildlife based on proximity of recorded occurrences.

Table 3. Occurrence likelihoods of special-status species of volant wildlife 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 Noriko detected.

Common name	Species name	Status ¹	Data bases, Site visit
Monarch	<i>Danaus plexippus</i>	FC	Very close
Black swift	<i>Cypseloides niger</i>	SSC3, BCC	Nearby
Vaux's swift	<i>Chaetura vauxi</i>	SSC2, BCC	Very close
Costa's hummingbird	<i>Calypte costae</i>	BCC	Very close
Rufous hummingbird	<i>Selasphorus rufus</i>	BCC	Very close
Allen's hummingbird	<i>Selasphorus sasin</i>	BCC	On site
Laughing gull	<i>Leucophaeus atricilla</i>	WL	In region
Heermann's gull	<i>Larus heermanni</i>	BCC	In region
Western gull	<i>Larus occidentalis</i>	BCC	Very close
California gull	<i>Larus californicus</i>	BCC, WL	Very close
Double-crested cormorant	<i>Phalacrocorax auritus</i>	WL	Very close
American white pelican	<i>Pelicanus erythrorhynchos</i>	SSC1, BCC	Very close
Turkey vulture	<i>Cathartes aura</i>	BOP	Very close
Osprey	<i>Pandion haliaetus</i>	WL, BOP	Nearby
White-tailed kite	<i>Elanus luecurus</i>	CFP, BOP	Nearby
Golden eagle	<i>Aquila chrysaetos</i>	BGEPA, CFP, BOP, WL	Very close
Northern harrier	<i>Circus cyaneus</i>	BCC, SSC3, BOP	Very close
Sharp-shinned hawk	<i>Accipiter striatus</i>	WL, BOP	Very close
Cooper's hawk	<i>Accipiter cooperii</i>	WL, BOP	Very close
Bald eagle	<i>Haliaeetus leucocephalus</i>	CE, BGEPA, CFP	Nearby
Red-shouldered hawk	<i>Buteo lineatus</i>	BOP	Very close
Swainson's hawk	<i>Buteo swainsoni</i>	CT, BOP	Very close
Red-tailed hawk	<i>Buteo jamaicensis</i>	BOP	Very close
Ferruginous hawk	<i>Buteo regalis</i>	WL, BOP	Very close
Zone-tailed hawk	<i>Buteo albonotatus</i>	BOP	Nearby
Barn owl	<i>Tyto alba</i>	BOP	Very close
Western screech-owl	<i>Meascops kennicotti</i>	BOP	Nearby
Great horned owl	<i>Bubo virginianus</i>	BOP	Very close
Burrowing owl	<i>Athene cunicularia</i>	BCC, SSC2, BOP	Nearby

Common name	Species name	Status¹	Data bases, Site visit
Lewis's woodpecker	<i>Melanerpes lewis</i>	BCC	Nearby
Nuttall's woodpecker	<i>Picoides nuttallii</i>	BCC	Very close
American kestrel	<i>Falco sparverius</i>	BOP	Very close
Merlin	<i>Falco columbarius</i>	WL, BOP	Very close
Peregrine falcon	<i>Falco peregrinus</i>	BOP	Very close
Prairie falcon	<i>Falco mexicanus</i>	WL, BOP	Nearby
Olive-sided flycatcher	<i>Contopus cooperi</i>	BCC, SSC2	Very close
Willow flycatcher	<i>Empidonax trailii</i>	CE	Very close
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	FE, CE	In region
Vermilion flycatcher	<i>Pyrocephalus rubinus</i>	SSC2	Very close
Least Bell's vireo	<i>Vireo bellii pusillus</i>	FE, CE	In region
Loggerhead shrike	<i>Lanius ludovicianus</i>	SSC2	Nearby
Oak titmouse	<i>Baeolophus inornatus</i>	BCC	Very close
California horned lark	<i>Eremophila alpestris actia</i>	WL	Nearby
Bank swallow	<i>Riparia riparia</i>	CT	Nearby
Purple martin	<i>Progne subis</i>	SSC2	Nearby
Wrentit	<i>Chamaea fasciata</i>	BCC	Very close
California gnatcatcher	<i>Poliophtila c. californica</i>	FT, SSC2	In region
California thrasher	<i>Toxostoma redivivum</i>	BCC	Very close
Cassin's finch	<i>Haemorhous cassinii</i>	BCC	In region
Lawrence's goldfinch	<i>Spinus lawrencei</i>	BCC	Very close
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC2	Nearby
Black-chinned sparrow	<i>Spizella atrogularis</i>	BCC	Nearby
Gray-headed junco	<i>Junco hyemalis caniceps</i>	WL	Nearby
Bell's sparrow	<i>Amphispiza b. belli</i>	WL	In region
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	WL	Very close
Yellow-breasted chat	<i>Icteria virens</i>	SSC3	Nearby
Yellow-headed blackbird	<i>X. xanthocephalus</i>	SSC3	Nearby
Bullock's oriole	<i>Icterus bullockii</i>	BCC	Very close
Tricolored blackbird	<i>Agelaius tricolor</i>	CT, BCC, SSC1	Very close
Lucy's warbler	<i>Leiothlypis luciae</i>	SSC3, BCC	Nearby
Virginia's warbler	<i>Leiothlypis virginiae</i>	WL, BCC	Nearby
Yellow warbler	<i>Setophaga petechia</i>	SSC2	Very close
Summer tanager	<i>Piranga rubra</i>	SSC1	Very close
Pallid bat	<i>Antrozous pallidus</i>	SSC, WBWG:H	In region
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SSC, WBWG:H	In range
Silver-haired bat	<i>Lasionycteris noctivagans</i>	WBWG:M	In region
Spotted bat	<i>Euderma maculatum</i>	SSC, WBWG:H	In range
Hoary bat	<i>Lasiurus cinereus</i>	WBWG:M	Nearby
Western yellow bat	<i>Lasiurus xanthinus</i>	SSC, WBWG:H	In range
Western small-footed myotis	<i>Myotis cililabrum</i>	WBWG:M	In range

Common name	Species name	Status ¹	Data bases, Site visit
Miller's myotis	<i>Myotis evotis</i>	WBWG:M	In region
Little brown myotis	<i>Myotis lucifugus</i>	WBWG:M	In region
Fringed myotis	<i>Myotis thysanodes</i>	WBWG:H	In range
Long-legged myotis	<i>Myotis volans</i>	WBWG:H	In range
Yuma myotis	<i>Myotis yumanensis</i>	WBWG:LM	Nearby
Western mastiff bat	<i>Eumops perotis</i>	SSC, WBWG:H	Nearby

¹ Listed as FT or FE = federal threatened or endangered, FC = federal candidate for listing, BGEPA = Bald and Golden Eagle Protection Act, 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).

Because the project would consist of a glass-covered tall building, avian use of the local aerosphere should be of principal concern. Of the available records of tracked birds, 2,585 birds of 117 species have been recorded flying into the Los Angeles area from 18 countries of the Americas, from as far away as Argentina, Bahamas, and Canada (<https://explorer.audubon.org/explore/locations/MYSwLgngvAMg9gZwAQEEB2BzApGgywgbgCcsMQ4ooBhFA4OAVzTCOfUBlWnAQzCgDMAFgBoABgCsAiQHYYCOClACoARhUAOEQCYhE3UA/connections?locationAddress=Los+Angeles%2C+California&y=2403411.3245877805&x=2517121.9601057805&zoom=7&legend=expand&layersPanel=expand>). According to BirdCast, which detects flying birds via radar, nearly 794,000 birds were in flight over Los Angeles County during the night of 28 April 2024. I am unable to locate the major pathways of these flights, but Terrill et al. (2021) found up to 13,500 birds per morning¹ flying low through Bear Divide. Headed to and from Bear Divide, these birds would have been similarly channeled by terrain in and around the Los Angeles Metropolitan Area. Many of these birds likely pass through the US 101 gap through the Santa Monica Mountains on their way to or from the Los Angeles River, a pathway that would take birds right across the site of the proposed project (Figure 3).

¹ Morning flights are regarded as continuation of nocturnal flights into daylight hours.

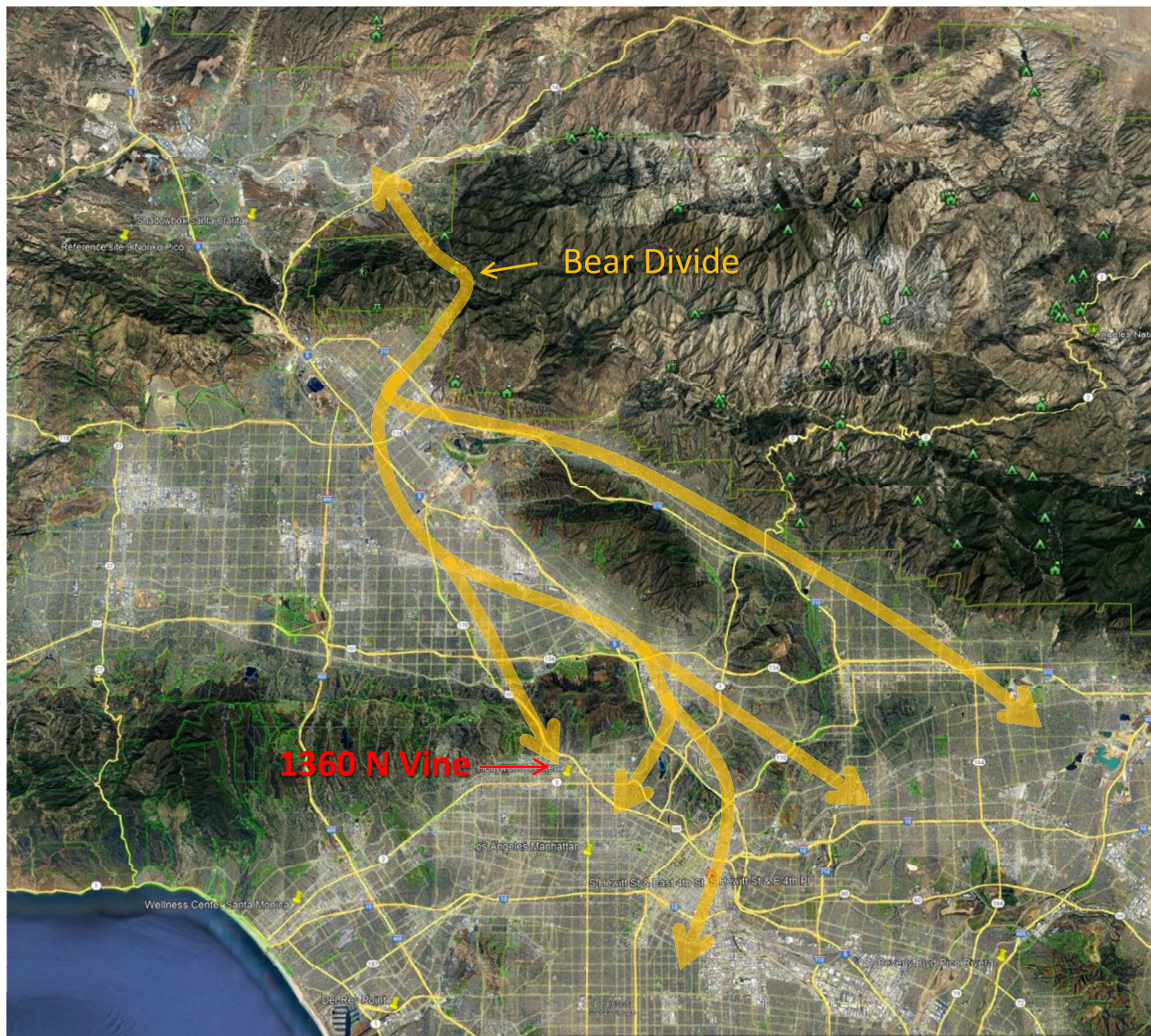


Figure 3. Likely flight paths of birds passing through Bear Divide, which has been found to serve as a major pathway of bird migration through Los Angeles County (Terrill et al. 2021). The terrain in the map is exaggerated for improved visibility of how birds are likely channeled by the landscape. The approximate location of the Project site is indicated by the red arrow, and is just south of a likely movement corridor through the Santa Monica Mountains.

More than 11 million birds flew across Los Angeles County through the 2024 spring migration by the time of this writing (<https://dashboard.birdcast.info/region/US-CA-037>). Bird flights across Los Angeles averaged 107,539 flights per night in spring 2024. Most of these flights ranged in height from 100 feet to 10,000 feet above ground. I am unaware of the distribution of flight heights of birds crossing the City of Los Angeles, but at a nearby study site (Coachella Valley), McCrary et al. (1982) detected 12.9% of nocturnally migrating birds below 100 m altitude, which corresponds with the heights of the proposed building of either option. Assuming this percentage also applies to birds

flying across the aerosphere overlying Los Angeles, then migratory flights documented by BirdCast would average 13,873 birds per night to be flying in the dark and within the height domain of the proposed building. That 13,500 birds per night were documented flying through the Bear Divide during peak migration likely attests to considerable uncertainty in the BirdCast data. Such uncertainty should be treated in a manner that is consistent with the precautionary principle in risk assessment. The BirdCast data might be missing many of the migratory birds that fly low due to ground clutter.² Ground clutter in Los Angeles comes in the forms of buildings and trees. In summary, the basis exists for concern that a large number of birds might routinely fly through the aerosphere that would be displaced by the proposed building of either Project option. Potential collision impacts from this project are addressed below, under the heading Bird-Window Collisions.

Hundreds of thousands of birds migrate along the Pacific Flyway, which includes Los Angeles. At least 62 special-status species of bird are known to the project area (Table 2). According to the scientific literature, many of the special-status species in Table 2 have been documented as window collision fatalities and are therefore susceptible to new structural glass installations (Supplemental Material to Basilio et al. 2020; Smallwood unpublished review). Many more species of migratory birds, protected by the federal Migratory Bird Treaty Act and by California's Migratory Bird Protection Act, have also been documented as window collision victims (Basilio et al. 2020).

BIOLOGICAL IMPACTS ASSESSMENT

Accurate characterization of the existing environmental setting is an essential foundation for analysis of potential project impacts, but the DEIR provides no foundation for impacts analysis. An impacts analysis should consider whether and how the proposed project would affect members of each potentially occurring special-status species and of each species of bird likely to attempt to fly through the airspace of the project. In the following, I analyze two types of impacts likely to result from the project, and neither of which is addressed in the DEIR.

BIRD-WINDOW COLLISIONS

The project would add either a >360-foot-tall residential building or a 303-foot-tall office building, either of which would expose the birds of Los Angeles to expansive windows composing the building's facades. 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.

² Ground clutter generates solid radar echoes that hide the echoes of individual 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 (Van Doren et al. 2021) 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 et 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 m² 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 m² 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.

The DEIR does not disclose the extent of glass windows on the proposed new building. I therefore measured the extents of windows depicted in the building schematics within the DEIR. Based on my measurements, I estimate the project would include 20,840 m² windows in the office building option, and 24,725 m² windows in the residential building option. Applying the mean fatality rate (above) to my estimates of glass in either project, I predict annual bird deaths of 1,523 (95% CI: 904–2,142) due to the office building option, or annual bird deaths of 1,807 (95% CI: 1,073–2,542) due to the residential building option.

The vast majority of these deaths would be of birds protected under the Migratory Bird Treaty Act and under the recently revised 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 potentially significant adverse biological impacts. The DEIR should be revised to appropriately analyze the potential impacts of bird-window collisions that might be caused by either project option.

TRAFFIC IMPACTS TO WILDLIFE

The DEIR neglects to address one of the project's most obvious, substantial impacts to wildlife, and that is wildlife mortality and injuries caused by project-generated traffic. Project-generated traffic would endanger wildlife that must, for various reasons, cross roads used by the project's traffic (Photos 18–21), including along roads far from the project footprint but which would nevertheless be traversed by automobiles head to or from the project's building. Vehicle collisions have accounted for the deaths of many thousands of amphibian, reptile, mammal, bird, and arthropod fauna, and the impacts have often been found to be significant at the population level (Forman et al. 2003). Across North America traffic impacts have taken devastating tolls on wildlife (Forman et al. 2003). In Canada, 3,562 birds were estimated killed per 100 km of road per year (Bishop and Brogan 2013), and the US estimate of avian mortality on roads is 2,200 to 8,405 deaths per 100 km per year, or 89 million to 340 million total per year (Loss et al. 2014). Local impacts can be more intense than nationally.

Photo 18. A white-tailed antelope squirrel runs across the road just in the Coachella Valley, 26 May 2022. Such road crossings are usually successful, but too often prove fatal to the animal.



Photo 19. A coyote uses the crosswalk to cross a road on 2 February 2023. Not all drivers stop, nor do all animals use the crosswalk. Too often, animals are injured or killed when they attempt to cross roads.



Photos 20 and 21. Raccoon killed on Road 31 just east of Highway 505 in Solano County (left; photo taken on 10 November 2018), and mourning dove killed by vehicle on a California road (right; photo by Noriko Smallwood, 21 June 2020.)

The nearest study of traffic-caused wildlife mortality was performed along a 2.5-mile stretch of Vasco Road in Contra Costa County, California. Fatality searches in this study

found 1,275 carcasses of 49 species of mammals, birds, amphibians and reptiles over 15 months of searches (Mendelsohn et al. 2009). This fatality number needs to be adjusted for the proportion of fatalities that were not found due to scavenger removal and searcher error. This adjustment is typically made by placing carcasses for searchers to find (or not find) during their routine periodic fatality searches. This step was not taken at Vasco Road (Mendelsohn et al. 2009), but it was taken as part of another study next to Vasco Road (Brown et al. 2016). Brown et al.'s (2016) adjustment factors for carcass persistence resembled those of Santos et al. (2011). Also applying searcher detection rates from Brown et al. (2016), the adjusted total number of fatalities was estimated at 12,187 animals killed by traffic on the road. This fatality number over 1.25 years and 2.5 miles of road translates to 3,900 wild animals per mile per year. In terms comparable to the national estimates, the estimates from the Mendelsohn et al. (2009) study would translate to 243,740 animals killed per 100 km of road per year, or 29 times that of Loss et al.'s (2014) upper bound estimate and 68 times the Canadian estimate. An analysis is needed of whether increased traffic generated by the project site would similarly result in local impacts on wildlife.

For wildlife vulnerable to front-end collisions and crushing under tires, road mortality can be predicted from the study of Mendelsohn et al. (2009) as a basis, although it would be helpful to have the availability of more studies like that of Mendelsohn et al. (2009) at additional locations. My analysis of the Mendelsohn et al. (2009) data resulted in an estimated 3,900 animals killed per mile along a county road in Contra Costa County. Two percent of the estimated number of fatalities were birds, and the balance was composed of 34% mammals (many mice and pocket mice, but also ground squirrels, desert cottontails, striped skunks, American badgers, raccoons, and others), 52.3% amphibians (large numbers of California tiger salamanders and California red-legged frogs, but also Sierran treefrogs, western toads, arboreal salamanders, slender salamanders and others), and 11.7% reptiles (many western fence lizards, but also skinks, alligator lizards, and snakes of various species). VMT is useful for predicting wildlife mortality because I was able to quantify miles traveled along the studied reach of Vasco Road during the time period of the Mendelsohn et al. (2009), hence enabling a rate of fatalities per VMT that can be projected to other sites, assuming similar collision fatality rates.

The DEIR predicts daily VMTs of 25,389 in the office building option, and 34,090 in the residential building option, which translate to 9,266,985 and 12,442,850 annual VMT, respectively. During the Mendelsohn et al. (2009) study, 19,500 cars traveled Vasco Road daily, so the vehicle miles that contributed to my estimate of non-volant fatalities was $19,500 \text{ cars and trucks} \times 2.5 \text{ miles} \times 365 \text{ days/year} \times 1.25 \text{ years} = 22,242,187.5$ vehicle miles per 12,187 wildlife fatalities, or 1,825 vehicle miles per fatality. This rate divided into the DEIR's predicted annual VMT would predict 5,078 vertebrate wildlife fatalities per year due to project-generated traffic from the office building option, or 6,818 vertebrate wildlife fatalities per year due to project-generated traffic from the residential building option. However, compared to the study area of Mendelsohn et al. (2009), fewer animals would be killed in the urbanized part of Los Angeles that surrounds the project site, so an adjustment is warranted. Assuming that the number of wild animals encountered by project-generated traffic would be only 10% of the number

of animals encountered by traffic in the Mendelsohn et al. (2009) study, the annual death toll to wildlife resulting from project-generated traffic would be 508 or 682 depending on whether the project building was built for offices or residential, respectively. Either outcome would qualify as a significant impact, and based on the current DEIR, neither would be mitigated.

Based on my analysis, the project-generated traffic would cause substantial, significant impacts to wildlife. The DEIR does not address this potential impact, let alone propose to mitigate it. Mitigation measures to improve wildlife safety along roads are available and are feasible, and they need exploration for their suitability with the proposed project. Given the predicted level of project-generated traffic-caused mortality, and the lack of any proposed mitigation, it is my opinion that the proposed project would result in potentially significant adverse biological impacts. The DEIR should be revised to appropriately analyze the impact of wildlife-automobile collisions resulting from project-generated traffic.

CUMULATIVE IMPACTS

The project would insert a tall building into the airspace that has been used by volant wildlife for many thousands of years to travel across the Los Angeles Basin. The project would further fragment aerial habitat of volant wildlife, and this would contribute cumulatively to other similar impacts caused by other mid-rise and high-rise buildings in the area. The project would also cause a predicted 1,523 (95% CI: 904–2,142) bird collision fatalities due to the office building option, or 1,807 (95% CI: 1,073–2,542) bird collision fatalities due to the residential building option. Additionally, the project would generate a predicted 9,266,985 annual VMT due to the office building option, or 12,442,850 annual VMT due to the residential building option, which, assuming collision mortality would be 10 of the estimated mortality in a California study (see above), would contribute 508 or 682 to 396 wildlife-automobile collision fatalities to the cumulative annual mortality already underway in Los Angeles. A cumulative impacts analysis needs to be completed.

MITIGATION MEASURES

The DEIR proposes no mitigation for potential project impacts to wildlife, including for impacts to flying birds. Below are recommendations for mitigation to be added to a revised DEIR.

RECOMMENDED MEASURES

Guidelines on Building Design to Minimize Bird-Window Collisions: If the project goes forward, it should at a minimum 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. The San Francisco Planning Department's (2011) building design guidelines are more comprehensive than those of New York City, but they could have gone further. For example, the San Francisco guidelines probably should have also covered scientific monitoring of impacts as well as compensatory mitigation for impacts that could not be avoided, minimized or reduced.

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).

Van Doren et al. (2021) found that nocturnal migrants contributed most of the collision fatalities in their study, and the largest predictors of fatalities were peak migration and lit windows. Van Doren et al. (2021) predicted that a light-out mitigation measure could reduce bird-window collision mortality by 60%.

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 the project for fatalities.

The City of Los Angeles should also follow the examples of other major cities and formulate its own mitigation guidelines for analysis of potential impacts and for mitigating those impacts.

Road Mortality: Compensatory mitigation is needed for the increased wildlife mortality that would be caused by bird-window collisions and the project-generated road traffic in the region. I suggest that this mitigation can be directed toward funding research to identify fatality patterns and effective impact reduction measures such as reduced speed limits and wildlife under-crossings or overcrossings of particularly

dangerous road segments. Compensatory mitigation can also be provided in the form of donations to wildlife rehabilitation facilities (see below).

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 the building's windows and with automobiles traveling to and from the building.

Thank you for your consideration,



Shawn Smallwood, Ph.D.

LITERATURE CITED

- Barton, C. M., C. S. Riding, and S. R. Loss. 2017. Magnitude and correlates of bird collisions at glass bus shelters in an urban landscape. Plos One 12. (6): e0178667. <https://doi.org/10.1371/journal.pone.0178667>
- Basilio, L. G., D. J. Moreno, and A. J. Piratelli. 2020. Main causes of bird-window collisions: a review. Anais da Academia Brasileira de Ciências 92(1): e20180745 DOI 10.1590/0001-3765202020180745.
- Bishop, C. A. and J. M. Brogan. 2013. Estimates of Avian Mortality Attributed to Vehicle Collisions in Canada. Avian Conservation and Ecology 8:2. <http://dx.doi.org/10.5751/ACE-00604-080202>.
- Borden, W. C., O. M. Lockhart, A. W. Jones, and M. S. Lyons. 2010. Seasonal, taxonomic, and local habitat components of bird-window collisions on an urban university campus in Cleveland, OH. Ohio Journal of Science 110(3):44-52.
- Bracey, A. M., M. A. Etterson, G. J. Niemi, and R. F. Green. 2016. Variation in bird-window collision mortality and scavenging rates within an urban landscape. The Wilson Journal of Ornithology 128:355-367.
- Brown, B. B., L. Hunter, and S. Santos. 2020. Bird-window collisions: different fall and winter risk and protective factors. PeerJ 8:e9401 <http://doi.org/10.7717/peerj.9401>
- Brown, K., K. S. Smallwood, J. Szewczak, and B. Karas. 2016. Final 2012-2015 Report Avian and Bat Monitoring Project Vasco Winds, LLC. Prepared for NextEra Energy Resources, Livermore, California.

- Calvert, A. M., C. A. Bishop, R. D. Elliot, E. A. Krebs, T. M. Kydd, C. S. Machtans, and G. J. Robertson. 2013. A synthesis of human-related avian mortality in Canada. *Avian Conservation and Ecology* 8(2): 11. <http://dx.doi.org/10.5751/ACE-00581-080211>
- City of Portland Bureau of Environmental Services and Portland Audubon. 2020. Collisions at the Columbia Building: A synthesis of pre- and post-retrofit monitoring. Environmental Services of City of Portland, Oregon.
- Davy, C. M., A. T. Ford, and K. C. Fraser. 2017. Aeroconservation for the fragmented skies. *Conservation Letters* 10(6): 773–780.
- Diehl, R. H., A. C. Peterson, R. T. Bolus, and D. Johnson. 2017. Extending the habitat concept to the airspace. USGS Staff -- Published Research. 1129. <https://digitalcommons.unl.edu/usgsstaffpub/1129>
- Dunn, E. H. 1993. Bird mortality from striking residential windows in winter. *Journal of Field Ornithology* 64:302-309.
- Forman, T. T., D. Sperling, J. A. Bisonette, A. P. Clevenger, C. D. Cutshall, V. H. Dale, L. Fahrig, R. France, C. R. Goldman, K. Heanue, J. A. Jones, F. J. Swanson, T. Turrentine, and T. C. Winter. 2003. *Road Ecology*. Island Press, Covello, California.
- Gelb, Y. and N. Delacretaz. 2009. Windows and vegetation: Primary factors in Manhattan bird collisions. *Northeastern Naturalist* 16:455-470.
- Gómez-Moreno, V. del C., J. R. Herrera-Herrera, and S. Niño-Maldonado. 2018. Bird collisions in windows of Centro Universitario Victoria, Tamaulipas, México. *Huitzil, Revista Mexicana de Ornitología* 19(2): 227-236. <https://doi.org/10.28947/hrmo.2018.19.2.347>
- Hager, S. B., H. Trudell, K. J. McKay, S. M. Crandall, and L. Mayer. 2008. Bird density and mortality at windows. *Wilson Journal of Ornithology* 120:550-564.
- Hager S. B., B. J. Cosentino, K J. McKay, C. Monson, W. Zuurdeeg, and B. Blevins. 2013. Window area and development drive spatial variation in bird-window collisions in an urban landscape. *PLoS ONE* 8(1): e53371. doi:10.1371/journal.pone.0053371
- Hall, L. S., P. R. Krausman, and M. L. Morrison. 1997. “The habitat concept and a plea for standard terminology.” *Wildlife Society Bulletin* 25:173-82.
- Johnson, R. E., and G. E. Hudson. 1976. Bird mortality at a glassed-in walkway in Washington State. *Western Birds* 7:99-107.
- Kahle, L. Q., M. E. Flannery, and J. P. Dumbacher. 2016. Bird-window collisions at a west-coast urban park museum: analyses of bird biology and window attributes from Golden Gate Park, San Francisco. *PLoS ONE* 11(1):e144600 DOI 10.1371/journal.pone.0144600.

- Klem, D., Jr. 1989. Bird-window collisions. *Wilson Bulletin* 101:606-620.
- Klem, D., Jr. 1990. Collisions between birds and windows: mortality and prevention. *Journal of Field Ornithology* 61:120-128.
- Klem, D., Jr. 2009. Preventing bird-window collisions. *The Wilson Journal of Ornithology* 121:314-321.
- Klem, D., Jr. 2010. Avian mortality at windows: the second largest human source of bird mortality on earth. Pages 244-251 in *Proc. Fourth Int. Partners in Flight Conference: Tundra to Tropics*.
- Klem, D., Jr. 2011. Evaluating the effectiveness of Acopian Birdsavers to deter or prevent bird-glass collisions. Unpublished report.
- Klem, D., Jr. and P. G. Saenger. 2013. Evaluating the effectiveness of select visual signals to prevent bird-window collisions. *The Wilson Journal of Ornithology* 125:406-411.
- Klem, D. Jr., C. J. Farmer, N. Delacretaz, Y. Gelb and P. G. Saenger. 2009. Architectural and Landscape Risk Factors Associated with Bird-Glass Collisions in an Urban Environment. *Wilson Journal of Ornithology* 121:126-134.
- Kunz, T. H., S. A. Gauthreaux Jr., N. I. Hristov, J. W. Horn, G. Jones, E. K. V. Kalko, R. P. Larkin, G. F. McCracken, S. M. Swartz, R. B. Srygley, R. Dudley, J. K. Westbrook, and M. Wikelski. 2008. Aeroecology: probing and modelling the aerosphere. *Integrative and Comparative Biology* 48:1-11. doi:10.1093/icb/icn037
- Loss, S. R., T. Will, S. S. Loss, and P. P. Marra. 2014. Bird-building collisions in the United States: Estimates of annual mortality and species vulnerability. *The Condor: Ornithological Applications* 116:8-23. DOI: 10.1650/CONDOR-13-090.1
- Loss, S. R., T. Will, and P. P. Marra. 2014. Estimation of bird-vehicle collision mortality on U.S. roads. *Journal of Wildlife Management* 78:763-771.
- Loss, S. R., S. Lao, J. W. Eckles, A. W. Anderson, R. B. Blair, and R. J. Turner. 2019. Factors influencing bird-building collisions in the downtown area of a major North American city. *PLoS ONE* 14(11): e0224164. <https://doi.org/10.1371/journal.pone.0224164>
- Machtans, C. S., C. H. R. Wedeles, and E. M. Bayne. 2013. A first estimate for Canada of the number of birds killed by colliding with building windows. *Avian Conservation and Ecology* 8(2):6. <http://dx.doi.org/10.5751/ACE-00568-080206>
- McCrary, M. D., R. L. McKernan, R. E. Landry, W. D. Wagner, and R. W. Schreiber. 1982. Nocturnal avian migration assessment of the San Geronio Wind Resource

- Study Area, Spring 1982. Report to Southern California Edison Company, Rosemead, CA.
- Mendelsohn, M., W. Dexter, E. Olson, and S. Weber. 2009. Vasco Road wildlife movement study report. Report to Contra Costa County Public Works Department, Martinez, California.
- Ocampo-Peñuela, N., R. S. Winton, C. J. Wu, E. Zambello, T. W. Wittig and N. L. Cagle . 2016. Patterns of bird-window collisions inform mitigation on a university campus. *PeerJ* 4:e1652; DOI 10.7717/peerj.1652
- O’Connell, T. J. 2001. Avian window strike mortality at a suburban office park. *The Raven* 72:141-149.
- Orff, K., H. Brown, S. Caputo, E. J. McAdams, M. Fowle, G. Phillips, C. DeWitt, and Y. Gelb. 2007. Bird-safe buildings guidelines. New York City Audubon, New York.
- Parkins, K. L., S. B. Elbin, and E. Barnes. 2015. Light, glass, and bird–building collisions in an urban park. *Northeastern Naturalist* 22:84-94.
- Porter, A., and A. Huang. 2015. Bird collisions with glass: UBC pilot project to assess bird collision rates in Western North America. UBC Social Ecological Economic Development Studies (SEEDS) Student Report. Report to Environment Canada, UBC SEEDS and UBC BRITE.
- Riding, C. S., T. J. O’Connell, and S. R. Loss. 2020. Building façade-level correlates of bird–window collisions in a small urban area. *The Condor: Ornithological Applications* 122:1–14.
- Rössler, M., E. Nemeth, and A. Bruckner. 2015. Glass pane markings to prevent bird-window collisions: less can be more. *Biologia* 70: 535–541. DOI: 10.1515/biolog-2015-0057
- Sabo, A. M., N. D. G. Hagemeyer, A. S. Lahey, and E. L. Walters. 2016. Local avian density influences risk of mortality from window strikes. *PeerJ* 4:e2170; DOI 10.7717/peerj.2170
- San Francisco Planning Department. 2011. Standards for bird-safe buildings. San Francisco Planning Department, City and County of San Francisco, California.
- Santos, S. M., F. Carvalho, and A. Mira. 2011. How long do the dead survive on the road? Carcass persistence probability and implications for road-kill monitoring surveys. *PLoS ONE* 6(9): e25383. doi:10.1371/journal.pone.0025383
- Schneider, R. M., C. M. Barton, K. W. Zirkle, C. F. Greene, and K. B. Newman. 2018. Year-round monitoring reveals prevalence of fatal bird-window collisions at the

Virginia Tech Corporate Research Center. *PeerJ* 6:e4562 <https://doi.org/10.7717/peerj.4562>

Sheppard, C., and G. Phillips. 2015. Bird-friendly building design, 2nd Ed., American Bird Conservancy, The Plains, Virginia.

Shuford, W. D., and T. Gardali, [eds.]. 2008. California bird species of special concern: a ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California.

Somerlot, K. E. 2003. Survey of songbird mortality due to window collisions on the Murray State University campus. *Journal of Service Learning in Conservation Biology* 1:1–19.

Smallwood, K.S. 2002. Habitat models based on numerical comparisons. Pages 83-95 in *Predicting species occurrences: Issues of scale and accuracy*, J. M. Scott, P. J. Heglund, M. Morrison, M. Raphael, J. Haufler, and B. Wall, editors. Island Press, Covello, California.

Smallwood, N.L. and E.M. Wood. 2022. The ecological role of native plant landscaping in residential yards to urban wildlife. *Ecosphere* 2022;e4360.

Terrill, R. S., C. A. Dean, J. Garrett, D. W. Maxwell, L. Hill, A. Farnsworth, A. M. Dokter, M. W. Tingley. 2021. A novel locality for the observation of thousands of passerine birds during spring migration in Los Angeles County, California. *Western Birds* 52:322–339. doi 10.21199/WB52.4.4

Van Doren, B. M., D. E. Willardb, M. Hennenb, K. G. Hortonc, E. F. Stuber, D. Sheldond, A. H. Sivakumare, J. Wanga, A. Farnswortha, and B. M. Winger. 2021. Drivers of fatal bird collisions in an urban center. *Proceedings of the National Academy of Sciences* 118 (24). e2101666118

Kenneth Shawn Smallwood

Curriculum Vitae

3108 Finch Street
Davis, CA 95616
Phone (530) 756-4598
Cell (530) 601-6857
puma@dcn.org

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

- 762 professional reports, including:
 - 90 peer reviewed publications
 - 24 in non-reviewed proceedings
- 646 reports, declarations, posters and book reviews
- 8 in mass media outlets
- 92 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 based on 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 founts 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 interspersed 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.

Peer Reviewed Publications

Smallwood, K. S. 2022. Utility-scale solar impacts to volant wildlife. *Journal of Wildlife Management*: e22216. <https://doi.org/10.1002/jwmg.22216>

Smallwood, K. S., and N. L. Smallwood. 2021. Breeding Density and Collision Mortality of Loggerhead Shrike (*Lanius ludovicianus*) in the Altamont Pass Wind Resource Area. *Diversity* 13, 540. <https://doi.org/10.3390/d13110540>.

Smallwood, K. S. 2020. USA wind energy-caused bat fatalities increase with shorter fatality search intervals. *Diversity* 12(98); <https://doi.org/10.3390/d12030098>

Smallwood, K. S., D. A. Bell, and S. Standish. 2020. Dogs detect larger wind energy impacts on bats and birds. *Journal of Wildlife Management* 84:852-864. DOI: 10.1002/jwmg.21863.

Smallwood, K. S., and D. A. Bell. 2020. Relating bat passage rates to wind turbine fatalities.

- Diversity 12(84); doi:10.3390/d12020084.
- Smallwood, K. S., and D. A. Bell. 2020. Effects of wind turbine curtailment on bird and bat fatalities. *Journal of Wildlife Management* 84:684-696. DOI: 10.1002/jwmg.21844
- Kitano, M., M. Ino, K. S. Smallwood, and S. Shiraki. 2020. Seasonal difference in carcass persistence rates at wind farms with snow, Hokkaido, Japan. *Ornithological Science* 19: 63 – 71.
- Smallwood, K. S. and M. L. Morrison. 2018. Nest-site selection in a high-density colony of burrowing owls. *Journal of Raptor Research* 52:454-470.
- Smallwood, K. S., D. A. Bell, E. L. Walther, E. Leyvas, S. Standish, J. Mount, B. Karas. 2018. Estimating wind turbine fatalities using integrated detection trials. *Journal of Wildlife Management* 82:1169-1184.
- Smallwood, K. S. 2017. Long search intervals under-estimate bird and bat fatalities caused by wind turbines. *Wildlife Society Bulletin* 41:224-230.
- Smallwood, K. S. 2017. The challenges of addressing wildlife impacts when repowering wind energy projects. Pages 175-187 in Köppel, J., Editor, *Wind Energy and Wildlife Impacts: Proceedings from the CWW2015 Conference*. Springer. Cham, Switzerland.
- May, R., Gill, A. B., Köppel, J. Langston, R. H.W., Reichenbach, M., Scheidat, M., Smallwood, S., Voigt, C. C., Hüppop, O., and Portman, M. 2017. Future research directions to reconcile wind turbine–wildlife interactions. Pages 255-276 in Köppel, J., Editor, *Wind Energy and Wildlife Impacts: Proceedings from the CWW2015 Conference*. Springer. Cham, Switzerland.
- Smallwood, K. S. 2017. Monitoring birds. M. Perrow, Ed., *Wildlife and Wind Farms - Conflicts and Solutions*, Volume 2. Pelagic Publishing, Exeter, United Kingdom. www.bit.ly/2v3cR9Q
- Smallwood, K. S., L. Neher, and D. A. Bell. 2017. Turbine siting for raptors: an example from Repowering of the Altamont Pass Wind Resource Area. M. Perrow, Ed., *Wildlife and Wind Farms - Conflicts and Solutions*, Volume 2. Pelagic Publishing, Exeter, United Kingdom. www.bit.ly/2v3cR9Q
- Johnson, D. H., S. R. Loss, K. S. Smallwood, W. P. Erickson. 2016. Avian fatalities at wind energy facilities in North America: A comparison of recent approaches. *Human–Wildlife Interactions* 10(1):7-18.
- Sadar, M. J., D. S.-M. Guzman, A. Mete, J. Foley, N. Stephenson, K. H. Rogers, C. Grosset, K. S. Smallwood, J. Shipman, A. Wells, S. D. White, D. A. Bell, and M. G. Hawkins. 2015. Mange Caused by a novel *Micnemidocoptes* mite in a Golden Eagle (*Aquila chrysaetos*). *Journal of Avian Medicine and Surgery* 29(3):231-237.
- Smallwood, K. S. 2015. Habitat fragmentation and corridors. Pages 84-101 in M. L. Morrison and H. A. Mathewson, Eds., *Wildlife habitat conservation: concepts, challenges, and solutions*. John Hopkins University Press, Baltimore, Maryland, USA.

- Mete, A., N. Stephenson, K. Rogers, M. G. Hawkins, M. Sadar, D. Guzman, D. A. Bell, J. Shipman, A. Wells, K. S. Smallwood, and J. Foley. 2014. Emergence of *Knemidocoptic mangel* in wild Golden Eagles (*Aquila chrysaetos*) in California. *Emerging Infectious Diseases* 20(10):1716-1718.
- Smallwood, K. S. 2013. Introduction: Wind-energy development and wildlife conservation. *Wildlife Society Bulletin* 37: 3-4.
- Smallwood, K. S. 2013. Comparing bird and bat fatality-rate estimates among North American wind-energy projects. *Wildlife Society Bulletin* 37:19-33. + Online Supplemental Material.
- Smallwood, K. S., L. Neher, J. Mount, and R. C. E. Culver. 2013. Nesting Burrowing Owl Abundance in the Altamont Pass Wind Resource Area, California. *Wildlife Society Bulletin*: 37:787-795.
- Smallwood, K. S., D. A. Bell, B. Karas, and S. A. Snyder. 2013. Response to Huso and Erickson Comments on Novel Scavenger Removal Trials. *Journal of Wildlife Management* 77: 216-225.
- Bell, D. A., and K. S. Smallwood. 2010. Birds of prey remain at risk. *Science* 330:913.
- Smallwood, K. S., D. A. Bell, S. A. Snyder, and J. E. DiDonato. 2010. Novel scavenger removal trials increase estimates of wind turbine-caused avian fatality rates. *Journal of Wildlife Management* 74: 1089-1097 + Online Supplemental Material.
- Smallwood, K. S., L. Neher, and D. A. Bell. 2009. Map-based repowering and reorganization of a wind resource area to minimize burrowing owl and other bird fatalities. *Energies* 2009(2):915-943. <http://www.mdpi.com/1996-1073/2/4/915>
- Smallwood, K. S. and B. Nakamoto. 2009. Impacts of West Nile Virus Epizootic on Yellow-Billed Magpie, American Crow, and other Birds in the Sacramento Valley, California. *The Condor* 111:247-254.
- Smallwood, K. S., L. Rugge, and M. L. Morrison. 2009. Influence of Behavior on Bird Mortality in Wind Energy Developments: The Altamont Pass Wind Resource Area, California. *Journal of Wildlife Management* 73:1082-1098.
- Smallwood, K. S. and B. Karas. 2009. Avian and Bat Fatality Rates at Old-Generation and Repowered Wind Turbines in California. *Journal of Wildlife Management* 73:1062-1071.
- Smallwood, K. S. 2008. Wind power company compliance with mitigation plans in the Altamont Pass Wind Resource Area. *Environmental & Energy Law Policy Journal* 2(2):229-285.
- Smallwood, K. S., C. G. Thelander. 2008. Bird Mortality in the Altamont Pass Wind Resource Area, California. *Journal of Wildlife Management* 72:215-223.
- Smallwood, K. S. 2007. Estimating wind turbine-caused bird mortality. *Journal of Wildlife Management* 71:2781-2791.

- Smallwood, K. S., C. G. Thelander, M. L. Morrison, and L. M. Rugge. 2007. Burrowing owl mortality in the Altamont Pass Wind Resource Area. *Journal of Wildlife Management* 71:1513-1524.
- Cain, J. W. III, K. S. Smallwood, M. L. Morrison, and H. L. Loffland. 2005. Influence of mammal activity on nesting success of Passerines. *J. Wildlife Management* 70:522-531.
- Smallwood, K.S. 2002. Habitat models based on numerical comparisons. Pages 83-95 *in* Predicting species occurrences: Issues of scale and accuracy, J. M. Scott, P. J. Heglund, M. Morrison, M. Raphael, J. Haufler, and B. Wall, editors. Island Press, Covello, California.
- Morrison, M. L., K. S. Smallwood, and L. S. Hall. 2002. Creating habitat through plant relocation: Lessons from Valley elderberry longhorn beetle mitigation. *Ecological Restoration* 21: 95-100.
- Zhang, M., K. S. Smallwood, and E. Anderson. 2002. Relating indicators of ecological health and integrity to assess risks to sustainable agriculture and native biota. Pages 757-768 *in* D.J. Rapport, W.L. Lasley, D.E. Rolston, N.O. Nielsen, C.O. Qualset, and A.B. Damania (eds.), *Managing for Healthy Ecosystems*, Lewis Publishers, Boca Raton, Florida USA.
- Wilcox, B. A., K. S. Smallwood, and J. A. Kahn. 2002. Toward a forest Capital Index. Pages 285-298 *in* D.J. Rapport, W.L. Lasley, D.E. Rolston, N.O. Nielsen, C.O. Qualset, and A.B. Damania (eds.), *Managing for Healthy Ecosystems*, Lewis Publishers, Boca Raton, Florida USA.
- Smallwood, K.S. 2001. The allometry of density within the space used by populations of Mammalian Carnivores. *Canadian Journal of Zoology* 79:1634-1640.
- Smallwood, K.S., and T.R. Smith. 2001. Study design and interpretation of Sorex density estimates. *Annales Zoologici Fennici* 38:141-161.
- Smallwood, K.S., A. Gonzales, T. Smith, E. West, C. Hawkins, E. Stitt, C. Keckler, C. Bailey, and K. Brown. 2001. Suggested standards for science applied to conservation issues. *Transactions of the Western Section of the Wildlife Society* 36:40-49.
- Geng, S., Yixing Zhou, Minghua Zhang, and K. Shawn Smallwood. 2001. A Sustainable Agro-ecological Solution to Water Shortage in North China Plain (Huabei Plain). *Environmental Planning and Management* 44:345-355.
- Smallwood, K. Shawn, Lourdes Rugge, Stacia Hoover, Michael L. Morrison, Carl Thelander. 2001. Intra- and inter-turbine string comparison of fatalities to animal burrow densities at Altamont Pass. Pages 23-37 *in* S. S. Schwartz, ed., *Proceedings of the National Avian-Wind Power Planning Meeting IV*. RESOLVE, Inc., Washington, D.C.
- Smallwood, K.S., S. Geng, and M. Zhang. 2001. Comparing pocket gopher (*Thomomys bottae*) density in alfalfa stands to assess management and conservation goals in northern California. *Agriculture, Ecosystems & Environment* 87: 93-109.
- Smallwood, K. S. 2001. Linking habitat restoration to meaningful units of animal demography.

- Restoration Ecology 9:253-261.
- Smallwood, K. S. 2000. A crosswalk from the Endangered Species Act to the HCP Handbook and real HCPs. Environmental Management 26, Supplement 1:23-35.
- Smallwood, K. S., J. Beyea and M. Morrison. 1999. Using the best scientific data for endangered species conservation. Environmental Management 24:421-435.
- Smallwood, K. S. 1999. Scale domains of abundance among species of Mammalian Carnivora. Environmental Conservation 26:102-111.
- Smallwood, K.S. 1999. Suggested study attributes for making useful population density estimates. Transactions of the Western Section of the Wildlife Society 35: 76-82.
- Smallwood, K. S. and M. L. Morrison. 1999. Estimating burrow volume and excavation rate of pocket gophers (*Geomyidae*). Southwestern Naturalist 44:173-183.
- Smallwood, K. S. and M. L. Morrison. 1999. Spatial scaling of pocket gopher (*Geomyidae*) density. Southwestern Naturalist 44:73-82.
- Smallwood, K. S. 1999. Abating pocket gophers (*Thomomys* spp.) to regenerate forests in clearcuts. Environmental Conservation 26:59-65.
- Smallwood, K. S. 1998. Patterns of black bear abundance. Transactions of the Western Section of the Wildlife Society 34:32-38.
- Smallwood, K. S. 1998. On the evidence needed for listing northern goshawks (*Accipiter gentilis*) under the Endangered Species Act: a reply to Kennedy. J. Raptor Research 32:323-329.
- Smallwood, K. S., B. Wilcox, R. Leidy, and K. Yarris. 1998. Indicators assessment for Habitat Conservation Plan of Yolo County, California, USA. Environmental Management 22: 947-958.
- Smallwood, K. S., M. L. Morrison, and J. Beyea. 1998. Animal burrowing attributes affecting hazardous waste management. Environmental Management 22: 831-847.
- Smallwood, K. S, and C. M. Schonewald. 1998. Study design and interpretation for mammalian carnivore density estimates. Oecologia 113:474-491.
- Zhang, M., S. Geng, and K. S. Smallwood. 1998. Nitrate contamination in groundwater of Tulare County, California. Ambio 27(3):170-174.
- Smallwood, K. S. and M. L. Morrison. 1997. Animal burrowing in the waste management zone of Hanford Nuclear Reservation. Proceedings of the Western Section of the Wildlife Society Meeting 33:88-97.
- Morrison, M. L., K. S. Smallwood, and J. Beyea. 1997. Monitoring the dispersal of contaminants by wildlife at nuclear weapons production and waste storage facilities. The Environmentalist 17:289-295.

- Smallwood, K. S. 1997. Interpreting puma (*Puma concolor*) density estimates for theory and management. *Environmental Conservation* 24(3):283-289.
- Smallwood, K. S. 1997. Managing vertebrates in cover crops: a first study. *American Journal of Alternative Agriculture* 11:155-160.
- Smallwood, K. S. and S. Geng. 1997. Multi-scale influences of gophers on alfalfa yield and quality. *Field Crops Research* 49:159-168.
- Smallwood, K. S. and C. Schonewald. 1996. Scaling population density and spatial pattern for terrestrial, mammalian carnivores. *Oecologia* 105:329-335.
- Smallwood, K. S., G. Jones, and C. Schonewald. 1996. Spatial scaling of allometry for terrestrial, mammalian carnivores. *Oecologia* 107:588-594.
- Van Vuren, D. and K. S. Smallwood. 1996. Ecological management of vertebrate pests in agricultural systems. *Biological Agriculture and Horticulture* 13:41-64.
- Smallwood, K. S., B. J. Nakamoto, and S. Geng. 1996. Association analysis of raptors on an agricultural landscape. Pages 177-190 in D.M. Bird, D.E. Varland, and J.J. Negro, eds., *Raptors in human landscapes*. Academic Press, London.
- Erichsen, A. L., K. S. Smallwood, A. M. Commandatore, D. M. Fry, and B. Wilson. 1996. White-tailed Kite movement and nesting patterns in an agricultural landscape. Pages 166-176 in D. M. Bird, D. E. Varland, and J. J. Negro, eds., *Raptors in human landscapes*. Academic Press, London.
- Smallwood, K. S. 1995. Scaling Swainson's hawk population density for assessing habitat-use across an agricultural landscape. *J. Raptor Research* 29:172-178.
- Smallwood, K. S. and W. A. Erickson. 1995. Estimating gopher populations and their abatement in forest plantations. *Forest Science* 41:284-296.
- Smallwood, K. S. and E. L. Fitzhugh. 1995. A track count for estimating mountain lion *Felis concolor californica* population trend. *Biological Conservation* 71:251-259.
- Smallwood, K. S. 1994. Site invasibility by exotic birds and mammals. *Biological Conservation* 69:251-259.
- Smallwood, K. S. 1994. Trends in California mountain lion populations. *Southwestern Naturalist* 39:67-72.
- Smallwood, K. S. 1993. Understanding ecological pattern and process by association and order. *Acta Oecologica* 14(3):443-462.
- Smallwood, K. S. and E. L. Fitzhugh. 1993. A rigorous technique for identifying individual mountain lions *Felis concolor* by their tracks. *Biological Conservation* 65:51-59.

Smallwood, K. S. 1993. Mountain lion vocalizations and hunting behavior. *The Southwestern Naturalist* 38:65-67.

Smallwood, K. S. and T. P. Salmon. 1992. A rating system for potential exotic vertebrate pests. *Biological Conservation* 62:149-159.

Smallwood, K. S. 1990. Turbulence and the ecology of invading species. Ph.D. Thesis, University of California, Davis.

Peer-reviewed Reports

Smallwood, K. S., and L. Neher. 2017. Comparing bird and bat use data for siting new wind power generation. Report CEC-500-2017-019, California Energy Commission Public Interest Energy Research program, Sacramento, California. <http://www.energy.ca.gov/2017publications/CEC-500-2017-019/CEC-500-2017-019.pdf> and <http://www.energy.ca.gov/2017publications/CEC-500-2017-019/CEC-500-2017-019-APA-F.pdf>

Smallwood, K. S. 2016. Bird and bat impacts and behaviors at old wind turbines at Forebay, Altamont Pass Wind Resource Area. Report CEC-500-2016-066, California Energy Commission Public Interest Energy Research program, Sacramento, California. <http://www.energy.ca.gov/publications/displayOneReport.php?pubNum=CEC-500-2016-066>

Sinclair, K. and E. DeGeorge. 2016. Framework for Testing the Effectiveness of Bat and Eagle Impact-Reduction Strategies at Wind Energy Projects. S. Smallwood, M. Schirmacher, and M. Morrison, eds., Technical Report NREL/TP-5000-65624, National Renewable Energy Laboratory, Golden, Colorado.

Brown, K., K. S. Smallwood, J. Szewczak, and B. Karas. 2016. Final 2012-2015 Report Avian and Bat Monitoring Project Vasco Winds, LLC. Prepared for NextEra Energy Resources, Livermore, California.

Brown, K., K. S. Smallwood, J. Szewczak, and B. Karas. 2014. Final 2013-2014 Annual Report Avian and Bat Monitoring Project Vasco Winds, LLC. Prepared for NextEra Energy Resources, Livermore, California.

Brown, K., K. S. Smallwood, and B. Karas. 2013. Final 2012-2013 Annual Report Avian and Bat Monitoring Project Vasco Winds, LLC. Prepared for NextEra Energy Resources, Livermore, California. http://www.altamontsrc.org/alt_doc/p274_ventus_vasco_winds_2012_13_avian_bat_monitoring_report_year_1.pdf

Smallwood, K. S., L. Neher, D. Bell, J. DiDonato, B. Karas, S. Snyder, and S. Lopez. 2009. Range Management Practices to Reduce Wind Turbine Impacts on Burrowing Owls and Other Raptors in the Altamont Pass Wind Resource Area, California. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. CEC-500-2008-080. Sacramento, California. 183 pp. <https://tethys.pnnl.gov/publications/range-management-practices-reduce-wind-turbine->

[impacts-burrowing-owls-other-raptors](#)

Smallwood, K. S., and L. Neher. 2009. Map-Based Repowering of the Altamont Pass Wind Resource Area Based on Burrowing Owl Burrows, Raptor Flights, and Collisions with Wind Turbines. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. CEC-500-2009-065. Sacramento, California. <http://www.energy.ca.gov/publications/displayOneReport.php?pubNum=CEC-500-2009-065>

Smallwood, K. S., K. Hunting, L. Neher, L. Spiegel and M. Yee. 2007. Indicating Threats to Birds Posed by New Wind Power Projects in California. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. Submitted but not published. Sacramento, California.

Smallwood, K. S. and C. Thelander. 2005. Bird mortality in the Altamont Pass Wind Resource Area, March 1998 – September 2001 Final Report. National Renewable Energy Laboratory, NREL/SR-500-36973. Golden, Colorado. 410 pp.

Smallwood, K. S. and C. Thelander. 2004. Developing methods to reduce bird mortality in the Altamont Pass Wind Resource Area. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. 500-01-019. Sacramento, California. 531 pp. http://www.altamontsrcarchive.org/alt_doc/cec_final_report_08_11_04.pdf

Thelander, C.G. S. Smallwood, and L. Rugge. 2003. Bird risk behaviors and fatalities at the Altamont Pass Wind Resource Area. Period of Performance: March 1998—December 2000. National Renewable Energy Laboratory, NREL/SR-500-33829. U.S. Department of Commerce, National Technical Information Service, Springfield, Virginia. 86 pp.

Thelander, C.G., S. Smallwood, and L. Rugge. 2001. Bird risk behaviors and fatalities at the Altamont Wind Resource Area – a progress report. Proceedings of the American Wind Energy Association, Washington D.C. 16 pp.

Non-Peer Reviewed Publications

Smallwood, K. S. 2009. Methods manual for assessing wind farm impacts to birds. Bird Conservation Series 26, Wild Bird Society of Japan, Tokyo. T. Ura, ed., in English with Japanese translation by T. Kurosawa. 90 pp.

Smallwood, K. S. 2009. Mitigation in U.S. Wind Farms. Pages 68-76 in H. Hötter (Ed.), Birds of Prey and Wind Farms: Analysis of problems and possible solutions. Documentation of an International Workshop in Berlin, 21st and 22nd October 2008. Michael-Otto-Institut im NABU, Goosstrook 1, 24861 Bergenhusen, Germany. <http://bergenhusen.nabu.de/forschung/greifvoegel/>

Smallwood, K. S. 2007. Notes and recommendations on wildlife impacts caused by Japan's wind power development. Pages 242-245 in Yukihiro Kominami, Tatsuya Ura, Koshitawa, and Tsuchiya, Editors, Wildlife and Wind Turbine Report 5. Wild Bird Society of Japan, Tokyo.

Thelander, C.G. and S. Smallwood. 2007. The Altamont Pass Wind Resource Area's Effects on Birds: A Case History. Pages 25-46 in Manuela de Lucas, Guyonne F.E. Janss, Miguel Ferrer

- Editors, *Birds and Wind Farms: risk assessment and mitigation*. Madrid: Quercus.
- Neher, L. and S. Smallwood. 2005. Forecasting and minimizing avian mortality in siting wind turbines. *Energy Currents*. Fall Issue. ESRI, Inc., Redlands, California.
- Jennifer Davidson and Shawn Smallwood. 2004. Laying plans for a hydrogen highway. *Comstock's Business*, August 2004:18-20, 22, 24-26.
- Jennifer Davidson and Shawn Smallwood. 2004. Refined conundrum: California consumers demand more oil while opposing refinery development. *Comstock's Business*, November 2004:26-27, 29-30.
- Smallwood, K.S. 2002. Review of "The Atlas of Endangered Species." By Richard Mackay. *Environmental Conservation* 30:210-211.
- Smallwood, K.S. 2002. Review of "The Endangered Species Act. History, Conservation, and Public Policy." By Brian Czech and Paul B. Krausman. *Environmental Conservation* 29: 269-270.
- Smallwood, K.S. 1997. Spatial scaling of pocket gopher (*Geomys*) burrow volume. Abstract in *Proceedings of 44th Annual Meeting, Southwestern Association of Naturalists*. Department of Biological Sciences, University of Arkansas, Fayetteville.
- Smallwood, K.S. 1997. Estimating prairie dog and pocket gopher burrow volume. Abstract in *Proceedings of 44th Annual Meeting, Southwestern Association of Naturalists*. Department of Biological Sciences, University of Arkansas, Fayetteville.
- Smallwood, K.S. 1997. Animal burrowing parameters influencing toxic waste management. Abstract in *Proceedings of Meeting, Western Section of the Wildlife Society*.
- Smallwood, K.S, and Bruce Wilcox. 1996. Study and interpretive design effects on mountain lion density estimates. Abstract, page 93 in D.W. Padley, ed., *Proceedings 5th Mountain Lion Workshop*, Southern California Chapter, The Wildlife Society. 135 pp.
- Smallwood, K.S, and Bruce Wilcox. 1996. Ten years of mountain lion track survey. Page 94 in D.W. Padley, ed. Abstract, page 94 in D.W. Padley, ed., *Proceedings 5th Mountain Lion Workshop*, Southern California Chapter, The Wildlife Society. 135 pp.
- Smallwood, K.S, and M. Grigione. 1997. Photographic recording of mountain lion tracks. Pages 75-75 in D.W. Padley, ed., *Proceedings 5th Mountain Lion Workshop*, Southern California Chapter, The Wildlife Society. 135 pp.
- Smallwood, K.S., B. Wilcox, and J. Karr. 1995. An approach to scaling fragmentation effects. Brief 8, Ecosystem Indicators Working Group, 17 March, 1995. Institute for Sustainable Development, Thoreau Center for Sustainability – The Presidio, PO Box 29075, San Francisco, CA 94129-0075.
- Wilcox, B., and K.S. Smallwood. 1995. Ecosystem indicators model overview. Brief 2,

- Ecosystem Indicators Working Group, 17 March, 1995. Institute for Sustainable Development, Thoreau Center for Sustainability – The Presidio, PO Box 29075, San Francisco, CA 94129-0075.
- EIP Associates. 1996. Yolo County Habitat Conservation Plan. Yolo County Planning and Development Department, Woodland, California.
- Geng, S., K.S. Smallwood, and M. Zhang. 1995. Sustainable agriculture and agricultural sustainability. Proc. 7th International Congress SABRAO, 2nd Industrial Symp. WSAA. Taipei, Taiwan.
- Smallwood, K.S. and S. Geng. 1994. Landscape strategies for biological control and IPM. Pages 454-464 in W. Dehai, ed., Proc. International Conference on Integrated Resource Management for Sustainable Agriculture. Beijing Agricultural University, Beijing, China.
- Smallwood, K.S. and S. Geng. 1993. Alfalfa as wildlife habitat. California Alfalfa Symposium 23:105-8.
- Smallwood, K.S. and S. Geng. 1993. Management of pocket gophers in Sacramento Valley alfalfa. California Alfalfa Symposium 23:86-89.
- Smallwood, K.S. and E.L. Fitzhugh. 1992. The use of track counts for mountain lion population census. Pages 59-67 in C. Braun, ed. Mountain lion-Human Interaction Symposium and Workshop. Colorado Division of Wildlife, Fort Collins.
- Smallwood, K.S. and E.L. Fitzhugh. 1989. Differentiating mountain lion and dog tracks. Pages 58-63 in Smith, R.H., ed. Proc. Third Mountain Lion Workshop. Arizona Game and Fish Department, Phoenix.
- Fitzhugh, E.L. and K.S. Smallwood. 1989. Techniques for monitoring mountain lion population levels. Pages 69-71 in Smith, R.H., ed. Proc. Third Mountain Lion Workshop. Arizona Game and Fish Department, Phoenix.
- Reports to or by Alameda County Scientific Review Committee (Note: all documents linked to SRC website have since been removed by Alameda County)**
- Smallwood, K. S. 2014. Data Needed in Support of Repowering in the Altamont Pass WRA. SRC document P284, County of Alameda, Hayward, California.
- Smallwood, K. S. 2013. Long-Term Trends in Fatality Rates of Birds and Bats in the Altamont Pass Wind Resource Area, California. SRC document R68, County of Alameda, Hayward, California.
- Smallwood, K. S. 2013. Inter-annual Fatality rates of Target Raptor Species from 1999 through 2012 in the Altamont Pass Wind Resources Area. SRC document P268, County of Alameda, Hayward, California.
- Smallwood, K. S. 2012. General Protocol for Performing Detection Trials in the FloDesign Study

- of the Safety of a Closed-bladed Wind Turbine. SRC document P246, County of Alameda, Hayward, California.
- Smallwood, K. S., I. Neher, and J. Mount. 2012. Burrowing owl distribution and abundance study through two breeding seasons and intervening non-breeding period in the Altamont Pass Wind Resource Area, California. SRC document P245, County of Alameda, Hayward, California.
- Smallwood, K. S. 2012. Draft study design for testing collision risk of Flodesign wind turbine in former AES Seawest wind projects in the Altamont Pass Wind Resource Area (APWRA). SRC document P238, County of Alameda, Hayward, California.
- Smallwood, L. Neher, and J. Mount. 2012. Winter 2012 update on burrowing owl distribution and abundance study in the Altamont Pass Wind Resource Area, California. SRC document P232, County of Alameda, Hayward, California.
- Smallwood, S. 2012. Status of avian utilization data collected in the Altamont Pass Wind Resource Area, 2005-2011. SRC document P231, County of Alameda, Hayward, California.
- Smallwood, K. S., L. Neher, and J. Mount. 2011. Monitoring Burrow Use of Wintering Burrowing Owls. SRC document P229, County of Alameda, Hayward, California.
- Smallwood, K. S., L. Neher, and J. Mount. 2011. Nesting Burrowing Owl Distribution and Abundance in the Altamont Pass Wind Resource Area, California. SRC document P228, County of Alameda, Hayward, California.
- Smallwood, K. S. 2011. Draft Study Design for Testing Collision Risk of Flodesign Wind Turbine in Patterson Pass Wind Farm in the Altamont Pass Wind Resource Area (APWRA). http://www.altamontsrc.org/alt_doc/p100_src_document_list_with_reference_numbers.pdf
- Smallwood, K. S. 2011. Sampling Burrowing Owls Across the Altamont Pass Wind Resource Area. SRC document P205, County of Alameda, Hayward, California.
- Smallwood, K. S. 2011. Proposal to Sample Burrowing Owls Across the Altamont Pass Wind Resource Area. SRC document P155, County of Alameda, Hayward, California. SRC document P198, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Comments on APWRA Monitoring Program Update. SRC document P191, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Inter-turbine Comparisons of Fatality Rates in the Altamont Pass Wind Resource Area. SRC document P189, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Review of the December 2010 Draft of M-21: Altamont Pass Wind Resource Area Bird Collision Study. SRC document P190, County of Alameda, Hayward, California.
- Alameda County SRC (Shawn Smallwood, Jim Estep, Sue Orloff, Joanna Burger, and Julie Yee). Comments on the Notice of Preparation for a Programmatic Environmental Impact Report on

- Revised CUPs for Wind Turbines in the Alameda County portion of the Altamont Pass. SRC document P183, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Review of Monitoring Implementation Plan. SRC document P180, County of Alameda, Hayward, California.
- Burger, J., J. Estep, S. Orloff, S. Smallwood, and J. Yee. 2010. SRC Comments on CalWEA Research Plan. SRC document P174, County of Alameda, Hayward, California.
- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). SRC Comments on Monitoring Team's Draft Study Plan for Future Monitoring. SRC document P168, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Second Review of American Kestrel-Burrowing owl (KB) Scavenger Removal Adjustments Reported in Alameda County Avian Monitoring Team's M21 for the Altamont Pass Wind Resource Area. SRC document P171, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Assessment of Three Proposed Adaptive Management Plans for Reducing Raptor Fatalities in the Altamont Pass Wind Resource Area. SRC document P161, County of Alameda, Hayward, California.
- Smallwood, K. S. and J. Estep. 2010. Report of additional wind turbine hazard ratings in the Altamont Pass Wind Resource Area by Two Members of the Alameda County Scientific Review Committee. SRC document P153, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Alternatives to Improve the Efficiency of the Monitoring Program. SRC document P158, County of Alameda, Hayward, California.
- Smallwood, S. 2010. Summary of Alameda County SRC Recommendations and Concerns and Subsequent Actions. SRC document P147, County of Alameda, Hayward, California.
- Smallwood, S. 2010. Progress of Avian Wildlife Protection Program & Schedule. SRC document P148, County of Alameda, Hayward, California. SRC document P148, County of Alameda, Hayward, California.
- Smallwood, S. 2010. Old-generation wind turbines rated for raptor collision hazard by Alameda County Scientific Review Committee in 2010, an Update on those Rated in 2007, and an Update on Tier Rankings. SRC document P155, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Review of American Kestrel-Burrowing owl (KB) Scavenger Removal Adjustments Reported in Alameda County Avian Monitoring Team's M21 for the Altamont Pass Wind Resource Area. SRC document P154, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Fatality Rates in the Altamont Pass Wind Resource Area 1998-2009. Alameda County SRC document P-145.
- Smallwood, K. S. 2010. Comments on Revised M-21: Report on Fatality Monitoring in the

- Altamont Pass Wind Resource Area. SRC document P144, County of Alameda, Hayward, California.
- Smallwood, K. S. 2009. SRC document P129, County of Alameda, Hayward, California.
- Smallwood, K. S. 2009. Smallwood's review of M32. SRC document P111, County of Alameda, Hayward, California.
- Smallwood, K. S. 2009. 3rd Year Review of 16 Conditional Use Permits for Windworks, Inc. and Altamont Infrastructure Company, LLC. Comment letter to East County Board of Zoning Adjustments. 10 pp + 2 attachments.
- Smallwood, K. S. 2008. Weighing Remaining Workload of Alameda County SRC against Proposed Budget Cap. Alameda County SRC document not assigned. 3 pp.
- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). 2008. SRC comments on August 2008 Fatality Monitoring Report, M21. SRC document P107, County of Alameda, Hayward, California.
- Smallwood, K. S. 2008. Burrowing owl carcass distribution around wind turbines. SRC document P106, County of Alameda, Hayward, California.
- Smallwood, K. S. 2008. Assessment of relocation/removal of Altamont Pass wind turbines rated as hazardous by the Alameda County SRC. SRC document P103, County of Alameda, Hayward, California.
- Smallwood, K. S. and L. Neher. 2008. Summary of wind turbine-free ridgelines within and around the APWRA. SRC document P102, County of Alameda, Hayward, California.
- Smallwood, K. S. and B. Karas. 2008. Comparison of mortality estimates in the Altamont Pass Wind Resource Area when restricted to recent fatalities. SRC document P101, County of Alameda, Hayward, California.
- Smallwood, K. S. 2008. On the misapplication of mortality adjustment terms to fatalities missed during one search and found later. SRC document P97, County of Alameda, Hayward, California.
- Smallwood, K. S. 2008. Relative abundance of raptors outside the APWRA. SRC document P88, County of Alameda, Hayward, California.
- Smallwood, K. S. 2008. Comparison of mortality estimates in the Altamont Pass Wind Resource Area. SRC document P76, County of Alameda, Hayward, California.
- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). 2010. Guidelines for siting wind turbines recommended for relocation to minimize potential collision-related mortality of four focal raptor species in the Altamont Pass Wind Resource Area. SRC document P70, County of Alameda, Hayward, California.

Alameda County SRC (J. Burger, Smallwood, K. S., S. Orloff, J. Estep, and J. Yee). 2007. First DRAFT of Hazardous Rating Scale First DRAFT of Hazardous Rating Scale. SRC document P69, County of Alameda, Hayward, California.

Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). December 11, 2007. SRC selection of dangerous wind turbines. Alameda County SRC document P-67. 8 pp.

Smallwood, S. October 6, 2007. Smallwood's answers to Audubon's queries about the SRC's recommended four-month winter shutdown of wind turbines in the Altamont Pass. Alameda County SRC document P-23.

Smallwood, K. S. October 1, 2007. Dissenting opinion on recommendation to approve of the AWI Blade Painting Study. Alameda County SRC document P-60.

Smallwood, K. S. July 26, 2007. Effects of monitoring duration and inter-annual variability on precision of wind-turbine caused mortality estimates in the Altamont Pass Wind Resource Area, California. SRC Document P44.

Smallwood, K. S. July 26, 2007. Memo: Opinion of some SRC members that the period over which post-management mortality will be estimated remains undefined. SRC Document P43.

Smallwood, K. S. July 19, 2007. Smallwood's response to P24G. SRC Document P41, 4 pp.

Smallwood, K. S. April 23, 2007. New Information Regarding Alameda County SRC Decision of 11 April 2007 to Grant FPLE Credits for Removing and Relocating Wind Turbines in 2004. SRC Document P26.

Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, and J. Burger [J. Yee abstained]). April 17, 2007. SRC Statement in Support of the Monitoring Program Scope and Budget.

Smallwood, K. S. April 15, 2007. Verification of Tier 1 & 2 Wind Turbine Shutdowns and Relocations. SRC Document P22.

Smallwood, S. April 15, 2007. Progress of Avian Wildlife Protection Program & Schedule.

Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). April 3, 2007. Alameda County Scientific Review Committee replies to the parties' responses to its queries and to comments from the California Office of the Attorney General. SRC Document S20.

Smallwood, S. March 19, 2007. Estimated Effects of Full Winter Shutdown and Removal of Tier I & II Turbines. SRC Document S19.

Smallwood, S. March 8, 2007. Smallwood's Replies to the Parties' Responses to Queries from the SRC and Comments from the California Office of the Attorney General. SRC Document S16.

Smallwood, S. March 8, 2007. Estimated Effects of Proposed Measures to be Applied to 2,500 Wind Turbines in the APWRA Fatality Monitoring Plan. SRC Document S15.

Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). February 7, 2007. Analysis of Monitoring Program in Context of 1/1//2007 Settlement Agreement.

Smallwood, S. January 8, 2007. Smallwood's Concerns over the Agreement to Settle the CEQA Challenges. SRC Document S5.

Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). December 19, 2006. Altamont Scientific Review Committee (SRC) Recommendations to the County on the Avian Monitoring Team Consultants' Budget and Organization.

Reports to Clients

Smallwood, K. S. 2022. Assessment of wildlife collision risk with initial wind turbine layout of Viracocha Wind Farm. Report to Viracocha Wind LLC and Salka LLC.

Smallwood, K. S. 2020. Comparison of bird and bat fatality rates among utility-scale solar projects in California. Report to undisclosed client.

Smallwood, K. S., D. Bell, and S. Standish. 2018. Skilled dog detections of bat and small bird carcasses in wind turbine fatality monitoring. Report to East Bay Regional Park District, Oakland, California.

Smallwood, K. S. 2018. Addendum to Comparison of Wind Turbine Collision Hazard Model Performance: One-year Post-construction Assessment of Golden Eagle Fatalities at Golden Hills. Report to Audubon Society, NextEra Energy, and the California Attorney General.

Smallwood, K. S., and L. Neher. 2018. Siting wind turbines to minimize raptor collisions at Sand Hill Repowering Project, Altamont Pass Wind Resource Area. Report to S-Power, Salt Lake City, Utah.

Smallwood, K. S., and L. Neher. 2018. Siting wind turbines to minimize raptor collisions at Rooney Ranch Repowering Project, Altamont Pass Wind Resource Area. Report to S-Power, Salt Lake City, Utah.

Smallwood, K. S. 2017. Summary of a burrowing owl conservation workshop. Report to Santa Clara Valley Habitat Agency, Morgan Hill, California.

Smallwood, K. S., and L. Neher. 2018. Comparison of wind turbine collision hazard model performance prepared for repowering projects in the Altamont Pass Wind Resources Area. Report to NextEra Energy Resources, Inc., Office of the California Attorney General, Audubon Society, East Bay Regional Park District.

Smallwood, K. S., and L. Neher. 2016. Siting wind turbines to minimize raptor collisions at Summit Winds Repowering Project, Altamont Pass Wind Resource Area. Report to Salka, Inc., Washington, D.C.

Smallwood, K. S., L. Neher, and D. A. Bell. 2017. Mitigating golden eagle impacts from

- repowering Altamont Pass Wind Resource Area and expanding Los Vaqueros Reservoir. Report to East Contra Costa County Habitat Conservation Plan Conservancy and Contra Costa Water District.
- Smallwood, K. S. 2016. Review of avian-solar science plan. Report to Center for Biological Diversity. 28 pp
- Smallwood, K. S. 2016. Report of Altamont Pass research as Vasco Winds mitigation. Report to NextEra Energy Resources, Inc., Office of the California Attorney General, Audubon Society, East Bay Regional Park District.
- Smallwood, K. S., and L. Neher. 2016. Siting Wind Turbines to Minimize Raptor collisions at Sand Hill Repowering Project, Altamont Pass Wind Resource Area. Report to Ogin, Inc., Waltham, Massachusetts.
- Smallwood, K. S., and L. Neher. 2015a. Siting wind turbines to minimize raptor collisions at Golden Hills Repowering Project, Altamont Pass Wind Resource Area. Report to NextEra Energy Resources, Livermore, California.
- Smallwood, K. S., and L. Neher. 2015b. Siting wind turbines to minimize raptor collisions at Golden Hills North Repowering Project, Altamont Pass Wind Resource Area. Report to NextEra Energy Resources, Livermore, California.
- Smallwood, K. S., and L. Neher. 2015c. Siting wind turbines to minimize raptor collisions at the Patterson Pass Repowering Project, Altamont Pass Wind Resource Area. Report to EDF Renewable Energy, Oakland, California.
- Smallwood, K. S., and L. Neher. 2014. Early assessment of wind turbine layout in Summit Wind Project. Report to Altamont Winds LLC, Tracy, California.
- Smallwood, K. S. 2015. Review of avian use survey report for the Longboat Solar Project. Report to EDF Renewable Energy, Oakland, California.
- Smallwood, K. S. 2014. Information needed for solar project impacts assessment and mitigation planning. Report to Panorama Environmental, Inc., San Francisco, California.
- Smallwood, K. S. 2014. Monitoring fossorial mammals in Vasco Caves Regional Preserve, California: Report of Progress for the period 2006-2014. Report to East Bay Regional Park District, Oakland, California.
- Smallwood, K. S. 2013. First-year estimates of bird and bat fatality rates at old wind turbines, Forebay areas of Altamont Pass Wind Resource Area. Report to FloDesign in support of EIR.
- Smallwood, K. S. and W. Pearson. 2013. Neotropical bird monitoring of burrowing owls (*Athene cunicularia*), Naval Air Station Lemoore, California. Tierra Data, Inc. report to Naval Air Station Lemoore.
- Smallwood, K. S. 2013. Winter surveys for San Joaquin kangaroo rat (*Dipodomys nitratooides*) and

- burrowing owls (*Athene cunicularia*) within Air Operations at Naval Air Station, Lemoore. Report to Tierra Data, Inc. and Naval Air Station Lemoore.
- Smallwood, K. S. and M. L. Morrison. 2013. San Joaquin kangaroo rat (*Dipodomys n. nitratooides*) conservation research in Resource Management Area 5, Lemoore Naval Air Station: 2013 Final Report (Inclusive of work during 2000-2013). Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California.
- Smallwood, K. S. and M. L. Morrison. 2013. San Joaquin kangaroo rat (*Dipodomys n. nitratooides*) conservation research in Resource Management Area 5, Lemoore Naval Air Station: 2012 Progress Report (Inclusive of work during 2000-2012). Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California.
- Smallwood, K. S. 2012. Fatality rate estimates at the Vantage Wind Energy Project, year one. Report to Ventus Environmental, Portland, Oregon.
- Smallwood, K. S. and L. Neher. 2012. Siting wind turbines to minimize raptor collisions at North Sky River. Report to NextEra Energy Resources, LLC.
- Smallwood, K. S. 2011. Monitoring Fossorial Mammals in Vasco Caves Regional Preserve, California: Report of Progress for the Period 2006-2011. Report to East Bay Regional Park District.
- Smallwood, K. S. and M. L. Morrison. 2011. San Joaquin kangaroo rat (*Dipodomys n. nitratooides*) Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2011 Progress Report (Inclusive of work during 2000-2011). Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California.
- Smallwood, K. S. 2011. Draft study design for testing collision risk of FloDesign Wind Turbine in Patterson Pass, Santa Clara, and Former AES Seawest Wind Projects in the Altamont Pass Wind Resource Area (APWRA). Report to FloDesign, Inc.
- Smallwood, K. S. 2011. Comments on Marbled Murrelet collision model for the Radar Ridge Wind Resource Area. Report to EcoStat, Inc., and ultimately to US Fish and Wildlife Service.
- Smallwood, K. S. 2011. Avian fatality rates at Buena Vista Wind Energy Project, 2008-2011. Report to Pattern Energy.
- Smallwood, K. S. and L. Neher. 2011. Siting repowered wind turbines to minimize raptor collisions at Tres Vaqueros, Contra Costa County, California. Report to Pattern Energy.
- Smallwood, K. S. and M. L. Morrison. 2011. San Joaquin kangaroo rat (*Dipodomys n. nitratooides*) Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2010 Progress Report (Inclusive of work during 2000-2010). Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California.
- Smallwood, K. S. 2010. Wind Energy Development and avian issues in the Altamont Pass, California. Report to Black & Veatch.

- Smallwood, K. S. and L. Neher. 2010. Siting repowered wind turbines to minimize raptor collisions at the Tres Vaqueros Wind Project, Contra Costa County, California. Report to the East Bay Regional Park District, Oakland, California.
- Smallwood, K. S. and L. Neher. 2010. Siting repowered wind turbines to minimize raptor collisions at Vasco Winds. Report to NextEra Energy Resources, LLC, Livermore, California.
- Smallwood, K. S. 2010. Baseline avian and bat fatality rates at the Tres Vaqueros Wind Project, Contra Costa County, California. Report to the East Bay Regional Park District, Oakland, California.
- Smallwood, K. S. and M. L. Morrison. 2010. San Joaquin kangaroo rat (*Dipodomys n. nitratooides*) Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2009 Progress Report (Inclusive of work during 2000-2009). Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 86 pp.
- Smallwood, K. S. 2009. Mammal surveys at naval outlying landing field Imperial Beach, California, August 2009. Report to Tierra Data, Inc. 5 pp
- Smallwood, K. S. 2009. Mammals and other Wildlife Observed at Proposed Site of Amargosa Solar Power Project, Spring 2009. Report to Tierra Data, Inc. 13 pp
- Smallwood, K. S. 2009. Avian Fatality Rates at Buena Vista Wind Energy Project, 2008-2009. Report to members of the Contra Costa County Technical Advisory Committee on the Buena Vista Wind Energy Project. 8 pp.
- Smallwood, K. S. 2009. Repowering the Altamont Pass Wind Resource Area more than Doubles Energy Generation While Substantially Reducing Bird Fatalities. Report prepared on behalf of Californians for Renewable Energy. 2 pp.
- Smallwood, K. S. and M. L. Morrison. 2009. Surveys to Detect Salt Marsh Harvest Mouse and California Black Rail at Installation Restoration Site 30, Military Ocean Terminal Concord, California: March-April 2009. Report to Insight Environmental, Engineering, and Construction, Inc., Sacramento, California. 6 pp.
- Smallwood, K. S. 2008. Avian and Bat Mortality at the Big Horn Wind Energy Project, Klickitat County, Washington. Unpublished report to Friends of Skamania County. 7 pp.
- Smallwood, K. S. 2009. Monitoring Fossorial Mammals in Vasco Caves Regional Preserve, California: report of progress for the period 2006-2008. Unpublished report to East Bay Regional Park District. 5 pp.
- Smallwood, K. S. and M. L. Morrison. 2008. San Joaquin kangaroo rat (*Dipodomys n. nitratooides*) Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2008 Progress Report (Inclusive of work during 2000-2008). Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 84 pp.

- Smallwood, K. S. and M. L. Morrison. 2008. Habitat Assessment for California Red-Legged Frog at Naval Weapons Station, Seal Beach, Detachment Concord, California. Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 48 pp.
- Smallwood, K. S. and B. Nakamoto. 2008. Impact of 2005 and 2006 West Nile Virus on Yellow-billed Magpie and American Crow in the Sacramento Valley, California. 22 pp.
- Smallwood, K. S. and M. L. Morrison. 2008. Former Naval Security Group Activity (NSGA), Skaggs Island, Waste and Contaminated Soil Removal Project (IR Site #2), San Pablo Bay, Sonoma County, California: Re-Vegetation Monitoring. Report to U.S. Navy, Letter Agreement – N68711-04LT-A0045. Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 10 pp.
- Smallwood, K. S. and M. L. Morrison. 2008. Burrowing owls at Dixon Naval Radio Transmitter Facility. Report to U.S. Navy. Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 28 pp.
- Smallwood, K. S. and M. L. Morrison. 2008. San Joaquin kangaroo rat (*Dipodomys n. nitratooides*) Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2007 Progress Report (Inclusive of work during 2001-2007). Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 69 pp.
- Smallwood, K. S. and M. L. Morrison. 2007. A Monitoring Effort to Detect the Presence of the Federally Listed Species California Clapper Rail and Salt Marsh Harvest Mouse, and Wetland Habitat Assessment at the Naval Weapons Station, Seal Beach, Detachment Concord, California. Installation Restoration (IR) Site 30, Final Report to U.S. Navy, Letter Agreement – N68711-05LT-A0001. U.S. Navy Integrated Product Team (IPT), West, Naval Facilities Engineering Command, San Diego, California. 8 pp.
- Smallwood, K. S. and M. L. Morrison. 2007. San Joaquin kangaroo rat (*Dipodomys n. nitratooides*) Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2006 Progress Report (Inclusive of work during 2001-2006). U.S. Navy Integrated Product Team (IPT), West, Naval Facilities Engineering Command, Southwest, Daly City, California. 165 pp.
- Smallwood, K. S. and C. Thelander. 2006. Response to third review of Smallwood and Thelander (2004). Report to California Institute for Energy and Environment, University of California, Oakland, CA. 139 pp.
- Smallwood, K. S. 2006. Biological effects of repowering a portion of the Altamont Pass Wind Resource Area, California: The Diablo Winds Energy Project. Report to Altamont Working Group. Available from Shawn Smallwood, puma@yolo.com . 34 pp.
- Smallwood, K. S. 2006. Impact of 2005 West Nile Virus on yellow-billed magpie and american crow in the Sacramento Valley, California. Report to Sacramento-Yolo Mosquito and Vector Control District, Elk Grove, CA. 38 pp.
- Smallwood, K. S. and M. L. Morrison. 2006. San Joaquin kangaroo rat (*Dipodomys n. nitratooides*)

- Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2005 Progress Report (Inclusive of work during 2001-2005). U.S. Navy Integrated Product Team (IPT), West, Naval Facilities Engineering Command, South West, Daly City, California. 160 pp.
- Smallwood, K. S. and M. L. Morrison. 2006. A monitoring effort to detect the presence of the federally listed species California tiger salamander and California red-legged frog at the Naval Weapons Station, Seal Beach, Detachment Concord, California. Letter agreements N68711-04LT-A0042 and N68711-04LT-A0044, U.S. Navy Integrated Product Team (IPT), West, Naval Facilities Engineering Command, South West, Daly City, California. 60 pp.
- Smallwood, K. S. and M. L. Morrison. 2006. A monitoring effort to detect the presence of the federally listed species California Clapper Rail and Salt Marsh Harvest Mouse, and wetland habitat assessment at the Naval Weapons Station, Seal Beach, Detachment Concord, California. Sampling for rails, Spring 2006, Installation Restoration (IR) Site 1. Letter Agreement – N68711-05lt-A0001, U.S. Navy Integrated Product Team (IPT), West, Naval Facilities Engineering Command, South West, Daly City, California. 9 pp.
- Morrison, M. L. and K. S. Smallwood. 2006. Final Report: Station-wide Wildlife Survey, Naval Air Station, Lemoore. Department of the Navy Integrated Product Team (IPT) West, Naval Facilities Engineering Command Southwest, 2001 Junipero Serra Blvd., Suite 600, Daly City, CA 94014-1976. 20 pp.
- Smallwood, K. S. and M. L. Morrison. 2006. Former Naval Security Group Activity (NSGA), Skaggs Island, Waste and Contaminated Soil Removal Project, San Pablo Bay, Sonoma County, California: Re-vegetation Monitoring. Department of the Navy Integrated Product Team (IPT) West, Naval Facilities Engineering Command Southwest, 2001 Junipero Serra Blvd., Suite 600, Daly City, CA 94014-1976. 8 pp.
- Dorin, Melinda, Linda Spiegel and K. Shawn Smallwood. 2005. Response to public comments on the staff report entitled *Assessment of Avian Mortality from Collisions and Electrocutions* (CEC-700-2005-015) (Avian White Paper) written in support of the 2005 Environmental Performance Report and the 2005 Integrated Energy Policy Report. California Energy Commission, Sacramento. 205 pp.
- Smallwood, K. S. 2005. Estimating combined effects of selective turbine removal and winter-time shutdown of half the wind turbines. Unpublished CEC staff report, June 23. 1 p.
- Erickson, W. and S. Smallwood. 2005. Avian and Bat Monitoring Plan for the Buena Vista Wind Energy Project Contra Costa County, California. Unpubl. report to Contra Costa County, Antioch, California. 22 pp.
- Lamphier-Gregory, West Inc., Shawn Smallwood, Jones & Stokes Associates, Illingworth & Rodkin Inc. and Environmental Vision. 2005. Environmental Impact Report for the Buena Vista Wind Energy Project, LP# 022005. County of Contra Costa Community Development Department, Martinez, California.
- Morrison, M. L. and K. S. Smallwood. 2005. A monitoring effort to detect the presence of the federally listed species California clapper rail and salt marsh harvest mouse, and wetland habitat

- assessment at the Naval Weapons Station, Seal Beach, Detachment Concord, California. Targeted Sampling for Salt Marsh Harvest Mouse, Fall 2005 Installation Restoration (IR) Site 30. Letter Agreement – N68711-05lt-A0001, U.S. Department of the Navy, Naval Facilities Engineering Command Southwest, Daly City, California. 6 pp.
- Morrison, M. L. and K. S. Smallwood. 2005. A monitoring effort to detect the presence of the federally listed species California clapper rail and salt marsh harvest mouse, and wetland habitat assessment at the Naval Weapons Station, Seal Beach, Detachment Concord, California. Letter Agreement – N68711-05lt-A0001, U.S. Department of the Navy, Naval Facilities Engineering Command Southwest, Daly City, California. 5 pp.
- Morrison, M. L. and K. S. Smallwood. 2005. Skaggs Island waste and contaminated soil removal projects, San Pablo Bay, Sonoma County, California. Report to the U.S. Department of the Navy, Naval Facilities Engineering Command Southwest, Daly City, California. 6 pp.
- Smallwood, K. S. and M. L. Morrison. 2004. 2004 Progress Report: San Joaquin kangaroo rat (*Dipodomys nitratoideus*) Conservation Research in Resources Management Area 5, Lemoore Naval Air Station. Progress report to U.S. Department of the Navy, Lemoore, California. 134 pp.
- Smallwood, K. S. and L. Spiegel. 2005a. Assessment to support an adaptive management plan for the APWRA. Unpublished CEC staff report, January 19. 19 pp.
- Smallwood, K. S. and L. Spiegel. 2005b. Partial re-assessment of an adaptive management plan for the APWRA. Unpublished CEC staff report, March 25. 48 pp.
- Smallwood, K. S. and L. Spiegel. 2005c. Combining biology-based and policy-based tiers of priority for determining wind turbine relocation/shutdown to reduce bird fatalities in the APWRA. Unpublished CEC staff report, June 1. 9 pp.
- Smallwood, K. S. 2004. Alternative plan to implement mitigation measures in APWRA. Unpublished CEC staff report, January 19. 8 pp.
- Smallwood, K. S., and L. Neher. 2005. Repowering the APWRA: Forecasting and minimizing avian mortality without significant loss of power generation. California Energy Commission, PIER Energy-Related Environmental Research. CEC-500-2005-005. 21 pp. [Reprinted (in Japanese) in Yukihiro Kominami, Tatsuya Ura, Koshitawa, and Tsuchiya, Editors, Wildlife and Wind Turbine Report 5. Wild Bird Society of Japan, Tokyo.]
- Morrison, M. L., and K. S. Smallwood. 2004. Kangaroo rat survey at RMA4, NAS Lemoore. Report to U.S. Navy. 4 pp.
- Morrison, M. L., and K. S. Smallwood. 2004. A monitoring effort to detect the presence of the federally listed species California clapper rails and wetland habitat assessment at Pier 4 of the Naval Weapons Station, Seal Beach, Detachment Concord, California. Letter Agreement N68711-04LT-A0002. 8 pp. + 2 pp. of photo plates.
- Smallwood, K. S. and M. L. Morrison. 2003. 2003 Progress Report: San Joaquin kangaroo rat

- (*Dipodomys nitratoides*) Conservation Research at Resources Management Area 5, Lemoore Naval Air Station. Progress report to U.S. Department of the Navy, Lemoore, California. 56 pp. + 58 figures.
- Smallwood, K. S. 2003. Comparison of Biological Impacts of the No Project and Partial Underground Alternatives presented in the Final Environmental Impact Report for the Jefferson-Martin 230 kV Transmission Line. Report to California Public Utilities Commission. 20 pp.
- Morrison, M. L., and K. S. Smallwood. 2003. Kangaroo rat survey at RMA4, NAS Lemoore. Report to U.S. Navy. 6 pp. + 7 photos + 1 map.
- Smallwood, K. S. 2003. Assessment of the Environmental Review Documents Prepared for the Tesla Power Project. Report to the California Energy Commission on behalf of Californians for Renewable Energy. 32 pp.
- Smallwood, K. S., and M. L. Morrison. 2003. 2002 Progress Report: San Joaquin kangaroo rat (*Dipodomys nitratoides*) Conservation Research at Resources Management Area 5, Lemoore Naval Air Station. Progress report to U.S. Department of the Navy, Lemoore, California. 45 pp. + 36 figures.
- Smallwood, K. S., Michael L. Morrison and Carl G. Thelander 2002. Study plan to test the effectiveness of aerial markers at reducing avian mortality due to collisions with transmission lines: A report to Pacific Gas & Electric Company. 10 pp.
- Smallwood, K. S. 2002. Assessment of the Environmental Review Documents Prepared for the East Altamont Energy Center. Report to the California Energy Commission on behalf of Californians for Renewable Energy. 26 pp.
- Thelander, Carl G., K. Shawn Smallwood, and Christopher Costello. 2002 Rating Distribution Poles for Threat of Raptor Electrocution and Priority Retrofit: Developing a Predictive Model. Report to Southern California Edison Company. 30 pp.
- Smallwood, K. S., M. Robison, and C. Thelander. 2002. Draft Natural Environment Study, Prunedale Highway 101 Project. California Department of Transportation, San Luis Obispo, California. 120 pp.
- Smallwood, K.S. 2001. Assessment of ecological integrity and restoration potential of Beeman/Pelican Farm. Draft Report to Howard Beeman, Woodland, California. 14 pp.
- Smallwood, K. S., and M. L. Morrison. 2002. Fresno kangaroo rat (*Dipodomys nitratoides*) Conservation Research at Resources Management Area 5, Lemoore Naval Air Station. Progress report to U.S. Department of the Navy, Lemoore, California. 29 pp. + 19 figures.
- Smallwood, K.S. 2001. Rocky Flats visit, April 4th through 6th, 2001. Report to Berger & Montaque, P.C. 16 pp. with 61 color plates.
- Smallwood, K.S. 2001. Affidavit of K. Shawn Smallwood, Ph.D. in the matter of the U.S. Fish and Wildlife Service's rejection of Seatuck Environmental Association's proposal to operate an

- education center on Seatuck National Wildlife Refuge. Submitted to Seatuck Environmental Association in two parts, totaling 7 pp.
- Magney, D., and K.S. Smallwood. 2001. Maranatha High School CEQA critique. Comment letter submitted to Tamara & Efren Compeán, 16 pp.
- Smallwood, K. S. and D. Mangey. 2001. Comments on the Newhall Ranch November 2000 Administrative Draft EIR. Prepared for Ventura County Counsel regarding the Newhall Ranch Specific Plan EIR. 68 pp.
- Magney, D. and K. S. Smallwood. 2000. Newhall Ranch Notice of Preparation Submittal. Prepared for Ventura County Counsel regarding our recommended scope of work for the Newhall Ranch Specific Plan EIR. 17 pp.
- Smallwood, K. S. 2000. Comments on the Preliminary Staff Assessment of the Contra Costa Power Plant Unit 8 Project. Submitted to California Energy Commission on November 30 on behalf of Californians for Renewable Energy (CaRE). 4 pp.
- Smallwood, K. S. 2000. Comments on the California Energy Commission's Final Staff Assessment of the MEC. Submitted to California Energy Commission on October 29 on behalf of Californians for Renewable Energy (CaRE). 8 pp.
- Smallwood, K. S. 2000. Comments on the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). Submitted to California Energy Commission on October 29 on behalf of Californians for Renewable Energy (CaRE). 9 pp.
- Smallwood, K. S. 2000. Comments on the Preliminary Staff Assessment of the Metcalf Energy Center. Submitted to California Energy Commission on behalf of Californians for Renewable Energy (CaRE). 11 pp.
- Smallwood, K. S. 2000. Preliminary report of reconnaissance surveys near the TRW plant south of Phoenix, Arizona, March 27-29. Report prepared for Hagens, Berman & Mitchell, Attorneys at Law, Phoenix, AZ. 6 pp.
- Morrison, M. L., K. S. Smallwood, and M. Robison. 2001. Draft Natural Environment Study for Highway 46 compliance with CEQA/NEPA. Report to the California Department of Transportation. 75 pp.
- Morrison, M.L., and K.S. Smallwood. 1999. NTI plan evaluation and comments. Exhibit C in W.D. Carrier, M.L. Morrison, K.S. Smallwood, and Vail Engineering. Recommendations for NBHCP land acquisition and enhancement strategies. Northern Territories, Inc., Sacramento.
- Smallwood, K. S. 1999. Estimation of impacts due to dredging of a shipping channel through Humboldt Bay, California. Court Declaration prepared on behalf of EPIC.
- Smallwood, K. S. 1998. 1998 California mountain lion track count. Report to the Defenders of Wildlife, Washington, D.C. 5 pages.

- Smallwood, K.S. 1998. Draft report of a visit to a paint sludge dump site near Ridgewood, New Jersey, February 26th, 1998. Unpublished report to Consulting in the Public Interest.
- Smallwood, K.S. 1997. Science missing in the “no surprises” policy. Commissioned by National Endangered Species Network and Spirit of the Sage Council, Pasadena, California.
- Smallwood, K.S. and M.L. Morrison. 1997. Alternate mitigation strategy for incidental take of giant garter snake and Swainson’s hawk as part of the Natomas Basin Habitat Conservation Plan. Pages 6-9 and *iii* illustrations in W.D. Carrier, K.S. Smallwood and M.L. Morrison, Natomas Basin Habitat Conservation Plan: Narrow channel marsh alternative wetland mitigation. Northern Territories, Inc., Sacramento.
- Smallwood, K.S. 1996. Assessment of the BIOPORT model's parameter values for pocket gopher burrowing characteristics. Report to Berger & Montague, P.C. and Roy S. Haber, P.C., Philadelphia. (peer reviewed).
- Smallwood, K.S. 1997. Assessment of plutonium releases from Hanford buried waste sites. Report Number 9, Consulting in the Public Interest, 53 Clinton Street, Lambertville, New Jersey, 08530.
- Smallwood, K.S. 1996. Soil Bioturbation and Wind Affect Fate of Hazardous Materials that were Released at the Rocky Flats Plant, Colorado. Report to Berger & Montague, P.C., Philadelphia.
- Smallwood, K.S. 1996. Second assessment of the BIOPORT model's parameter values for pocket gopher burrowing characteristics and other relevant wildlife observations. Report to Berger & Montague, P.C. and Roy S. Haber, P.C., Philadelphia.
- Smallwood, K.S., and R. Leidy. 1996. Wildlife and their management under the Martell SYP. Report to Georgia Pacific, Corporation, Martel, CA. 30 pp.
- EIP Associates. 1995. Yolo County Habitat Conservation Plan Biological Resources Report. Yolo County Planning and Development Department, Woodland, California.
- Smallwood, K.S. and S. Geng. 1995. Analysis of the 1987 California Farm Cost Survey and recommendations for future survey. Program on Workable Energy Regulation, University-wide Energy Research Group, University of California.
- Smallwood, K.S., S. Geng, and W. Idzerda. 1992. Final report to PG&E: Analysis of the 1987 California Farm Cost Survey and recommendations for future survey. Pacific Gas & Electric Company, San Ramon, California. 24 pp.
- Fitzhugh, E.L. and K.S. Smallwood. 1987. Methods Manual – A statewide mountain lion population index technique. California Department of Fish and Game, Sacramento.
- Salmon, T.P. and K.S. Smallwood. 1989. Final Report – Evaluating exotic vertebrates as pests to California agriculture. California Department of Food and Agriculture, Sacramento.
- Smallwood, K.S. and W. A. Erickson (written under supervision of W.E. Howard, R.E. Marsh, and

R.J. Laacke). 1990. Environmental exposure and fate of multi-kill strychnine gopher baits. Final Report to USDA Forest Service –NAPIAP, Cooperative Agreement PSW-89-0010CA.

Fitzhugh, E.L., K.S. Smallwood, and R. Gross. 1985. Mountain lion track count, Marin County, 1985. Report on file at Wildlife Extension, University of California, Davis.

Comments on Environmental Documents (Year; pages)

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

- Shirk & Riggin Industrial Park Application, Visalia (2022; 22);
- Duarte Industrial Application, Visalia (2022; 17);
- Amond World Cold Storage Warehouse IS/MND, Madera (2022; 23);
- Replies on Schulte Logistics Centre EIR, Tracy (2022; 28);
- Alta Cuvee Mixed Use Project Recirculated IS/MND, Ranch Cucamonga (2022; 8);
- Fourth visit, Veterans Affairs Site Plan Review No. 20-0102 MND, Bakersfield (2022; 9);
- Replies on 1242 20th Street Wellness Center Project FEIR, Santa Monica (2022; 5);
- 656 South San Vicente Medical Office Project EIR, Los Angeles (2022; 21);
- UCSF New Hospital at Parnassus Heights DEIR. San Francisco (2022; 40);
- DPR-21-021 Warehouse IS, Modesto (2022; 19);
- Ormat Brawley Solar Project DEIR, Brawley (2022; 37);
- Site visits to Heber 1 Geothermal Repower Project IS/MND (2022; 31);
- Heritage Industrial Center Design Review, Chula Vista (2022; 13);
- Temporary Outdoor Vehicle Storage DEIR, Port of Hueneme (2022; 29);
- CNU Medical Center and Innovation Park DEIR, Natomas (2022; 35);
- Beverly Boulevard Warehouse IS/MND, Pico Rivera (2021; 28);
- Hagemon Properties IS/MND Amendment, Bakersfield (2022; 23);
- Airport Distribution Center IS/MND, Redding (2021; 22);
- Orchard on Nevada Warehouse Staff Report, Redlands (2021; 24);
- Landings Logistics Center Exemption, Bakersfield (2021; 19);
- Replies on Hearn Veterans Village IS/MND, Santa Rosa (2021; 22);
- North Central Valley BESS Project IS/MND, Stockton (2021; 37);
- 2nd Replies on Heber 1 Geothermal Repower Project IS/MND (2022; 21);
- Stagecoach Solar DEIR, Barstow (2021; 24);
- Updated Sun Lakes Village North EIR Amendment 5, Banning, Riverside County (2021; 35);
- Freedom Circle Focus Area and Greystar General Plan Amendment Project EIR, San Jose (2021; 43);
- Operon HKI Warehouse IS/MND, Perris (2021; 26);
- Fairway Business Park Phase III IS/MND, Lake Elsinore (2021; 23);
- South Stockton Commerce Center IS/MND, Stockton (2021; 31);
- Starpoint Warehouse IS/MND, San Bernardino (2021; 24);
- Replies on Heber 1 Geothermal Repower Project IS/MND (2021; 15);
- Heber 1 Geothermal Repower Project IS/MND (2021; 11);

- Alviso Hotel Project IS/MND, San Jose (2021; 43);
- Replies on Easton Research Park West IS/MND, Rancho Cordova (2021; 3);
- Easton Research Park West IS/MND, Rancho Cordova (2021; 31);
- US Cold Storage DEIR, Hesperia (2021; 30);
- 1242 20th Street Wellness Center Project FEIR, Santa Monica (2021; 23);
- Third visit, Veterans Affairs Site Plan Review No. 20-0102 MND, Bakersfield (2021; 10);
- Roseland Creek Community Park Project IS/MND, Santa Rosa (2021; 23);
- Vista Mar Declaration of Irreparable Harm, Pacifica (2021; 3);
- LogistiCenter at Fairfield IS/MND (2021; 25);
- Alta Cuvee Mixed Use Project IS/MND, Ranch Cucamonga (2021; 29);
- Caligrows Architectural and Site Plan Review, Patterson (2021; 21);
- 1055 E. Sandhill Avenue Warehouse IS/MND, Carson (2021; 10);
- Chestnut & Tenth Street Commercial Project IS/MND, Gilroy (2021; 27);
- Libitzky Management Warehouse IS/MND, Modesto (2021; 20);
- 3rd Replies on Heber 2 Geothermal Repower Project IS/MND, El Centro (2021; 10);
- Medical Office Building DEIR, Santa Cruz (2021; 30);
- Scannell Warehouse DEIR, Richmond (2021; 24);
- Diamond Heights Application, San Francisco (2021; 24);
- Costa Azul Mixed-Use EIR Addendum, San Diego (2021; 25);
- Woodland Research Park DEIR (2021; 45);
- 2nd Replies on Diamond Street Industrial IS/MND, San Marcos (2021; 9);
- Replies on Diamond Street Industrial IS/MND, San Marcos (2021; 3);
- Diamond Street Industrial IS/MND, San Marcos (2021; 28);
- DHS 109 Industrial Park IS/MND, Desert Hot Springs (2021; 33);
- Jersey Industrial Complex Rancho Cucamonga (2022; 22);
- 1188 Champions Drive Parking Garage Staff Report, San Jose (2021; 5);
- San Pedro Mountain, Pacifica (2021; 22);
- Pixior Warehouse IS/MND, Hesperia (2021; 29);
- 2nd Replies on Heber 2 Geothermal Repower Project IS/MND, El Centro (2021; 9);
- Hearn Veterans Village IS/MND, Santa Rosa (2021; 23);
- Second visit, Veterans Affairs Site Plan Review No. 20-0102 MND, Bakersfield (2021; 11);
- Replies on Station East Residential/Mixed Use EIR, Union City (2021; 26);
- Schulte Logistics Centre EIR, Tracy (2021; 30);
- 4150 Point Eden Way Industrial Development EIR, Hayward (2021; 13);
- Airport Business Centre IS/MND, Manteca (2021; 27);
- Dual-branded Hotel IS/MND, Santa Clara (2021; 26);
- Legacy Highlands Specific Plan EIR, Beaumont (2021; 47);
- UC Berkeley LRDP and Housing Projects #1 and #2 EIR (2021; 27);
- Santa Maria Airport Business Park EIR, Santa Maria (2021; 27);
- Replies on Coachella Valley Arena EIR Addendum, Thousand Palms (2021; 20);
- Coachella Valley Arena EIR Addendum, Thousand Palms (2021; 35);
- Inland Harbor Warehouse NOD, Ontario (2021; 8);
- Alvarado Specific Plan DEIR, La Mesa (2021; 35);
- Harvill Avenue and Rider Street Terminal Project MND, Riverside (2021; 23);

- Gillespie Field EIR Addendum, El Cajon (2021; 28);
- Heritage Wind Energy Project section 94-c siting process, New York (2021: 99);
- Commercial Street Hotels project Site Plans, Oakland (2021; 19);
- Heber 1 Geothermal Repower Project MND, El Centro (2021; 11);
- Citrus-Slover Warehouse Project MND, Fontana (2021; 20);
- Scott Ranch Project RDEIR (Davidon Homes), Petaluma (2021; 31);
- Replies on StratosFuel Renewable H2 Project MND, Victorville (2021; 5);
- StratosFuel Renewable H2 Project MND, Victorville (2021; 25);
- Replies on PARS Global Storage MND, Murietta (2021; 22);
- Baldwin-Zacharias Master Plans EIR, Patterson (2021; 38);
- 1000 Gibraltar Drive EIR, Milpitas (2021; 20);
- Mango Avenue Industrial Warehouse Project, Fontana, MND (2021; 20);
- Veterans Affairs Site Plan Review No. 20-0102 MND, Bakersfield (2021; 25);
- 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, Sunnyvale (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, Rialto (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);
- Beale WAPA Interconnection Project EA & CEQA checklist (2020; 30);
- 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 Hombro 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);
- Zeiss Innovation Center IS/MND, Dublin (2018: 32);
- 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 Geronio 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);
- 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;);
- Davidson 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 IS/MND 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 Calxico 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);
- North Table Mountain MND, Butte County (2006; 15);
- 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

Long-Term Population Trend of Burrowing Owls in the Altamont. Golden Gate Audubon, 21 October 2020.

Long-Term Population Trend of Burrowing Owls in the Altamont. East Bay Regional Park District 2020 Stewardship Seminar, Oakland, California, 18 November 2020.

Smallwood, K.S., D.A. Bell, and S. Standish. Dogs detect larger wind energy effects on bats and birds. The Wildlife Society, 28 September 2020.

Smallwood, K.S. and D.A. Bell. Effects of wind turbine curtailment on bird and bat fatalities in the Altamont Pass Wind Resource Area. The Wildlife Society, 28 September 2020.

Smallwood, K.S., D.A. Bell, and S. Standish. Dogs detect larger wind energy effects on bats and birds. The Wildlife Survey, 7 February 2020.

Smallwood, K.S. and D.A. Bell. Effects of wind turbine curtailment on bird and bat fatalities in the Altamont Pass Wind Resource Area. The Wildlife Survey, 7 February 2020.

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 (*Geomys*) 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.

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

Noriko Lena Smallwood

530-601-6852 | norikosmallwood@yahoo.com | Temecula, CA



Education

M.S., Environmental Sciences

Aug 2019 – Aug 2021

California State University Los Angeles, Advisor: Dr. Eric Wood

Thesis: The influence of native plants on urban wildlife in Southern California residential yards

- GIS certificate
- Special Recognition in Graduate Studies award, 2020

B.S., Environmental and Ecosystem Sciences

Aug 2015 – Dec 2018

Washington State University, Pullman, Washington

- Minors: Biology, Geology

Professional Experience

Wildlife Ecologist, Dr. Shawn Smallwood, Environmental Consultant

June 1, 2016 – Present

- Independently conduct biological resource surveys at proposed project sites for CEQA review throughout California
 - Survey for species presence and habitat suitability of birds, mammals, herpetofauna, insects, and plants, especially special status species
- Assist with the writing of comment letters for proposed project sites undergoing CEQA review
- Conduct biological resource surveys for various research projects on wildlife conservation
- Manage and analyze large datasets
- Assisted with nest surveys of burrowing owl and loggerhead shrike, and raptor behavior surveys as a part of a research study on 46 plots in the Altamont Pass Wind Resource Area
- Processed documents and data relating to human structure impacts on wildlife

Biologist, Bargas Environmental Consulting

June 9, 2020 – June 2022

- Supported various utility-sector projects in Southern and Central California including Southern California Edison, SoCal Gas, and Spectrum
- Conducted pre-construction surveys and construction monitoring for nesting birds and plant and wildlife species of special concern, including woodpeckers, raptors, burrowing owl, golden eagle, bald eagle, peregrine falcon, California gnatcatcher, least Bell's vireo, San Bernardino kangaroo rat, Southern rubber boa, monarch butterfly, California red-legged frog, coast horned lizard, Joshua tree, Santa Susana tarplant, and many others. Surveys and monitoring intended to limit or eliminate disturbance to species and habitat
- Pre-construction surveys and construction monitoring for water resources (streams and washes)
- Delineated and mapped water features in the Mojave desert
- Mapped and classified vegetation using the Manual of California Vegetation (MCV)
- Used ESRI Survey 123, Collector, and Field Maps, Gaia GPS, and Solocator to collect data and prepare reports
- Worked alone and in groups, and often communicated with other biologists as well as construction crew members, including conducting tailboard meetings before construction

- Trained new biologists in the field by teaching species identification, habitat assessments, ESRI software, and explained job duties
- Served as a Field Lead on large SCE projects to provide full-time support and maintain communication between Field Biologists, Project Managers, and Contractors
- Conducted desktop reviews to assess landscape and potential suitable habitat for special status species

Graduate Researcher, California State University Los Angeles

Aug 1, 2019 – Aug 6, 2021

- Thesis: "The influence of native plants on urban wildlife in Southern California residential yards"
- Preparation of research project: conducted literature review, public outreach to obtain volunteers, and wrote grant proposals to obtain research funding
- Planned, scheduled, and conducted field surveys for birds, pollinating insects, and vegetation in residential yards
- Managed a large dataset and conducted statistical analysis in the software, "R"
- Conducted remote sensing analyses and created maps using ArcMap and ArcGIS Pro
- Gave presentations on my research to a conference and non-profit organizations

Research Assistant, University of Idaho

Feb 15, 2019 – Aug 31, 2019

- Processed images using the software, "ImageJ," for research relating to the effects of cattle grazing on greater sage-grouse nests

Lab Assistant, University of Idaho

Sep 15, 2017 – May 15, 2019

- Set up and maintained lab experiments with nematodes including a research project relating to heat stress on the entomopathogenic nematode, *S. feltiae*

Teaching Experience

Graduate Assistant, California State University

Jan 20, 2020 – Dec 23, 2020

- Graded and provided feedback on assignments and exams for 150 and 90 undergraduate students in BIOL 3600: Integrative Organismal Biology and 80 students in MICR 1010: Intro to Microbiology

Tutor, Hayutin & Associates

July 25, 2019 – May 31, 2020

- Independently tutored K-12 student in test prep (ISEE test), executive function coaching, and subject tutoring (science and mathematics)

Volunteer Experience

Restoration Volunteer, Washington State University

Dec 5, 2018

- Participated in a restoration project by planting native willows in an eroded and degraded stream bed in the South Fork of the Palouse River near Moscow, Idaho

Field Surveyor, Washington State University

Oct 27-29, 2018

- Participated in a research project on deer vehicle strikes by surveying locations of local radio collared mule and white-tailed deer in Winthrop, Washington using VHF radiotelemetry

Field Surveyor, University of Idaho

Sep 22-23, 2018

- Participated in a research project on the declining populations of pygmy rabbit by surveying pygmy rabbit burrows in the sagebrush ecosystem near Leadore, Idaho using Garmin GPS devices

Restoration Volunteer, Washington State University

April 2016

- Participated in a restoration project by removing invasive reed canary grass and planting native plants in Missouri Flat Creek in Pullman, Washington

Publications

- Smallwood, K.S. and **N.L. Smallwood**. 2023. Measured effects of anthropogenic development on vertebrate wildlife diversity. *Diversity* 15(10):1037.
- Smallwood, N.L.** and E.M. Wood. 2023. The ecological role of native-plant landscaping in residential yards to birds during the nonbreeding period. *Ecosphere* 14(1): e4360.
- Smallwood, N.L.** and E.M. Wood. 2022 Native-plant landscaping in residential yards provides habitat and refuge for birds in Southern California. *Los Angeles Audubon Society Western Tanager* 89(2).
- Smallwood, K.S. and **N.L. Smallwood**. 2021. Breeding Density and Collision Mortality of Loggerhead Shrike (*Lanius ludovicianus*) in the Altamont Pass Wind Resource Area. *Diversity* 13(11):540.

Presentations

- Smallwood, N.L.** The ecological role of native-plant landscaping in residential yards to birds during the nonbreeding period. American Ornithological Society/Society of Canadian Ornithologists Conference. August 8 2023, London, Ontario, Canada.
- Smallwood, N.L.** The ecological role of native-plant landscaping in residential yards to birds during the nonbreeding period. University of California Riverside Palm Desert Center. March 2, 2023, Palm Desert, California.
- Smallwood, N.L.** The ecological role of native-plant landscaping in residential yards to urban wildlife. *Southern California Academy of Sciences Annual Meeting*, May 6, 2022, Fullerton, CA.
- Smallwood, N.L.** Gardening for Biodiversity, a guided tour. *Arlington Garden*, December 11, 2021, Pasadena, CA.
- Smallwood, N.L.** The influence of native plant landscaping on urban wildlife in Southern California residential yards. *California Native Plant Society Los Angeles/Santa Monica Mountains Chapter*, October 12, 2021, virtual.
- Smallwood, N.L.** and E.M. Wood. The influence of native plants on urban wildlife in Southern California residential yards. *International Urban Wildlife Conference*, May 25-27, 2021, virtual.
- Smallwood, N.L.** The influence of native plants on urban wildlife in Southern California residential yards. *Theodore Payne Foundation Poppy Hour*, March 18, 2021, virtual.

Grants

	Total	Year(s)
Travel award, <i>American Ornithological Society meeting 2023</i>	\$936	2023
Graduate Equity Fellowship, <i>California State University Los Angeles</i>	\$2,000	2020 – 2021
Pasadena Audubon Society Grant	\$3,000	2020
State University Grant, <i>California State University Los Angeles</i>	\$14,352	2019 – 2021
Cougar Academic Award, <i>Washington State University</i>	\$45,500	2015 – 2018

Workshops

Level 1 Venomous Handling Certification Course, Save the Snakes , 29-30 April 2023. 16 hours, Sacramento, California

Rare Pond Species Workshop, The Laguna de Santa Rosa Foundation/The Wildlife Project, 11-12 March 2023, 14 hours, Santa Rosa, California.

Burrowing Owl Training. The Western Section of The Wildlife Society Meeting, 6 February 2023, 2 hours, Riverside, California.

Introduction to the Mojave Desert Tortoise. Desert Tortoise Council. October/November 2022, 17 hours, online lectures and field training in Ridgecrest, California.

Association of Environmental Professionals' 2021 Intermediate CEQA Workshop, February 2021, 4 hours, online.

Memberships

The Western Section of The Wildlife Society

Association of Environmental Professionals

Skills and Coursework

<i>Research Interests</i>	Ecology, Conservation Biology, Urban Ecology, Ornithology, Mammalogy, Habitat Conservation, Habitat Restoration, Wildlife-Human Interactions
<i>Species (T&E)</i>	Swainson's hawk, California gnatcatcher, least Bell's vireo, Tricolored blackbird, Mojave desert tortoise, California red-legged frog, California tiger salamander, San Bernardino kangaroo rat, Stephens' kangaroo rat
<i>Field Techniques</i>	Biological resource surveys, habitat assessment, water resource surveys, construction monitoring, bird point counting, bird behavior surveys, nest searching, nest and resource mapping, small mammal burrow surveys, insect transect surveys, vegetation cover surveys, locating wildlife using radio telemetry Experience hiking, backpacking, and operating four-wheel drive vehicles off road
<i>Software</i>	R, ArcMap, ArcGIS Pro, QGIS, ImageJ, Digital Photo Professional 4, GPS operation
<i>Related Coursework</i>	Wildlife and Ecology: Wildlife Habitat Ecology (3 semester units), Methods in Wildlife Ecology (4), Restoration Ecology (3), General Ecology (4), Natural Resource Ecology (3), Community Ecology (3), Animal Behavior (3), Ornithology (4), Marine Ecology (3), Rivers: Form, Function, and Management (3), Natural Resource and Environmental Policy and Law (3), Natural Resources: Society and the Environment (3), Environment, Human Life, Sustainability (4) Botany: Plant Systematics (3), Plant Ecology (4), Hot Topics Seminar: "What Kills Trees?" (3) Statistics and GIS: Data Analysis in Biological Sciences (3), Statistical Methods in Research (3), Intro to Statistical Methods (4), Intro to GIS (3), GIS Applications (3), Remote Sensing (3), Digital Cartography (3) Other: Professional Writing in Life Sciences (2), Environmental Geology (3), Water and the Earth (3), Oceanography, General Genetics (4)

Attachment B

Brad Napientek Résumé

BRAD J NAPIENTEK, M.S.

Principal Planner

Brad Napientek has more than 11 years of experience in the preparation of complex environmental compliance documentation pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Mr. Napientek has prepared Environmental Impact Reports (EIR), Environmental Impact Statements (EIS), Initial Studies (IS), Mitigated Negative Declarations (MND), Mitigation Monitoring and Reporting Programs (MMRP), Environmental Assessments (EA), and Categorical Exclusions (CE) for a variety of project types, including commercial/retail, institutional, agriculture, mixed-use developments, and Department of Defense and Caltrans infrastructure projects. His responsibilities include coordination with subconsultants and agency staff, environmental document preparation and coordination, analytical research, document/task management, fulfilling public noticing requirements, and production and distribution. Specifically, he has assessed potential impacts on biological resources on a wide range of projects, including high rise urban infill development in Hollywood and Downtown Los Angeles.

Mr. Napientek specializes in the analysis of agriculture and forest resources, biological resources, hazards and hazardous materials, hydrology and water quality, transportation, and utilities (water supply, wastewater, solid waste, and energy). Prior to Eystone, Mr. Napientek also conducted compliance audits of active construction sites per Department of Defense and NEPA requirements and participated in habitat restoration projects. Mr. Napientek has also been recognized by the California State Assembly for work related to biomass conversion.

EDUCATION

M.S., Environmental Studies, California State University—Fullerton, 2010

B.A., Political Science, San Diego State University, 2003

PROFESSIONAL EXPERIENCE

100 E. Ocean (EIR)

1360 N. Vine (EIR)

2143 Violet (EIR)

2nd & PCH (EIR)

5420 Sunset (EIR)

Bathymetry Survey Santa Margarita Lagoon (CE)

Butterfield-Keenan GPA (EIR)

Cochrane Road Commercial Development (MND)

Crossroads Hollywood (EIR)

Condit-Evergreen GPA (EIR)

Diridon Station Area Plan (EIR)

District NoHo (EIR)

Entrada South & Valencia Commerce Center (EIR)

Figueroa Centre (EIR)

Fire Station 3, Headquarters (CE)

Hollywood & Wilcox (EIR)

Mobile Gunnery Training System (CE)

MV-22 Landing Zones (EA)

Old Canyon Road Bridge (MND/CE)

Ridge Vineyards Land Exchange (MND)

San Domingo—Monterey Dynasty (MND)

Silver Creek High School Track and Field Stadium Lights (MND)

Silver Creek Valley Road Gas Station (MND)

South Airport Boulevard Bridge Replacement (MND/CE)

UCSD Weather Station (CE)