Interoffice Memo

DATE: July 9, 2026 **PHONE:** 909-387-4110

FROM: **PRECIOUS MCDUFFIE,** PLANNER III
LAND USE SERVICES DEPARTMENT

TO: **HONORABLE PLANNING COMMISSION**

SUBJECT: AGENDA ITEM #2 - PROJ-2023-00107 /JACK LUU

Since the distribution of the staff report, Staff has received additional comments for the above-referenced Project. These additional comments are attached for your consideration.

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KIMBERLYN HEARNS
PO BOX 9891
SAN BERNARDINO, CA 92427

LAND USE SERVICES / PLANNING
COUNTY OF SAN BERNARDINO
385 N. ARROWHEAD AVENUE
FIRST FLOOR
SAN BERNARDINO, CA 92415-0187

JUNE 29, 2026

RE: MUSCOY WAREHOUSE PROJECT
PROJECT # PROJ-2023-00107 / APN: 0267012090000

DEAR PRECIOUS McDUFFIE,

I'M RESTATING MY OPPOSITION TO THE MUSCOY WAREHOUSE PROJECT FOR THE PREVIOUS REASONS STATED IN MY PRIOR TWO LETTERS DATED DECEMBER 9, 2025 AND MAY 11, 2026.

I RECENTLY CHECKED THE ENVIRONMENTAL DETERMINATION WEBSITE AND NOTICED AN "ARTIFICIAL INTELLIGENCE (AI)" CHAT SIDEBAR WITH A QUESTION BOX. I TYPED IN ASKING IF THIS PROJECT IS A DATA CENTER. AI REPLIED YES, THE MUSCOY WAREHOUSE PROJECT IS A DATA CENTER. I AM VEHEMENTLY OPPOSED TO LOCATING A

DATA CENTER OR ANYTHING LIKE IT WITHIN 20 MILES OF CIMARRON RANCH. I'M DISAPPOINTED THAT THE LITERATURE MAILED TO ME AND THAT I READ ONLINE EFFECTIVELY MISLEADS THE PUBLIC BY OMITTING AND POTENTIALLY CONCEALS KEY FACTS ABOUT THE PURPOSE AND USES OF THE PROPERTY, AND PLACING THIS NOISY ELECTRICITY AND WATER GOBBLING ACTIVITY NEXT TO (ALMOST ON TOP OF) CIMARRON RANCH IS PLACING CORPORATE GREED OVER THE INTERESTS OF THE RESIDENTS IN CIMARRON RANCH, MY ELECTRIC BILL HAS ALREADY TRIPLED AND IT'S NO SECRET THAT CURRENTLY OPERATING DATA CENTERS RAISE EVERYONE'S ELECTRIC RATES AND POTENTIALLY CONTAMINATES THE MASSIVE AMOUNTS OF WATER THAT IT USES TO COOL THE FACILITIES VIA AIR CONDITIONING. THEY'RE ALSO VERY NOISY FACILITIES. I THINK OUR WATER RATES WILL ALSO MARKETLY INCREASE.

NO DATA CENTERS! THE PLANNING COMMISSION MUST CLEARLY STATE IN TRUTHFUL UNAMBIGUOUS LANGUAGE EXACTLY WHAT THE PURPOSES AND USES OF THESE WAREHOUSES ARE AND WHAT SPECIFICALLY WILL BE OCCURRING INSIDE. THIS MUST BE STATED "ON THE RECORD" ORALLY AT THE HEARING AND IN WRITING WITH DOCUMENTATION POSTED ONLINE AND MAILED TO THE RESIDENTS.

SINCERELY,

[signature]

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LOZEAU DRURY LLP
T 510.836.4200
F 510.836.4205
1939 Harrison Street, Ste. 150
Oakland, CA 94612
www.lozeaudrury.com
victoria@lozeaudrury.com

Via Email

July 8, 2026

Michael Stoffel, Chair
Kareem Gongora, Vice-Chair
Jonathan Weldy, Commissioner
Matthew Slowik, Commissioner
Suket Dayal, Commissioner
Planning Commission
San Bernardino County
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415
PlanningCommissionComments@lus.sbcounty.gov

Precious McDuffie, Planner
Land Use Services Department
County of San Bernardino
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415
precious.mcduffie@lus.sbcounty.gov

Re: Comment on Mitigated Negative Declaration for the Muscoy Warehouse Project, Planning Commission July 9, 2026 Hearing Agenda Item 2

Dear Chair Stoffel, Vice-Chair Gongora, Honorable Commissioners, and Ms. McDuffie:

This comment is submitted on behalf of Supporters Alliance For Environmental Responsibility ("SAFER") regarding the Initial Study and Mitigated Negative Declaration ("MND") prepared for the Muscoy Warehouse Project (PROJ-2023-00107, SCH NO. 2025120438) including all actions referring or related to the proposed development of two industrial warehouse buildings totaling 88,174 square feet, located on the southeast corner of Cajon Boulevard and June Street in the County of San Bernardino ("Project"), which is scheduled to be heard by the County of San Bernardino ("County") Planning Commission on July 9, 2026 as Agenda Item 2.

SAFER's review of the MND was assisted by expert wildlife biologist Dr. Shawn Smallwood, Ph.D., whose written comments and CV are attached as Exhibit A. As discussed below, there is substantial evidence supporting a fair argument that the Project may have significant and unmitigated impacts on biological resources necessitating the preparation of an EIR. Accordingly, SAFER requests that the County not approve the MND and instead prepare an EIR to ensure that potentially significant environmental impacts of this Project are fully disclosed, analyzed, and mitigated.

PROJECT DESCRIPTION

The Project Applicant, Dunleer, LLC, is requesting the approval of a Conditional Use Permit for the construction and operation of two industrial warehouse buildings totaling 88,174 square feet, a variance to reduce the front yard setback from 25 feet to 15 feet, and a Tentative Parcel Map to subdivide a 4.59-acre parcel into two parcels (2.39 acres and 2.2 acres) to be built in one phase.

The proposed warehouse buildings would include:

- Building 1: 44,751 sf of warehouse space including 4,136 sf of office space with four dock high doors and one ground level door; and
- Building 2: 35,151 sf of warehouse space including 4,136 sf of office space with four dock high doors and one ground level door.

The Project would total 79,902 sf of warehouse space and 8,272 sf of office space for a total of 88,174 sf.

The Project Site is currently vacant and is located on the southeast corner of Cajon Boulevard and June Street in an unincorporated area of San Bernardino County within the community of Muscoy.

LEGAL STANDARD

As the California Supreme Court held, "[i]f no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR." (*Communities for a Better Env't v. South Coast Air Quality Mgmt. Dist.* (2010) 48 Cal.4th 310, 319-20.) "Significant environmental effect" is defined very broadly as "a substantial or potentially substantial adverse change in the environment." (Pub. Res. Code ["PRC"] § 21068; see also 14 CCR § 15382.) An effect on the environment need not be "momentous" to meet the CEQA test for significance; it is enough that the impacts are "not trivial." (*No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 83.) "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." (*Communities for a Better Env't v. Cal. Res. Agency* (2002) 103 Cal.App.4th 98, 109.)

The EIR is the very heart of CEQA. (*Bakersfield Citizens for Local Control v. City of Bakersfield (*2004) 124 Cal.App.4th 1184, 1214 (*Bakersfield Citizens*); *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 927.) 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,* 124 Cal.App.4th at 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 process "protects not only the environment but also informed self-government." (*Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 927.)

An EIR is required if "there is substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment." (PRC § 21080(d); *see also Pocket Protectors*, 124 Cal.App.4th at 927.) An MND instead of an EIR is proper only if project revisions would avoid or mitigate the potentially significant effects identified in the initial study "to a point where clearly no significant effect on the environment would occur, and . . . there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment." (*Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322, 331 [quoting PRC §§ 21064.5, 21080(c)(2)].) In that context, "may" means a reasonable possibility of a significant effect on the environment. (PRC §§ 21082.2(a), 21100, 21151(a); *Pocket Protectors*, 124 Cal.App.4th at 927; *League for Protection of Oakland's etc. Historic Res. v. City of Oakland* (1997) 52 Cal.App.4th 896, 904-05.)

An EIR must be prepared rather than an MND "whenever it can be fairly argued on the basis of substantial evidence that the project may have a significant environmental impact." (*No Oil, Inc. v City of Los Angeles* (1974) 13 Cal.3d 68, 75.) Under this "fair argument" standard, an EIR is required if any substantial evidence in the record indicates that a project may have an adverse environmental effect—even if contrary evidence exists to support the agency's decision. (14 CCR § 15064(f)(1); *Pocket Protectors*, 124 Cal.App.4th at 931; *Stanislaus Audubon Society v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-51; *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602.) The "fair argument" standard creates a "low threshold" favoring environmental review through an EIR rather than through issuance of negative declarations or notices of exemption from CEQA. (*Pocket Protectors*, 124 Cal.App.4th at 928.)

The "fair argument" standard is virtually the opposite of the typical deferential standard accorded to agencies. As a leading CEQA treatise explains:

> This 'fair argument' standard is very different from the standard normally followed by public agencies in making administrative determinations. Ordinarily, public agencies weigh the evidence in the record before them and reach a decision based on a preponderance of the evidence. [Citations]. The fair argument standard, by contrast, prevents the lead agency from weighing competing evidence to determine who has a better argument concerning the likelihood or extent of a potential environmental impact. The lead agency's decision is thus largely legal rather than factual; it does not resolve conflicts in the evidence but determines only whether substantial evidence exists in the record to support the prescribed fair argument.

(Kostka & Zishcke, Practice Under CEQA, §6.29, pp. 273-74.) The Courts have explained that "it is a question of law, not fact, whether a fair argument exists, and the courts owe no deference to the lead agency's determination. Review is de novo, with a preference for resolving doubts in favor of environmental review." (*Pocket Protectors,* 124 Cal.App.4th at 928.)

DISCUSSION

I. AN EIR IS REQUIRED TO DISCLOSE AND MITIGATE THE PROJECT'S IMPACTS TO BIOLOGICAL RESOURCES.

Expert wildlife ecologist Shawn Smallwood, Ph.D., found several deficiencies in the MND's analysis of the Project's impacts on wildlife species. Dr. Smallwood's comment and CV are attached as Exhibit A. As discussed below, Dr. Smallwood concluded: (1) the MND's biological report underestimated the diversity of species and the Project's likely impacts to those species; (2) the Project will have significant impacts on biological resources, and (3) the MND's mitigation measures are inadequate to reduce the Project's impacts to biological resources.

A. The MND underestimated the diversity of species using the Project site.

Dr. Smallwood's associate, Noriko Smallwood, performed a 1.8-hour site visit during the day and a 2.22-hour nocturnal survey of the site on May 20, 2026, and a 2.33-hour site visit during the day on August 26, 2025. (Smallwood, pp. 2-3.) During these surveys, Noriko Smallwood detected 19 species of vertebrate wildlife at or adjacent to the project site, including four species with special status. (Smallwood, pp. 3, 7.)

The General Biological Assessment prepared for the MND by Natural Resources Assessment, Inc. in 2024 ("NRAI Assessment") claimed that "[t]here is no habitat for sensitive plants, fish, amphibians, reptiles, mammals or insects that were listed as potentially present in the vicinity of the property." (Smallwood, p. 13 [quoting MND, p. 21; NRAI Assessment, p. 11].) However, this is not true. Dr. Smallwood explained:

> [T]he project site does provide habitat for sensitive species of wildlife. Noriko detected two species of raptor, silver-haired bat, and monarch, the latter of which is a candidate for listing under the federal Endangered Species Act. [NRAI]'s biologists also detected a raptor on site, as well as California horned lark. [NRAI] attempts to characterize the horned lark(s) on the project site as the subspecies that lacks special status, but [NRAI]'s explanation is inaccurate; the project site occurs within the geographic range of the *actia* subspecies.

(Smallwood, p. 14.) Furthermore, Dr. Smallwood found that:

> many more species of wildlife occur on the project site than those documented by [NRAI]. [NRAI] documented only about 22% of the species of vertebrate wildlife

> likely to be detected in daylight surveys. Adding species more likely to be detected in nocturnal surveys or specialized surveys, i.e., use of cover boards, live-traps, or thermal-imaging, [Dr. Smallwood] estimate[s] [NRAI]'s survey findings represent 15% of vertebrate wildlife species that rely on habitat on the project site**. *[NRAI]'s survey findings cannot support its claim that no habitat exists on site for sensitive species of plants or wildlife***.

(*Id.* [emph. added].)

The failure of the NRAI Assessment to detect several special-status species and an abundance of other wildlife and identify habitat for these species at the Project site underscores the inadequacy of the MND's documentation of baseline conditions, skewing the subsequent impact analysis. (Smallwood, 14-15; *see also id*., pp. 8-11.)

B. The Project will have a significant impact on biological resources as a result of habitat loss and fragmentation, wildlife movement, road mortality, and cumulative impacts.

Dr. Smallwood found that the Project may have numerous significant impacts on biological resources, including habitat loss and fragmentation, wildlife movement, road mortality, and cumulative biological impacts, which the MND failed to discuss. (Smallwood, pp. 24-29.) Dr. Smallwood's analysis constitutes a fair argument that the Project may have significant unmitigated impacts and, as such, an EIR is required prior to approval of the Project.

1. <u>Habitat loss and fragmentation.</u>

Dr. Smallwood found that the NRAI Assessment's analysis of the Project's impact on habitat loss was inadequate because "[t]he surveys that have been conducted on the project site were unsuitable for detecting all bird nests or estimating total nest density." (Smallwood, p. 23.) Dr. Smallwood calculated that the Project could result in "[t]he loss of 79 birds per year" which "would be a loss of significant habitat value that is currently provided by the project site," and "[m]ost if not all these birds are protected by the federal Migratory Bird Treaty Act and by California's Migratory Bird Protection Act, both of which are intended to most strongly protect breeding migratory birds." (Smallwood, p. 24.) The loss of this many birds would easily qualify as an unmitigated significant impact. (*Id.*) The MND failed to address or analyze this potentially significant impact and an EIR is necessary to ensure the impact to wildlife from habitat loss is mitigated to the fullest extent.

2. <u>Wildlife Movement</u>

The MND fails to address impacts on wildlife movement, and instead "over-focuses on the question of whether a corridor exists on the project site." (Smallwood, p. 24.) In doing so, Dr. Smallwood explained that the MND improperly dismisses the Project's potential to significantly impact wildlife movement reasoning:

> The Project Site and surrounding areas have been disturbed or developed. Therefore, the Project Site would not be suitable as a native resident or migratory wildlife corridor or for facilitating the movement of any native resident or migratory wildlife species. No significant impacts are identified or anticipated, and no mitigation measures are required.

(MND, p. 24.)

These conclusions rely on a false CEQA standard. According to Dr. Smallwood, the MND's "argument does not flow logically from premise to conclusion" given that "[j]ust about every place on Earth has been disturbed, and the [MND] fails to make the case why the disturbance on the project site would prevent its use by migratory wildlife or by wildlife on the move for other reasons." (Smallwood, p. 24.) As Dr. Smallwood noted, "[t]he development around the project site might ***increase*** the project site's importance to wildlife movement, because wildlife are losing stopover opportunities as the process of habitat fragmentation proceeds." (*Id.*) Thus, Dr. Smallwood concluded that the Project's impact on wildlife movement would be significant and currently unmitigated by the MND. (*Id.*)

5. <u>Road Mortality</u>.

The MND and NRAI Assessment did not address impacts to wildlife from collision with traffic generated by the Project. Assuming 18 miles per trip and adopting the MND's 443 daily trips, Dr. Smallwood predicted 2,766,978 vehicle miles traveled annually. (*See* Smallwood, pp. 24-26.) Dr. Smallwood estimates that collisions with vehicles as a result of the Project would kill 481 to 1,277 animals annually. (*Id.*, p. 27.) Especially due to the special-status species likely to occur at or near the Project, these collisions represent a significant impact to wildlife that has not been addressed, discussed, or mitigated in the MND. (*Id.*, pp. 27-28.) Dr. Smallwood's calculations constitute a fair argument of a significant impact and an EIR is necessary to address and mitigate this impact.

6. <u>Cumulative Impacts</u>.

Dr. Smallwood found the MND's discussion of cumulative impacts to wildlife to be inadequate. (Smallwood, p. 35.) Dr. Smallwood concluded that the MND "fails to seriously analyze the project's contributions to cumulative impacts on biological resources" and instead relies on unsupported assumptions that Project-specific mitigation measures and mitigation measures included in San Bernardino County's buildout of the Countywide Plan will reduce cumulative impacts to less than significant. (Smallwood, pp. 27-28 [citing MND, p. 81].) However, this is not the standard under CEQA.

As, Dr. Smallwood explained:

> [T]his notion that mitigation of project-specific impacts would avoid cumulative impacts is inconsistent with CEQA's definition of a cumulative impact, which is

> "created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts" (CEQA Guidelines §15065 (a)(3)). Even though a project's direct or indirect effects might be mitigated to a less than significant impact at the project level, it can still incrementally contribute to the effects of other projects for a significant cumulative impact.

(Smallwood, pp. 28-29.)

In addition, Dr. Smallwood explained that:

> [T]he [MND]'s argument that the Countywide Plan anticipated all potential cumulative impacts, hence avoiding significant project contributions to cumulative impacts, the CEQA Guidelines (§15064(h)(3)) states, "When relying on a plan, regulation or program, the lead agency should explain how implementing the particular requirements in the plan, regulation or program ensure that the project's incremental contribution to the cumulative effect is not cumulatively considerable." The [MND] fails to explain how the Countywide Plan would minimize, avoid or offset the project's contributions to cumulative impacts. CEQA requires a cumulative impacts analysis.

(Smallwood, p. 29.) He further cited studies showing that, despite required mitigation, "mitigated development resulted in a **66% loss of species on site**, and **48% loss of species in the project area**," while "[c]ounts of vertebrate animals declined **90%**," demonstrating that "urban development substantially reduced vertebrate species richness and numerical abundance." (*Id.*, p. 28 [emph. added].) Based on this evidence, Dr. Smallwood concluded that "[t]he environmental review for this project needs to include an appropriate cumulative impacts analysis." (*Id.*) Therefore, the MND fails to provide appropriate, serious analysis of cumulative impacts.

As such, the MND's conclusion that the cumulative impacts would be less than significant is unfounded and should be revised.

C. The MND's proposed mitigation measures are inadequate.

Dr. Smallwood critiqued the MND's proposed mitigation measures as being inadequate to reduce the Project's impacts to biological resources below significance. (Smallwood, pp. 35-41.) For example, the MND's proposed biological mitigation measure, BIO-1, is infeasible, unenforceable, and ineffective to reduce the Project's impacts on avian species to less than significant. More specifically, BIO-1 conflates survey types, lacks objective criteria, and well as provides temporary and negligible conservation. (Smallwood, pp. 29-31.) To comply with CEQA, an EIR should be prepared requiring stronger mitigation measures. Dr. Smallwood recommends protocol-level surveys completed before environmental review, compensatory mitigation, contributions to wildlife rehabilitation facilities, and landscaping with native plants. (Smallwood, pp. 31-32.)

CONCLUSION

As discussed above, the MND fails to provide substantial evidence to support several of its conclusions related to the Project's impacts to biological resources. Furthermore, SAFER's expert has established a fair argument that the Project may have significant impacts on biological resources. For those reasons, SAFER respectfully requests that the City not rely on the MND but instead prepare and circulate an EIR prior to further consideration of the Project.

Sincerely,

Victoria Yundt

Victoria Yundt
Lozeau Drury LLP

EXHIBIT A

Shawn Smallwood, PhD
3108 Finch Street
Davis, CA 95616

Attn: Precious McDuffie, Senior Planner
County of San Bernardino
Land Use Services Department
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182 29 May 2026

RE: Muscoy Warehouse Facility

Dear Ms. McDuffie,

I write to comment on potential impacts to biological resources that would result from development of the proposed Muscoy Warehouse Facility. The project would add two warehouse buildings totaling 88,174 square-feet with 110 parking spaces and three driveways on 4.59 acres at the southeast corner of Cajon Blvd and June St in the community of Muscoy within San Bernardino County, California (APN: 0267-012-09). My comments that follow address my concerns that the Draft Initial Study/Mitigated Negative Declaration (IS/MND), supported by a General Biological Assessment prepared by Natural Resources Assessment, Inc. (NRAI 2024), mischaracterizes the existing environmental setting, and that its impacts analysis is flawed and its mitigation measures are inadequate.

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 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 forty-one years. My CV is attached.

THE WILDLIFE COMMUNITY AS A BIOLOGICAL RESOURCE

Most environmental reviews pursuant to the California Environmental Quality Act (CEQA) focus on special-status species because CEQA's Checklist Evaluation of Environmental Impacts Question IV(a) asks specifically whether the project would adversely affect special-status species. However, this narrowly focused question is part of a larger policy goal of CEQA, which is "to prevent the elimination of fish or wildlife species due to man's activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history." Pub. Res. Code § 21001(c). This policy is not restricted to special-status species; it also applies to wildlife populations and plant and animal communities, as it must, because special-status species are inter-dependent members of ecological communities. The CEQA Guidelines Section 21155.1 defines wildlife habitat as "the ecological communities upon which wild animals, birds, plants, fish, amphibians, and invertebrates depend for their conservation and protection." This definition is consistent with the scientific definition of habitat, which is that portion of the environment that is used by members of a species for survival and reproduction (Hall et al. 1997). An essential portion of the environment used by any special-status species is composed of the collection of other species of plants and wildlife, because these species provide for special-status species their forage, refugia and nest substrates, and some serve as ecological mutualists. The CEQA Checklist Evaluation assigns priority to special-status species to balance information and cost, but it does not exclude the need to evaluate environmental impacts to other species, which, after all, are members of the very communities within which special-status species inter-depend for survival and reproduction.

The species I consider to be special-status species are those listed in California's Special Animals List inclusive of threatened and endangered species under the California and federal Endangered Species Acts, candidates for listing under CESA and FESA, California's Fully Protected Species, California species of special concern, and California's Taxa to Watch List (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406), continental and region-specific US Fish and Wildlife Service Birds of Conservation Concern (https://www.fws.gov/sites/default/files/documents/birds-of-conservation-concern-2021.pdf), and naturally rare species such as raptors protected by California's Birds of Prey laws, Fish and Game Code Sections 3503, 3503.5, 3505 and 3513 (see https://wildlife.ca.gov/Conservation/ Birds/Raptors).

What follows is a summary of a site visit to detect as many of the species of wildlife as possible within the short time available. The visit was also intended to detect as many of the special-status species as possible, but with the understanding that most special-status species are less readily detectable due to rarity and crypticity. Nonetheless, the species detected can indicate the ecological integrity of the site and thus the likelihood of occurrence of special-status species not yet detected.

SITE VISITS

On my behalf, Noriko Smallwood, a wildlife biologist with a Master of Science Degree from California State University Los Angeles, visited the site of the proposed project for 1.8 hours of diurnal survey starting at 18:00 and for 2.22 hours of nocturnal survey starting at 19:48 on 20 May 2026, and for 2.33 hours of diurnal survey starting at 5:53 on 26 May 2026. During daylight, Noriko walked the site's perimeter where accessible, stopping to scan for wildlife with use of binoculars. At night, Noriko affixed a Pettersson M500 acoustic bat detector to a 20-foot pole, and cabled the detector to her computer, which ran SonoBat Live. SonoBat Live identifies bat species based on the bats' sonograms that are detected by the M500. She also scanned for nocturnal wildlife using a Pulsar Telos LRF XG50 5.5-14x 50 mm thermal-imaging monocular. Noriko recorded all species of vertebrate wildlife she detected, including those whose members flew over the site or were seen just off site. Conditions were sunny to clear with 10.3-2.1 km/hr southeast wind and temperatures of 29.2-23.4° C on 20 May 2026, and cloudy with 1.6 km/hr southeast wind and temperatures of 18.1-17° C on 26 May 2026. The site annual grassland bordered by ornamental shrubs and trees (Photo 1).

Photo 1. *View of the project site, 26 May 2026. Photo by Noriko Smallwood.*

Noriko saw American kestrel and red-tailed hawk (Photos 2 and 3), great-tailed grackle and Say's phoebe (Photos 4 and 5), Cassin's kingbird and cliff swallow (Photos 6 and 7), northern mockingbird and monarch (Photos 8 and 9), Mexican free-tailed bat and silver-haired bat (Photos 10 and 11), and other species. Noriko detected 19 species of vertebrate wildlife and a species of butterfly at or adjacent to the project site, including 4 species with special status (Table 1).

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

Noriko Smallwood

Noriko Smallwood

Photos 2 and 3. *American kestrel (left), and red-tailed hawk (right) on the project site, 20 May 2026. Photos by Noriko Smallwood.*

Photo 4. *Great-tailed grackle with a beetle on the project site, 20 May 2026. Photo by Noriko Smallwood.*

Photo 5. *Say's phoebe just off the project site, 26 May 2026. Photo by Noriko Smallwood.*

Photos 6 and 7. *Cassin's kingbird (left), and cliff swallow (right) on the project site, 20 and 26 May 2026. Photos by Noriko Smallwood.*

Photos 8 and 9. *Northern mockingbird (left), and monarch finding a roosting spot in a pine tree (right) on the project site, 20 May 2026. Photos by Noriko Smallwood.*

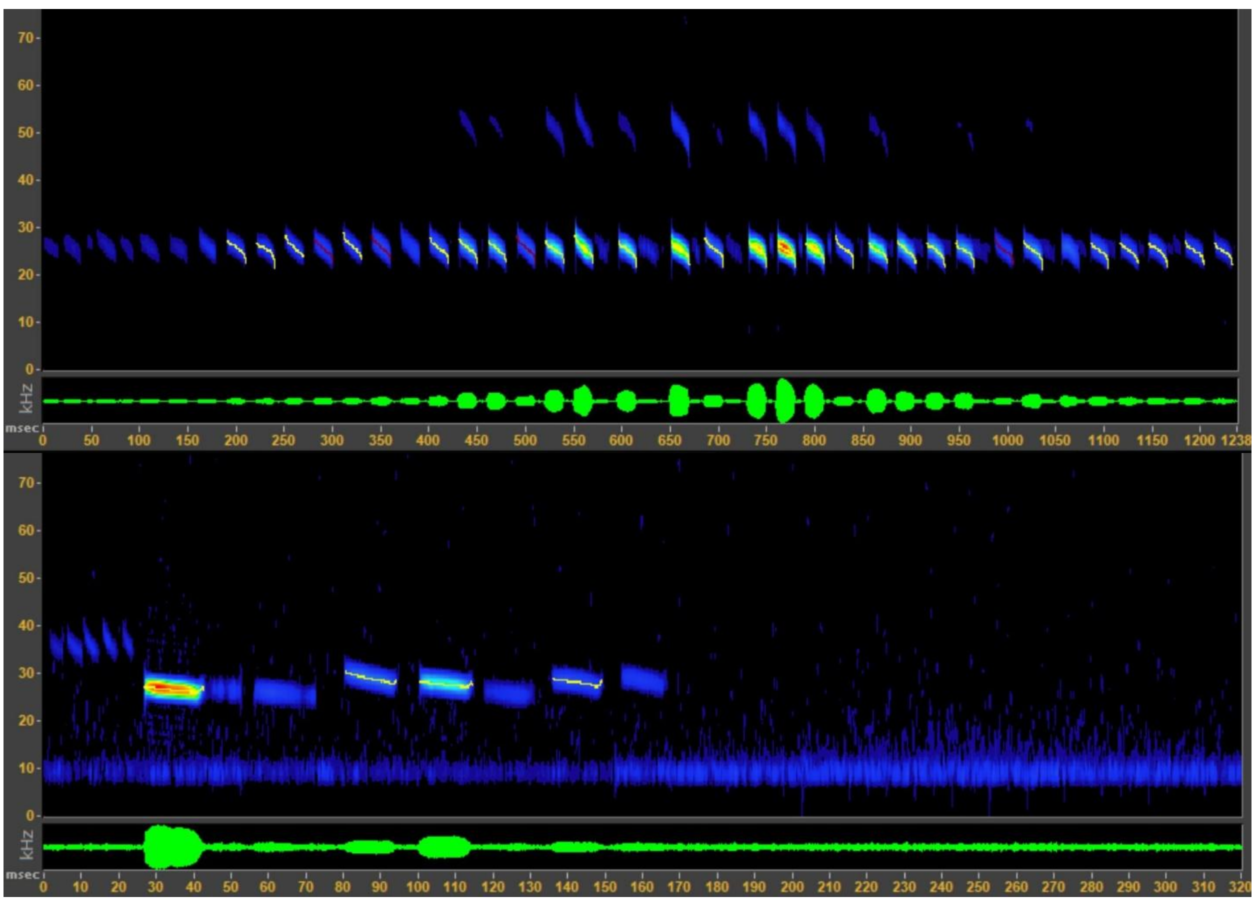


Photo 10. *Sonograms of Mexican free-tailed bat (top) and silver-haired bat on the project site detected using SonoBat Live and a Pettersson M500, 20 May 2026. Photo by Noriko Smallwood.*

Table 1. *Species of wildlife Noriko observed in 1.8 hours of diurnal survey and 2.22 hours of nocturnal survey on 20 May 2026, and in 2.33 hours of diurnal survey on 26 May 2026.*

Common name	***Species name***	**Status[1]**	**Notes**
Monarch	*Danaus plexippus*	FC	Flew over site, roosted in pine tree just off site
Western side-blotched lizard	*Uta stansburiana elegans*		
Rock pigeon	*Columba livia*	Non-native	
Eurasian collared-dove	*Streptopelia decaocto*	Non-native	
Anna's hummingbird	*Calypte anna*		Territory defense
Red-tailed hawk	*Buteo jamaicensis*	BOP	Soared over
American kestrel	*Falco sparverius*	BOP	Hunted on site
Cassin's kingbird	*Tyrannus vociferans*		Foraged, chased each other
Say's phoebe	*Sayornis saya*		Foraged
Common raven	*Corvus corax*		
Cliff swallow	*Petrochelidon pyrrhonota*		
Northern mockingbird	*Mimus polyglottos*		Foraged
European starling	*Sturnus vulgaris*	Non-native	
House sparrow	*Passer domesticus*	Non-native	Foraged
House finch	*Haemorphous mexicanus*		Foraged
Lesser goldfinch	*Spinus psaltria*		
Great-tailed grackle	*Quiscalus mexicanus*		Foraged
Silver-haired bat	*Lasionycteris noctivagans*	WBWG: M	
Mexican free-tailed bat	*Tadarida brasiliensis*	WBWG: L	
Botta's pocket gopher	*Thomomys bottae*		Burrows

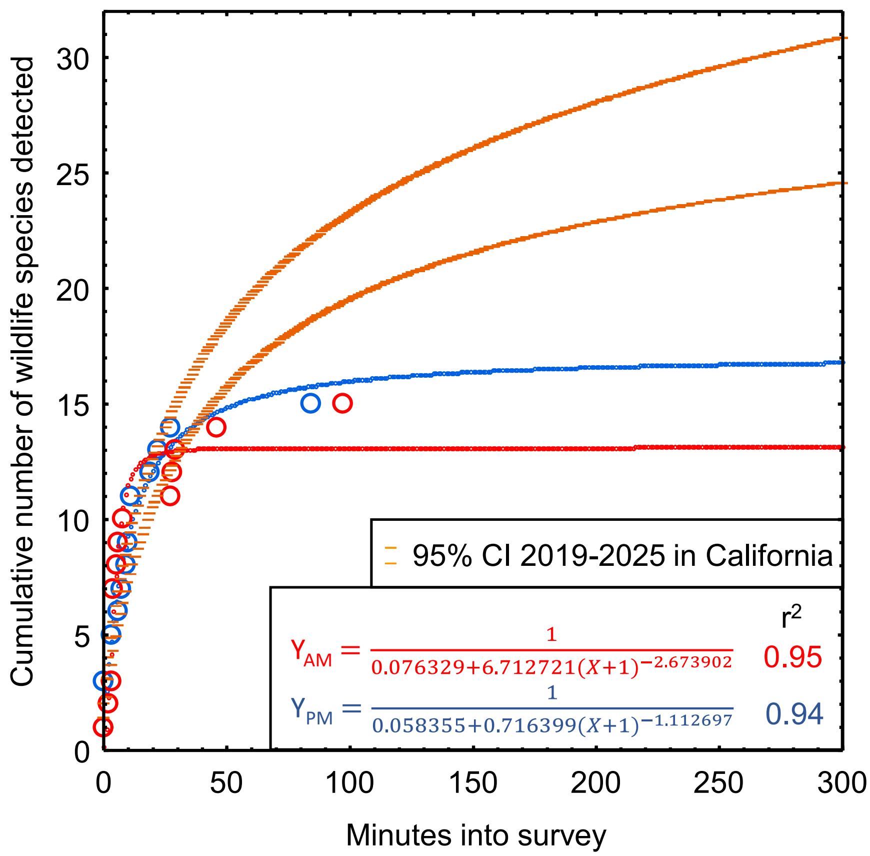
[1] Listed on CDFW's Special Animals List (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406) as FC = federal candidate for listing; WBWG = Western Bat Working Group with priority rankings, of low (L) and moderate (M); and BOP = protected by Birds of Prey (California Fish and Game Code 3503.5, see https://wildlife.ca.gov/Conservation/Birds/Raptors).

ANALYSIS OF RECONNAISSANCE SURVEY DATA

In addition to monarch, Noriko detected 19 species of vertebrate wildlife, which was a good number for the brevity of her survey effort. All the species in Table 1 would lose habitat as a result of the project and its replacement of natural ground covers with impervious surfaces. Assuming that the habitat that would remain within the region is at carrying capacity for each species at issue, habitat loss translates directly to a numerical decline in the species. Smallwood and Smallwood (2023) confirmed this habitat loss by measuring the impacts of similar development projects on species richness and the abundances of wildlife. Smallwood and Smallwood (2023) directly compared the species and the numbers of animals observed prior to development to the those observed after development, while they did the same at control sites. The measured losses of these species resulting from development is indicative of habitat loss, because habitat is defined as that portion of the environment that is used for survival and reproduction by members of a species (Hall et al. 1997).

However, the species of wildlife Noriko detected at the project site were not the only species that were present during her survey, as there are always species that are not detected. To demonstrate this, I fit nonlinear regression models to Noriko's accumulation of first detections of vertebrate wildlife species with time into her daytime surveys to predict the number of species that she would have detected with longer surveys or perhaps with additional biologists available to assist her. The type of model is a logistic growth model, which reaches an asymptote that corresponds with the theoretical maximum number of vertebrate wildlife species that could have been detected during the survey. The model fit to Noriko's survey data from the evening of 20 May predicts 17 species of vertebrate wildlife were available to be detected, or two more species than she detected that evening (Figure 1). Noriko's rate of species detections initially exceeded the upper bound of the 95% confidence interval estimated from many other surveys we have completed in the Inland Empire region, but it fell away from the 95% CI after about 40 minutes of survey. This pattern typifies sites where wildlife are highly exposed due to lack of vegetative cover.

Figure 1. *Actual and predicted relationships between the numbers of vertebrate wildlife species detected and the elapsed survey time based on Noriko's visual-scan surveys at the project site on 20 and 26 May 2026. Note the confidence interval (orange) applies only to the morning survey (red line).*



Unknown are the identities of the species Noriko missed, but the species that Noriko did and did not detect on 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, some require more survey effort because they are highly cryptic, and the members of other species would visit the site only periodically while patrolling large home ranges. Surveys on only two days cannot possibly detect all of the species of the local wildlife community.

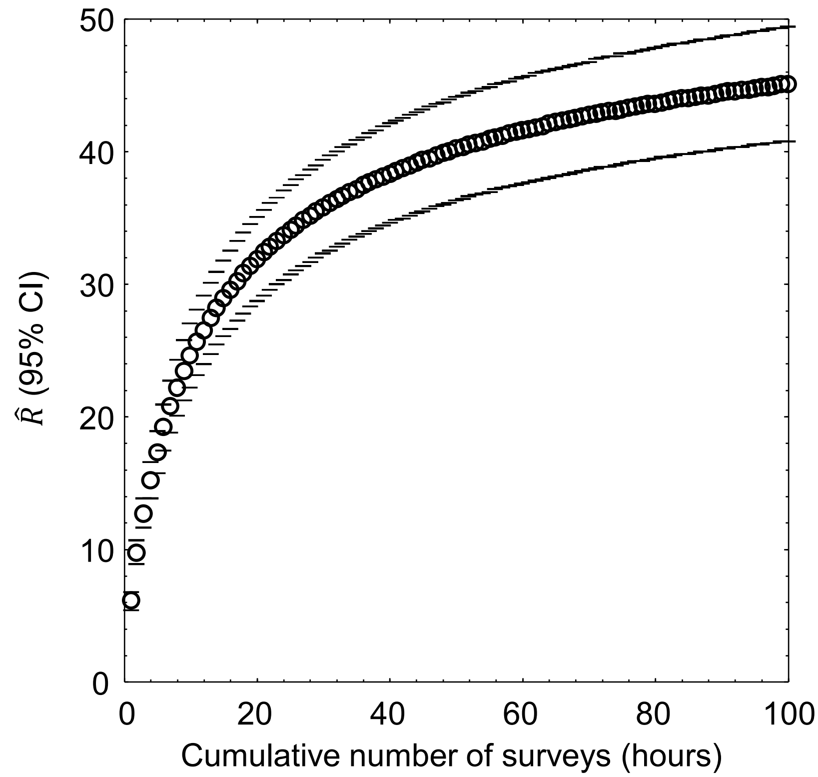
At least a year's worth of surveys would be needed to more accurately report the number of vertebrate species that occur at the project site, but I only have Noriko's one survey. However, by use of an analytical bridge, a modeling effort applied to a large, robust data set from a research site can predict the number of vertebrate wildlife species that likely make use of the site over the longer term. This analytical bridge draws inference from the pattern of species detections more than it does from the research site, and I note that the pattern, i.e., rate, of species detections is consistent from site to site.

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 13 species over my first 4.13 hours of diurnal surveys at my research site in the Altamont Pass (4.13 hours to match the 4.13 hours Noriko surveyed during daylight hours at the project site), which composed 22.8% 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 17 vertebrate wildlife species Noriko detected in her 4.13 hours of daylight survey at the project site likely represented 22.8% 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 $^{17}/_{0.228} = 75$ species of vertebrate wildlife in daylight surveys at the site. Assuming Noriko's ratio of special-status to non-special-status species was to hold through the detections of all 75 predicted species, then continued daylight surveys would eventually detect 9 special-status species of vertebrate wildlife.

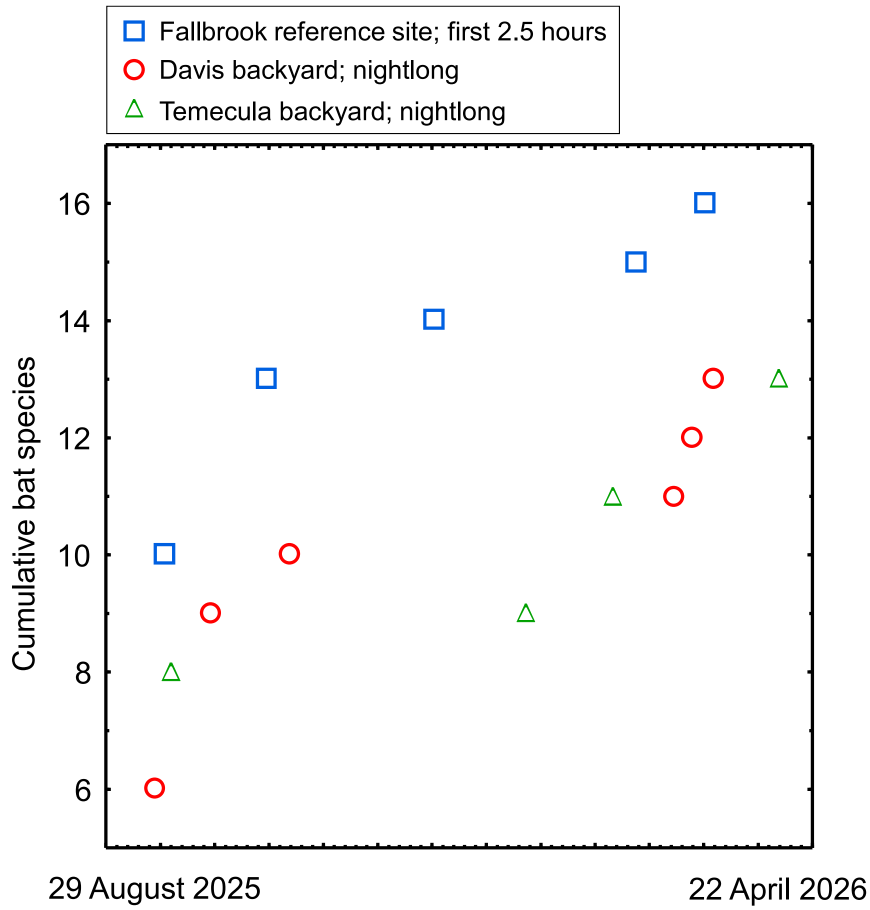
Because my prediction of 75 species of vertebrate wildlife, including 9 special-status species, is derived from daytime visual-scan surveys, and would detect few nocturnal mammals such as bats, the true number of species composing the wildlife community of the site must be larger. Proof of this in Noriko's brief nocturnal survey in which she added 2 species of vertebrate wildlife to her tally. Noriko's reconnaissance survey should serve only as a starting point toward characterization of the site's wildlife community, but it certainly cannot alone inform of the inventory of species that use the site. More surveys are needed than her one survey to produce an inventory the project site's wildlife community. Nevertheless, the number of species I predict at the project site is indicative of a more species-rich wildlife community than characterized by NRAI (2024), and which warrants a serious survey effort.

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.*



One should expect the same increase in the number of species known to the site after continued surveys for nocturnally active wildlife. Noriko's one brief nocturnal survey detected Mexican free-tailed bats and silver-haired bats on the project site. However, in our monitoring of bats in both our backyards and at a third monitoring site in a nature reserve, the average cumulative number of bat species detected increased 1.8-fold with additional surveys over only 8 months since the first surveys in the peak season for bat activity (Figure 3), just as it likely would have at the project site had the site been similarly monitored.

Figure 3. *The cumulative numbers of bat species detected at each of 3 sites increased with more surveys from late August 2025 through April 2026. One site is a reference site with high ecological integrity at Fallbrook, California. The other two sites were in backyards in Davis and Temecula, California.*



Considering the number of species yet to be detected, there is at least a fair argument that can be made for the need to prepare and EIR to accurately characterize the wildlife community as part of the existing environmental setting, which is needed to predict potential project impacts and to formulate an effective mitigation strategy.

MISCHARACTERIZATION OF THE EXISTING ENVIRONMENTAL SETTING

CEQA's primary objectives should guide the design and conduct of CEQA review. Four of CEQA's primary objectives are to (1) accurately characterize the existing environmental setting, (2) disclose potential project impacts to the public and decision-makers, (3) foster public participation with decision-making over proposed projects, and (4) identify issues and feasible alternative mitigation measures to minimize environmental impacts. The first objective is essential to the other three, because an accurate understanding of the existing environmental setting is needed to predict impacts, provide the public with the means to meaningfully participate with issues of importance, and effectively strategize mitigation and project alternatives (Figure 4). For biological resources, essential information includes the species composition of the plant and wildlife communities, key ecological interactions, identification of ecological keystone species, determining the presence of special-status species or their habitats, and identifying risk factors that could result in significant direct, indirect and cumulative impacts should the project go forward.

Assess species occurrence likelihoods

1. Desktop review

a. Species geographic range overlap or database occurrence records

b. Crosswalk habitat associations with mapped ground cover

2. Reconnaissance survey/Habitat assessment

3. Detection surveys for special-status species

Characterize wildlife community

4. Lists of species detected and of those expected but not yet detected, and any known trends

Note: Impact predictions and significance determinations have been of unknown accuracy in the absence of experimental measurement

Outcomes

5. Predict impacts

6. Formulate mitigation strategy

7. Determine significance of impacts

Figure 4. *General flow of information from its gathering through characterizing the existing environment to predicting impacts and their significance.*

The public and decision-makers need to know which species are susceptible to harm potentially caused by the project and its associated activities, and which are known to be vulnerable to harm once exposed to the environmental changes brought by the project. For these reasons, field studies are needed to identify as many of the species that occur on the project site as reasonably feasible, and to otherwise examine the environmental conditions for their likelihood to support species that are not detected, otherwise known as "habitat assessment." A review of species occurrence records – also known as "desktop review" – is needed to identify the other species that potentially occur on the site – a process that is also referred to as "habitat assessment." Because habitat assessments that are based on either or both field study and desktop review are prone to uncertainty, emphasis needs to be directed to adequate field study to reduce the pool of species subjected to habitat assessment, thereby weighing the review more towards certainty. Appropriately weighted reviews are less susceptible to speculation over species occurrence likelihoods. For this reason, protocol-level detection surveys have been formulated for numerous special-status species of plants and wildlife, and otherwise best scientific practices are needed to provide a reasonable likelihood of detection of species that truly occur on the project site. The negative findings of a properly conducted detection survey are the only findings that can support a determination of species absence.

Even among reviews founded on the best field studies, there is always uncertainty over some of the determinations of species occurrences. The uncertainties of habitat assessments need to be managed to achieve CEQA's primary objectives. This means that the methodological details of both the field studies and desktop review need to be carefully and thoroughly reported, and it means that results need to be reported in context of their uncertainties. For example, the reporting of having detected 10 species in a reconnaissance survey is nearly meaningless without also reporting the numbers of species found in surveys of similar methods and effort levels, and the reporting of the failure to detect a given species is nearly entirely meaningless without also reporting the likelihood that species would be detected given the survey methods and effort level. The same is true of desktop review; that is, there should be some means of validating habitat assessments based on the thousands of habitat assessments that have already been conducted in support of CEQA reviews. If industry standards in environmental review are to be credible, then they must include the use of the comparative method.

In the case of the proposed project, the IS/MND fails to explain how or why the steps taken to characterize the ecological community relate to CEQA's primary objectives. Additionally, the ecological community is inaccurately characterized as composed of only those species detected in a reconnaissance survey or deemed likely to occur based on desktop review of occurrence records. Furthermore, the IS/MND reports nothing about the uncertainties of NRA's (2024) findings, which vastly diminishes the accuracy of the characterization of the existing environmental setting.

Environmental Setting informed by Field Surveys

On 12 October 2023, NRAI (2024:8) deployed two biologists to conduct a field survey to search for sensitive biological resources and observe potential habitat for sensitive species. According to NRAI (2024:8), "The field team conducted the survey according to standard protocols set forth by the US Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW)." However, NRAI (2024) fails to explain which specific protocols its biologists followed. NRAI (2024) did not survey according to the CDFW (2018) recommended protocol for rare plants. Other than protocols for detection surveys for particular special-status species of wildlife, there is no protocol for a reconnaissance-level field survey. Perhaps NRA refers to a wetlands survey protocol but overgeneralizes it to wildlife and plants. Anyhow, for whatever reason NRA's statement is misleading.

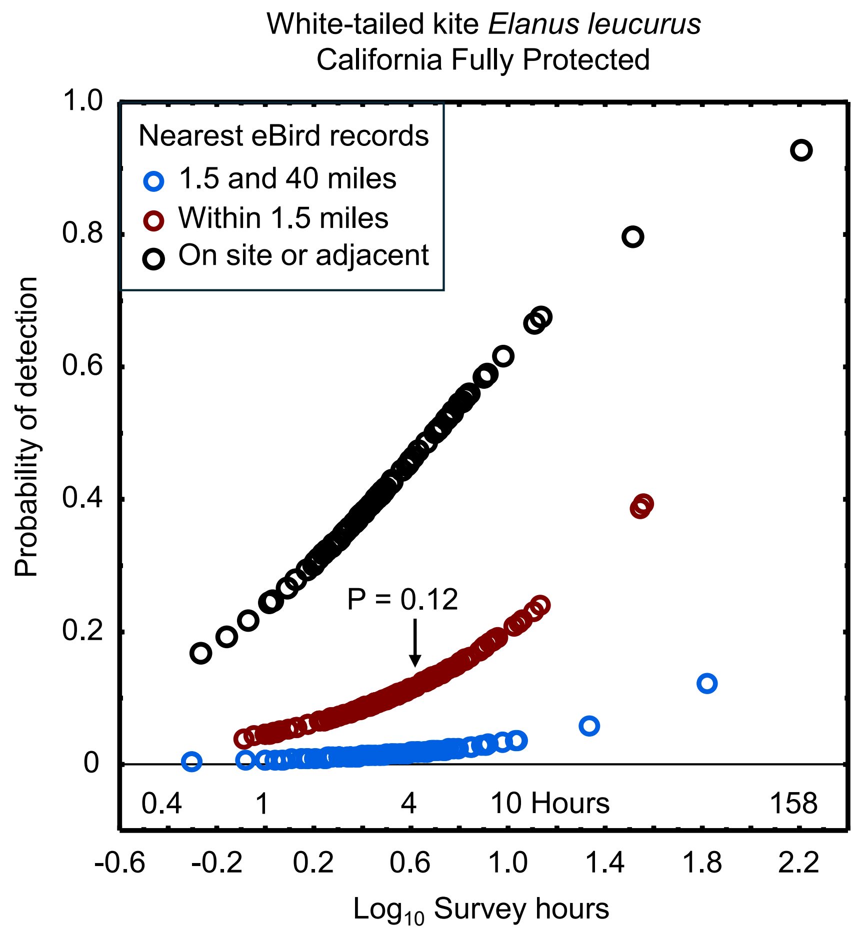
NRAI (2024) fails to report its survey start time and survey duration. These methodological details are essential for contextualizing survey findings because time of day and survey duration impart large effects on which species of wildlife are detected and the number of species detected. Additionally, NRAI (2024) provides no comparative analysis to help the reader understand whether NRA's findings are typical or atypical of surveys completed elsewhere. More troublesome, NRAI (2024) gives the false impression that the plant and wildlife species its biologists found on the project site on one day in October were all the species that occur on the site. According to NRAI (2024:11, and repeated on p. 21 of the IS/MND), "There is no habitat for sensitive plants, fish, amphibians, reptiles, mammals or insects that were listed as potentially present in the vicinity of the property."

In fact, the project site does provide habitat for sensitive species of wildlife. Noriko detected two species of raptor, silver-haired bat, and monarch, the latter of which is a candidate for listing under the federal Endangered Species Act. NRA's biologists also detected a raptor on site, as well as California horned lark. NRA attempts to characterize the horned lark(s) on the project site as the subspecies that lacks special status, but NRA's explanation is inaccurate; the project site occurs within the geographic range of the *actia* subspecies (see Shuford and Gardali 2008, and the California Wildlife Habitat Relationships System).

Furthermore, as I commented earlier, many more species of wildlife occur on the project site than those documented by NRA. NRA documented only about 22% of the species of vertebrate wildlife likely to be detected in daylight surveys. Adding species more likely to be detected in nocturnal surveys or specialized surveys, i.e., use of cover boards, live-traps, or thermal-imaging, and I estimate NRA's survey findings represent 15% of vertebrate wildlife species that rely on habitat on the project site. NRA's survey findings cannot support its claim that no habitat exists on site for sensitive species of plants or wildlife.

The type of survey performed by NRA is not the type of survey one would perform to develop evidence in support of an absence determination. For rare plants, such information would need to be based on the negative findings of a survey effort that is consistent with the recommendations of CDFW (2018). For special-status species of wildlife, there exist various survey protocols to develop the same type of evidence that could support absence determinations, such as for burrowing owl (CDFW 2012) or Crotch's bumble bee (CDFW 2023). These survey protocols were formulated with the understanding that multiple surveys are essential for attaining a reasonable probability of detection of species that are truly present. For example, although the white-tailed kite was not detected by NRA or Noriko, its detection probability needs consideration. To the outcomes of hundreds of surveys Noriko and I have completed among project sites, I fit logit regression models by proximity class of eBird occurrence records (Figure 5). I found that in addition to the proximity of occurrence records relative to the surveyed project site, cumulative survey duration was a major factor in predicting survey outcome. In the case of Noriko's survey at the project site, and because eBird includes one or more occurrence records of white-tailed kite within 1.5 miles of the project site, Noriko's 4.13 hours of daytime survey on the site afforded her a 12% chance of detecting white-tailed kites. Noriko would need to survey multiple times to establish a reasonable chance of detecting white-tailed kites if kites are truly present. (I cannot estimate detection probability for NRA's biologists because NRAI (2024) fails to report its survey duration.) A single survey is insufficient for determining a species' absence, and for this reason most detection survey protocols recommend repeat surveys spaced throughout the breeding season.

__Figure 5.__ Probability of detection of white-tailed kite as a function of survey effort and proximity of occurrence records to a project site, based on hundreds of reconnaissance surveys we completed 2019–2024.



Environmental Setting Informed by Desktop Review

As part of its desktop review in support of the IS/MND, NRAI reviewed a short list of natural resources databases. However, NRAI (2024) insufficiently describes what information was gathered from these databases or how it was used. To establish its pool of special-status species for assessing occurrence likelihoods, NRAI presumably queried the California Natural Diversity Data Base (CNDDB) for documented occurrences of special-status species within some spatial area surrounding and inclusive of the project site, but no explanation is reported of how species were selected for inclusion in the analyses of occurrences likelihoods. If NRAI used the CNDDB to screen out special-status species from further analysis of occurrence likelihoods, then it effectively determined species' absences from the project site without having accumulated supporting data from the appropriate detection surveys. The CNDDB is not designed to support absence determinations or to screen out species from characterization of a site's wildlife community. As noted by the CNDDB, "*The CNDDB is a positive sighting database. It does not predict where something may be found. We map occurrences only where we have documentation that the species was found at the site. There are many areas of the state where no surveys have been conducted and therefore there is nothing on the map. That does not mean that there are no special status species present*." NRAI (2024) and hence the IS/MND misuses the CNDDB.

The CNDDB relies entirely on volunteer reporting from biologists who were allowed access to whatever properties they report from. Many properties have never been surveyed by biologists. Many properties have been surveyed, but the survey outcomes never reported to the CNDDB. Many properties have been surveyed multiple times, but not all survey outcomes reported to the CNDDB. Furthermore, the CNDDB is interested only in the findings of special-status species, which means that species more recently assigned special status will have been reported many fewer times to the CNDDB than were species assigned special status since the inception of the CNDDB. The lack of many CNDDB records for species recently assigned special status had nothing to do with whether the species' geographic ranges overlapped the project site, but rather more to do with the brief time for records to have accumulated since the species were assigned special status. And because negative findings are not reported to the CNDDB, the CNDDB cannot provide the basis for estimating occurrence likelihoods, either.

Monarch is an example of a special-status species of wildlife that was omitted from NRAI's occurrence likelihood analysis. No explanation is reported. Nonetheless, Noriko detected monarch on the project site.

In my assessment based on a database review and site visits, 133 special-status species of wildlife are known to occur near enough to the site to warrant analysis of occurrence potential (Table 2). Not all these species should be expected to occur at the project site, but each of them should be given a closer look to estimate the degrees to which they contribute to the local wildlife community, and to determine whether additional surveys are needed. Of these 133 special-status species, 6 were recorded on or adjacent to the project site (on the fringe), and another 41 (31%) have been documented within 1.5 miles of the site (Very close), another 26 (20%) between 1.5 and 4 miles (Nearby), and another 49 (37%) between 4 and 30 miles (In region). Over half (55%) of the special-status species in Table 2 have been reportedly seen within 4 miles of the project site. The site therefore supports at least six special-status species of wildlife, and it carries the potential for supporting many more special-status species of wildlife based on the proximities of recorded occurrences. Evidence certainly suggests that habitat assessments are needed for these species.

NRAI (2024) assesses the occurrence likelihoods of 56 (42%) of the special-status species in Table 2. Of these 56 species, NRAI determines 8 have low potential to occur, and 48 have no potential. However, of the 8 species assigned low potential, 6 have been observed within 1.5 miles of the project site, and another was recorded between 1.5 and 4 miles from the site. Of the 48 special-status species given no potential to occur, NRAI detected one of them on site (California horned lark), and 19 have been documented within 1.5 miles, and another 11 have been documented between 1.5 and 4 miles from the site. Close proximities of known occurrences cast doubt on 65% of NRAI's determinations of special-status species having no chance of occurrence. NRAI's process for determining occurrence likelihoods is flawed and inaccurate.

Table 2. *Occurrence likelihoods of special-status species of 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 detected by Noriko Smallwood during her site visit.*

Common name	***Species name***	**Status**[1]	**NRAI 2024**	**Records, Surveys**
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT		In region
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE		In region
Riverside fairy shrimp	*Streptocephalus woottoni*	FE		In region
Delhi sands flower-loving fly	*Rhaphiomidas terminatus abdominalis*	FE	None	In region
Quino checkerspot butterfly	*Euphydryas editha quino*	FE	None	In range
Monarch	*Danaus plexippus*	FC		Very close/**On site**
Crotch's bumble bee	*Bombus crotchii*	CCE	None	Very close
Western spadefoot	*Spea hammondii*	FC, SSC	None	Nearby
Southwestern pond turtle	*Actinemys pallida*	FC, SSC		In region
San Diego banded gecko	*Coleonyx variegatus abbotti*	SSC	None	In range
Coast horned lizard	*Phrynosoma blainvillii*	SSC	None	Nearby
Orange-throated whiptail	*Aspidoscelis hyperythra*	WL	None	In region
Coastal whiptail	*Aspidoscelis tigris stejnegeri*	SSC	None	In region
San Diegan legless lizard	*Anniella stebbinsi*	SSC	None	Very close
California glossy snake	*Arizona elegans occidentalis*	SSC	None	Nearby
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	SSC		In region
Two-striped gartersnake	*Thamnophis hammondii*	SSC	None	In region
South coast gartersnake	*Thamnophis sirtalis pop. 1*	SSC		In region
Red-diamond rattlesnake	*Crotalus ruber*	SSC	None	In region
Brant	*Branta bernicla*	SSC2		In region
Cackling goose (Aleutian)	*Branta hutchinsii leucopareia*	WL		Nearby
Redhead	*Aythya americana*	SSC2		Nearby
Western grebe	*Aechmophorus occidentalis*	BCC		Nearby
Clark's grebe	*Aechmophorus clarkii*	BCC		In region
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FT, CE	None	In region

Common name	*Species name*	Status[1]	NRAI 2024	Records, Surveys
Black swift	*Cypseloides niger*	SSC3, BCC		In region
Vaux's swift	*Chaetura vauxi*	SSC2		Very close
Costa's hummingbird	*Calypte costae*	BCC	None	Very close
Calliope hummingbird	*Selasphorus calliope*	BCC		Very close
Rufous hummingbird	*Selasphorus rufus*	BCC		Very close
Allen's hummingbird	*Selasphorus sasin*	BCC	None	Very close
Mountain plover	*Charadrius montanus*	SSC2, BCC		In region
Snowy plover	*Charadrius nivosus*	BCC		In region
Western snowy plover	*Charadrius nivosus nivosus*	FT, SSC		In region
Long-billed curlew	*Numenius americanus*	WL		In region
Marbled godwit	*Limosa fedoa*	BCC		In region
Red knot	*Calidris canutus*	BCC		In region
Pectoral sandpiper	*Calidris melanotos*	BCC		In region
Short-billed dowitcher	*Limnodromus griseus*	BCC		In region
Lesser yellowlegs	*Tringa flavipes*	BCC		In region
Willet	*Tringa semipalmata*	BCC		In region
Laughing gull	*Leucophaeus atricilla*	WL		In region
Franklin's gull	*Leucophaeus pipixcan*	BCC		Nearby
Heermann's gull	*Larus heermanni*	BCC		In region
Western gull	*Larus occidentalis*	BCC		In region
California gull	*Larus californicus*	BCC, WL		Very close
California least tern	*Sternula antillarum browni*	FE, CE, CFP		In region
Black tern	*Chlidonias niger*	SSC2, BCC		In region
Common loon	*Gavia immer*	SSC		Nearby
Double-crested cormorant	*Phalacrocorax auritus*	WL		Very close
American white pelican	*Pelacanus erythrorhynchos*	SSC1		Very close
Least bittern	*Ixobrychus exilis*	SSC2		In region
White-faced ibis	*Plegadis chihi*	WL	None	Nearby
Turkey vulture	*Cathartes aura*	BOP		Very close/On site (NRAI)
Osprey	*Pandion haliaetus*	WL, BOP		Very close
White-tailed kite	*Elanus luecurus*	CFP, BOP	None	Very close

Common name	*Species name*	Status[1]	NRAI 2024	Records, Surveys
Golden eagle	*Aquila chrysaetos*	BGEPA, CFP, BOP, WL	Low	Very close
Northern harrier	*Circus cyaneus*	BCC, SSC3, BOP	None	Very close
Sharp-shinned hawk	*Accipiter striatus*	WL, BOP	Low	Very close
Cooper's hawk	*Accipiter cooperii*	WL, BOP	Low	Very close
Bald eagle	*Haliaeetus leucocephalus*	CE, BGEPA, BOP		Nearby
Red-shouldered hawk	*Buteo lineatus*	BOP		Very close
Swainson's hawk	*Buteo swainsoni*	CT, BOP	None	Very close
Red-tailed hawk	*Buteo jamaicensis*	BOP		Very close/**On site**
Ferruginous hawk	*Buteo regalis*	WL, BOP	Low	Very close
Zone-tailed hawk	*Buteo albonotatus*	BOP		In region
Harris' hawk	*Parabuteo unicinctus*	WL, BOP		In region
Rough-legged hawk	*Buteo lagopus*	BOP		In region
American barn owl	*Tyto furcata*	BOP		Very close
Western screech-owl	*Megascops kennicotti*	BOP		Nearby
Great horned owl	*Bubo virginianus*	BOP		Very close
Burrowing owl	*Athene cunicularia*	BCC, CCE, SSC2, BOP	None	Very close
Long-eared owl	*Asio otus*	BCC, SSC3, BOP	None	In region
Short-eared owl	*Asia flammeus*	BCC, SSC3, BOP		Nearby
Lewis's woodpecker	*Melanerpes lewis*	BCC	None	Nearby
Nuttall's woodpecker	*Picoides nuttallii*	BCC	None	Very close
American kestrel	*Falco sparverius*	BOP		Very close/**On site**
Merlin	*Falco columbarius*	WL, BOP	Low	Very close
Peregrine falcon	*Falco peregrinus*	BOP	Low	Very close
Prairie falcon	*Falco mexicanus*	WL, BOP	Low	Nearby
Olive-sided flycatcher	*Contopus cooperi*	BCC, SSC2	None	Very close
Willow flycatcher	*Empidonax trailii*	CE		Very close
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE, CE	None	In region
Vermilion flycatcher	*Pyrocephalus rubinus*	SSC2	None	Very close
Least Bell's vireo	*Vireo bellii pusillus*	FE, CE	None	Nearby
Loggerhead shrike	*Lanius ludovicianus*	SSC2	None	Very close
Oak titmouse	*Baeolophus inornatus*	BCC	None	Very close

Common name	*Species name*	Status[1]	NRAI 2024	Records, Surveys
California horned lark	*Eremophila alpestris actia*	WL	None	Very close/On site (NRA)
Bank swallow	*Riparia riparia*	CT	None	Nearby
Purple martin	*Progne subis*	SSC2		Nearby
Wrentit	*Chamaea fasciata*	BCC	None	Very close
California gnatcatcher	*Polioptila c. californica*	FT, SSC2	None	Nearby
California thrasher	*Toxostoma redivivum*	BCC		Very close
Cassin's finch	*Haemorhous cassinii*	BCC		Nearby
Lawrence's goldfinch	*Spinus lawrencei*	BCC	None	Very close
Grasshopper sparrow	*Ammodramus savannarum*	SSC2	None	Nearby
Black-chinned sparrow	*Spizella atrogularis*	BCC		Very close
Gray-headed junco	*Junco hyemalis caniceps*	WL		Very close
Bell's sparrow	*Amphispiza b. belli*	WL	None	Very close
Oregon vesper sparrow	*Pooecetes gramineus affinis*	SSC2		In range
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	WL	None	Very close
Yellow-breasted chat	*Icteria virens*	SSC3	None	Nearby
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	SSC3		Nearby
Bullock's oriole	*Icterus bullockii*	BCC		Very close
Tricolored blackbird	*Agelaius tricolor*	CT, BCC, SSC1	None	Very close
Lucy's warbler	*Leiothlypis luciae*	SSC3		Nearby
Virginia's warbler	*Leiothlypis virginiae*	WL, BCC		Nearby
Northern yellow warbler	*Setophaga aestiva*	SSC2	None	Very close
Summer tanager	*Piranga rubra*	SSC1		Very close
Little brown bat	*Myotis lucifugus*	WBWG: M		In range
Yuma myotis	*Myotis yumanensis*	WBWG: LM		Nearby
Long-eared myotis	*Myotis evotis*	WBWG: M		In region
Fringed myotis	*Myotis thysanodes*	WBWG: H		In region
Long-legged myotis	*Myotis volans*	WBWG: H		In range
Small-footed myotis	*Myotis ciliolabrum*	WBWG: M		In region
Canyon bat	*Parastrellus hesperus*	WBWG: M		In region
Silver-haired bat	*Lasionycteris noctivagans*	WBWG: M		In range/**On site**

Common name	*Species name*	Status[1]	NRAI 2024	Records, Surveys
Hoary bat	*Lasiurus cinereus*	WBWG: M		In region
Western red bat	*Lasiurus blossevillii*	SSC, WBWG: H		In region
Western yellow bat	*Lasiurus xanthinus*	SSC, WBWG: H	None	In region
Spotted bat	*Euderma maculatum*	SSC, WBWG: H		In range
Townsend's big-eared bat	*Corynorhinus townsendii*	SSC, WBWG: H		In region
Pallid bat	*Antrozous pallidus*	SSC, WBWG: H	Low	In range
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	SSC, WBWG: M	None	In range
Western mastiff bat	*Eumops perotis*	SSC, WBWG: H	None	In range
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	SSC	None	In region
Pallid San Diego pocket mouse	*Chaetodipus fallax pallidus*	SSC		In range
San Bernardino kangaroo rat	*Dipodomys merriami parvus*	FE, CE, SSC	No suitable habitat	In region
Stephens' kangaroo rat	*Dipodomys stephensi*	FT, CT		In region
Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	SSC	None	Nearby
San Diego Bryant's woodrat	Neotoma bryanti intermedia	SSC	None	In region
Southern grasshopper mouse	*Onychomys torridus ramona*	SSC		In range
American badger	*Taxidea taxus*	SSC	None	In region

[1] Listed on CDFW's Special Animals List (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406) as FT or FE = federal threatened or endangered; FC = federal candidate for listing; 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_i = California Species of Special Concern with i = priorities 1, 2 and 3; WL = CDFW's Taxa to Watch List; BGEPA = Bald and Golden Eagle Protection Act; WBWG = Western Bat Working Group with priority rankings, of low (L), moderate (M), and high (H); BCC = U.S. Fish and Wildlife Service's Bird of Conservation Concern (https://www.fws.gov/sites/default/files/documents/birds-of-conservation-concern-2021.pdf); and BOP = protected by Birds of Prey (California Fish and Game Code 3503.5, see https://wildlife.ca.gov/Conservation/Birds/Raptors).

Explanations for why special-status species have no chance for occurrence too often fail to follow logically from the habitats that NRAI (2024) describes for them. As examples, grasslands, open grassland and open country are reportedly the habitats of white-tailed kite, Northern harrier, California horned lark, Grasshopper sparrow, and Crotch's bumble bee. The project site's vegetation cover appears generally consistent with these habitat descriptions. Therefore, it does not follow that no chance of occurrence is determined for any of them.

Mischaracterization of the Wildlife Community

NRAI (2024) reports on a field survey and a desktop review having been completed, but the field survey was much too cursory, and its results and those of the desktop review are mischaracterized as definitive of the wildlife community. NRAI over-relies on speculation to determine that no habitat is available for sensitive species. Speculation used this way is inappropriate for precious or rare resources such as special-status species (National Research Council 1986). The true wildlife community remains to be described with sufficient accuracy. Without a more accurate characterization of the wildlife community, the basis is inadequate for predicting impacts and formulating appropriate mitigation strategies.

Considering the deficiencies in the survey effort directed to the project site, the deficiencies in reporting of survey methods and the reporting of results, and the inadequacy of the desktop review to analyze the occurrence likelihoods of special-status species, there is at least a fair argument that can be made for the need to prepare an EIR to accurately characterize the wildlife community on the project site as a suitable baseline from which to predict project impacts and to formulate an appropriate mitigation strategy.

BIOLOGICAL IMPACTS ASSESSMENT

The impacts analysis in CEQA review involves prediction. Impact predictions are necessary in environmental review because measuring a project's impacts directly could not happen until after the impacts occur, and the timing of this type of measurement would come too late for formulating a mitigation strategy or deciding on a project alternative. As noted earlier, the accuracy of the predictions of impacts and their significance ultimately relies on the degree of accuracy in the characterization of the existing environmental setting (Figure 4). Prediction accuracy also relies on experience, of which development projects subjected to CEQA review have been made amply available (Figure 6). CEQA prohibits the use of speculation to predict that potential project impacts would be less than significant (see CEQA Guidelines section 15145. SPECULATION), so it is experience that must be used. The type of experience proven most effective, and therefore most amenable to achieving CEQA's primary objectives, is scientific inference, as generally depicted in Figure 6. Scientific inference can be drawn from scientific studies or from the many other projects that have undergone CEQA review. The comparative method enables the use of scientific inference to predict impacts and to predict the efficacies of mitigation strategies, the latter of which should be also amply available in the record.

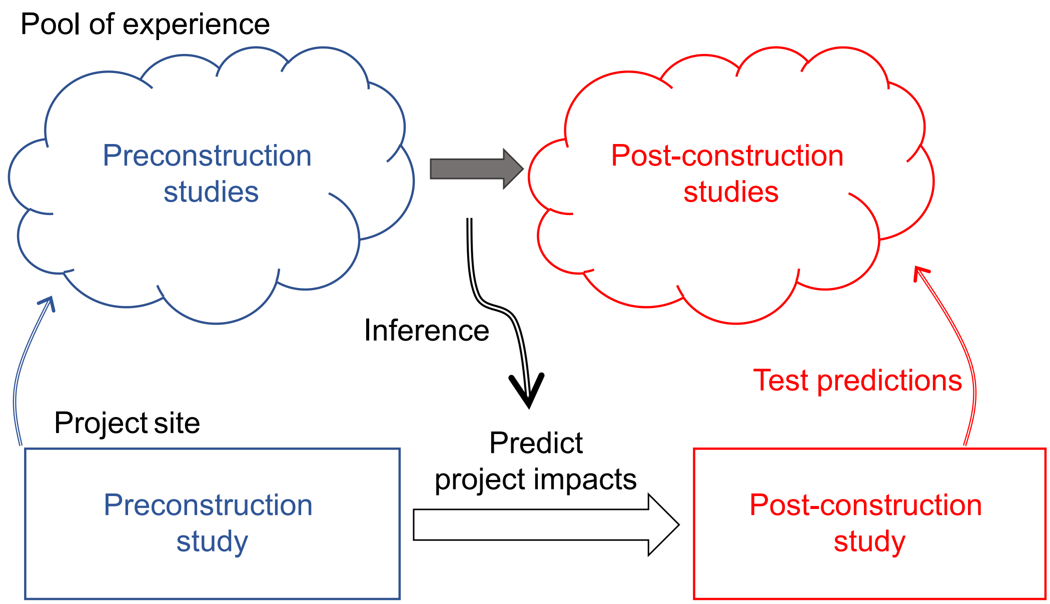


Figure 6. *A framework for arriving at predicted project impacts based on experience with other project sites. Ideally, there is a pool of similar projects in similar circumstances where predicted impacts were compared to realized impacts, and into which the proposed project can also contribute to experience.*

In the following, I analyze several types of impacts likely to result from the project, but which are inadequately analyzed by NRAI (2024) and the IS/MND.

REDUCED PRODUCTIVE CAPACITY FROM HABITAT LOSS

Habitat loss results in a reduced productive capacity of wildlife species. The site is proven to serve as habitat to at least 26 species of vertebrate wildlife which Noriko and NRAI observed on the project site, but the number of avian nest sites remains unknown. The surveys that have been conducted on the project site were unsuitable for detecting all bird nests or estimating total nest density. The alternative method for estimating avian productive capacity is to infer it from estimates of total nest density elsewhere.

In 2024, Noriko estimated 3.8 bird nests/acre on a 3.16-acre ruderal grassland study site she surveyed throughout the breeding season in Murrieta. This total nest density applied to the 4.59 acres of the project site predicts 17 nest sites. Assuming 1.39 broods per nest site based on a review of 322 North American bird species, which averaged 1.39 broods per year, then I estimate 24 nest attempts per year on the project site. Assuming Young's (1948) study site typifies bird productivity of 2.9 fledged birds per nest attempt, then I predict 70 fledglings/year at the project site.

The loss of 17 nest sites and 24 nest attempts per year would qualify as significant impacts that have not been analyzed in the IS/MND. But the impacts would not end with the immediate loss of nest sites. The reproductive capacity of the site would be lost. The project would prevent the production of 70 fledglings per year. Assuming an average bird generation time of 4 years, the lost capacity of both breeders and annual fledgling production can be estimated from an equation in Smallwood (2022): {(nests/year × chicks/nest × number of years) + (2 adults/nest × nests/year) × (number of years ÷ years/generation)} ÷ (number of years) = 79 birds per year lost to California.

The loss of 79 birds per year would be a loss of significant habitat value that is currently provided by the project site. Most if not all these birds are protected by the federal Migratory Bird Treaty Act and by California's Migratory Bird Protection Act, both of which are intended to most strongly protect breeding migratory birds. The loss of 79 birds would easily qualify as an unmitigated significant impact.

INTERFERENCE WITH WILDLIFE MOVEMENT

One of CEQA's principal concerns regarding potential project impacts is whether a proposed project would interfere with wildlife movement in the region. Unfortunately, this concern has not motivated any serious analysis of whether or how the project would interfere with wildlife movement in the region. According to the IS/MND (p. 24), "The Project Site and surrounding areas have been disturbed or developed. Therefore, the Project Site would not be suitable as a native resident or migratory wildlife corridor or for facilitating the movement of any native resident or migratory wildlife species. No significant impacts are identified or anticipated, and no mitigation measures are required." However, the IS/MND's argument does not flow logically from premise to conclusion. Just about every place on Earth has been disturbed, and the IS/MND fails to make the case why the disturbance on the project site would prevent its use by migratory wildlife or by wildlife on the move for other reasons. The development around the project site might *increase* the project site's importance to wildlife movement, because wildlife are losing stopover opportunities as the process of habitat fragmentation proceeds. Lastly, the IS/MND over-focuses on the question of whether a corridor exists on the project site, because the CEQA Guidelines App. G question of whether the project would interfere with wildlife movement only mentions corridors as an example of how the question could be approached. The IS/MND's analysis relies on red-herring speculation, and not at all on any sort of study design or program of observation to characterize wildlife movement on and around the project site.

TRAFFIC IMPACTS ON WILDLIFE

The IS/MND neglects to address one of the project's most obvious, substantial impacts on 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 12—15), including along roads far from the project footprint but which would nevertheless by 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.

Photos 12 and 13. *A desert cottontail runs across the road in Murietta, California (top),* and a *great-tailed grackle crosses a road in the Imperial Valley (bottom).*

Photos 14 and 15. *Raccoon killed on Road 31 just east of Highway 505 in Solano County (left; photo taken on 10 November 2018), and California kingsnake killed by a vehicle on a rural road in El Dorado County in 2024.*

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 9,462 animals killed by traffic on the road. This fatality number projected over 1.25 years and 2.5 miles of road translates to 3,028 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 188,191 animals killed per 100 km of road per year, or 22 times that of Loss et al.'s (2014) upper bound estimate and 53 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 3,028 animals killed per mile along a county road in Contra Costa County. The estimated numbers of fatalities were 1.75% birds, 26.4% mammals (many mice and pocket mice, but also ground squirrels, desert cottontails, striped skunks, American badgers, raccoons, and others), 67.4% 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 4.4% 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 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.

Predicting project-generated traffic impacts on wildlife

The IS/MND fails to predict project-generated annual VMT, but it does predict 443 daily trips. Assuming 18 miles per trip and adopting the IS/MND's 443 daily trips, I predict 2,766,978 annual VMT. During the Mendelsohn et al. (2009) study, 19,500 cars traveled Vasco Road in Contra Costa County daily, so the vehicle miles that contributed to my estimate of non-volant fatalities was 19,500 cars and trucks × 2.5 miles × 365 days/year × 1.25 years = 22,242,187.5 vehicle miles per 9,462 wildlife fatalities, or 2,351 vehicle miles per fatality. This rate divided into the predicted annual VMT would predict 1,277 wildlife fatalities per year due to project-generated traffic.

However, some might argue that this prediction relies too much on a study along a road through less-disturbed rangeland that likely supports more non-volant wildlife that is more vulnerable to collision mortality. I would argue that the project-generated traffic would pass through similar rural environments with ample wildlife available to be crushed under automobile tires. Nevertheless, to better represent those reaches of road that are more urban than rural, or that would become more urban with the development of the project, I recently completed my own study of wildlife mortality caused by automobiles along roads that were urban and interfaced between urban and agricultural land uses.

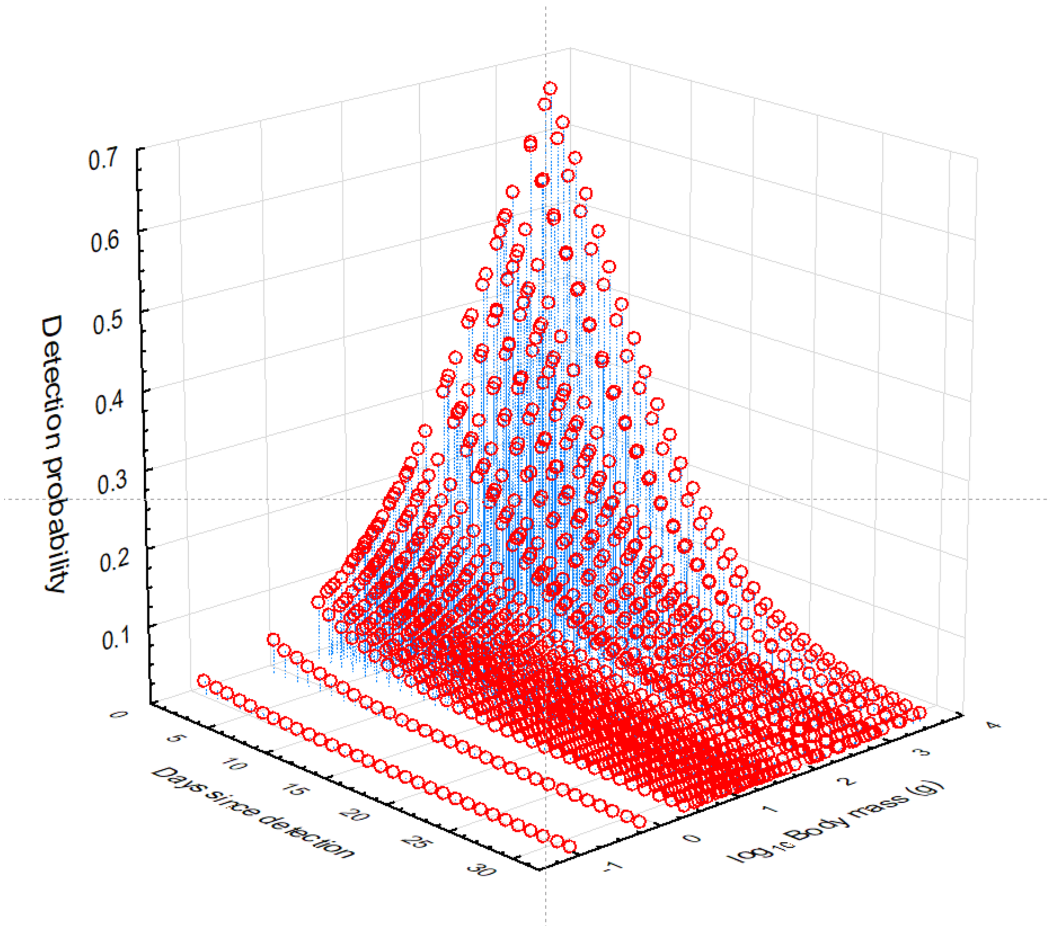
I completed one year of daily pedestrian surveys along 2.7 km (1.713 miles) of local, collector and minor arterial roads in north Davis, California, where I tallied 314 fatalities of 40 species of vertebrate wildlife. Most of the fatalities were small-bodied animals such as Sierran treefrogs, western toads, western fence lizards, 10”- to 16”-long juvenile Pacific gophersnakes, valley gartersnakes and California kingsnakes, as well as bushtits, yellow-rumped warblers, deer mice and California ground squirrels. Most of the animals I found would never have been detected from a moving vehicle, which is why people often underestimate how many wild animals are killed by vehicle traffic.

The animals I found in my study did not include all the animals killed by vehicles on the roads I searched. Many had been removed by scavengers before I could find and count them. (American crows patrol the roads every morning, and so does a large flock of wild turkeys.) Some of the animals are knocked off the road in places where I could never find them, and some were undoubtedly caught and carried away in the grills of vehicles or in tire treads. Most of the Sierran treefrogs disappeared from where I found them within several hours, so daily searches missed many of the fatalities. To adjust for these undetected fatalities, I fit a logit regression model to my fatality finds, all of which transitioned to carcass detection trials after I initially found them. Starting with the first day after each detection, I monitored the carcass trials for 30 days, and I assigned each a body mass estimate based on typical body mass reported in the literature. Predictor variables were days since detection and $\log_{10}$ body mass. The relationship between carcass detection probability and the predictor variables is depicted in Figure 7. My fatality finds adjusted by the model results in an estimate of 2,126 vertebrate wildlife fatalities over 1.713 miles of roads in one year, or 1,241 vertebrate wildlife fatalities/mile/year. This rate is 40.9% of the rate measured at Vasco Road, or an estimated 5,748 vehicle miles per fatality. Applying this urban fatality rate to the VMT that is predicted for the project would predict 481 vertebrate wildlife fatalities per year in the area around the project that is traveled by project-generated traffic.

A reasonable range of predicted mortality is therefore 481 to 1,277 vertebrate wildlife fatalities per year due to project-generated traffic.

Based on my analysis, project-generated traffic would cause significant impacts on wildlife. The IS/MND 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, and that these impacts would be unmitigated.

Figure 7. *Wildlife carcass detection probability is a function of the number of days since discovery and log_{10} body mass.*



FLAWED CUMULATIVE IMPACTS ANALYSIS

One of CEQA's principal concerns regarding potential project impacts is whether a proposed project would contribute significantly to cumulative impacts of past, present and future projects, or to multiple types of impacts that are cumulatively considerable. Unfortunately, the IS/MND fails to seriously analyze the project's contributions to cumulative impacts on biological resources. In fact, the IS/MND reports no analysis of cumulative impacts that is specific to biological resources.

On p. 81, the IS/MND argues that "Although cumulative impacts are always possible, by incorporating all mitigation measures outlined herein … would reduce the Project's contribution to any such cumulative impacts to levels that are not cumulatively considerable. Additionally, mitigation measures have been adopted by San Bernardino County for buildout of the Countywide Plan. … Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required." However, this notion that mitigation of project-specific impacts would avoid cumulative impacts is inconsistent with CEQA's definition of a cumulative impact, which is "created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts" (CEQA Guidelines §15065 (a)(3)). Even though a project's direct or indirect effects might be mitigated to a less than significant impact at the project level, it can still incrementally contribute to the effects of other projects for a significant cumulative impact.

As for the IS/MND's argument that the Countywide Plan anticipated all potential cumulative impacts, hence avoiding significant project contributions to cumulative impacts, the CEQA Guidelines (§15064(h)(3)) states, "When relying on a plan, regulation or program, the lead agency should explain how implementing the particular requirements in the plan, regulation or program ensure that the project's incremental contribution to the cumulative effect is not cumulatively considerable." The IS/MND fails to explain how the Countywide Plan would minimize, avoid or offset the project's contributions to cumulative impacts. CEQA requires a cumulative impacts analysis.

The IS/MND's conclusion that the Countywide Plan and the project's required mitigation would avoid significant cumulative impacts lacks support in evidence, and it is readily refutable. Noriko Smallwood and I performed an experiment to measure the efficacy of applicable laws and regulations, permitting requirements, and required mitigation measures at avoiding or minimizing project impacts including cumulative impacts. We revisited the project sites we had surveyed as experts to repeat the survey methods at the same time of year, the same start time in the day, and the same methods and survey duration to control these sources of variation to cleanly measure the effects of mitigated development on wildlife. We structured the experiment in a before-after, control-impact experimental design, as some of the sites had been developed since our initial survey and some had remained undeveloped. All the developed sites had included mitigation measures to avoid, minimize or compensate for impacts to wildlife. Nevertheless, we found that mitigated development resulted in a 66% loss of species on site, and 48% loss of species in the project area. Counts of vertebrate animals declined 90%. We found that "Development impacts measured by the mean number of species detected per survey were greatest for amphibians (-100%), followed by mammals (-86%), grassland birds (-75%), raptors (-53%), special-status species (-49%), all birds as a group (-48%), non-native birds (-44%), and synanthropic birds (-28%). Our results indicated that urban development substantially reduced vertebrate species richness and numerical abundance, even after richness and abundance had likely already been depleted by the cumulative effects of loss, fragmentation, and degradation of habitat in the urbanizing environment," and despite all the mitigation measures and existing policies, regulations, and habitat plans. Experimental evidence demonstrates the need to analyze a project's potentially significant contributions to cumulative impacts on wildlife despite existing laws, policies and General Plans. The environmental review for this project needs to include an appropriate cumulative impacts analysis.

FLAWED MITIGATION STRATEGY

The mitigation strategy needs to be based on the first five environmental review steps in Figure 4 to Assess species occurrence likelihoods, Characterize wildlife community, and Predict impacts. The mitigation strategy needs to be based on knowledge of which species occur or are likely to occur on the project site, which species are resident versus migratory, and how the project factors into regional wildlife movement. For special-status species, detection surveys should have been completed to either detect the species or to obtain evidence of absence. And what was found of wildlife species needs to be carefully interpreted by comparing findings from on site to those resulting from surveys elsewhere, and failures to detect species should be interpreted relative to the probabilities of their detections given the survey effort. However, the IS/MND's mitigation strategy lacks sufficient nexus to these steps. This pointed out, my comments follow in regular font the summary of each required mitigation measure in italics.

Mitigation Measure BIO-1: *Applicant shall designate an avian biologist (qualified biologist) experienced in: identifying local and migratory bird species; conducting bird surveys using appropriate survey protocol, nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, identifying nesting stages and success; establishing avoidance and minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures.*

If start of construction occurs between February 1 and August 31, then a qualified biologist shall conduct a breeding bird survey at the appropriate time of day/night during the appropriate weather conditions, no more than three days prior to the start of construction to determine if nesting is occurring. … If active occupied nests are found, they shall not be disturbed unless the qualified biologist verifies through non-invasive methods that either (a) the adult birds have not begun egg-laying and incubation; or (b) the juveniles from the occupied nests are capable of independent survival and will not be impacted by the removal of the nest. If the biologist is not able to verify one of the above conditions, then no disturbance shall occur within a distance specified by the qualified biologist for each nest or nesting site. The qualified biologist will determine the appropriate distance in consultation with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service. The size and location of buffer zones shall be based on nesting bird species, species behavior, nesting stage, species sensitivity to disturbance, and the intensity and duration of the disturbance activity.

If the project goes forward, preconstruction surveys for nesting birds should be implemented. However, it should be understood that Mitigation Measure BIO-1 would not avoid the permanent loss of habitat, nor the collision mortality with automobiles. Even assuming all the nests could be found (not likely), the mitigation measure would apply only to the breeding season of the survey. After the breeding season of the preconstruction survey, there would be no further production of birds from the project site, except for synanthropic species able to nest on homes or in ornamental trees. Moreover, it is a long-standing principle of ecology that animal populations are usually at carrying capacity. (An exception would be the repopulating of an area devastated by a natural disaster.) Ultimately, the same number of birds that are allowed to finish breeding via Mitigation Measure BIO-1 would be the number of birds that would subsequently perish through competition for what remains of habitat in the region, and the productive capacity of the region would diminish accordingly. Mitigation Measure

BIO-1 is a feel-good measure that fails to avoid the project-caused impact of the region's diminished productive capacity of birds. The project's impact on birds would be permanent and of large magnitude. The conservation benefits of this measure would be *de minimis* in comparison to the project's potential impacts on breeding birds.

The IS/MND does not report whether Mitigation Measure BIO-1 has proven effective at any other project site, ever. It provides no evidence that the measure has proven effective at any project where it has been implemented. The known efficacy of this measure needs to be disclosed.

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

Lastly, the mitigation language includes the requirement that the preconstruction nest survey shall be conducted by a wildlife biologist, and this requirement carries over to determinations of the buffer areas and buffer timing to avoid take caused by construction activities. The IS/MND lists out some skills that would qualify the biologist, but it does not require any certification of these skills such as advanced degrees, or minimum number of years mentoring under an established expert, or peer-reviewed publications based on the identified skills. I assert that documentation of the needed skills is important because having conducted the types of surveys needed to detect the nests of all breeding birds on a given site, I am confident that most consulting biologists lack sufficient experience to achieve the conservation objective of Mitigation Measure BIO-1. Nesting birds, including ground-nesting birds, are expert at hiding their nests. Without more objective criteria, Mitigation Measure BIO-1 lacks is unenforceable.

NEEDED MITIGATION MEASURES

Compensatory Habitat Protection: The project would destroy the productive capacity of the project site for birds and other wildlife. The loss of this capacity would need to be offset by compensatory mitigation as near to the site as possible. I recommend a 5:1 mitigation ratio to achieve a no net loss standard in the face of severe and ongoing habitat fragmentation in the region, which magnifies the effects of habitat loss (Smallwood 2015).

Road Mortality: Compensatory mitigation is needed for the increased wildlife mortality that would be caused by collisions with automobiles due to 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).

Wildlife overcrossings and under-crossings have been built and tested for wildlife use. Strategic fencing and speed controls have also been implemented, as speed is an important factor to wildlife mortality (Illner 1992). Evidence is now available to also plan roads without vegetated medians to minimize animal mortality (Keilsohn et al. 2018).

Fund Wildlife Rehabilitation Facilities: Compensatory mitigation is needed, and it ought to also 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 during construction and by collisions with automobiles traveling to and from the project site.

Landscaping: If the project goes forward, California native plant landscaping (i.e., grassland and locally appropriate scrub plants) should be used as opposed to landscaping with lawn and exotic shrubs and trees. Native plants offer more structure, cover, food resources, and nesting substrate for wildlife than landscaping with lawn and ornamental trees. Native plant landscaping has been shown to increase the abundance of arthropods which act as important sources of food for wildlife and are crucial for pollination and plant reproduction (Narango et al. 2017, Adams et al. 2020, Smallwood and Wood 2022.). Further, many endangered and threatened insects require native host plants for reproduction and migration, e.g., monarch butterfly. Around the world, landscaping with native plants over exotic plants increases the abundance and diversity of birds, and it is particularly valuable to native birds (Lerman and Warren 2011, Burghardt et al. 2008, Berthon et al. 2021, Smallwood and Wood 2022).The same is true for pollinating insects (Reyes et al. 2026). Landscaping with native plants is a way to maintain or to bring back some of the natural habitat and lessen the footprint of urbanization by acting as interconnected patches of habitat for wildlife (Goddard et al. 2009, Tallamy 2020). Lastly, not only does native plant landscaping benefit wildlife, but it also requires less water and maintenance than traditional landscaping with lawn and hedges.

Thank you for your consideration,

Shawn Smallwood

Shawn Smallwood, Ph.D.

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