From: Samantha Steele
To: Sheikhali, Monet
Subject: [EXTERNAL] Veterans Village Project
Date: Monday, June 7, 2021 6:23:32 PM

Hello,

We are residents of Northpoint Village on Park Meadow Drive. We are emailing to let you know we are strongly opposed to the proposed project on 2149 W. Hearn Ave. regarding the Veterans Village Project.

We have lived at this location since we purchased our home in 2000. Back then, it was a quiet neighborhood. Over the years, we have been affected by the low-come townhomes and apartments, which have brought a lot of new crime to our neighborhood. There have been numerous stabbings, shootings, etc. focused around these low-income areas.

We feel we are already dealing with a highly-concentrated number of low-income residents. In addition, many homeless people migrate through our neighborhood from the creek trail near our home. We have had numerous car break-ins and I have had to file a police report. I also have video of one of the perpetrators holding what appears to be a gun while rummaging through our truck.

We have 12-year-old and 16-year-old boys, and already feel uneasy about letting them roam the neighborhood or go to Pear Blossom Park unattended. We do not feel it is fair to add more low-income or free shelters to our area. We respect the military and Veterans highly, but our area has had a high intake of homeless or low-income residents.

Our neighborhood has an access gate on West Hearn and we have no doubt residents of the Veterans Village will take shortcuts through our community to get to Stony Point, the bus stop, etc.

We have already had other residents put homes up for sale here and in areas in close proximity to Joe Rodota trail due to the lack of help from the city. We feel we should have a safe home to raise our family and the high concentration of this type of housing in such a small area is making this less possible.

Thank you,

Park Meadow Drive Resident

From:	Rebecca Davis
To:	Sheikhali, Monet
Subject:	[EXTERNAL] Public Comment on Hearn Veterans Village MND
Date:	Monday, June 7, 2021 7:11:23 PM
Attachments:	2021.06.07 Comment on MND_Hearn Vet. Village.pdf

Dear Ms. Sheikhali,

Attached comments of West Hearn Residents for Rural Integrity regarding the Initial Study and Mitigated Negative Declaration for the Hearn Veterans Village Project. Please let me know if you have any questions.

Sincerely,

Rebecca Davis

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June 7, 2021

Via Email
Monet Sheikhali, City Planner
City of Santa Rosa: Planning and Economic
Development Department
100 Santa Rosa Avenue, Room 3
Santa Rosa, CA 95404
Phone: (707) 543-4698
Email: msheikhali@srcity.org

Re: Public Comment on Initial Study/Mitigated Negative Declaration for Hearn Veterans Village (City Project File # MIN21-001)

Dear Ms. Sheikhali:

I am writing on behalf of West Hearn Residents for Rural Integrity, including its members living on West Hearn Avenue and in the West Hearn Neighborhood who are concerned about the proposed Hearn Veterans Village Project proposed for 2149 West Hearn Avenue ("Project") and the inadequacy of the initial study and mitigated negative declaration (collectively, "MND") prepared for the Project.

These comments were prepared with the assistance of wildlife expert Shawn Smallwood, Ph.D. Mr. Smallwood's expert comments and resume are attached hereto as Exhibit A. After reviewing the MND together with our expert, it is clear that the document fails to comply with CEQA and fails to adequately analyze and mitigate the Project's impacts. In addition, the Project does not comply with City Zoning, and is not consistent with the rural character of the neighborhood. Without adequate analysis and mitigation, the Project will have a real and significant negative impact on the lives of everyone living in the West Hearn neighborhood, as well as on the biological resources that make the historically rural neighborhood and Santa Rosa what it is.

Accordingly, because of the Project's significant impacts, the City of Santa Rosa ("City") must prepare an environmental impact report ("EIR") to fully analyze the Project's impacts, and to implement additional mitigation measures that ensure protection of the environment and the neighborhood.

PROJECT DESCRIPTION

The Project site is located on a 2.01-acre parcel at 2149 West Hearn Avenue, in Santa Rosa, California. The Project site consists of two parcels (APN 134-011-012; -013). The larger of the two parcels (APN 134-011-012) is developed with a 17-bed transitional housing facility for veterans, including an existing 4,870 square foot building and a 1,405 square foot building. The City is currently processing a lot line adjustment (LLA20-009) for the larger of the two parcels (APN 134-011-012). The lot line adjustment will result in a 1.04-acre parcel for the existing housing facility, which would be operated separately from the proposed Project.

The remainder of the 2.01-acre lot is biologically rich undeveloped land including non-native grassland, native valley oak, coast live oak, arroyo willow, Himalayan blackberries, poison oak, toyon, and coyote brush. Existing trees and shrubs include ornamental fruit trees, magnolia, palm, and walnut. The Project site also contains two vernal pools along West Hearn Avenue at the southwest portion of the site. Directly north of the Project site is an established wetland preserve, the North Point Mitigation Site. Northwest of the Project site is a FEMA conservation site, which is an established habitat preservation area for rare and endangered plants and the California Tiger Salamander breeding and upland habitat.

The Project would subdivide the remaining property into four individual lots ranging in size from 20,000 to 25,000 square feet. The Project includes four six-bedroom detached residential units and four two-bedroom detached accessory dwelling units, one of each type on each proposed lot. Each residential unit includes bedrooms with individual bathrooms and counter space with a sink. A full kitchen, laundry room, living room, dining room, and office space are provided in each unit and will be shared among occupants. The six-bedroom residential units will be two stories, totaling 3,139 square feet, while the ADUs will be 1,008 square feet. For comparison, most homes in the neighborhood are 1,000-1,200 square feet.

This development will provide housing for 32 residents, one onsite property manager, and four peer managers, for a total of 37 new residents, in addition to the 15 people currently residing at the Project site. The Project also includes onsite amenities such as a basketball court, gathering areas, parking, and landscaping.

LEGAL BACKGROUND

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR") except in certain limited circumstances. *See, e.g.,* Pub. Res. Code § 21100. The EIR is the very *heart* of CEQA. *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652. Since "[t]he adoption of a negative declaration . . . has a terminal effect on the environmental review process," by allowing the agency "to dispense with the duty [to prepare an EIR]," negative declarations are allowed only in cases where "the proposed project will not affect the environment at all." *Citizens of Lake Murray v. City Council of San Diego* (1982) 129 Cal.App.3d 436, 440. A negative declaration may be prepared instead of an EIR when, after preparing an initial study, a lead agency

determines that a project "would not have a significant effect on the environment." *Quail Botanical Gardens v. City of Encinitas* (1994) 29 Cal.App.4th 1597; § 21080(c). Such a determination may be made, however, only if "[t]here is *no* substantial evidence in light of the whole record before the lead agency" that such an impact *may* occur. *Id.*, § 21080(c)(1) (emphasis added).

A negative declaration is improper, and an EIR is required, whenever substantial evidence in the record supports a "fair argument" that significant impacts may occur. Even if other substantial evidence supports the opposite conclusion, the agency nevertheless must prepare an EIR. *Stanislaus Audubon v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-151; *Quail Botanical Gardens*, 29 Cal.App.4th 1597. 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. *Citizens Action to Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748, 754. As a matter of law, "substantial evidence includes . . . expert opinion." Pub. Res. Code § 21080(e)(1); 14 Cal Code Regs § 15064(f)(5). An agency's decision not to require an EIR can be upheld only when there is no credible evidence to the contrary. *Sierra Club v. County of Sonoma*, (1992) 6 Cal.App.4th, 1307, 1318.

Here, substantial evidence indicates that the Project is likely to cause numerous significant impacts for which the City has either failed to identify or offer measures to mitigate those impacts to less than significant levels.

I. AN EIR IS REQUIRED BECAUSE SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT WILL HAVE SIGNIFICANT EFFECTS ON THE ENVIRONMENT

CEQA contains a strong presumption in favor of requiring a lead agency to prepare an EIR. This presumption is reflected in the fair argument standard. Under that standard, a lead agency must prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment. Pub. Res. Code § 21082.2; *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1993) (*"Laurel Heights II"*) 6 Cal. 4th 1112, 1123; *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal. 3d 68, 75, 82; *Quail Botanical, supra,* at 1602.

Under both CEQA and its Guidelines, if a project may cause a significant effect on the environment, the lead agency must prepare nd EIR. Pub. Res. Code §§ 21100, 21151; CEQA Guidelines §§ 15064(a)(1), (f)(1). "Significant effect upon the environment" is defined as "a substantial or potentially substantial adverse change in the environment."[1] Pub. Res. Code § 21068; 14 Cal. Code Regs. § 15382. A project "may" have a significant effect on the

[1] Under the Guidelines, "significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise and objects of historic or aesthetic significance. . ." 14 Cal. Code Regs § 15382.

environment if there is a "reasonable probability" that it will result in a significant impact. *No Oil, Inc., supra,* at 83, fn 16; *Sundstrom v. City of Mendocino* (1988) 202 Cal.App.3d 296, 309. If any aspect of the project could result in a significant impact on the environment, an EIR must be prepared even if the overall effect of that project is beneficial. 14 Cal. Code Regs. § 15063(b)(1).

A lead agency may elect not to prepare an EIR only when it finds there is no substantial evidence in the initial study, or elsewhere in the record, indicating the project may have a significant effect on the environment. This standard sets a low threshold for requiring preparation of an EIR. If substantial evidence supports a "fair argument" that a project may have a significant environmental effect, the lead agency must prepare an EIR even if it also possesses other substantial evidence that indicates the project will have no significant effects. 14 Cal. Code Regs § 15064(f)(1); *Friends of "B" Street v. City of Hayward* (1980) 106 Cal.App.3d 988, 1002. Substantial evidence includes facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts. Pub. Res. Code § 21082.2(c). Under the CEQA Guidelines, substantial evidence means

> enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency. . .

14 Cal. Code Regs. § 15384(a).

Substantial evidence supporting a fair argument that a project may have significant environmental impacts can be provided by technical experts or members of the public. 14 Cal. Code Regs. § 15063(a)(3); *Uhler v. City of Encinitas* (1991) 227 Cal.App.3d 795, 805; *Gabric v. City of Rancho Palos Verdes* (1977) 73 Cal.App.3d 183, 199.

Under both CEQA and the Guidelines, an EIR must be prepared when certain types of environmental impacts could result from a project. Pub. Res. Code § 21083(a); 14 Cal. Code Regs. § 15065. In effect, a finding by the lead agency that such conditions exist makes the project's environmental effects "significant" as a matter of law. Under the Guidelines, an agency *must* find that a project may have a significant environmental effect, and thus prepare an EIR, if, *inter alia*, the possible environmental effects of the project are cumulatively considerable.[2] Pub. Res. Code § 21083(b)(2); 14 Cal. Code Regs. § 15065(c).

Here, substantial evidence presented in this comment letter, and the supporting expert comments, supports a fair argument that the Project will have significant environmental impacts

[2] "'Cumulative considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects as defined in Section 15130." 14 Cal. Code Regs. § 15065(c).

on biological resources, cumulative impacts, and other environmental impacts. For these reasons, the City should withdraw the MND and prepare an EIR for the Project.

A. The MND Fails to Adequately Analyze and Mitigate the Project's Impacts on Biological Resources.

Expert ecologist Shawn Smallwood, Ph.D., visited the Project site on June 1, 2021 to conduct a wildlife survey, and he has also reviewed the MND's discussion of biological resources, as well as the supporting Biological Resource Assessment. *See* Smallwood Comments, attached as Exhibit A. Drawing on his site visit, as well as his decades of studying and surveying many of the species encountered at the site, Dr. Smallwood has prepared a critique of the MND, pointing out numerous shortcomings in the baseline assessment of the presence of species at the site, failures to evaluate impacts that will result from the Project, and numerous instances where the MND's assertions are insufficient or not supported by substantial evidence. The need for an accurate and thorough analysis of the Project's impacts on biological resources is crucial because the Project site is extremely rich in biological resources.

1. The MND fails to establish an accurate baseline for sensitive biological resources.

Establishing an accurate baseline is the "sin qua non" to adequately analyzing and mitigating the significant environmental impacts of a project. *See* 14 Cal. Code Regs. § 15125(a); *Save Our Peninsula*, 87 Cal.App.4th at 121-123. Unfortunately, the MND's failure to thoroughly investigate and identify the occurrences of sensitive biological resources at the Project site results in a skewed baseline. Such a skewed baseline ultimately "mislead[s] the public" by engendering inaccurate analyses of environmental impacts, mitigation measures and cumulative impacts for biological resources. *See San Joaquin Raptor Rescue Center,* 149 Cal.App.4th at 656; *Woodward Park Homeowners,* 150 Cal.App.4th at 708-711. The MND's failure to acknowledge the abundance of special status species that likely will be adversely affected by the extensive building proposed by the Project means that it "lacks analysis" and "omits the magnitude of the impact" to biological resources. *Sierra Club v. Cty. of Fresno*, 6 Cal.5th at 514. As a result, the MND is insufficient as a matter of law.

An accurate baseline of biological resources was not established, in part because the site assessment itself was completely insufficient. The consulting firm WRA visited the Project site on April 27, 2020 to conduct a reconnaissance-level site visit. Biological Assessment, p. 13. The Biological Resources Assessment ("Biological Assessment") prepared for the MND is based off of this site visit. The Biological Assessment notes that "[t]he reconnaissance-level site visit was intended only as an evaluation of on-site and adjacent habitat types, and no special status animal species surveys were conducted as part of this effort." *Id*. Dr. Smallwood explains that there are numerous problems with the Biological Assessment, with the result being that it does not provide an accurate environmental setting and masks numerous potentially significant impacts to biological resources.

First, the Biological Assessment does not report even the most basic information about the site visit conducted by WRA that would allow a reader to understand the rigor and focus of the survey, including how long the biologists were on the site and what time of day the survey took place. Smallwood, p. 9. Other than reporting the date of the survey and how biologists walked the site ("meandering"), no additional information is provided. *Id*. The omission of these basic details regarding methodology, together with the substantive results, led Dr. Smallwood to question the WRA biologists' ability to detect wildlife or assess habitat of multiple special-status species. *Id*.

Dr. Smallwood visited the site for less three hours, yet merely from observing via the perimeter of the site he observed 34 species of vertebrate wildlife, seven of which were special-status species. *Id*. at pp. 1 to 2. While the Biological Assessment does not disclose how long the site visit lasted, WRA's two biologists had direct access to the Project site, and together observed only seven species of wildlife, and no special-status species. *Id*. at 9. Said another way, WRA's two biologists detected only one fifth of the species detected by Dr. Smallwood in just three hours. *Id*. Dr. Smallwood hypothesizes: "Perhaps the two visiting biologists were not experienced with wildlife, or perhaps they were focused on plants or soils, but for whatever reason they did not see more than a tiny fraction of the wildlife community that uses the site." *Id.* Given the insufficient site visit, Dr. Smallwood concludes that "WRA's (2020) findings regarding wildlife are not credible." *Id*.

Second, in addition to the inadequacy of the site visits, the Biological Assessment is further flawed in its list of potentially occurring species. Specifically, many species and subspecies were listed for consideration even though they do not occur anywhere in the region. *Id*. at 10. For example, the Biological Assessment considered a special-status species that is endemic to San Clemente Island. *Id*. The Biological Assessment also improperly applied the US Fish and Wildlife Service's lists of Bird Species of Conservation Concern, ultimately including species that are only listed for other regions of the United States. *Id*.

Third, the MND and Biological Assessment are flawed in that they improperly dismiss or understate the occurrence potential of numerous species. *Id*. Dr. Smallwood identified 63 special-status species of vertebrate wildlife with the potential to use the Project site based on his own observations and by reviewing eBird and iNaturalist for sighting records near the Project site. *Id*. Of those 63 species identified by Dr. Smallwood as having potential to use the site, 15 have been seen either directly on Project site, or have been seen on a property immediately adjacent to it. *Id*. Despite this evidence, WRA only considered the occurrence potential of one-third of these 15 species that have been documented on the Project site or on an adjacent property. *Id*. Making matters worse, of the five species that were considered in the Biological Assessment, WRA biologists determined three to have no potential to occur on the Project site (white-tailed kite, Nuttall's woodpecker, and San Francisco common yellowthroat) and one to have low potential (Cooper's hawk). *Id*.; Biological Assessment at 27. Based on readily available evidence of species, Dr. Smallwood put the Biological Assessment's conclusions this way:

The biologists who visited the site saw Cooper's hawk next to it, and yet WRA still

> determined it has only low potential to occur. They were aware of the white-tailed kites, and yet WRA still determined the species has no occurrence potential. These determinations defy reality.

Smallwood, p. 10.

In total, the WRA biologists, the Biological Assessment, and the MND only analyzed the occurrence potential of 18 (29%) of the 63 species that Dr. Smallwood concludes have the potential to use the Project site. *Id*.. In other words, WRA failed to analyze the potential for occurrence of 61% of the special-status species that Dr. Smallwood includes may be impacted by the Project. *Id*.

Moreover, of the 18 species the Biological Assessment did consider, almost all were found to have no occurrence likelihood. *Id*. Dr. Smallwood comes to a different conclusion regarding the analysis and conclusions for many of these species based on his own experience and occurrence records that are publicly available on sighting records data bases. *Id*.

For example, according to the Biological Assessment, "Suitable breeding habitat for CTS are water bodies that typically support inundation during winter/spring and hold water for a minimum of 12 consecutive weeks in a year of average rainfall, which results in water remaining until May or longer. None of the drainage ditches within the proposed project area supported that type of ponding. As a result, the site is only suitable for upland habitat." Biological Assessment, p. 26. Dr. Smallwood points out two problems with this analysis. "The first problem with this conclusion is that its characterization of ponding on the site was based on a single site visit in late April during a drought year." Smallwood, p. 14. The second problem is that it is inconsistent with Dr. Smallwood's own observations. Dr. Smallwood has monitored many ponds for California Tiger Salamanders ("CTS"), including one study in which he monitored 64 ponds for CTS for two years. *Id*. During these studies, he found that ponds did not always remain inundated through May every year. *Id*. He "found CTS larvae in ponds that did not remain inundated through May of the previous year. Therefore, ponds that were dry when WRA visited them in April 2020 could be inundated in another year, and they could support CTS. A single site visit is insufficient for determining the potential of the site for supporting breeding CTS." *Id*.

Dr. Smallwood disagrees with the Biological Assessment's conclusion that "the small size of the parcel and the lack of tall trees preclude the potential for raptors to nest on the site." Biological Assessment, p. 27. Dr. Smallwood has "often found raptors nesting in trees of stature similar to those on the project site, and on parcels even smaller than that of the project site. One can look to the successful nest of white-tailed kites right next door on an even smaller parcel and in a tree no larger than the trees on the project site." Smallwood, p. 14. Based on decades of experience, Dr. Smallwood concludes that "WRA's assertion lacks credibility." *Id*. The below photos of a family of white-tailed kite were taken by Dr. Smallwood on June 1, 2021 at the edge of the Project site.

Photos 1 and 2. *White-tailed kite preparing to pounce (left) and preparing to eat a pocket gopher (right) next the project site, 1 June 2021, Shawn Smallwood.*

Photo 3. *(Left) A family of white-tailed kites, including both parents and 3 fledglings at the site, 1 June 2021. The center of activity is an adult kite dangling a pocket gopher it caught on the project site.* ***Photo 4.*** *(Right) A closer view of an adult white-tailed kite using a pocket gopher to train 2 of its fledglings at the site to capture and manage a prey item, 1 June 2021, Shawn Smallwood.*

Dr. Smallwood's comments demonstrate that the MND, having been based on an inadequate Biological Assessment, lacks reliable information on the Project site's existing biological resources. It is not possible to effectively analyze the extent of the Project's impacts on biological resources without knowing what resources use the Project site. Without an adequate baseline, there is no way for the City to determine the true scope of the Project's impacts on biological resources. There is no way for the City to rule out the potential for the Project to have an unmitigated significant impact on special-status species.

2. The Project may have a significant impact on numerous special-status species.

Dr. Smallwood's observations reveal that Project impacts will be greater than what the MND has disclosed. Based on Dr. Smallwood's site visit, review of relevant wildlife databases, and his more than 30 years of experience, he concludes that the Project may have a significant impact on 63 special-status species. Smallwood, pp. 1-13. As Dr. Smallwood explains in his comments, and as discussed below, each of the 63 species he identified may be significantly impacted as a result of the Project through: direct habitat loss, habitat fragmentation, loss of reproductive capacity, window collisions, and interference of movement, among others.

As an expert, Dr. Smallwood's comments constitute substantial evidence that the Project will have a significant impact on biological resources. An EIR is required to analyze and mitigate this potentially significant impact.

3. The Project will have a significant impact on wildlife movement.

The Biological Assessment and MND improperly dismiss the potential for the Project to impact wildlife movement based on a flawed analysis. In dismissing the Project's potential to significantly impact wildlife movement, the Biological Assessment notes that "[t]he study area is not located in an Essential Connectivity Area (defined as areas that are essential for ecological connectivity between blocks) (Spencer et al. 2010)." Biological Assessment, p. 16. But Dr. Smallwood explains that the WRA biologists were incorrect in relying on the California Essential Habitat Connectivity Project. Smallwood, p. 15. Indeed, "the California Essential Habitat Connectivity Project very specifically pointed out that it is not: 'A California Department of Fish and Game or US Fish and Wildlife Service response to potential impacts to a habitat or species from a project subject to the California Environmental Quality Act (CEQA),' nor 'Fine scale, with every important piece of habitat identified' nor ''Essential', meaning the only places of importance' nor 'A solution by itself for how to provide necessary linkages for any given species of plant or animal... Linkage designs will vary depending on focal species chosen and the goal of providing connected habitat for a chosen species might be met several different ways' nor 'The final word on connectivity for California.'" Smallwood, p. 15 (quoting California Essential Habitat Connectivity Project[3]). Because the California Essential Habitat Connectivity

[3] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18486 &inline.

Project's grid cells are 2,000 acres, it is "much too coarse for the conclusion drawn by WRA (2020)." Smallwood, p. 15.

The Biological Assessment also asserts: "The proposed construction will not be an impediment to any movement corridors in this area based on the separated nature of the individual units and a lack of fencing around the proposed development." Biological Assessment, p. 16. This implies that whether or not a project interferes with wildlife movement is dependent upon whether it is located within a wildlife movement corridor. *Id*. But this is not the standard. "The primary phrase of the CEQA standard goes to wildlife movement regardless of whether the movement is channeled by a corridor." Smallwood, p. 15. The CEQA Guidelines explain that a project will have a significant biological impact if it would "[i]nterfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites." CEQA Guidelines, App. G.

Based on his analysis of the Project and the site, Dr. Smallwood concludes that "The project would cut wildlife off from stopover and staging habitat, forcing volant wildlife to travel even farther between remaining patches of stopover habitat. The project would interfere with wildlife movement in the region. " Smallwood, p. 15. He explains that:

> A site such as the proposed project site is critically important for wildlife movement because it composes an increasingly diminishing expanse of open space within a growing expanse of anthropogenic uses, forcing more species of volant wildlife to use the site as stopover and staging habitat during migration, dispersal, and home range patrol (Warnock 2010, Taylor et al. 2011, Runge et al. 2014).

Smallwood, p. 15.

Dr. Smallwood's expert comments constitute substantial evidence that the Project may have a significant impact on wildlife movement. CEQA requires the City prepare an EIR to analyze and mitigate this potentially significant impact.

4. <u>The Project will have a significant impact on wildlife as a result of window collisions.</u>

"The proposed project would impose windows in the airspace normally used by birds." Smallwood, p. 16. As a result, Dr. Smallwood concludes that the Project may have a significant impact on birds as a result of window collisions. *Id*. "

Dr. Smallwood has reviewed and processed results of bird collision monitoring at 213 buildings and façades in order to calculate the number of bird collisions that would likely occur annually as a result of the Project. Smallwood, p. 16. According to his calculations, each m^2 of glass would result in 0.073 bird deaths per year, with 95% confidence. *Id.*

Dr. Smallwood then looked at the building design for the Project and estimated that the Project would include at least 368 m^2 of glass windows. *Id*. at 16. Based on the estimated 368 m^2 of glass windows and the 0.073 bird deaths per m^2 of glass windows, Dr. Smallwood estimates that the project could result in 27 bird deaths per year, which would continue until the homes were either renovated to reduce bird collisions, or demolished. *Id*. "The vast majority of these deaths would be of birds protected under the Migratory Bird Treaty Act and under the recently revised California Fish and Game Code section 3513, thus causing significant unmitigated impacts." *Id*. These bird deaths constitute a significant impact that must be analyzed. *Id*. The City must prepare a project-level EIR to disclose, analyze, and mitigate the full scope of the Project's impact resulting from window collisions.

To mitigate these impacts, Dr. Smallwood suggests adherence to available guidelines on building design intended to minimize collisions hazards to birds, such as those by the American Bird Conservancy ("ABC"). Smallwood, p. 19. ABC recommends: (1) minimizing use of glass; (2) placing glass behind some type of screening (grilles, shutters, exterior shades); (3) using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) turning off lights during migration seasons. *Id*. Dr. Smallwood also suggests that the City look to the guidelines developed by the City of San Francisco, based on guidelines produced by the New York City Audubon Society, to minimize injuries and fatalities to bird species. *Id*.

5. <u>The Project will have a significant impact on lost reproductive capacity, which has not been analyzed or mitigated.</u>

The MND does not analyze the lost reproductive capacity of birds that would result from the loss of 2.01 acres of habitat through construction of the Project. Smallwood, p. 14. While habitat loss results in the immediate decline in birds and other animals, it also results in a permeant loss of reproductive capacity. *Id*. Dr. Smallwood cites two studies that show that total bird nesting densities were between 32.8 and 35.8 nests per acre, for an average of 34.3 nests per acre. *Id*. When multiplied by the Project's 2.01 acres of habitat that would be lost, Dr. Smallwood predicts a loss of 200 fledglings per year. *Id*. This loss would repeat each year. *Id*. Based on an average of 2.9 fledglings per nest, and an average generation time of 5 years, "the project would deny California 22,760 birds over the next century due solely to the loss of terrestrial habitat. *Id*. at 15.

The potential loss of hundreds of birds each year is a significant impact that has not been analyzed. An EIR is required to fully analyze the Project's impact on lost breeding capacity, and to mitigate that impact.

6. <u>The Project may have a significant impact on wildlife as a result of house cats.</u>

The MND fails to analyze the Project's impacts on wildlife as a result of house cats that may be brought to the Project site by future residents of the Project. House cats are one of the largest sources of avian mortality in North America. Smallwood, p. 17. Studies show that in the

US alone, an estimated 139 million house cats killed an estimated 16.95 billion vertebrate wildlife annually. Smallwood, p. 17. The MND does not mention any restrictions on house cats. Therefore, Dr. Smallwood made the following calculations based on average cat ownership in the US:

> In 2012 there were 0.44 house cats per human, and 122 vertebrate animals were killed per cat, free-ranging members of which killed disproportionately larger numbers of vertebrate wildlife. According to the IS/MND, the proposed project would add 32 new residents and 5 staff. The above rates applied to 37 new residents/staff **would add 16 cats, which would kill 1,952 vertebrate wildlife per year**.

Smallwood, p. 17.

Going beyond just the averages, Dr. Smallwood notes that during his three hour site visit, he observed three house cats hunting for wildlife on the Project site, one of which captured a pocket gopher.

An EIR must be prepared to analyze the impacts of house cats on wildlife.

7. <u>The MND's conclusion that the project will have no cumulative biological impact is not supported by substantial evidence because the MND fails to analyze the Project's cumulative impact on biological resources.</u>

The MND does not contain an analysis of the potential cumulative impacts to biological resources resulting from the Project, together with past, present, and reasonably foreseeable future projects. As a result, there is no evidence to support the MND's conclusion that the Project will not have a significant cumulative impact on biological resources.

An initial study and MND must discuss a Project's significant cumulative impacts. 14 Cal. Code Regs. § 15130(a). This requirement flows from CEQA section 21083, which requires a finding that a project may have a significant effect on the environment if "the possible effects of a project are individually limited but cumulatively considerable. . . . 'Cumulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

"Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." 14 Cal. Code Regs. § 15355(a). "[I]ndividual effects may be changes resulting from a single project or a number of separate projects." *Id.* "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." *Comm. for a Better Env't v. Cal.*

Resources Agency (2002) 103 Cal.App.4th 98, 117; 14 Cal. Code Regs. § 15355(b). A legally adequate cumulative impacts analysis views a particular project over time and in conjunction with other related past, present, and reasonably foreseeable probable future projects whose impacts might compound or interrelate with those of the project at hand.

The CEQA Guidelines allow two methods for satisfying the cumulative impacts analysis requirement: the list-of-projects approach, and the summary-of projects approach. Under either method, the MND must summarize the expected environmental effects of the project and related projects, provide a reasonable analysis of the cumulative impacts, and examine reasonable mitigation options. 14 Cal. Code Regs. § 15130(b).

Here, the MND relies on the environmental review performed for the City's General Plan EIR and the Roseland/Sebastapol Road Specific Plan and Roseland Area Annexation EIR. MND, p. 108. The MND admits that "The project will contribute to cumulative impacts identified in the City's General Plan EIR but not to a level that is cumulatively considerable." *Id*. This conclusion is based on the following analysis:

> As described in **Sections 7.1 – 7.20,** development of the Hearn Veterans Village project could potentially result in significant impacts. However, those impacts would be reduced to less-than-significant levels with implementation of mitigation measures. The implementation of mitigation measures would ensure that development of the proposed project would not be cumulatively considerable and as such the project's cumulative impacts will be less than significant.

MND, p. 108.

This analysis is flawed and does not comply with CEQA. According to the MND, an impact is cumulatively considerable only when it has not been fully mitigated. "If this was CEQA's standard, then cumulative effects analysis would be merely an analysis of mitigation efficacy." Smallwood, pp. 17-18. The conclusion that the Project will have no cumulative impact because each individual impact has been reduced to a less-than-significant level relies on the exact argument CEQA's cumulative impact analysis is meant to protect against. The entire purpose of the cumulative impact analysis is to prevent the situation where mitigation occurs to address project-specific impacts, without looking at the bigger picture. This argument, applied over and over again, has resulted in major environmental damage, and is a major reason why CEQA was enacted. As the court stated in *CBE v. CRA,* 103 Cal. App. 4th at 114:

> Cumulative impact analysis is necessary because the full environmental impact of a proposed project cannot be gauged in a vacuum. One of the most important environmental lessons that has been learned is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact.

A new cumulative impacts analysis is needed for the Project that complies with CEQA's requirement to look at the Project's environmental impact, combined with the impacts of other past, current, and probable future projects. An EIR must be prepared to fully analyze the Project's cumulative impacts.

B. The Project will have a Significant Energy Impact.

A project has a significant impact under CEQA if it will result in the "wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation" or if it would "[c]onflict with or obstruct a state or local plan for renewable energy or energy efficiency." MND, p. 52-53.

The MND's analysis of the Project's energy impacts is completely deficient in its discussion of renewable energy. It fails to acknowledge the California Energy Commission's 2019 Building Energy Efficiency Standards (found in the 2019 Building Code), which went into effect on January 1, 2020. The 2019 Building Code requires all new low-rise residential buildings, such as the Project, to be Zero Net Energy and include solar photovoltaic systems. Title 24, Building Code, sections 150.1(b)(1) and 150.1(c)(14). Zero Net Energy ("ZNE") means netting out a home's annual energy usage to zero by making homes more efficient and providing on-site renewable energy. *Id*. Specifically, solar PV panels are required to offset the energy usage of new homes. *Id*. None of these requirements are mentioned in the MND.

Despite the mandatory nature of the ZNE requirement, the MND does not explain how the Project will meet the California Building Code's ZNE standard, nor does it mention the inclusion of solar panels in the Project. By not complying with the 2019 Building Energy Efficiency Standards, the Project will be in "conflict with or obstruct a state or local plan for renewable energy or energy efficiency." This is a significant impact that must be fully analyzed and mitigated in an EIR.

In addition, the Building Code, and all newly constructed buildings that have complied with the Code since it became effective in 2020, are evidence that low-rise residential buildings can be constructed to operate using only renewable energy sources. Since the Project will not include solar generation or meet ZNE standards, the Project will result in the wasteful, inefficient, and unnecessary consumption of non-renewable energy. This is also a significant impact that must be fully analyzed and mitigated in an EIR.

II. MANY OF THE PROPOSED MITIGATION MEASURES VIOLATE CEQA BECAUSE THERE IS NO EVIDENCE THAT THEY ARE EFFECTIVE OR FEASIBLE, AND THEY CONSTITUTE DEFERRED MITIGATION.

CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and mitigation measures. 14 Cal. Code Regs. § 15002(a)(2) and (3). Mitigation measures must be designed to minimize, reduce, or avoid an identified environmental impact or to rectify or compensate for that impact. 14 Cal.

Code Regs. § 15370. Mitigation measures must be feasible, enforceable, and effective. A public agency may not rely on mitigation measures of uncertain efficacy or feasibility. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727 (finding groundwater purchase agreement inadequate mitigation measure because no record evidence existed that replacement water was available). "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. 14 Cal. Code Regs § 15364.

A lead agency is precluded from making the required CEQA findings unless the record shows that all uncertainties regarding the mitigation of impacts have been resolved; an agency may not rely on mitigation measures of uncertain efficacy or feasibility. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727. This approach helps "ensure the integrity of the process of decision making by precluding stubborn problems or serious criticism from being swept under the rug." *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935.

To ensure mitigation measures are feasible and certain, CEQA disallows deferring the formulation of mitigation measures to post-approval studies. 14 Cal. Code Regs. § 15126.4(a)(1)(B); *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 308-309. Deferral of the development of specific details of a mitigation measure is only permitted when "it is impractical or infeasible to include those details during the project's environmental review provided that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will considered, analyzed, and potentially incorporated in the mitigation measure." 14 CCR § 15126.

Moreover, "mitigation measure[s] [that do] no more than require a report be prepared and followed" do not provide adequate information for informed decisionmaking under CEQA. *Endangered Habitats League v. County of Orange* (2005) 131 Cal.App.4th 777, 794; 14 Cal. Code Regs. § 15126.4(a)(1)(B). By deferring the development of specific mitigation measures, the City has effectively precluded public input into the development of those measures. CEQA prohibits this approach. As explained by the court in *Communities for a Better Env't v. Richmond* (2010) 184 Cal.App.4th 70, 92:

> [R]eliance on tentative plans for future mitigation after completion of the CEQA process significantly undermines CEQA's goals of full disclosure and informed decisionmaking; and[,] consequently, these mitigation plans have been overturned on judicial review as constituting improper deferral of environmental assessment.

A. Many of the Proposed Mitigation Measures Constitute Improperly Deferred Mitigation.

MM BIO-1 requires the preparation of a landscaping plan that would offset the loss of grassland habitat for the special-status western bumble bee. MND, p. 9-5. The measure requires

native shrubs and herbaceous species to be identified in a landscape plan, and plants known to benefit native bees shall be selected, which may include, but are not limited to, coyote brush, sage lupines, various species of Lotus and Acmispon gum plant, and Phacelia. *Id*. Mitigation Measure BIO-1 constitutes deferred mitigation because it defers the formulation of the landscape plan until after the CEQA process is complete, and the City has not shown it is impractical or infeasible to include those details during the City's environmental review process. *See* 14 CCR § 15126.

MM BIO-3 includes a requirement that the Applicant "prepare and submit a Relocation Plan for the Service/CDFW review and written approval." MND, p. 9-7. The Relocation Plan is supposed to contain the method of relocation, a map, and a description of the proposed release site(s) and burrow(s), and written permission from land owners to use their land. *Id*. This measure also constitutes deferred mitigation because it defers the formulation of the Release Plan until after the CEQA process is complete, and the City has not shown it is impractical or infeasible to include those details during the City's environmental review process. *See* 14 CCR § 15126.

Moreover, deferral of mitigation is also impermissible if it removes the CEQA decision-making body from its decision-making role. The City may not delegate the formulation and approval of mitigation measures to address environmental impacts because an agency's legislative body must ultimately review and vouch for all environmental analysis mandated by CEQA. *Sundstrom v County of Mendocino* (1988) 202 Cal.App.3d 296, 306-308. Thus, the MND may not rely on programs to be developed and implemented later without approval by the City. Yet that is precisely what MM BIO-3 does. The lead agency – the City - has improperly delegated its legal responsibility of determining what constitutes adequate mitigation to USFWS and CDFW. MM BIO-3 calls for USFWS and CDFW to have a final say in mitigation requirements, while the public is given no opportunity to comment. The MND may not rely on a Relocation Plan to be developed, approved, and implemented later, at some future time after the Project has been approved. Without valid mitigation, the Project's significant impact on California Tiger Salamanders remains significant.

Similarly, part 10 of Mitigation Measure AQ-2 also violates CEQA and defers formulation of mitigation. MM AQ-2(10) states that the "project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOX reduction and 45 percent PM reduction compared to the most recent CARB fleet average." MND, p. 9-4. There are numerous problems with this mitigation. First, as written, this mitigation measure does not require the project to actually use construction equipment with a project-wide fleet average of 20 percent below NOx and 45 percent below PM compared to the most recent CARB fleet average. Instead, it merely requires preparation of a plan. As such, there is no enforceable requirement that the Project reduce its emissions by 20 and 45 percent. The measure should be revised to require the Project to achieve a project wide fleet-average 20 percent NOX reduction and 45 percent PM reduction. Second, even if a plan were sufficient, it must be prepared and reviewed by the City now, not deferred to

some later date after CEQA review is complete. Third, the measure is vague in its reliance on "the most recent CARB fleet average." CARB is a regulatory agency and does not itself use fleets. Which fleets is the mitigation measure referring to? Additional information must be provided.

Part 11 of Mitigation Measure AQ-2 requires the applicant to "[u]se low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings)." MND, p. 9-5. This measure is vague in that it does not state what "beyond the local requirements" means or provide any standard for how far beyond those standards the project is required to go. Is it sufficient for coatings to be just 1% lower in VOC emissions? Without any guidance on the level of additional VOC reduction required, there is no evidence it will adequately reduce emissions.

Mitigation Measure GEO-1 requires the Applicant to prepare an Erosion Control Plan and submit it to the Building Division of the City's Department of Planning and Economic Development. MND, p. 9-18 to 19. Again, there is no reason that the deferral of the Erosion Control Plan is warranted. Moreover, rather than the legislative body of the lead agency approving the plan, MM GEO-1 delegates approval of the Erosion Control Plan to City staff who work in the Department of Planning and Economic Development.

Mitigation Measure NOI-1 requires the Project Applicant to "[l]imit use of the concrete saw to a distance of 50 feet or greater from residences, **where feasible**," to "[c]onstruct temporary noise barriers, **where feasible**," and to muffle stationary noise-generating equipment with enclosures "**where feasible**." MND, p. 9-24. There is no standard of guidance for what is or is not "feasible," leaving that determination entirely up to the Applicant. Without standards for what is feasible, there is no evidence that the resulting noise levels after mitigation is implemented that the applicant thinks is "feasible" will be sufficiently low to mitigation the Projects noise impacts.

B. There is no Evidence that the Project's impacts on habitat for California Tiger Salamander and other species have been Mitigated to a Less-Than-Significant Level.

Mitigation Measure BIO-2 requires the Applicant to purchase mitigation credit at a 2:1 ratio "from a mitigation bank that is within the Critical Habitat for the species." MND, p. 9-6. Courts have rejected this mitigation, particularly where, as here, there is no evidence that sufficient mitigation credits exist and that the credits are linked to a reasonable plan for mitigation. *See*, *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 877.

Moreover, the purchase of mitigation credits does not actually mitigate the loss of habitat, either for CTS or for other species. The Biological Assessment is incorrect when it states that "[t]he mitigation will be purchased from a mitigation bank that is within the Critical Habitat for the species. Therefore, no net loss of CTS Critical Habitat will occur." Biological Assessment, p.

28. Dr. Smallwood explains that "The habitat that would be purchased in a conservation bank already exists. The loss of habitat at the project site will not be replaced by new habitat. Therefore, a net loss of habitat will occur." Smallwood, p. 14. Moreover, purchasing credits for habitat elsewhere outsources the benefits of the Project site to another community. For example, the fire mitigation, flood protection, and groundwater benefits currently provided by the site will be lost to another community.

Second, as Dr. Smallwood explains:

> many more special-status species would be significantly and adversely affected by this project. Compensatory mitigation would also be needed for impacts to these other species. Habitat should be permanently protected in the form of fee title or conservation easement, or a combination thereof. Habitat impacts should also be mitigated as near as possible to the project footprint, and it should be strategically implemented to reduce the effects of habitat fragmentation (Smallwood 2015).

Smallwood, p. 19.

Additional mitigation is required to mitigate the Project's impacts on habitat to a less-than-significant level.

III. THE PROJECT IS NOT CONSISTENT WITH THE CITY'S ZONING CODE AND WILL CHANGE THE CHARACTER OF THE NEIGHBORHOOD.

Per the City of Santa Rosa General Plan 2035 Land Use Diagram (October 18, 2016), the Project site is designated Very Low Density Residential which is intended to accommodate single-family detached units at a density of 0.2 to 2.0 dwelling units per acre. This designation was changed to Very Low Density Residential (allowing 0.2 to 2 units per acre) from Low Density Residential (allowing 2 to 8 units per acre) following lengthy negotiations between the City and the West Hearn Avenue residents prior to approval of the Roseland Area/Sebastopol Road Specific Plan and Roseland Area Annexation Project. West Hearn Avenue residents wanted to ensure that the rural character of the neighborhood was maintained if annexation occurred. In addition to designating the area as Very Low Density Rural Residential, the City also agreed to create a "Rural Heritage combining district," which it applied to the neighborhood. The purpose of the Rural Heritage combining district is "to recognize, preserve, and enhance Santa Rosa's rural communities." Santa Rosa Mun. Code sec. 20-28.090(A). This zoning standard is specifically applied to the West Hearn Avenue neighborhood in which the Project is located. *Id*. at (C)(1).

The Project violates both the spirit and the letter of the agreement and the Zoning Code. It would create eight new residential units (four primary residences and four ADUs) on 2.01 acers of land, creating a density of 4 units per acre, which is twice the maximum density permitted on land designated Very Low Density Residential. The Project's violation of the Very

Low Density standard is a significant impact under CEQA because density standards are meant to avoid or mitigate a variety of environmental impacts.

In addition, the Project will change the existing character of the neighborhood., which is distinctly rural. Every other property on this street has a single family home that is one-story on parcels of .5 acres, with houses ranging in size between 1,000 and 1,200 square feet. Most have small family farms that include sheep, goats, chicken, pigs, cows, and horses. In contrast, the proposed Project will include four main houses of 3,139 square feet, over two stories, with accessory units being 1,008 square feet. The Project buildings will be massive compared to the existing homes. The Project will house 37 people on 2 acres, or nearly double the population currently living on West Hearn.

By violating the agreed upon land use designation, and failing to protect the rural character of the neighborhood, the City and Applicant are acting in bad faith.

IV. THE PROJECT REQUIRES A MINOR USE PERMIT.

The MND improperly states that supportive housing uses are permitted by-right within the RR-20-RH Zoning District. MND, p. 3. Santa Rosa Municipal Code section 20-22.030 specifies in Note 4 to Table 202 that:

> **A Minor Use Permit is required for the construction of new multi-family supportive or transitional housing units in an RR or R-1-6 Zoning District**, similar to construction of a new traditional multi-family unit in an RR or R-1-6 Zone. The construction of new multi-family supportive housing units does not require a Minor Use Permit when the proposed use meets each of the requirements of Assembly Bill 2161, as specified in Government Code Section 65651.

The exception to the requirement for a Minor Use Permit for supportive housing in Rural Residential zones is not applicable because each of the requirements of Government Code section 65651 are not met. Specifically, Government Code section 65651 applies only when supportive housing is proposed "in zones where multifamily **and** mixed uses are permitted." Cal. Government Code section 65651(a) (emph. added). Mixed uses are not permitted in Rural Residential zones in Santa Rosa. Accordingly, the exception to the requirement that a supportive housing proposed to operate in a Rural Residential zone must obtain a Minor Use Permit. The Project cannot be approved without a Minor Use Permit.

V. THE PROJECT REQUIRES NEPA REVIEW.

According to the MND, the Project will be federally funded through the United States Department of Housing and Human Development. MND, p. 50. This federal funding triggers the National Environmental Policy Act ("NEPA"), 42 USC §§4321-4370j. An environmental assessment must be prepared to determine if an EIS is required.

CONCLUSION

The West Hearn Residents for Rural Integrity are not opposed to the type of use proposed. Instead, they are opposed to the density of the Project, its failure to maintain the character of the neighborhood, and the Project's environmental impacts, particularly impacts to the abundant wildlife that uses the Project site. Despite a willingness to discuss their concerns with the Applicant, over the past five years, the applicant never reached out to neighborhood residents. Instead, it waited until the proposal was complete, after decisions had already been made about density, location, mitigation, etc. Rather than asking for true input, the Applicant is now merely presenting the pre-determined plan to neighbors.

For the foregoing reasons, we respectfully request the City:

1. Prepare an EIR to address the MND's inadequacies, as described above;
2. Require the Applicant to resubmit the Project only once a new design is prepared that complies with the City of Santa Rosa's zoning requirements;
3. Direct the Applicant to undertake good faith discussions with the West Hearn Avenue Neighbors to resolve their concerns;
4. Postpone the Planning Commission's hearing on the Project until the above corrections have been made.

Sincerely,

Rebecca L. Davis

EXHIBIT A

Shawn Smallwood, PhD
3108 Finch Street
Davis, CA 95616

Monet Sheikhali, City Planner
City of Santa Rosa
Planning and Economic Development Department
100 Santa Rosa Avenue, Room 3
Santa Rosa, CA 95404 7 June 2021

RE: Hearn Veterans Village

Dear Ms. Sheikhali,

I write to comment on the Initial Study/Mitigated Negative Declaration (IS/MND) prepared for the proposed Hearn Veterans Village Project (City of Santa Rosa 2021). I understand this project would add 4 single-family homes and an accessory dwelling unit on 2.01 acres. I also reviewed WRA and Jane Valerius Environmental Consulting (2020) (hereafter referred to as WRA 2020).

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 subsequently worked for four years as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research has been on animal density and distribution, habitat selection, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, and on the ecology of invading species. I authored numerous papers on special-status species issues. I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and the Raptor Research Foundation, and I've been a part-time lecturer at California State University, Sacramento. I was Associate Editor of wildlife biology's premier scientific journal, The Journal of Wildlife Management, as well as of Biological Conservation, and I was on the Editorial Board of Environmental Management. I have performed wildlife surveys in California for thirty-five years, including at many proposed project sites. My CV is attached.

SITE VISIT

I visited the site of the proposed project for 3 hours on 1 June 2021, starting at 17:32 hours. With binoculars, I walked the western perimeter, stopping periodically to perform visual scans for vertebrate wildlife.

Based on my visual scan of the site, its vegetation cover consists of grassland with a dense cluster of oaks and willows in its interior, and shrubs. It is bordered by a remnant streambed to the west. According to the IS/MND, the site also includes wetlands with plant species that grow only on wetlands. Otherwise, the site is surrounded by various densities of housing, and vernal pool/grassland complexes remain intact to the northwest and southwest.

While visiting the site, I detected 34 species of vertebrate wildlife, 7 of which were special-status species (Table 1). The site supports Anna's hummingbirds and hooded orioles (Photos 1 and 2), California towhees and American crows (Photos 3 and 4), black phoebes and bushtits (Photos 5 and 6), and a family of white-tailed kites (Photos 7 - 10), among other species. Evidence of breeding was abundant. The site is rich in wildlife.

Table 1. *Species of wildlife I observed during 3 hours on 1 June 2021.*

Species	***Scientific name***	**Status (see Table 2)**
Mallard	*Anas platyrhynchos*	
Great egret	*Ardea alba*	
Snowy egret	*Egretta thula*	
Ring-billed gull	*Larus delawarensis*	
Turkey vulture	*Cathartes aura*	BOP
Red-shouldered hawk	*Buteo lineatus*	BOP
White-tailed kite	*Elanus leucurus*	CFP, BOP
Mourning dove	*Zenaida macroura*	
Rock pigeon	*Columba livia*	Non-native
Eurasian collared-dove	*Streptopelia decaocto*	Non-native
Anna's hummingbird	*Calypte anna*	
Nuttall's woodpecker	*Picoides nuttallii*	BCC
Willow flycatcher	*Empidonax traillii*	CE, BCC
Black phoebe	*Sayornis nigricans*	
Oak titmouse	*Baeolophus inornatus*	BCC
Bewick's wren	*Thryomanes bewickii*	
Bushtit	*Psaltriparus minimus*	
California scrub-jay	*Aphelocoma californica*	
American crow	*Corvus brachyrhynchos*	
Violet-green swallow	*Tachycineta thalassina*	
Barn swallow	*Hirundo rustica*	
Northern mockingbird	*Mimus polyglottos*	
MacGillivray's warbler	*Oporonus tolmiei*	
San Francisco common yellowthroat	*Geothlypis trichas sinuosa*	SSC3
California towhee	*Pipilo crissalis*	
House sparrow	*Passer domesticus*	Non-native
Hooded oriole	*Icterus cucullatus*	
Great-tailed grackle	*Quiscalus mexicanus*	
House finch	*Carpodacus mexicanus*	
American goldfinch	*Carduelis tristis*	
Bats	*Chiroptera*	
Botta's pocket gopher	*Thomomys bottae*	
Gray fox	*Urocyon cinereoargenteus*	
House cat	*Felis catus*	Non-native

Photos 1 and 2. *Anna's hummingbird and hooded oriole on the project site, 1 June 2021.*

Photos 3 and 4. *California towhees and American crow at the project site, 1 June 2021.*

Photos 5 and 6. *Black phoebe and bushtit at the project site, 1 June 2021.*

Photo 7. *A family of white-tailed kites, including both parents and 3 fledglings at the site, 1 June 2021. The center of activity is an adult kite dangling a pocket gopher it caught on the project site*

Photo 8. *A closer view of an adult white-tailed kite using a pocket gopher to train 2 of its fledglings at the site to capture and manage a prey item, 1 June 2021.*

Photos 9 and 10. *White-tailed kite preparing to pounce (left) and preparing to eat a pocket gopher (right) next the project site, 1 June 2021.*

The white-tailed kites nested in a tree located just west of the project site, but the kites hunted on the project site. The adults invested considerable time and effort to train their fledglings on pocket gophers they caught on the site (see Photos 7 through 10). The success of the nest would have been less likely without access to forage on the site proposed for the project.

Another species of raptor also nested in a tree just west of the project site, and that was red-shouldered hawk. I did not determine whether that nest was successful, but the location of the nest near the project site was unlikely a coincidence. Red-shouldered hawks prey on a variety of vertebrate species, but it is known as the species of the genus Buteo that most specializes on birds. Because the project site is rich in bird species, the nearness of the red-shouldered hawks' nest site makes sense.

Nesting on or very near the site are most of the bird species listed in Table 1. I saw fledglings or territorial defense or other behaviors indicative of breeding expressed by Anna's hummingbird, hooded oriole, California towhee, black phoebe, mourning dove, oak titmouse, Bewick's wren, American crow, house sparrow and house finch. Other species were less clearly breeding, but probably were doing so. And other species did clearly forage on site, including bushtit, willow flycatcher, Nuttall's woodpecker, California scrub-jay, violet-green swallow, barn swallow, and bats.

A few species simply flew over the project site, such as turkey vulture, great egret, snowy egret, mallard, great-tailed grackle, and ring-billed gull. However, this type of use of the project site can be just as important as any other, because that portion of the aerosphere that composes a species' aerohabitat is essential for home range patrol, foraging, dispersal and migration. If none of these essential functions can be achieved, then an animal in the wild cannot successfully breed. In my experience, volant wildlife select aerohabitat over open spaces more so than over residential rooftops and other impervious surfaces.

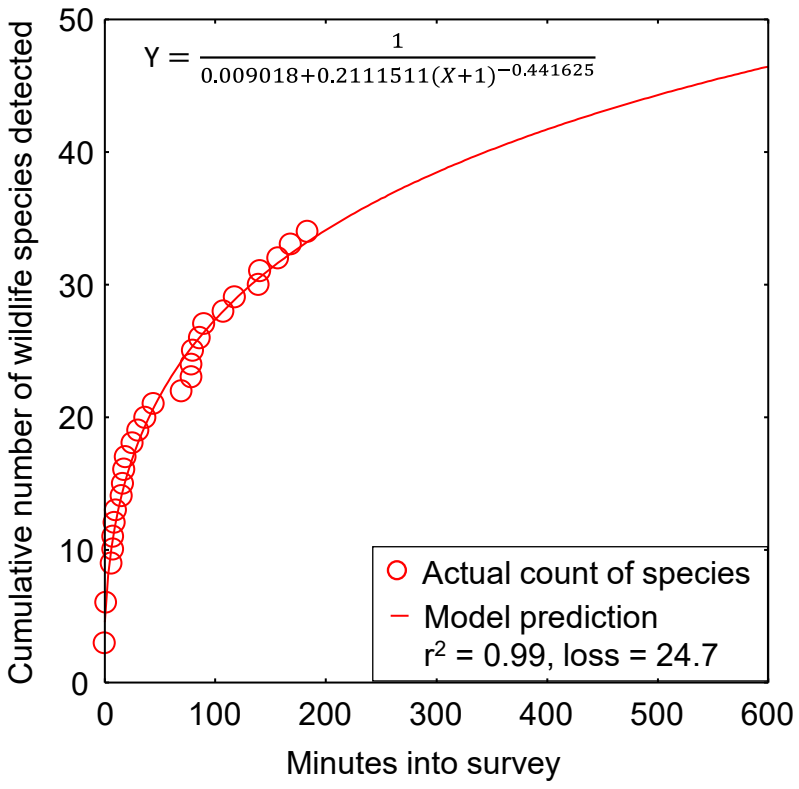
My gray fox identification was uncertain. From the west edge, I saw a large extruded soil mound near the cluster of willows on the site. The soil mound formed a ramp typical of the entrance to a fox den. Locals informed me that a gray fox has been seen in the area recently, so there is a reasonable likelihood that the soil mound I saw had been excavated by gray fox. Another candidate species would be American badger (*Taxidea taxus*), and a third would be coyote (*Canis latrans*).

My detection of 34 species of vertebrate wildlife needs to be interpreted within the context of her survey effort. The results of a single survey qualify as an absurdly thin empirical foundation for characterizing the environmental setting of any given site, including one proposed for a project. A single survey can serve only as a starting point toward characterization of a site's wildlife community. I had only 3 hours available to perform a visual scan survey on 3 June 2021, so there were only so many species I was likely to detect. It would have been inappropriate of me to have reported that the site supports only 34 species of wildlife. However, when a reconnaissance-level survey is diligently performed, and when the outcome is analyzed appropriately and fully reported, the number of species detected within a given reconnaissance survey effort can

inform of the number of species that likely would have been detected with a larger survey effort during the same time of year.

By recording when I detected each species, I was able to forecast the number of species that could have been detected with a longer effort using the same visual scan method. Figure 1 shows my cumulative count of species detected at the site with increasing time into my survey. Just as I have seen for many other survey efforts, a nonlinear regression model fit the data very well, explaining 99% of the variation in the data, and it showed progress towards the inevitable asymptote of the number of species detectable over a longer time period using the same survey method. In this case, my model predicted I would have eventually detected 111 species had I continued performing evening surveys during early June. I actually detected only 30.6% of what the pattern in my data predicts I could have detected with an expanded effort.

Figure 1. *Actual and predicted relationships between the number of vertebrate wildlife species detected and the elapsed survey time based on a visual-scan survey on 3 June 2021. Note that the relationship would differ if the survey was based on another method, another time of day, or during another season. Also note the cumulative number of vertebrate species across all methods, times of day, and seasons would increase substantially.*

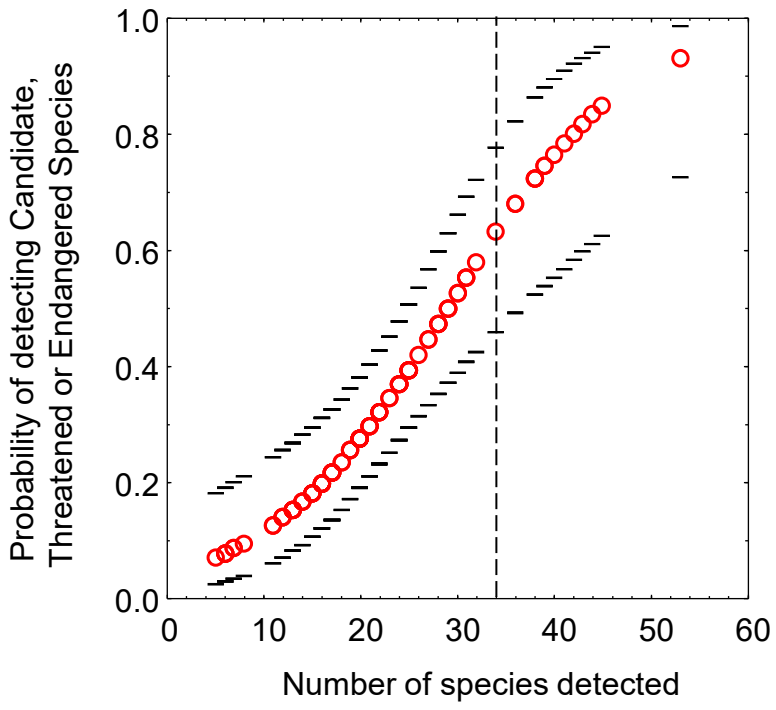


I could have detected many more species than I predicted by also performing surveys at different times of day to detect diurnal, nocturnal and crepuscular species, or surveys in different seasons and years to detect migrants and species with multi-annual cycles of abundance, or surveys of different methods such as se of acoustic detectors or thermal-imaging for bats, owls, and nocturnally migratory birds, and live-trapping for small mammals. My reconnaissance-level survey, performed carefully and analyzed appropriately, informs me that the site is rich in wildlife but also that its environmental setting remains insufficiently characterized as foundation for analysis of impacts to special-status species (more on this later). What my survey does not inform me, and

what detection surveys could, is which of the potentially occurring special-status species actually occur at the site in addition to those I had the good fortune to detect.

The likelihood of detecting special-status species is typically lower than that of more common species. This difference can be explained by the fact that special-status species tend to be rarer than common species. Special-status species also tend to be more cryptic, fossorial, or active during nocturnal periods when reconnaissance surveys are not performed. Another useful relationship from careful recording of species detections and subsequent comparative analysis is the probability of detection of listed species as a function of an increasing number of vertebrate wildlife species detected (Figure 2). (Note that listed species number fewer than special-status species, which are inclusive of listed species.) As demonstrated in Figure 1, the number of species detected is a function of survey effort. Therefore, greater survey effort increases the likelihood that listed species will be detected (which is the first tenet of detection surveys for special-status species). Based on the outcomes of 106 previous surveys that I performed at sites of proposed projects, my survey effort at the project site carried a 63% chance of detecting a listed species. As it turned out, I beat the odds by detecting not only one, but two listed species at the site: willow flycatcher (California Endangered) and white-tailed kite (California Fully Protected).

Figure 2. *Probability of detecting ≥1 Candidate, Threatened or Endangered Species of wildlife listed under California or federal Endangered Species Acts, based on survey outcomes that I logit-regressed on the number of wildlife species I detected as an expert witness during 106 site visits throughout California. The short-dashed vertical line represents the cumulative number of species I detected on 3 June 2020, and the long-dashed line represents the cumulative number of species both WRA (2020) and I detected.*



I am confident that with greater survey effort, including surveys during other times of year and using additional methods, and including the appropriate detection survey protocols, multiple additional special-status species would be detected, including merlin, burrowing owl, multiple additional species of bats, and most of the species listed in Table 2. A larger survey effort is needed to inform the public and decision-makers about the potential project impacts to wildlife and how to mitigate them.

BASELINE CONDITIONS AND BIOLOGICAL IMPACTS ASSESSMENT

On the one hand, City of Santa Rosa (2021) appears to understand the biological values of the project site, and on the other hand to have given little effort toward analyzing potential project impacts to biological resources. According to the IS/MND (p. 39), "The City of Santa Rosa and Planning Area contains streams, creeks, and associated tributaries, vernal pools, grasslands, hillsides, and woodlands, all of which serve as important habitats for a variety of plant and animal species." And, "...the project site is identified as an area potentially containing sensitive species and potentially containing high quality vernal pool habitat." But after acknowledging the importance of the site, the IS/MND's conclusions are based on a highly cursory site survey and a weak analysis of potential impacts.

Other than reporting the date of the survey (27 April 2020) and how biologists walked over the site ("meandering"), WRA (2020) neglected to report the most basic information needed to assess the rigor and focus of the biological survey. The reader needs to know what time of day the survey took place, and how long the biologists were on site. All the reader knows is that the biologists who performed the survey did not see much in the way of plants and wildlife. However, as I pointed out earlier, the number of wildlife species detected is largely a function of survey effort. WRA (2020) should have reported the level of effort committed to the site.

The reporting of the field survey should be improved, but the only remedy for an unreliable survey outcome is to perform appropriate surveys. Given what I saw at the site during my 3-hour visit, I found it astounding that the two biologists who surveyed the site on 27 April 2020 detected a mere 7 species of wildlife (WRA 2020). The two biologists who surveyed the site – and who had direct access to it – detected a fifth of the species I saw and heard in only 3 hours on the evening of June 3rd. Perhaps the two visiting biologists were not experienced with wildlife, or perhaps they were focused on plants or soils, but for whatever reason they did not see more than a tiny fraction of the wildlife community that uses the site. Admittedly, I also detected only a fraction of the species that compose the local wildlife community but at least I put my findings in context of the survey effort. WRA's (2020) findings regarding wildlife are not credible.

The biologists who visited the site likely knew that their wildlife species list was too short. WRA (2020:13) added the caveat, "The reconnaissance-level site visit was intended only as an evaluation of on-site and adjacent habitat types, and no special status animal species surveys were conducted as part of this effort." Indeed, no detection surveys were performed; and by detection surveys I mean the types of surveys that were formulated by species' experts and natural resource agencies to ensure reasonable likelihood of detection at reasonable cost. Detection surveys have been developed to detect a species that is present, to support absence determinations, and to inform preconstruction surveys to minimize take and to inform compensatory mitigation. Detection survey protocols are available for California tiger salamander, burrowing owl, Swainson's hawk, and multiple other special-status species with potential to occur at the site. Additionally, methods are available for detecting classes of

wildlife that WRA's field visit neglected. Acoustic detectors, thermal-imaging cameras, mist-netting and evening visual scans would enable detections of bats. Live-trapping would have enabled detections of small terrestrial mammals. Point counts would have helped with birds.

The inexperience hypothesis for WRA's short list of detected wildlife species gained support upon my review of WRA's (2020) list of potentially occurring species. Multiple species and subspecies were considered even though they do not occur in the region. WRA considered subspecies with special-status because they are endemic to San Clemente Island, for example. WRA also misapplied the US Fish and Wildlife Service's lists of Bird Species of Conservation Concern, including species that are listed for other regions of the USA. It would help to assign an experienced biologist to those performing the field survey and to those analyzing potential impacts.

The analysis of potential impacts also went astray in the determinations of species' occurrence likelihoods. I identified 63 special-status species of vertebrate wildlife with potential to use the site (Table 2). I identified these species through my own observations and by reviewing eBird and iNaturalist for sighting records in the area. Of the 63 species in Table 2, 15 have been seen either directly on the project site or on property immediately adjacent to it. WRA considered the occurrence potential of only a third of these 15 species documented on or next to the site, and of the 5 species considered, WRA determined 3 to have no potential (white-tailed kite, Nuttall's woodpecker, and San Francisco common yellowthroat) and one to have low potential (Cooper's hawk). The biologists who visited the site saw Cooper's hawk next to it, and yet WRA still determined it has only low potential to occur. They were aware of the white-tailed kites, and yet WRA still determined the species has no occurrence potential. These determinations defy reality.

In all, WRA determined the occurrence potentials of only 18 (29%) of the 63 species I listed in Table 2. Nearly all of the 18 species considered by WRA were also determined to have no occurrence likelihood. These determinations are inconsistent with my own experience and with the occurrence records that are publicly available on data bases of sightings records. One plausible explanation for WRA's determinations was that they were based narrowly on whether the species is likely to breed on site. However, no animal can successfully breed at any location without also surviving the non-breeding season and migration, and without having found sufficient forage and opportunities in refugia, stopover during migration, staging, mate-selection and all the other functions the animal must perform to successfully breed. If WRA determined occurrence potential based on whether a species would breed on site, then WRA made its determinations based on an unrealistic view of wildlife habitat.

Table 2. *Occurrence likelihoods of special-status species at the project site, based on WRA's assessments and by records of sightings in eBird and iNaturalist and actual site visits by biologists.*

Species	**Scientific name**	**Status[1]**	**Occurrence likelihood**	
			WRA	**eBird, iNaturalist, site visits**
California tiger salamander	*Ambystoma californiense*	FT, CT	High	Recent nearby
California red-legged frog	*Rana draytonii*	FT, SSC	None	Nearby
Foothill yellow-legged frog	*Rana boylii*	CE, SSC	None	Nearby
Western pond turtle	*Emys marmorata*	SSC	None	Nearby
Caspian tern	*Hydroprogne caspia*	BCC		Nearby
California gull	*Larus californicus*	WL		Very close
Turkey vulture	*Cathartes aura*	BOP		On site
Osprey	*Pandion haliaetus*	WL, BOP	None	Nearby
Bald eagle	*Haliaeetus leucocephalus*	BGEPA, BCC, CE, CFP		Nearby
Golden eagle	*Aquila chrysaetos*	BGEPA, BCC, CFP	None	Nearby
Red-tailed hawk	*Buteo jamaicensis*	BOP		Adjacent
Ferruginous hawk	*Buteo regalis*	BCC, WL, BOP		Nearby
Swainson's hawk	*Buteo swainsoni*	BCC, CT		Nearby
Rough-legged hawk	*Buteo regalis*	BOP		Nearby
Red-shouldered hawk	*Buteo lineatus*	BOP		Adjacent
Sharp-shinned hawk	*Accipiter striatus*	WL, BOP		Adjacent
Cooper's hawk	*Accipiter cooperi*	WL, BOP	Low	Adjacent
Northern harrier	*Circus cyaneus*	SSC3, BOP		Adjacent
White-tailed kite	*Elanus leucurus*	CFP, BOP	None	On site
American kestrel	*Falco sparverius*	BOP		Adjacent
Merlin	*Falco columbarius*	WL, BOP		Nearby
Prairie falcon	*Falco mexicanus*	BCC, WL, BOP		Nearby
Peregrine falcon	*Falco peregrinus*	BCC, CFP		Adjacent
Burrowing owl	*Athene cunicularia*	BCC, SSC2	None	Nearby
Great-horned owl	*Bubo virginianus*	BOP		Nearby
Long-eared owl	*Asio otus*	SSC3, BOP		In region
Short-eared owl	*Asio flammeus*	SSC3, BOP		Nearby
Barn owl	*Tyto alba*	BOP		Nearby
Western screech-owl	*Megascops kennicotti*	BOP		Nearby

Species	Scientific name	Status[1]	Occurrence likelihood	
			WRA	eBird, iNaturalist, site visits
Costa's hummingbird	*Calypte costae*	BCC		Nearby
Allen's hummingbird	*Selasphorus sasin*	BCC	None	Nearby
Rufous hummingbird	*Selasphorus rufus*	BCC	None	Nearby
Nuttall's woodpecker	*Picoides nuttallii*	BCC	None	On site
Lewis's woodpecker	*Melanerpes lewis*	BCC		Nearby
Vaux's swift	*Chaetura vauxi*	SSC2		Nearby
Willow flycatcher	*Epidomax trailii*	CE, BCC		On site
Olive-sided flycatcher	*Contopus cooperi*	BCC, SSC2		Nearby
Oak titmouse	*Baeolophus inornatus*	BCC	High	On site
Horned lark	*Eremophila alpestris*	WL		Nearby
Loggerhead shrike	*Lanius ludovicianus*	BCC, SSC2		Nearby
Yellow-billed magpie	*Pica nuttalli*	BCC		In region
San Francisco common yellowthroat	*Geothlypis trichas sinuosa*	SSC3	None	On site
Yellow warbler	*Setophaga petechia*	BCC, SSC2		Nearby
Yellow-breasted chat	*Icteria virens*	SSC3		Nearby
Oregon vesper sparrow	*Pooecetes gramineus affinis*	SSC2		In region
Grasshopper sparrow	*Ammodramus savannarum*	SSC2		Nearby
Summer tanager	*Piranga rubra*	SSC1		Nearby
Tricolored blackbird	*Agelaius tricolor*	CT, BCC	None	Nearby
Yellow-headed blackbird	*X. xanthocephalus*	SSC3		In region
Lawrence's goldfinch	*Spinus lawrencei*	BCC		Nearby
Pallid bat	*Antrozous pallidus*	SSC, WBWG H	None	Nearby
Townsend's big-eared bat	*Plecotus t. townsendii*	SSC, WBWG H		Nearby
Silver-haired bat	*Lasionycteris noctivagans*	WBWG:M		In region
Western red bat	*Lasiurus blossevillii*	SSC, WBWG H		Nearby
Little brown bat	*Myotis lucifugus*	WBWG:M		Very close
Canyon bat	*Parastrellus hesperus*	WBWG:M		In region
Small-footed myotis	*Myotis cililabrum*	WBWG M		In region
Miller's myotis	*Myotis evotis*	WBWG M		In region
Fringed myotis	*Myotis thysanodes*	WBWG H		In region

Species	Scientific name	Status[1]	Occurrence likelihood	
			WRA	eBird, iNaturalist, site visits
Long-legged myotis	*Myotis volans*	WBWG H		In range
Yuma myotis	*Myotis yumanensis*	WBWG LM		In range
Hoary bat	*Lasiurus cinereus*	WBWG LM	None	In region
American badger	*Taxidea taxus*	SSC	None	Nearby

[1] Listed as FT or FE = federally Threatened or Endangered, BGEPA = Bald and Golden Eagle Protection Act, BCC = US Fish and Wildlife Service's Bird Species of Conservation Concern, CT or CE = California Threatened or Endangered, CFP = California Fully Protected (California Fish and Game Code §3511 – birds; §4700 – mammals), BOP = California Fish and Game Code 3503.5 (Birds of prey), and SSC1, SSC2 and SSC3 = California Bird Species of Special Concern priorities 1, 2 and 3 (Shuford and Gardali 2008), WL = Taxa to Watch List (Shuford and Gardali 2008), WBWG = Western Bat Working Group with low, medium and high conservation priorities.

I disagree with WRA's (2020) analysis of potential impacts to California tiger salamander (CTS). According to WRA (2020:26), "Suitable breeding habitat for CTS are water bodies that typically support inundation during winter/spring and hold water for a minimum of 12 consecutive weeks in a year of average rainfall, which results in water remaining until May or longer. None of the drainage ditches within the proposed project area supported that type of ponding. As a result, the site is only suitable for upland habitat." The first problem with this conclusion is that its characterization of ponding on the site was based on a single site visit in late April during a drought year. I monitored many ponds for CTS. In one study (Smallwood and Morrison 2007), I monitored 64 ponds for CTS over two years. Whether ponds remained inundated through May varied between years. In the second year I found CTS larvae in ponds that did not remain inundated through May of the previous year. Therefore, ponds that were dry when WRA visited them in April 2020 could be inundated in another year, and they could support CTS. A single site visit is insufficient for determining the potential of the site for supporting breeding CTS.

I also disagree with WRA's (2020:27) assertion that "the small size of the parcel and the lack of tall trees preclude the potential for raptors to nest on the site." In my experience over several decades, I have often found raptors nesting in trees of stature similar to those on the project site, and on parcels even smaller than that of the project site. One can look to the successful nest of white-tailed kites right next door on an even smaller parcel and in a tree no larger than the trees on the project site. WRA's assertion lacks credibility.

Furthermore, I disagree with WRA's (2020:28) assertion that "The mitigation will be purchased from a mitigation bank that is within the Critical Habitat for the species. Therefore, no net loss of CTS Critical Habitat will occur." The habitat that would be purchased in a conservation bank already exists. The loss of habitat at the project site will not be replaced by new habitat. Therefore, a net loss of habitat will occur.

WRA's characterization of the wildlife community at the project site was grossly incomplete and misleading. A fair argument can be made for the need to prepare an EIR to more appropriately characterize the environmental setting, analyze impacts and formulate mitigation measures.

HABITAT LOSS

The project would eliminate 2.01 acres of wildlife habitat. Habitat loss not only results in the immediate numerical decline of wildlife, but also in permanent loss of productive capacity (Smallwood 2015). For example, grassland/wetland/woodland complexes at two study sites had total bird nesting densities of 32.8 and 35.8 nests per acre (Young 1948, Yahner 1982) for an average 34.3 nests per acre. Applying this density to the project site, then 34.3 nests/acre multiplied against 2.01 acres would predict a loss of 69 bird nests. The average number of fledglings per nest in Young's (1948) study was 2.9. Assuming Young's (1948) study site typifies bird productivity, the project would prevent the production of 200 fledglings per year.

After 100 years and assuming an average generation time of 5 years, the lost capacity of both breeders and annual fledgling production can be estimated from the following formula: {(nests/year × chicks/nest × number of years) + ((2 adults/nest × nests/year) × (number of years ÷ years/generation))}. In the case of this project, this formula would predict **the project would deny California 22,760 birds over the next century due solely to loss of terrestrial habitat**. This predicted loss would be substantial, and would qualify as significant impacts that have yet to be addressed by the IS/MND. A fair argument can be made for the need to prepare an EIR.

WILDLIFE MOVEMENT

Based on WRA's (2020) analysis, the IS/MND's determination of less than significant impacts to wildlife in the region is flawed. For example, WRA (2020:16) concludes, "The study area is not located in an Essential Connectivity Area (defined as areas that are essential for ecological connectivity between blocks) (Spencer et al. 2010)." However, WRA misapplied the California Essential Habitat Connectivity Project. At https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18486 &inline, the California Essential Habitat Connectivity Project very specifically pointed out that it is not: "A California Department of Fish and Game or US Fish and Wildlife Service response to potential impacts to a habitat or species from a project subject to the California Environmental Quality Act (CEQA)," nor "Fine scale, with every important piece of habitat identified" nor ""Essential", meaning the only places of importance" nor "A solution by itself for how to provide necessary linkages for any given species of plant or animal… Linkage designs will vary depending on focal species chosen and the goal of providing connected habitat for a chosen species might be met several different ways" nor "The final word on connectivity for California." With analytical grid cells of 2,000 acres, the spatial grain of the California Essential Habitat Connectivity Project is much too coarse for the conclusion drawn from it by WRA (2020).

In another example, WRA (2020:16) asserts, "The proposed construction will not be an impediment to any movement corridors in this area based on the separated nature of the individual units and a lack of fencing around the proposed development." WRA (2020) implies that whether a project would interfere with wildlife movement depends on whether it occurs within a movement corridor. This implication invokes a false CEQA standard. The primary phrase of the CEQA standard goes to wildlife movement regardless of whether the movement is channeled by a corridor. A site such as the proposed project site is critically important for wildlife movement because it composes an increasingly diminishing expanse of open space within a growing expanse of anthropogenic uses, forcing more species of volant wildlife to use the site as stopover and staging habitat during migration, dispersal, and home range patrol (Warnock 2010, Taylor et al. 2011, Runge et al. 2014). The project would cut wildlife off from stopover and staging habitat, forcing volant wildlife to travel even farther between remaining patches of stopover habitat. The project would interfere with wildlife movement in the region. An EIR needs to be prepared to more carefully analyze this impact.

WINDOW COLLISIONS

The IS/MND includes no analysis of potential impact so birds that would be caused by bird-window collisions. Window collisions are often characterized as either the second or third largest source or human-caused bird mortality. The numbers behind these characterizations are often attributed to Klem's (1990) and Dunn's (1993) estimates of about 100 million to 1 billion bird fatalities in the USA, or more recently by Loss et al.'s (2014) estimate of 365-988 million bird fatalities in the USA or Calvert et al.'s (2013) and Machtans et al.'s (2013) estimates of 22.4 million and 25 million bird fatalities in Canada, respectively. The proposed project would impose windows in the airspace normally used by birds.

Other factors can add to bird-window collision risk. For example, homes with birdfeeders are associated with higher rates of window collisions than are homes without birdfeeders (Kummer and Bayne 2015, Kummer et al. 2016a), so the developed area might pose even greater hazard to birds if it includes numerous birdfeeders.

Project Impact Prediction

By the time of these comments, I had reviewed and processed results of bird collision monitoring at 213 buildings and façades for which bird collisions per m^2 of glass per year could be calculated and averaged (Johnson and Hudson 1976, O'Connell 2001, Somerlot 2003, Hager et al. 2008, Borden et al. 2010, Hager et al. 2013, Porter and Huang 2015, Parkins et al. 2015, Kahle et al. 2016, Ocampo-Peñuela et al. 2016, Sabo et al. 2016, Barton et al. 2017, Gomez-Moreno et al. 2018, Schneider et al. 2018, Loss et al. 2019, Brown et al. 2020, City of Portland Bureau of Environmental Services and Portland Audubon 2020, Riding et al. 2020). These study results averaged 0.073 bird deaths per m^2 of glass per year (95% CI: 0.042-0.102). This average and its 95% confidence interval provide a robust basis for predicting fatality rates at a proposed new project, because the basis includes a variety of building sizes and heights and various window glass and window settings.

The IS/MND provides no information on the types and extents of windows that would be built into the dwelling units, but it does provide the square footage (s.f.) of floorspace of the homes. I therefore applied my own measurements of 0.0147368 m^2 of glass window extent per s.f. of floorspace in modern homes to the 25,000 s.f. of the proposed new home floorspace. Based on my measured rate, the proposed project would add 368 m^2 of new glass windows. Aplying the mean fatality rate (above) to my estimate of 368 m^2 of glass windows predicts **27 bird deaths per year (95% CI: 16-38)**. The 100-year toll from this average annual fatality rate would be 2,700 bird deaths (95% CI: 1,600-3,800). The vast majority of these deaths would be of birds protected under the Migratory Bird Treaty Act and under the recently revised California Fish and Game Code section 3513, thus causing significant unmitigated impacts. Given the predicted level of bird-window collision mortality, and the absence of proposed mitigation in the IS/MND, it is my opinion that the project would result in potentially significant adverse biological impacts. An EIR needs to be prepared to appropriately address this impact.

Given the magnitude of bird-window collision impacts, there are obviously great opportunities for reducing and minimizing these impacts going forward. Proposed new structures can be more carefully sited, designed, and managed to minimize impacts. However, the costs of some of these measures can be high and can vary greatly, but most importantly the efficacies of many of these measures remain uncertain. Both the costs and effectiveness of all of these measures can be better understood through experimentation and careful scientific investigation. Post-construction fatality monitoring should be an essential feature of any new building project.

HOUSE CATS

House cats likely would be brought to the project site by residents of the proposed residential units. However, the IS/MND does not address the impacts of house cats on wildlife. House cats serve as one of the largest sources of avian mortality in North America (Dauphiné and Cooper 2009, Blancher 2013, Loss et al. 2013, Loyd et al. 2017). Loss et al. (2013) estimated 139 million cats in the USA in 2013 (range 114 to 164 million), which killed an estimated 16.95 billion vertebrate wildlife annually (range 7.6 to 26.3 billion). In 2012 there were 0.44 house cats per human, and 122 vertebrate animals were killed per cat, free-ranging members of which killed disproportionately larger numbers of vertebrate wildlife. According to the IS/MND, the proposed project would add 32 new residents and 5 staff. The above rates applied to 37 new residents/staff **would add 16 cats, which would kill 1,952 vertebrate wildlife per year**.

If the above prediction seems unrealistic, I will add my own observations of the site while I visited it. I watched 3 house cats hunting for wildlife on the site while I was there. There were likely others I did not see. One captured a pocket gopher and carried it to a neighboring home. Even now, free-roaming house cats are taking a toll on wildlife at the project site. Adding more cats would intensify the impacts.

House cats also contribute to downstream loading of *Toxoplasma gondii*. According to a UC Davis wildlife health research program, "*Toxoplasma gondii is a parasite that can infect virtually all warm-blooded animals, but the only known definitive hosts are cats – domesticated and feral house cats included. Cats catch the parasite through hunting rodents and birds and they offload it into the environment through their feces… and …rain that falls on cement creates more runoff than rain that falls on natural earth, which contributes to increased runoff that can carry fecal pathogens to the sea*" (http://www.evotis.org/ toxoplasma-gondii- sea-otters/). An EIR needs to be prepared to address the impacts of house cats to wildlife.

CUMULATIVE IMPACTS

The IS/MND characterizes cumulative effects as simply residual impacts of incomplete mitigation of project-level impacts. It asserts that environmental review performed for the City's General Plan will serve as an umbrella review to ensure adequate protection and management of biological resources in the City of Santa Rosa. If this was CEQA's standard, then cumulative effects analysis would be merely an analysis of mitigation

efficacy. And if that was the standard, then I must point out that few of the project-level impacts would be offset to any degree by the proposed mitigation measures. But the IS/MND's implied standard is not the standard of analysis of cumulative effects. CEQA defines cumulative impacts, and it outlines two general approaches for performing the analysis. Neither approach is implemented in the IS/MND. An EIR needs to be prepared to address potential cumulative impacts.

MITIGATION

The proposed mitigation measures are largely premature and incomplete, having not been informed by adequate characterization of the environmental setting and analysis of potential impacts. Whether special-status species occur on site needs to be better established, as well as approximately how many of each species. Whether vernal pools occur on the project site needs to be determined. Whether bats roost on site needs to be determined.

The formulations of multiple mitigation measures are deferred to unspecified later dates, thereby precluding meaningful public participation with one of the most important aspects of CEQA review. An EIR should be prepared, and it should include more details of each mitigation measure.

BIO-4 – Preconstruction surveys for nesting birds and raptors. Whereas I agree that preconstruction surveys would be appropriate, I must add that preconstructions should not be performed without first having performed detection surveys, as I explained earlier. Preconstruction surveys are no substitute for detection surveys. Prior to certification of an EIR, which I suggest needs to be prepared, species detection surveys are needed to (1) support negative findings of species when appropriate, (2) inform preconstruction surveys to improve their efficacy, (3) estimate project impacts, and (4) inform compensatory mitigation and other forms of mitigation. Detection survey protocols and guidelines are available from resource agencies for most special-status species. Otherwise, professional standards can be learned from the scientific literature and species' experts.

Preconstruction surveys ought also to be performed for bats, but the IS/MND proposes no such surveys.

It should be understood that preconstruction surveys, although warranted, actually achieve very little. Birds are very capable of hiding nest sites, and bats are very capable of hiding roost sites. Most bird nests and bat roost sites would be missed by preconstruction surveys. For this reason, compensatory mitigation is needed for those bird nests and bat roosts that will be missed by preconstruction surveys. Additionally, preconstruction surveys accomplish nothing in terms of mitigating mortality caused by collisions with windows and automobiles, predation by house cats, and by habitat loss. Compensatory mitigation is needed for these types of project impacts to wildlife.

RECOMMENDED MITIGATION

Habitat Protection

The IS/MND promises that CTS habitat would be conserved by payment of a compensatory mitigation fee to a conservation bank. However, many more special-status species would be significantly and adversely affected by this project. Compensatory mitigation would also be needed for impacts to these other species. Habitat should be permanently protected in the form of fee title or conservation easement, or a combination thereof. Habitat impacts should also be mitigated as near as possible to the project footprint, and it should be strategically implemented to reduce the effects of habitat fragmentation (Smallwood 2015).

I also recommend that 15 years of monitoring be performed for targeted special-status species on and around the conserved lands and within the neighborhood itself to further assess cumulative impacts. If the project goes forward, we should at least learn of the cumulative impacts as well as the performance of mitigation measures.

Guidelines on Home Design to Minimize Bird-Window Collisions

If the project goes forward, it should at a minimum adhere to available Bird-Safe Guidelines, such as those prepared by American Bird Conservancy and New York and San Francisco. The American Bird Conservancy (ABC) produced an excellent set of guidelines recommending actions to: (1) Minimize use of glass; (2) Placing glass behind some type of screening (grilles, shutters, exterior shades); (3) Using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) Turning off lights during migration seasons (Sheppard and Phillips 2015). The City of San Francisco (San Francisco Planning Department 2011) also has a set of building design guidelines, based on the excellent guidelines produced by the New York City Audubon Society (Orff et al. 2007). The ABC document and both the New York and San Francisco documents provide excellent alerting of potential bird-collision hazards as well as many visual examples. The San Francisco Planning Department's (2011) building design guidelines are more comprehensive than those of New York City, but they could have gone further. For example, the San Francisco guidelines probably should have also covered scientific monitoring of impacts as well as compensatory mitigation for impacts that could not be avoided, minimized or reduced.

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

House Cats

If the project goes forward, a fund should be established for long-term management of house cats in the project. Management could include public education about the

environmental effects of outdoor and free-ranging cats. It could also include a program to spade and neuter cats, especially free-ranging cats. It could also involve some removals of feral cats.

Measures to Rectify Impacts

Compensatory mitigation ought also to include funding contributions to wildlife rehabilitation facilities to cover the costs of injured animals that would be delivered to these facilities for care. Most of the injuries likely would be caused by collisions with windows and automobiles, and by attacks by house cats. Many of these animals would need treatment by wildlife rehabilitation facilities.

Thank you for your attention,

_____

Shawn Smallwood, Ph.D.

REFERENCE CITED

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Kenneth Shawn Smallwood
Curriculum Vitae

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

Ecologist

Expertise

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

Education

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

Experience

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

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

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

the County on how to reduce wildlife fatalities.

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

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

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

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

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

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

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

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

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

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

to receive mitigation funds for habitat easements and restoration.

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

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

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

Projects

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Peer Reviewed Publications

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

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

Smallwood, K. S., and D. A. Bell. 2020. Relating bat passage rates to wind turbine fatalities. Diversity 12(84); doi:10.3390/d12020084.

Smallwood, K. S., and D. A. Bell. 2020. Effects of wind turbine curtailment on bird and bat fatalities. Journal of Wildlife Management 84:684-696. DOI: 10.1002/jwmg.21844

Kitano, M., M. Ino, K. S. Smallwood, and S. Shiraki. 2020. Seasonal difference in carcass persistence rates at wind farms with snow, Hokkaido, Japan. Ornithological Science 19: 63 –

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Smallwood, K. S. and M. L. Morrison. 2018. Nest-site selection in a high-density colony of burrowing owls. Journal of Raptor Research 52:454-470.

Smallwood, K. S., D. A. Bell, E. L. Walther, E. Leyvas, S. Standish, J. Mount, B. Karas. 2018. Estimating wind turbine fatalities using integrated detection trials. Journal of Wildlife Management 82:1169-1184.

Smallwood, K. S. 2017. Long search intervals under-estimate bird and bat fatalities caused by wind turbines. Wildlife Society Bulletin 41:224-230.

Smallwood, K. S. 2017. The challenges of addressing wildlife impacts when repowering wind energy projects. Pages 175-187 in Köppel, J., Editor, Wind Energy and Wildlife Impacts: Proceedings from the CWW2015 Conference. Springer. Cham, Switzerland.

May, R., Gill, A. B., Köppel, J. Langston, R. H.W., Reichenbach, M., Scheidat, M., Smallwood, S., Voigt, C. C., Hüppop, O., and Portman, M. 2017. Future research directions to reconcile wind turbine–wildlife interactions. Pages 255-276 in Köppel, J., Editor, Wind Energy and Wildlife Impacts: Proceedings from the CWW2015 Conference. Springer. Cham, Switzerland.

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Sadar, M. J., D. S.-M. Guzman, A. Mete, J. Foley, N. Stephenson, K. H. Rogers, C. Grosset, K. S. Smallwood, J. Shipman, A. Wells, S. D. White, D. A. Bell, and M. G. Hawkins. 2015. Mange Caused by a novel Micnemidocoptes mite in a Golden Eagle (*Aquila chrysaetos*). Journal of Avian Medicine and Surgery 29(3):231-237.

Smallwood, K. S. 2015. Habitat fragmentation and corridors. Pages 84-101 in M. L. Morrison and H. A. Mathewson, Eds., Wildlife habitat conservation: concepts, challenges, and solutions. John Hopkins University Press, Baltimore, Maryland, USA.

Mete, A., N. Stephenson, K. Rogers, M. G. Hawkins, M. Sadar, D. Guzman, D. A. Bell, J. Shipman, A. Wells, K. S. Smallwood, and J. Foley. 2014. Emergence of Knemidocoptic mange in wild Golden Eagles (Aquila chrysaetos) in California. Emerging Infectious Diseases 20(10):1716-1718.

Smallwood, K. S. 2013. Introduction: Wind-energy development and wildlife conservation.

Wildlife Society Bulletin 37: 3-4.

Smallwood, K. S. 2013. Comparing bird and bat fatality-rate estimates among North American wind-energy projects. Wildlife Society Bulletin 37:19-33. + Online Supplemental Material.

Smallwood, K. S., L. Neher, J. Mount, and R. C. E. Culver. 2013. Nesting Burrowing Owl Abundance in the Altamont Pass Wind Resource Area, California. Wildlife Society Bulletin: 37:787-795.

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Smallwood, K. S., L. Neher, and D. A. Bell. 2009. Map-based repowering and reorganization of a wind resource area to minimize burrowing owl and other bird fatalities. Energies 2009(2):915-943. http://www.mdpi.com/1996-1073/2/4/915

Smallwood, K. S. and B. Nakamoto. 2009. Impacts of West Nile Virus Epizootic on Yellow-Billed Magpie, American Crow, and other Birds in the Sacramento Valley, California. The Condor 111:247-254.

Smallwood, K. S., L. Rugge, and M. L. Morrison. 2009. Influence of Behavior on Bird Mortality in Wind Energy Developments: The Altamont Pass Wind Resource Area, California. Journal of Wildlife Management 73:1082-1098.

Smallwood, K. S. and B. Karas. 2009. Avian and Bat Fatality Rates at Old-Generation and Repowered Wind Turbines in California. Journal of Wildlife Management 73:1062-1071.

Smallwood, K. S. 2008. Wind power company compliance with mitigation plans in the Altamont Pass Wind Resource Area. Environmental & Energy Law Policy Journal 2(2):229-285.

Smallwood, K. S., C. G. Thelander. 2008. Bird Mortality in the Altamont Pass Wind Resource Area, California. Journal of Wildlife Management 72:215-223.

Smallwood, K. S. 2007. Estimating wind turbine-caused bird mortality. Journal of Wildlife Management 71:2781-2791.

Smallwood, K. S., C. G. Thelander, M. L. Morrison, and L. M. Rugge. 2007. Burrowing owl mortality in the Altamont Pass Wind Resource Area. Journal of Wildlife Management 71:1513-1524.

Cain, J. W. III, K. S. Smallwood, M. L. Morrison, and H. L. Loffland. 2005. Influence of mammal activity on nesting success of Passerines. J. Wildlife Management 70:522-531.

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- Replies on UCSF Comprehensive Parnassus Heights Plan EIR (2021; 13);
- 14 Charles Hill Circle Design Review (2021; 11);
- SDG Commerce 217 Warehouse IS, American Canyon (2021; 26);
- Mulqueeney Ranch Wind Repowering Project DSEIR (2021; 98);
- Clawiter Road Industrial Project IS/MND, Hayward (2021; 18);
- Garnet Energy Center Stipulations, New York (2020);
- Heritage Wind Energy Project, New York (2020: 71);
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- Cambria Hotel Project Staff Report, Dublin (2020; 19);
- Central Pointe Mixed-Use Staff Report, Santa Ana (2020; 20);
- Oak Valley Town Center EIR Addendum, Calimesa (2020; 23);
- Coachillin Specific Plan MND Amendment, Desert Hot Springs (2020; 26);
- Stockton Avenue Hotel and Condominiums Project Tiering to EIR, San Jose (2020; 19);
- Cityline Sub-block 3 South Staff Report, Sunyvale (2020; 22);
- Station East Residential/Mixed Use EIR, Union City (2020; 21);
- Multi-Sport Complex & Southeast Industrial Annexation Suppl. EIR, Elk Grove (2020; 24);
- Sun Lakes Village North EIR Amendment 5, Banning, Riverside County (2020; 27);
- 2nd comments on 1296 Lawrence Station Road, Sunnyvale (2020; 4);
- 1296 Lawrence Station Road, Sunnyvale (2020; 16);
- Mesa Wind Project EA, Desert Hot Springs (2020; 31);
- 11th Street Development Project IS/MND, City of Upland (2020; 17);
- Vista Mar Project IS/MND, Pacifica (2020; 17);
- Emerson Creek Wind Project Application, Ohio (2020; 64);
- Replies on Wister Solar Energy Facility EIR, Imperial County (2020; 12);
- Wister Solar Energy Facility EIR, Imperial County (2020; 28);
- Crimson Solar EIS/EIR, Mojave Desert (2020, 35) not submitted;
- Sakioka Farms EIR tiering, Oxnard (2020; 14);
- 3440 Wilshire Project IS/MND, Los Angeles (2020; 19);
- Replies on 2400 Barranca Office Development Project EIR, Irvine (2020; 8);
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- Replies on Heber 2 Geothermal Repower Project IS/MND, El Centro (2020; 4);
- 2nd comments on Heber 2 Geothermal Repower Project IS/MND, El Centro (2020; 8);
- Heber 2 Geothermal Repower Project IS/MND, El Centro (2020; 3);
- Lots 4-12 Oddstad Way Project IS/MND, Pacifica (2020; 16);
- Declaration on DDG Visalia Warehouse project (2020; 5);
- Terraces of Lafayette EIR Addendum (2020; 24);
- AMG Industrial Annex IS/MND, Los Banos (2020; 15);
- Replies to responses on Casmalia and Linden Warehouse (2020; 15);
- Clover Project MND, Petaluma (2020; 27);
- Ruby Street Apartments Project Env. Checklist, Hayward (2020; 20);
- Replies to responses on 3721 Mt. Diablo Boulevard Staff Report (2020; 5);
- 3721 Mt. Diablo Boulevard Staff Report (2020; 9);
- Steeno Warehouse IS/MND, Hesperia (2020; 19);
- UCSF Comprehensive Parnassus Heights Plan EIR (2020; 24);
- North Pointe Business Center MND, Fresno (2020; 14);
- Casmalia and Linden Warehouse IS, Fontana (2020; 15);
- Rubidoux Commerce Center Project IS/MND, Jurupa Valley (2020; 27);
- Haun and Holland Mixed Use Center MND, Menifee (2020; 23);
- First Industrial Logistics Center II, Moreno Valley IS/MND (2020; 23);
- GLP Store Warehouse Project Staff Report (2020; 15);
- Replies on Beale WAPA Interconnection Project EA & CEQA checklist (2020; 29);
- 2nd comments on Beale WAPA Interconnection Project EA & CEQA checklist (2020; 34);

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

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

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

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

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

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

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

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

Comments on other Environmental Review Documents:

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

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

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

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

Posters at Professional Meetings

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

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

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

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

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

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

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

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

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

Presentations at Professional Meetings and Seminars

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Other forms of Participation at Professional Meetings

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

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

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

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

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

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

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

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

Printed Mass Media

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

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

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

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

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

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

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

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

Radio/Television

PBS News Hour,

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Committees

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

Other Professional Activities or Products

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

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

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

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

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

Memberships in Professional Societies

The Wildlife Society
Raptor Research Foundation

Honors and Awards

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

Community Activities

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

Representative Clients/Funders

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

Representative special-status species experience

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

From:	Rena
To:	Weeks, Karen; Peterson, Julian; Carter, Charles; Kalia, Akash; Duggan, Vicki; Okrepkie, Jeff; Holton, Jeffrey; Sheikhali, Monet; _CityCouncilListPublic; Fleming, Victoria; Rogers, Chris; Schwedhelm, Tom; Rogers, Natalie
Subject:	[EXTERNAL] Re: RESPONCE: West Hearn ave CHSC Veteran"s village/ wetland Proposal in a RR-20-RH City designation
Date:	Tuesday, June 8, 2021 8:51:14 AM

Dear Mr. Kasimov, Supervisor Hopkins, Mayor Tom Schwedhelm,Vice Mayor,Victoria Fleming, & Council Members John Sawyer, Chris Rogers, Ernesto Olivares, Jack Tibbetts, & Richard Dowd, Natalie Rogers & all Planning Commission and City Councle members,

"I firmly believe, from what I have seen, that this is the chosen spot of all this earth as far as Nature is concerned." Luther Burbank

This is an urgent matter!
Our Nature is being threatened!

Let me be clear...
We as a neighborhood take seriously the issues that may impact our rural way of life in concert with all of nature!

2017 concluded the City's mandatory annexation of w. Hearn ave., and the adoption of its new designation; ***Rural Residential Heritage Low Density designation: RR-20-RH.***

In light of this oversized development threat - of the CHSC Veteran's Village on West Hearn ave - to our Rural Residential ***Low Density*** Heritage Neighborhood, **we have hired Rebecca L. Davis, Attorney with Lozeau Drury, and Shawn Smallwood PhD in Ecology with 35yrs experience** to keep you, our City representatives informed of the miss doings of this proposed project so far.

Our Attorney's findings in concert with Dr. Smallwood in short are as follows...
(please refer to and read their full briefs sent to you directly)

Re: Public Comment on Initial Study/Mitigated Negative Declaration for Hearn Veterans Village (City Project File # MIN21-001)

III. THE PROJECT IS NOT CONSISTENT WITH THE CITY'S ZONING CODE AND WILL CHANGE THE CHARACTER OF THE NEIGHBORHOOD.

Per the City of Santa Rosa General Plan 2035 Land Use Diagram (October 18, 2016), the Project site is designated Very Low Density Residential which is intended to accommodate single-family detached units at a density of 0.2 to 2.0 dwelling units per acre. This designation was changed to Very Low Density Residential (allowing 0.2 to 2 units per acre) from Low Density Residential (allowing 2 to 8 units per acre) following lengthy negotiations between the City and the West Hearn Avenue residents prior to approval of the Roseland Area/Sebastopol Road Specific Plan and Roseland Area Annexation Project. West Hearn Avenue residents wanted to ensure that the rural character of the neighborhood was maintained if annexation occurred. In addition to designating the area as Very Low Density Rural Residential, the City also agreed to create a "Rural Heritage combining district," which it applied to the neighborhood. The purpose of the Rural Heritage combining district is "to recognize, preserve, and enhance Santa Rosa's rural communities." Santa Rosa Mun. Code sec. 20-28.090(A). This zoning standard is specifically applied to the West Hearn Avenue neighborhood in which the Project is located. Id. at (C)(1).

The Project violates both the spirit and the letter of the agreement and the Zoning Code. It would create eight new residential units (four primary residences and four ADUs) on 2.01 acers of land, creating a density of 4 units per acre, which is twice the maximum density permitted on land designated Very Low Density Residential. The Project's violation of the Very

Low Density standard is a significant impact under CEQA because density standards are meant to avoid or mitigate a variety of environmental impacts.

In addition, the Project will change the existing character of the neighborhood., which is distinctly rural. Every other property on this street has a single family home that is one-story on parcels of .5 acres, with houses ranging in size between 1,000 and 1,200 square feet. Most have small family farms that include sheep, goats, chicken, pigs, cows, and horses. In contrast, the

proposed Project will include four main houses of 3,139 square feet, over two stories, with accessory units being 1,008 square feet. The Project buildings will be massive compared to the existing homes. The Project will house 37 people on 2 acres, or nearly double the population currently living on West Hearn.

By violating the agreed upon land use designation, and failing to protect

the rural character of the neighborhood, the City and Applicant are acting in bad faith.

CONCLUSION

The West Hearn Residents for Rural Integrity are not opposed to the type of use proposed. Instead, they are opposed to the density of the Project, its failure to maintain the character of the neighborhood, and the Project's environmental impacts, particularly impacts to the abundant wildlife that uses the Project site. Despite a willingness to discuss their concerns with the Applicant, over the past five years, the applicant never reached out to neighborhood residents. Instead, it waited until the proposal was complete, after decisions had already been made about density, location, mitigation, etc. Rather than asking for true input, the Applicant is now merely presenting the pre-determined plan to neighbors.

For the foregoing reasons, we respectfully request the City:

1. Prepare an EIR to address the MND's inadequacies, as described above; 2. Require the Applicant to resubmit the Project only once a new design is prepared that complies with the City of Santa Rosa's zoning requirements;

3. Direct the Applicant to undertake good faith discussions with the West Hearn Avenue Neighbors to resolve their concerns;

4. Postpone the Planning Commission's hearing on the Project until the above corrections have been made.

Below I have included my own brief...

A quick background:

As you know, we are newly incorporated into the City of Santa Rosa, with the designation of Rural Residential Heritage Neighborhood. West Hearn Ave is one of those little know rural-gem neighborhoods built in the late 50's with a mix of 1/2 to 1acre+ parcels, on a dead end country style street, with a narrow old road and open drainage ditches and the natural tributary called Rosaland Creek running through it.

For 27 years I have called this neighborhood community with all the wildlife, natural habitats and supportive close knit neighbors, my home.

Annexation:

In 2017, the City of Santa Rosa adopted & created a new Rural Residential Heritage Low Density designation: RR-20-RH.

Our neighborhood's annexation is in keeping with all the conditions of a rural quality of life, in concert with nature's beauty, riparian corridor, vernal pools, natural creeks and all the wild life and plant life supported by the rural nature of the area.

Neighborhood Protection:
The City of Santa Rosa's new **Rural Heritage (RR-20-RH)** district designation is intended to reduce threats of urban renewal, and other federally funded projects. And, in more detail, it **is aimed at controlling the size, quality, and scale of new construction in the district**... thus protecting the character and quality of the area.

CHSC- Veterans Village:
CHSC has an honorable vision: to create "...permeant supportive housing development for the homeless veterans."

CHSC's vision for, idea of, creating more permanent supportive housing for these Veterans makes me wonder...??
~How do we as an entire City Community support our Homeless Veterans, while maintaining the quality of our rural neighborhood's, & their natural resources and wildlife's natural habitats while supporting specific development needs?
~How do the developers and the greater community create a win-win outcome within a Low Density, Rural Residential Heritage Neighborhood designation?
~How does a property with not only 1, but 2 beautiful & naturally occurring vernal pools and the host of species dependent on them for survival co-exist, supporting each-other?
~How do we naturally coexist in harmony to support the greatest outcome on a property with specific zoning Characteristics?
~How do we support all its inhabitants, humans, animals and nature...? thus protecting the character and quality of the area for all to co-exist and enjoy?

These are questions worth considering! Don't you think?

Mitagation:
I understand it is common practice to mitigate Habitats to build more buildings... but at what cost to the wildlife who depend on us?
~Have we all truly considered the full scope of this proposal, and how it will impact our little Rural-Heritage Neighborhood?
~What if we work with & protect these natural resources?
...Use our innate genius to figure out a true win-win outcome for the people and animals that call this **Rural-Heritage Neighborhood home!**

In my humble opinion, there seems to be plenty of room on this proposed property to **build a smaller** facility in keeping with the City of Santa Rosa's adopted **Rural Heritage (RR-20-RH) district designation** and all that this designation supports and rejects with appropriate residential footprints (air & land), thus protecting and supporting the character and quality of the area for all. Vernal pools included!

Park meadow & Roseland Creek:
We are located within the 100 year floodplain of the Laguna de Santa Rosa, where tributaries like the Rosalind Creek are naturally occurring, important and supportive to our local area's habitat.
The proposed parking and opening up of the fire lane, aka Park Meadow dr., which is built right alongside Roseland Creek, was never meant to be a through road much less a driveway or parking lot.
Using this for any type of constant traffic, parking or drive through has a detrimental impact on the wildlife & creek being contaminated directly by the high activity of cars and their oils, gas & liquids. These effluents will negatively affect the immediate area and those down line of the Creek tributaries.
Although it may look like a great option on paper, to use this existing fire road to expand the functionality for the proposed Village, but in actuality, it has disastrous consequences! We are smarter than that! And there are other solutions yet to be explored, more in keeping with the existing area.

West Hearn ave:
Our little dead end rural street is not built for this type of increased traffic. It is old, tattered and narrow. As it is, when the service trucks for the existing veteran's facility arrive, they block 1/2 the street to unload. Part of our natural habitats are supported by the simple open ditch type storm drains that effectively allow rain water to soak into the soil, replenishing our aquifers and the Laguna de Santa Rosa. Removing them is counter to the innate Rural habitat.

20-22.020 Purposes of the residential zoning districts.
The purposes of the individual residential zoning districts and the manner in which they are applied are as follows.
A. RR (Rural Residential) district. The RR zoning district is applied to areas of the City intended to accommodate residential neighborhoods with compatible agricultural uses, but where the primary uses are residential, and compatible accessory uses. The maximum allowable density ranges from 0.2 to two dwellings per acre... The RR zoning district implements and is consistent with the Residential—Very Low Density along with the Rural Heritage land use classification of the General Plan.

Neighborhood Protection:
the City of Santa Rosa's new Rural Heritage (RR-20-RH) district designation is intended to reduce threats of urban renewal, and other federally funded projects. And, in more detail, it is aimed at controlling the size, quality, and scale of new construction in the district... thus protecting the character and quality of the area.

My Conclusions:
When CHSC chooses a site, it is not only about their project's end game vision and how it will affect their mission, bottom line & those few fortunate individuals that will benefit, but it is also about integrating the project into the existing area. Taking everything into consideration, including; animals, nature, our fresh water ways, and the existing Rural Heritage Neighborhood's people.

I welcome the Veterans to our neighborhood.

Done properly,
and in accordance with the primary zoning RR-20-RH,
(where uses are residential and designations control size, quality, and scale of new construction, to protect the character and quality of the area)
the health and well being of these amazingly brave people will be served & supported as will the health and well being of the existing natural wildlife, habitat's & rural neighborhood and current residents.
Done properly,
this Veteran's Village with-in the Rural Residential Heritage Low Density designated Neighborhood (RR-20-RH), -resplendent with natural beauty and resources- will create a supportive environment for our Veteran's to heal and have a beautiful place to call home!
Just as the CHSC Veteran Village's honorable mission/vision states to create; "... permeant supportive housing development for the homeless veterans."
as it works to impact individual lives, families, community health and safety.

Thank you for your kind attention to this matter.
And being willing to think creatively & holistically for all involved!
Albeit, perhaps a bit 'out-side the box'...
But, oh...doesn't that feel good!?!

Sincerely, Rena Radich
West Hearn ave Residents for Rural Integrity
2235 west Hearn ave.,
Santa Rosa, CA 95407

"I firmly believe, from what I have seen, that this is the chosen spot of all this earth as far as Nature is concerned." Luther Burbank

ABOUT US

Community Housing Sonoma County creates homes for those in need. CHSC is known throughout Sonoma County for developing supportive housing for people living with disabling conditions who are homeless or at risk of homelessness. CHSC's dedicated board members have advocated for developing projects that support homeless veterans.

Since 1994, CHSC has helped to create affordable housing for over 330 people, has provided supportive housing for 168 people, and has helped to leverage over $65.5 million in financing from local, state, and federal sources. CHSC works collaboratively to identify and respond to the changing needs of the community. Each project they develop is unique, creating different types of rental housing environments, serving a variety of people with special needs, using a wide array of financing tools. CHSC's work impacts individual lives, families, and our community infrastructure, health, and safety.

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LINK FOR CREEK MSTR PLAN FOR S.ROSA
http://maps.srcity.org/Html5Viewer/Index.html?viewer=CreekMasterPlan