### **RESPONSES TO I-PAGE LETTER**

**Response I-Page-1**: See Master Response 7 – Trip Generation, Master Response 8 – Traffic Operations, and Master Response 14 – Parking. This comment does not raise issues concerning the adequacy or accuracy of the RDEIR's coverage of environmental impacts under CEQA. The comment may be considered and weighed by city decision-makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration will be carried out independent of the environmental review process. For informational purposes, see Master Response 15 – Project Merit and Alternative for a discussion of the potential construction and operation impacts associated with multi-family development at the project site as compared to the proposed project.

### **Olivia Ervin**

From:	info@extendputnampark.org
Sent:	Friday, January 29, 2021 9:13 AM
То:	cityclerk@cityofpetaluma.org
Subject:	Scott Ranch Park Extension and Limited Housing Project

To the Members of the Petaluma City Council and the Planning Commission:

I live in Victoria at 119 Windsor Dr. here in Petaluma. I bought into this neighborhood because of the wide open spaces and its proximity to downtown. I relocated from an older home more central to the downtown and I wanted a bit more peace and quiet. I have lived in Petaluma since 2010, but have lived in Victoria only since April 2019. My husband and I love Petaluma.

There are certain aspects to this project that appeal...like preserving the red barn, extending the park and protecting wildlife. I understand from the neighborhood how much work has gone into reducing the housing project to 28. If am skeptical of the accessible parking if it is not free though, as right now we have a real chaotic mess on Windsor dr due to the volume of folks using Helen Putnam but not wanting to pay....and even if they wanted to pay (which they don't) is there ever going to be enough parking as to not wreak havoc in an otherwise peaceful neighborhood? I have a fire hydrant right at our front entrance to our house that people park in front of repeatedly with no regard for rules. There is also U-turns done every other minute leaving their parking spaces. This in addition to semi's and very large trucks driving through (which I thought were not allowed to enter but noone seems to enforce the rules nor is there any signage), not to mention bikers (which are very hard to see coming out of my driveway when there are cars parked on each side. I'll admit that after moving here I am disappointed in the noise and chaos. I hope there are plans to mediate these things as I am sure once

the new houses are in people will be inundating those streets and then those homeowners wont feel so happy about it either. Thanks for your time.

Sincerely, Velina Petrovic

Velina Petrovic

Petaluma

velinapetrovic@gmail.com

## **RESPONSES TO I-PETROVIC LETTER**

#### **Response I-Petrovic-1:** See Master Response 14 – Parking.

With respect to noise impacts associated with the construction and operation of the proposed project, these are analyzed in Section 4.10 of the RDEIR. As discussed in the RDEIR on page 4.10-13 to page 4.10-20, construction of the proposed project would result in significant noise and groundborne vibration impacts that would be reduced below significance with the implementation of Mitigation Measures NOISE-1, NOISE-2a, and NOISE-2b.

#### Ervin, Olivia

From:	Helen Porter <info@extendputnampark.org></info@extendputnampark.org>		
Sent:	Monday, March 8, 2021 2:13 PM		
То:	Ervin, Olivia		
Subject:	Scott Ranch Park Extension and Limited Housing Project		

----Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---To the Members of the Petaluma City Council and the Planning Commission:

I write today to share my support for the proposed Scott Ranch project, which includes plans to extend Putnam Park by 44 acres and a limited 28-home development on the least environmentally sensitive portions of the property. I appreciate how much work has gone into improving this project over the years and ensuring that its environmental impacts are kept to a minimum.

The Revised Draft Environmental Impact Report now before you is a comprehensive document that has evaluated and mitigated the potential impacts of this project effectively. I hope you will vote in support of the completeness of this revised draft EIR so that a final EIR can be prepared that responds to all comments received. And, ultimately, I hope you will approve this project as proposed.

Sincerely,

Helen Porter

Cloverdale,

helenporter@comcast.net

## **RESPONSES TO I-PORTER LETTER**

Response I-Porter-1: Comment noted.

1

From: Neema Pourtaheri <npourtah@gmail.com>
Sent: Monday, February 08, 2021 5:59 PM
To: Ellis, Evelyn <eellis@cityofpetaluma.org>
Subject: Scott's ranch project question

Ні,

My name is Neema Pourtaheri. I am the owner of 1211 B st. I just saw the plans for the scotts ranch development and noticed the road in the plans looks like it comes right to my property line in the back of my home. How is that permitted? I do have concerns about a road being so close to my property. Thanks.

Neema Pourtaheri M.D. Shoulder and Elbow Surgeon Santa Rosa Orthopedics

## **RESPONSES TO I-POUTAHERI LETTER**

**Response I-Poutaeri-1**: The proposed new A Street along the north boundary of the residential development is setback by approximately 10 feet to 30 feet from the northern property line. In addition, after the publication of the RDEIR, the conceptual plan of the proposed project was revised to further reduce the footprint of the residential component. As shown on the **Updated Figure 3.0-3** (See **Chapter 2.0, Revised Project Description**), the cul-de-sac of the proposed new A Street is now set back 15 to 30 feet from the northern property line.

From: Sharon Risedorph <sharonrisedorph@gmail.com>
Sent: Tuesday, February 09, 2021 1:49 PM
To: Ellis, Evelyn <eellis@cityofpetaluma.org>
Subject: "Comments on Scott Ranch RDEIR"

Clerk at eellis@cityofpetaluma.org

Hello.

My name is Sharon Risedorph. I have lived at 1258 B Street in Victoria for 6 years. I am very happy to be living here. However, I will not be happy to be living here if the Davidon development is approved. My side yard is the small Victoria park/playground. From my kitchen window and back yard, I can see everything that happens in the playground, on Windsor Drive and the beautiful hillsides of the Scott Ranch. I walk my dog every day in the neighborhood, which is mostly in Victoria, La Cresta and West Haven.

Since I've been living here, the traffic has increased to the point of traffic jams, speeders and careless drivers. I see people going through stop signs, parking in front of fire hydrants, and making U-turns in the middle of the street. Windsor Drive has become a parking lot for Helen Putnam Park. I worry very much about the pedestrians, runners and bike riders getting hit by careless drivers. One day I counted 136 bike riders in a row going down Windsor Drive.

I urge you to drive by this location to see the reality of what is described. If a park is created on the Arnold Scott property at Windsor and D Street, this same situation would happen in even a more dangerous location. The streets are already in bad shape so construction trucks traveling on the streets will make them even more dangerous.

So very important is the wildlife that the development would disrupt.....from the deer going down the hill behind my back yard from La Cresta, and then crossing Winsdor Drive to the Scott Ranch and many birds all over the area and, of course, the endangered red legged frogs are in danger. The turkeys have been a wonderful addition to the history of Petaluma. They will be missed by people walking, biking and driving by. The turkeys put on a wonderful show spreading their beautiful feathers and communicating with one another. I see many people stopping to check them out and show their children - quite an attraction!!!

Also, so very important there will be hundreds of people disrupted including wonderful, long-time Petaluma residents moving out of the area to avoid all of the problems with this development. I certainly will be looking for a new place to live if the development is approved. It would be very unhealthy for me and many others to live in a construction site with the air pollution, noise pollution, and water pollution that it will cause.

Thank you very much for NOT approving this development. SAVE THE BEAUTY AND QUALITY OF LIFE FOR ALL PETALUMANS AND ALL THOSE WHO VISIT!!!

Sharon

Sharon Risedorph <u>sharonrisedorph@gmail.com</u> P 707 658 2341 C 415 672 9003 F 707 658 2762 2

1

#### **RESPONSES TO I-RISEDORPH-1 LETTER**

**Response I-Risedorph-1-1**: See **Master Response 7 – Trip Generation, Master Response 8 – Traffic Operations,** and **Master Response 14 – Parking.** With respect to the streets conditions at the project site, the project Applicant would be responsible for improvements along the project site frontage that would include installing the curb and gutter as well as restriping. The City's Public Works Department has identified D Street Improvements including pavement rehabilitation under the capital improvement plan. The City will coordinate the D Street Improvements schedule with the construction activities of the proposed project.

Response I-Risedorph-1-2: Impact BIO-4 on page 4.3-57 through page 4.3-59 of the RDEIR provides an analysis of potential impacts on wildlife use and movement. As noted on page 4.3-58 of the RDEIR, visitors and their pets would disrupt wildlife use of the site and proposed residential development in the northwestern portion of the project site would limit movement opportunities for deer and other terrestrial wildlife through this area, although movement corridors are proposed all along the west and northern edges of the residential area. Collectively, the potential impacts of the project on wildlife movement were determined to be potentially significant and mitigation measures were identified in the RDEIR, including the interpretive program called for in Mitigation Measure BIO-4a. Mitigation Measures BIO-4b through BIO-4d were recommended to control future visitors access into sensitive habitat areas and to improve wildlife movement opportunities by removing existing impediments. Predation and disturbance to wildlife by domesticated pets of future residents and visitors to the site is a risk. However, reinforcement of leash controls through the interpretive program called for in Mitigation Measure BIO-4a would address this concern. Mitigation Measure BIO-1b also requires that methods be detailed and implemented as part of the Final CRLF Mitigation Plan to minimize the potential for harassment or take of listed and non-listed species as a result of increased human activity associated with the residential development and open space use of the site. Most of the site would remain undeveloped and would continue to be utilized by wildlife for movement opportunities, including into Helen Putnam Regional Park to the west, and undeveloped portions of the site to the south and southeast.

**Response I-Risedorph-1-3**: Project impacts related to air emissions and health risk analysis are addressed in **Section 4.2**, **Air Quality, of the RDEIR**. As described in **Section 4.2**, project's construction and operations impacts would be less than significant with implementation of identified **Mitigation Measures AIR-2**.

Noise impacts associated with the construction and operation of the proposed project are analyzed in **Section 4.10 of the RDEIR**. As discussed in the **RDEIR** on **page 4.10-13** to **page 4.10-20**, construction of the proposed project would result in significant noise and groundborne vibration impacts that would be

reduced below significance with the implementation of **Mitigation Measures NOISE-1**, **NOISE-2a**, and **NOISE-2b**.

With respect to concerns related to water pollution, as discussed in Section 4.8, Hydrology and Water Quality, and 4.14, Utilities and Service Systems, the proposed design drainage plan would maintain existing drainage patterns and introduce infiltration to pretreat stormwater runoff. See also Response I-Fabre-Marcia-7.

1

From:	Pascoe, Samantha		
То:	Pascoe, Samantha		
Subject:	FW: Scott Ranch development		
Date:	Monday, March 15, 2021 2:58:09 PM		

**From:** Risedorphphoto

Sent: Monday, March 15, 2021 1:50 PM

To: tbarratt@cityofpetaluma.org; Barnacle, Brian <bbarnacle@cityofpetaluma.org>; Fischer, D'Lynda <dfischer@cityofpetaluma.org>; Healy, Mike <mhealy@cityofpetaluma.org>; King, Dave <dking@cityofpetaluma.org>; kmcdonnell.org@aol.com; -- City Clerk <CityClerk@cityofpetaluma.org>
Subject: Scott Ranch development

Petaluma City Council and Planning Commission,

"Petaluma is an authentic and unique city, and the replacement of even a portion of its beautiful rolling hills, trees and wildlife with luxury single-family homes is a move in the wrong direction. The proposed development eliminates open space and further stresses natural resources. All California communities share responsibility of limiting growth and standing up to developers whose primary motive is profit." Mark Kessler, Professor of Design at U.C. Davis

I am in opposition to the development of Scott Ranch by a Walnut Creek developer that will build million dollar luxury homes in the middle of one of the most scenic areas of Petaluma for their profit. Does Petaluma need luxury homes in exchange for our beautiful open land? NO! We do not want a town like Walnut Creek!

I moved to Petaluma 6 years ago after searching the Bay Area to find a home where I could live peacefully for the rest of my life with quality visits from my family and friends! I found the perfect home in Victoria at the top of B Street next to the playground. I love living here! It's PARADISE to me! I look out my windows or step outside to see the beautiful landscape of rolling hills, old growth trees, cows, birds, deer, sheep and other wildlife. These were extremely important and appealing factors in my decision to move here. Sometimes there are cows grazing on the hills, sometimes there are wild turkeys mating and, of course, there are the deer that come down from the hills behind my house to cross Windsor Drive to get to Helen Putnam Park and beyond. One time I looked out my back door and saw a buck staring at me. One morning there were about 8 turkeys on my fence checking out what they could find to eat. There are hundreds of people - hikers, joggers, bikers, dog walkers, and babies on the backs of people or in strollers along Windsor Drive enjoying the day. One day I counted 136 bike riders in a group riding along the road. The Petaluma Thanksgiving Turkey Trot with most people in costumes having fun is a sight to be seen. I see many school kids from the High School PE classes running up B street to Windsor and on from there.

It is very upsetting to me to realize that if the Scott Creek development is approved, none of these events will happen. Instead of the cows grazing there will be bulldozers digging, jackhammers and many other building tools and equipment doing what they do, adding to the air pollution, the noise pollution, water pollution etc. Please do not deny so many Petalumans and visitors the pleasure of experiencing our wonderful town the way it is. It will never be the same if a Walnut Creek developer is allowed to make money by ruining our unique town.

My dream has come true by living in PARADISE aka Petaluma. It will change my dream to a Nightmare if the the development is approved. I will seriously consider moving instead of living in an unhealthy polluted construction zone for years to come.

Please for me and all the people that live and play and work and visit in the area, do not approve the distruction of our PARADISE!

Thank you so much!

Sharon Risedorph

## **RESPONSES TO I-RISEDORPH-2 LETTER**

#### Response I-Risedorph-2-1: See Responses I-Risedorph-1-2 and I-Risedorph-1-3.

With respect to the project merit, this may be considered and weighed by city decision-makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration will be carried out independent of the environmental review process.

**I-Rogers** 

#### Ervin, Olivia

From:	Nancy Rogers <nancy3006@sbcglobal.net></nancy3006@sbcglobal.net>
Sent:	Friday, March 5, 2021 10:33 AM
То:	Barrett, Teresa; Barnacle, Brian; dfishcer@cityofpetaluma.org; Healy, Mike; King, Dave;
	McDonnell, Kevin; Ervin, Olivia
Subject:	Davidon Development for Scott Ranch

----Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.----Hello-

I am a resident of Petaluma and would like you to know I do not support the Davidon Development at Scott Ranch. I believe the entire parcel should be added to the Helen Putnam Regional Park.

Petaluma needs affordable housing with easy access to public transportation, something that is currently lacking in Petaluma. There are already too many McMansions in town and certainly in the area being considered for the Davidon Development. It has to stop at some point- this is time is now.

Thank you for the opportunity to comment.

Nancy Rogers 3 Azalea Ct. Petaluma, CA <u>nancy3006@sbcglobal.net</u>

## **RESPONSES TO I-ROGERS LETTER**

**Response I-Rogers-1:** This comment does not raise issues concerning the adequacy or accuracy of the RDEIR's coverage of environmental impacts under CEQA. The comment may be considered and weighed by city decision-makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration will be carried out independent of the environmental review process.

## Ervin, Olivia

From: Sent: To: Subject: Rachael Ross <rkross@gmail.com> Tuesday, March 2, 2021 7:16 AM Ervin, Olivia Scott Ranch

----Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---Ms. Olivia Ervin,

I write this letter to express my enthusiastic support of the Putnam Park Extension and Scott Ranch Housing Development. I believe this project is an innovative compromise on the prior 66 home Davidon Homes proposal that will have numerous benefits to the community and environment. The park extension will provide new opportunities for healthy outdoor activities. The ongoing pandemic has clearly illustrated the incredible importance of public parks for our community and, as a public health professional, I must emphasize that research shows that greater access to outdoor recreation and public lands has significant physical and mental health benefits. This proposal will help secure these important benefits for future generations.

I hope the Petaluma City Council and Planning Commission will vote in support of the completeness of the revised draft EIR.

Thank you,

Rachael Ross Epidemiologist 1

## **RESPONSES TO I-ROSS LETTER**

Response I-Ross-1: Comment noted.

#### Ervin, Olivia

From:	Erik Schau <info@extendputnampark.org></info@extendputnampark.org>	
Sent:	Monday, March 8, 2021 9:59 PM	
То:	Ervin, Olivia	
Subject:	Scott Ranch Park Extension and Limited Housing Project	

----Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---To the Members of the Petaluma City Council and the Planning Commission:

I write today to share my support for the proposed Scott Ranch project, which includes plans to extend Putnam Park by 44 acres and a limited 28-home development on the least environmentally sensitive portions of the property. I appreciate how much work has gone into improving this project over the years and ensuring that its environmental impacts are kept to a minimum.

The Revised Draft Environmental Impact Report now before you is a comprehensive document that has evaluated and mitigated the potential impacts of this project effectively. I hope you will vote in support of the completeness of this revised draft EIR so that a final EIR can be prepared that responds to all comments received. And, ultimately, I hope you will approve this project as proposed.

Sincerely,

Erik Schau

Petaluma

ewschau@gmail.com

## **RESPONSES TO I-SCHAU LETTER**

Response I-Schau-1: Comment noted.

I-Shepard-1

From: Robert Shepard <RLShepard@live.com> Sent: Tuesday, February 09, 2021 11:53 AM To: Ellis, Evelyn <eellis@cityofpetaluma.org> Cc: Robert Shepard <rlshepard@live.com> Subject: Comments on Scott Ranch RDEIR

---Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---D'Lynda Fischer City Council Liaison <u>dfischer@cityofpetaluma.org</u> Sandi Potter Planning Commissioner/Vehicle Miles Traveled (VMT) Technical Advisory Committee Member <u>sandi.lee.potter@gmail.com</u> Blake Hooper Planning Commissioner/Pedestrian & Bicycle Advisory Committee Member <u>bmhooper1@gmail.com</u>

Richard Marzo Planning Commissioner/Tree Advisory Committee Member richard@lacehouselinen.com

Scott Alonso Planning Commission Vice Chair/Animal Services Advisory Committee Member alonsoplanningpet@gmail.com

Heidi Bauer Planning Commission Chair/Groundwater Sustainability Advisory Committee Member <u>heidibauer2000@gmail.com</u> Olivia Ervin Principal Environmental Planner <u>oervin@cityofpetaluma.org</u>

Residents in the neighboring developments around Helen Putnam Park are increasingly concerned about the number of cars parked in our neighborhoods. Over the past year, the numbers of parked cars has increased significantly. According to the county parks, Helen Putnam Park had approximately 189,000 users in the 2019-2020 season. That equates to about 517 users daily.

Our observation of people using the Park entrance in the Victoria development is about 350+ per day, which means that well over half of the park users enter through the neighborhood as opposed to paying for and parking at the main entrance on Chileno Valley Road. The number of cars parked by the West Haven development has increased significantly as well.

#### 1

1

Our understanding from the Sonoma County parks is that any new parking constructed for park use will be subject to the daily parking fee the park charges in all its parks. This will do nothing to mitigate the parking issues in the surrounding neighborhoods. People will continue to park in the neighborhoods surrounding the park, thereby avoiding paying for parking to use this valuable resource.

The City and Sonoma County Parks need to address the existing parking problems before any new parking is constructed for park use. Adding new trailheads to the park only exacerbates this problem. This is evidenced by the trailhead opened up last year at the roundabout on Windsor Drive. Parking was not built when the trailhead opened last fall, and a parking lot has yet to be constructed. People park all along Windsor Drive to use that entrance.

From your neighbors on Oxford Court.

Rob and Donna Shepard Larry and Chey Moore Jerry and Mary Beene Susan and Mark Jaderstrom Bob and Kathleen Billings Aaron Edmonson and Pat Spitzig Thom Knudsen Jeff Marcia Pam and Jim Granger Sharon Vallejo

> Attached are a few pictures of vehicular traffic and pedestrians entering the park in the Victoria neighborhood.











## **RESPONSES TO I-SHEPARD-1 LETTER**

Response I-Shepard-1-1: See Master Response 14 – Parking.

### Ervin, Olivia

From:	Robert Shepard <rlshepard@live.com></rlshepard@live.com>
Sent:	Tuesday, March 9, 2021 9:25 AM
To:	Fischer, D'Lynda; King, Dave; citymgr@ci.petaluma.us; sandi.lee.potter@gmail.com; bmhooper1@gmail.com; richard@lacehouselinen.com; heidibauer2000@gmail.com; Ervin, Olivia; Barrett,Teresa; Barnacle, Brian; Healy, Mike; McDonnell, Kevin; Pocekay, Dennis
Subject:	Proposed Scott Ranch Project

----Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---Dear Planning Commissioners and City Council Members,

The Scott Ranch Project plan offers a 27 space parking lot off of D Street and a 10 space parking lot in the neighborhood. A trail head is also planned off of Windsor Drive. My understanding is the 27 space lot will be part of the land given to Sonoma County Parks and will be fee-based.

Based on current conditions with parking for Helen Putnam Park, people are not going to use the proposed fee-based parking lot off of D Street. People don't want to pay the \$7 parking fee, even though these funds are used to maintain the park. They would rather park free in the neighborhoods bordering the park. This will continue with the proposed Scott Ranch development.

The City and Sonoma County Park Service need to come up with a solution that minimizes/eliminates park users parking in the neighborhoods and encourages parking in the fee-based parking areas. I don't see any mention of parking mitigation in the neighborhoods in the RDEIR. This solution should be identified before any more fee-based parking is put in place. The County Park should be aware of this problem as they opened up the new trail head at the roundabout on Windsor Drive with no parking. That has people parking in the West Haven neighborhood and increased parking on Windsor Drive.

As many of you know parking in the neighborhoods surrounding the park has been an issue for years. There have been recommendations to the city to make some of these streets residential parking only to force park users to the fee-based lots, thereby helping to fund the maintenance required at the park. The park has become popular and is very busy. The parking problem has developed over the past 10 years and continues to grow every year.

If the Scott Ranch homes are built, park users will park in those neighborhood streets as well unless there are restrictions. And those restrictions should be applied to all the nearby neighborhood streets.

The city has improved the dangerous traffic problems on Oxford Court by including it as part of the Slow Street Program, although there are still some people who don't obey the signage and continue to park on Oxford Court on a daily basis. Many of the people parking there tell us they called the City and Police Department and are told it is fine to park there. That should not be the response by the Police Department or the City. Although the police won't write parking tickets they should be telling these folks that non-residential parking is discouraged on all streets in the Slow Streets Program. I have written Chief Savano regarding this but have not received a response. I did hear back from Ken Eichstaedt and he agreed and said he would tell anyone who called him that parking is discouraged.

# I-Shepard-2

1

Bottom line is there needs to be a long term solution for parking before any new fee-based parking is put in place. We can't continue to add to the problem without a long term solution.

Regards,

Rob and Donna Shepard 20 Oxford Court

Get Outlook for iOS

## **RESPONSES TO I-SHEPARD-2 LETTER**

Response I-Shepard-2-1: See Master Response 14 – Parking.

#### Ervin, Olivia

From:	kerrin@therealestatedetective.com
Sent:	Wednesday, March 10, 2021 8:48 AM
То:	Barrett,Teresa; Barnacle, Brian; Fischer, D'Lynda; Healy, Mike; King, Dave; McDonnell,
	Kevin; Ervin, Olivia; Fischer, D'Lynda; sandi.lee.potter@gmail.com; bmhooper1
	<pre>@gmail.com; richard@lacehouselinen.com; alonsoplanningpet@gmail.com;</pre>
	heidibauer2000@gmail.com
Cc:	PetRP@comcast.net; kerrin@therealestatedetective.com
Subject:	EIR for Scott Ranch

---Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---Okay not sure how this council and planning commission can look themselves in the mirror each day. What in the heck is hard to understand about the OUTDATED report that has EVERYTHING to do with "is this really where we need to destroy a visual corridor so we can have more high end homes in this town?" Another stark example of how little open space is cherished by this town's leaders. This city constantly bends to developers and now one of the last treasured spots is being handed to this "out of area" developer. A treasure that will be ruined forever so the wealthy can have yet another batch of high end homes. This is nothing for Petaluma other than a big pot of gold for Davidon. I mean not even a local builder like Christopherson!! We don't need Walnut Creek style development here in quaint Petaluma. I have given my FULL support to PetRP and will continue to do so until justice and fairness are delivered. People are sick and tired of developers wrecking this city, expanding into open space territory and don't tell the public it is a windfall of tax dollars. It never is and the city's budget woes are evidence enough.

Regular citizens would never be permitted to use a seriously outdated report if they were building or remodeling. I mean this city is ALL OVER following the letter of the law for a homeowner yet for development, heh any old report no matter how outdated and irrelevant it now is, sure let's use it as it makes our case. Shameful and more of why even progressives are giving up on government entities that ignore the will of the people.

Writing in disgust,

Kerrin

Kerrin Shettle 707-287-4444 RE/MAX Marketplace TheRealEstateDetective.com DRE# 01189730



h high-ratio or yone, from the young a sense a sense a sense of the point has been		

The electronic mail message you have received, and any files transmitted with it are confidential and solely for the intended addressee(s)'s attention. Do not divulge copy, forward, or use the contents, attachments, or information without permission of Marketplace Brokers, Inc. DBA RE/MAX Marketplace. Information contained in this message is provided solely for the purpose stated in the message or its attachment(s) and must not be disclosed to any third party or used for any other purpose without

## **RESPONSES TO I-SHETTLE LETTER**

**Response I-Shettle-1:** The proposed development is located within the City's UGB and is at the lowest density allowed at the project site in the General Plan. The concerns of the commentor over impacts of the proposed project on natural habitat and data used in the RDEIR is noted. As needed, technical analyses in the RDEIR have been updated over the course of the environmental review process. Technical studies are included in **Appendix 4.2** through **Appendix 4.15 of the RDEIR** and are part of the project administrative records. Also, see **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site.** Furthermore, following publication of the RDEIR, technical analyses have been updated, as needed, to assess the impacts of the revised project as refined.

Shawn Smallwood, PhD 3108 Finch Street Davis, CA 95616

Attn: Heather Hines, Planning Manager City of Petaluma 11 English Street Petaluma, California 94954

28 February 2021

**RE:** Scott Ranch Project RDEIR

Dear Ms. Hines,

I write to comment on the revised draft Environmental Impact Report (DEIR) prepared for the Scott Ranch Project on 58.66 acres of land (City of Petaluma 2013, 2020). I understand this project would add 28 single-family dwelling units and a public park on 22.1 acres, and would contribute open space as a Putnam Park Extension.

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 11 February 2021, starting at 07:41 hours. With binoculars, I walked the eastern and southern perimeter, stopping periodically to perform visual scans for vertebrate wildlife. I also walked on the project site, accompanied by Sean Micallef of Zentner Planning & Ecology.

The site consists of cattle-grazed grassland bisected by riparian forest along Kelly Creek (Photos 1 and 2). It is bordered by oak woodland to the west. A stock pond is located on the west edge. Overflow from the stock pond drains from the south side of the earthen levee through a gully-eroded channel to Kelly Creek.

While visiting the site, I detected 43 species of vertebrate wildlife, 6 of which were special-status species (Table 1). The site supports keystone species such as Botta's

1

pocket gopher (Photos 3 and 4) and California scrub-jay. Pocket gophers serve both as prey items to carnivorous species and as providers of fossorial habitat used by many other species, including special-status species. California scrub-jays cache thousands of acorns, some of which grow new oaks. I saw 3 red-tailed hawks socializing on the site, and I heard an American kestrel calling from Kelly Creek. I saw a western screech-owl in Kelly Creek (Photo 5) and both Say's phoebes and black phoebes hunting all across the site (Photo 6). Western bluebirds and yellow-rumped warblers were abundant (Photo 7 and 8), as were wild turkeys and Anna's hummingbirds (Photos 9 and 10). Evidence of breeding was abundant. The site is rich in wildlife.



**Photo 1.** View of the portion of the project site west of Windsor Avenue, 11 February 2021. Kelly Creek is visible to the left.



**Photo 2.** Wild turkeys emerge onto the proposed development footprint from Kelly Creek, 11 February 2021.

Species	Scientific name	Status (see Table 2)
Canada goose	Branta canadensis	
California quail	Callipepla californica	
Wild turkey	Melleagris gallopavo	Non-native
Turkey vulture	Cathartes aura	FGC 3503.5
Red-tailed hawk	Buteo jamaicensis	FGC 3503.5
American kestrel	Falco sparverius	FGC 3503.5
Mourning dove	Zenaida macroura	
Western screech-owl	Megascops kennicottii	FGC 3503.5
Anna's hummingbird	Calypte anna	
Northern flicker	Colaptes auratus	
Acorn woodpecker	Melanerpes formicivorus	
Nuttall's woodpecker	Picoides nuttallii	BCC
Downy Woodpecker	Picoides pubescens	
Black phoebe	Sayornis nigricans	
Say's phoebe	Sayornis saya	
European starling	Sturnus vulgaris	Non-native
Ruby-crowned kinglet	Regulus calendula	
Oak titmouse	Baeolophus inornatus	BCC
Chestnut-backed chickadee	Poecile rufescens	
Bushtit	Psaltriparus minimus	
White-breasted nuthatch	Sitta carolinensis	
American crow	Corvus brachyrhynchos	
Common raven	Corvus corax	
California scrub-jay	Aphelocoma californica	
Steller's jay	Cyanocitta stelleri	
Northern mockingbird	Mimus polyglottos	
American robin	Turdus migratorius	
Western bluebird	Sialia mexicana	
Yellow-rumped warbler	Dendroica coronata	
California towhee	Pipilo crissalis	
Spotted towhee	Pipilo maculatus	
White-crowned sparrow	Zonotrichia leucophrys	
Golden-crowned sparrow	Zonotrichia atricapilla	
Western meadowlark	Sturnella neglecta	
House finch	Carpodacus mexicanus	
American goldfinch	Carduelis tristis	
Lesser goldfinch	Carduelis psaltria	
Black-tailed jackrabbit	Lepus californicus	
Botta's pocket gopher	Thomomys bottae	
California vole	Microtis californicus	
Western gray squirrel	Sciurus griseus	
Striped skunk	Mephitis mephitis	
Black-tailed deer	Odocoileus hemionus hemionus	

*Table 1.* Species of wildlife I observed during 3 hours on 11 February 2021.



**Photos 3 and 4.** Mounds of Botta's pocket gopher covered portions of the site, 11 February 2021, indicating an abundance of a keystone species that serves as prey items of multiple special-status species of raptor and American badger, and that serves as a prolific excavator of fossorial habitat for multiple special-status and listed species including California red-legged frog and California tiger salamander when these species are in need of refuge outside the breeding season.



**Photos 5 and 6.** Western screech-owl (left) and black phoebe (right) in Kelly Creek and on the development footprint of the project site, respectively, 11 February 2021.



**Photos 7 and 8.** Western bluebird (left), and yellow-rumped warbler (right) on the site, 11 February 2021.




**Photos 9 and 10.** Wild turkeys courting females (left) and an Anna's hummingbird defending its breeding territory (right) on the project site, 11 February 2021.

#### BASELINE CONDITIONS AND BIOLOGICAL IMPACTS ASSESSMENT

The RDEIR's characterization of baseline conditions and its analysis of potential project impacts to vertebrate wildlife are outdated, incomplete and flawed. Since the 2013 DEIR, the status of multiple species has changed, as have survey protocols for specialstatus species, and as has our understanding of anthropogenic impacts to wildlife. We now know that the takings of habitat here and the takings there, along with the usual assurances of insignificant impacts or of mitigated impacts, have resulted in a 29% loss of total bird abundance across North American over the last half-century (Rosenberg et al. 2019). Less understood are the ecological and economic costs of this loss of birds, but it would be reasonable to assume the costs are very large. We now know that bats are declining (Rodhouse et al. 2019), and that the loss of bats translates into large economic losses to agriculture as well as to downstream effects caused by the need to use greater amounts of insecticides to control pests that bats have long managed (Boyles et al. 2011). We also now know – and can quantify – the adverse effects of residential development that are additional to habitat loss, including from automobile traffic, glass windows, and outdoor house cats that come with the residents of new development. The RDEIR addresses none of these potential impacts.

According to the RDEIR, most of the surveys for biological resources were performed in 2003-2005. Given that wildlife populations tend to shift locations every generation or so (Taylor and Taylor 1979), and given all the other changes to the landscape, to species' status, and to survey protocols, surveys performed nearly two decades ago are out of date. Even though burrowing owl surveys were performed later – in 2013 – those surveys did not meet the standards of the CDFW (2012) guidelines, which specify

surveys separated by at least three weeks, including 1 survey prior to 15 April and the final survey between 15 June and 15 July. The surveys performed in 2013 did not meet the seasonal survey date thresholds. Without access to the report, I cannot determine whether additional standards were also missed.

The RDEIR lists multiple surveys and assessments performed for biological resources on the project site, most nearly two decades ago, but a few assessments more recently. However, only Micallef (2018) is provided with the RDEIR. Other than maps of broad vegetation cover categories, nowhere in the RDEIR can I find a list of species detected by those who performed site visits.

The RDEIR does not provide the most basic information the reader needs to know about the surveys listed on pages 4.3-2. Provision of the reports of field reconnaissance surveys would have been helpful, assuming there were reports. The dates of the reconnaissance surveys were reported in the 2013 DEIR, but neither the DEIR nor the RDEIR identifies the biologists who performed the surveys. The RDEIR should report when each survey began, how long it lasted, and how it was performed. The RDEIR should also provide a detailed account of which species were seen and in what levels of abundance, what members of each species were doing, and in what environmental context. Decision-makers and the public need to know how much credibility to assign the surveys.

The RDEIR presents a series of flawed and misleading conclusions regarding the occurrence potentials of special-status species of wildlife. For example, when discussing the occurrence potential of California tiger salamander (p. 4.3-19), the RDEIR says "...because the site is located outside the known potential range the species is not believed to be present." The appropriate wording would be 'the site is located outside the currently known range...' By adding the word *potential*, the RDEIR gives the false impression that it would be impossible for California tiger salamander to occur on site. Considering that California tiger salamanders have been documented to disperse 2.2 km from breeding ponds (Orloff 2011), the 4 miles reported by the RDEIR as the distance to the nearest sites recorded to host California tiger salamanders does not seem insurmountable. The RDEIR claims that California tiger salamanders at known locations north and west of the site are "generally separated" from the project site by residential development, but aerial imagery shows sufficient open space north and west of the project site for tiger salamanders to disperse and for larger vertebrate wildlife to vector egg masses. Essentially, the RDEIR gives up on conserving California tiger salamander in the project area, which is the opposite of how risk assessment should proceed for rare and precious resources in the face of uncertainty (National Research Council 1986).

In another example, the RDEIR (p. 4.3-20) reports "Several special-status birds have varying potential to frequent the project site..." Actually, the level of variation was binary: the RDEIR reported 6 special-status species of bird to be unlikely to occur and 4 to potentially occur. According to the RDEIR, the project site poses a bleak setting for special-status species of bird. Further, it claims that nesting habitat is generally unavailable and that no nesting was observed during reconnaissance visits. These

conclusions are misleading. The RDEIR assesses impacts to only 10 (22%) of the 45 potentially occurring special-status species of birds (Table 2), thereby neglecting 35 (78%) special-status species of birds. Of the 10 species it does assess, its conclusions do not comport with geographic range overlaps of the project site, with known habitat relationships, and with detection records of birds in the area (Table 2). Regarding its conclusion of no nesting habitat, the RDEIR falsely implies that birds do not nest on the ground and do not nest in the trees that are slated for removal.

Nor do the occurrence likelihoods in the RDEIR comport with the habitat characterizations of each species – habitat characterizations that appear in the same lines as the occurrence likelihood determinations in Table 4.3-1 of the RDEIR. (The same Table that appeared in the 2013 DEIR.) For example, golden eagle habitat is said to be "Open mountains, foothills, and canyons." By *open*, I assume the RDEIR means treeless, but the habitat characterization is cursory and vague. I have studied golden eagles for many years, and since 2013 I have tracked 35 golden eagles via GPS telemetry. Our telemetered golden eagles use many types of environment from Canada to Mexico, including the type of environment at the project site. The highest golden eagle breeding density in the world occurs just north of the Altamont Pass in Contra Costa County, where patches of grassland and woodland are interspersed similar to the area of the project area. In fact, a golden eagle was photographed in Helen Putnam Regional Park as recently as 2 February 2021. The proposed project site provides habitat for golden eagle, which undoubtedly uses the site.

In the case of burrowing owl, the RDEIR characterizes habitat as "Open grassland and fields, farms, and ruderal areas," before determining the species is unlikely to occur at the site even though the site conditions match the RDEIR's habitat characterization. In the body of text, the RDEIR provides two explanations for this discordant determination. The first is that "ground squirrel burrows necessary for nesting by burrowing owl were absent from the project site." I have studied burrowing owls even longer than I have studied golden eagles, and along the way I have recorded hundreds of burrowing owl nest sites, including 800 at one of my project sites alone (Smallwood et al. 2013). Whereas burrowing owls are more likely to nest among burrow complexes of ground squirrels, they do not require ground squirrel burrows. This is well published in the scientific literature. I have recorded nest sites in metal culverts, rock piles, caves, the cavity of a downed electric distribution pole, under overhangs of concrete and asphalt pads, and under concrete half-round (Smallwood and Morrison 2018). Other investigators have reported burrowing owls in nest burrows of their own construction, sometimes starting with pocket gopher burrows. The first explanation given for why burrowing owls are unlikely on site is inaccurate.

The second reason the RDEIR gives for why burrowing owls are unlikely on site is that no CNDDB records were found of burrowing owls nesting on site. This is a misuse of CNDDB. Whereas consulting CNDDB is fine for confirming presence of a species, it is inappropriate for determining absence and hence narrowing a list of potentially occurring species. CNDDB is voluntary and not based on scientific sampling or equal access to properties. The limitations of CNDDB are well-known, and are summarized in 3

4

5

6

8

a warning presented by CDFW on the CNDDB web site (<u>https://www.wildlife.ca.gov/</u><u>Data/CNDDB/About</u>): "We work very hard to keep the CNDDB and the Spotted Owl Database as current and up-to-date as possible given our capabilities and resources. However, we cannot and do not portray the CNDDB as an exhaustive and comprehensive inventory of all rare species and natural communities statewide. Field verification for the presence or absence of sensitive species will always be an important obligation of our customers..." The RDEIR needs to revise its analysis of potential project impacts to burrowing owl. As a first step, burrowing owl surveys should be performed to the standards of CDFW (2012).

In another example of occurrence determinations not comporting with habitat characterizations, the RDEIR determines northern harrier as unlikely. The habitat is described as "Marshes, fields, and grassland." The project site is largely covered in grassland, so why then does the RDEIR determine the species to be unlikely? I have recorded northern harriers in grasslands hundreds of times, if not thousands of times. I studied northern harriers in grasslands for 21 years. I have recorded northern harrier nests in grasslands. As recently as 23 November 2019, a northern harrier was photographed in Helen Putnam Regional Park and the photo posted on eBird. The analysis of potential project impacts to northern harrier needs to be revised in the RDEIR.

According to the RDEIR, horned lark is unlikely to occur at the project site because its habitat consists of "Open habitat with sparse cover." The RDEIR, however, describes only a narrow part of the species' habitat. Horned larks occur in greatest abundance in grasslands, which I can readily document with hundreds if not thousands of my own data. The horned lark is a grassland species, and nests in grasslands typical of the grassland of the project site.

Similarly, the RDEIR pigeonholes prairie falcons and peregrine falcons into unrealistically narrow portions of the environment, in this case to "Canyons, mountains, open grassland." The RDEIR adds, "Suitable nesting habitat for prairie falcon, peregrine falcon, and golden eagle, which may occasionally forage in the vicinity, is absent from the site because of the lack of suitable cliff faces or ledges used by the falcons and the proximity to existing development which limits the suitability for golden eagle nesting." I have studied these species for years. I have recorded them in many types of environment, and not just in canyons, mountains and open grassland. I have recorded occurrences of these species across California, and I have observed and quantified their flight behaviors over grasslands, oak woodlands and groves of California buckeye. I have recorded nest sites of these species, which have sometimes been on cliff faces as reported in the RDEIR, but not always. Golden eagles often nest in trees. Peregrine falcons often nest on buildings. Prairie falcons nest opportunistically, including in the nacelles of derelict wind turbines. These species of falcon occur where birds are abundant, which means they likely use the site of the proposed project. According to eBird, a peregrine falcon was recently seen east of the site, in Petaluma, and a prairie falcon was observed hunting western bluebirds in Helen Putnam Regional Park on 1 February 2021. The analysis of potential project impacts to peregrine and prairie falcons needs to be revised in the RDEIR.

8

9

10

As part of its explanation for why the project would not cause significant impacts to golden eagle, peregrine falcon and prairie falcon, the RDEIR implies that impacts are limited to "nesting habitat." The RDEIR separates foraging and perching habitat from nesting habitat, and then claims the former types of habitat occur on the project site, but not the latter type. This separation of habitat types is contrived for convenience to minimalize conclusions of potential project impacts. In reality, there is only *habitat*, and all of it is critical for nest success and persistence of the species. No animal can successfully breed without having acquired sufficient forage and effective refuge during both the breeding season and non-breeding season and both along migration routes and at migration destinations. Any animal coming up short will either not have survived to nest in the next season or it will lack the energy stores and physical conditioning to successfully nest. For the RDEIR to acknowledge that the site provides foraging and perching opportunities is the same as to acknowledge that the site provides resources that are critical to nest success. The question over whether nest structures occur on site cannot be answered soundly by mere speculation, but only by experience and actual directed surveys.

The RDEIR continues its misdirection by claiming, "Other raptors, such as ferruginous hawk, merlin, and bald eagle may be infrequent winter migrants and uncommon aerial transients that may forage and roost in the project vicinity, but essential breeding habitat for these species is absent." Bald eagles will use the site yearround, mostly for foraging but also for stop-over opportunity during long-distance flights. Merlin and ferruginous hawks are well known to migrate to the area in winter, and they are also well known to migrate north for breeding in spring and summer. These species do not breed in the project area, but as I explained in the preceding paragraph, migratory species cannot successfully breed if they cannot successfully forage at their migratory destinations. It is, in fact, essential for merlin and ferruginous hawk to find sufficient forage in the project area so that they can breed at the other end of their migration route. The RDEIR inappropriately absolves the project of any responsibility over what adverse impacts would befall these species should the project destroy the increasingly diminishing forage at the southern end of their winter migration.

Returning to the RDEIR's claims that nesting habitat is generally unavailable and that no nesting was observed during reconnaissance visits, I first point out that nearly all of the special-status species of birds listed in RDEIR Table 4.3-1 can nest at the project site. With the existing neighborhoods along Windsor Drive, I would not expect golden eagles to nest at the site because breeding golden eagles are typically averse to human presence, but every other species in the Table could nest there. Horned larks, burrowing owls, and northern harriers are ground-nesters. Having recorded loggerhead shrike nests across a 16,700-hectare study area for 4 years, I can say with confidence that loggerhead shrikes can nest on site. With 4 years' experience recording and analyzing site attributes of white-tailed kite nests (starting with Erichsen et al. 1996), I am confident in concluding the site provides suitable habitat of white-tailed kite. All of the Accipiters and Falcons in RDEIR Table 4.3 can also nest in the riparian forest of the project site. The claim that the site is generally absent of nesting habitat is unfounded and misleading.

The claim of no nesting habitat is also unfounded, as noted above, because it is based on the outcome of reconnaissance-level surveys. The surveys performed at the site were not detection surveys for breeding birds. The closest that any of the surveys came to breeding bird surveys was the burrowing owl survey, but that survey was focused only on burrowing owls and fell short of the CDFW (2012) breeding-season survey standards. No survey was otherwise directed toward breeding birds. Although springtime surveys were directed toward plants, frogs, burrowing owls and badgers, none were directed toward birds. As far as I can determine from the RDEIR, no biologist has yet to survey the grassland nor the trees for bird nests, nor for bird behaviors indicative of nesting. It is therefore inappropriate of the RDEIR to imply that bird nests are absent simply because they were not seen in reconnaissance-level surveys. Those surveys were not designed to record bird nests, so the outcomes of those surveys do not bear on any analysis of whether birds nest on site.

The assessments performed for bats in 2004 and 2014 were performed without the aid of any means to actually detect bat activity other than looking for bat guano under barns and sheds. Based on what I can discern from the RDEIR, no use was made of acoustic detectors, thermal-imaging cameras or mist nets. An assessment without these tools is an unreliable foundation for determining habitat suitability of bats. Without these tools of detection, the assessment cannot rule out the occurrences of individual species.

According to the RDEIR (p. 4.3-21), western red bat is not currently recognized as a species of special concern by the California Department of Fish and Wildlife. But it is so recognized. Under the California Fish and Game Code, western red bat is a California Species of Special Concern.

It is not enough for the RDEIR to simply list surveys and assessments performed for plants and wildlife and wetlands on the project site. As I pointed out earlier, the reader needs appropriate information about the surveys to assess the credibility of survey outcomes. The reader needs to know whether the surveys qualified as detection surveys. Surveys known as 'detection surveys' have been developed by species' experts to provide biologists with sufficient opportunity for detecting a particular special-status species. Detection surveys capitalize on species' attributes that predispose them to detection, but they also rely on sufficient survey effort to account for the stochastic nature of individuals of a species being both available and detectable at the place under surveillance. Detection surveys are also used for supporting absence determinations, for improving the efficacy of preconstruction surveys, and for supporting the formulation of appropriate mitigation measures. The reader needs to know that reconnaissance-level surveys are not surrogates for detection surveys.

But neither are reconnaissance surveys totally without value. When diligently performed, and when outcomes are 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 11

10

12

13

during the same time of year. I only had three hours I could commit to a visual scan survey on 11 February 2021, so there were only so many species I was likely to detect. By recording when I detected each species, I can 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 an inevitable asymptote of the number of species detectable from the same survey method over a longer time. In this case, I would have detected >100 species of terrestrial vertebrate wildlife after 67 hours of the same type of survey during the same portion of the year, but I could have detected even more species with commitment of more than 67 hours. I could have also accelerated my rate of wildlife species detections by surveying at different times of day, in different seasons, and using various methods such as acoustic detectors or thermal-imaging for bats, owls, and nocturnally migratory birds, and live-trapping for small mammals. My reconnaissance survey informs me that the site is rich in wildlife.

**Figure 1.** Actual and predicted relationships between the number of vertebrate wildlife species detected and the elapsed survey time based on visual scan on 11 February 2021. Note that the relationships 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.



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. Based on the outcomes of 106 previous surveys that I performed at sites of proposed projects, my survey effort at the currently proposed project site carried an 82% chance of detecting a listed species. Although the odds were pretty good, considering my survey effort, this time I did not detect a listed species. Another survey of similar effort would likely result in detection of a listed species because the site is rich in wildlife. The RDEIR needs to be revised to more carefully analyze potential project impacts to special-status species of wildlife.



Overall, the RDEIR founds its analysis of occurrence likelihoods of special-status species on a very cursory, inadequate review of the available data. The RDEIR should also make use of eBird, iNaturalist, and local knowledge of wildlife occurrences. According to eBird and iNaturalist records, 66 special-status species of vertebrate wildlife have been recently detected nearby or within the region of the project site, or their geographic ranges overlap the site (Table 2). At the site, I detected 6 of the special-status species listed in Table 2, and this outcome required only 3 hours of my time. I am confident that with more survey time, including surveys during other times of year and using additional methods, I would also detect multiple other species including northern harrier, merlin, white-tailed kite, yellow warbler, and multiple species of bats. Multiple special-status species of bats likely roost in the trees and old structures on site (Kunz and Lumsden 2003). A larger effort is needed to inform the public and decision-makers about the potential project impacts to wildlife and how to mitigate them.

			Occu	rrence likelihood
Species	Scientific name	Status <sup>1</sup>	RDEIR	eBird, iNaturalist
California tiger salamander	Ambystoma californiense	FT, CT	Unlikely	Nearby
California red-legged frog	Rana draytonii	FT, SSC	Present	Nearby
Foothill yellow-legged frog	Rana boylii	CE, SSC	Unlikely	In region
Western pond turtle	Emys marmorata	SSC	Unlikely	Nearby
Caspian tern	Hydroprogne caspia	BCC		Nearby
California gull	Larus californicus	TWL		Nearby
Turkey vulture	Cathartes aura	FGC 3503.5		Adjacent
Osprey	Pandion haliaetus	TWL, FGC 3503.5		Nearby
Bald eagle	Haliaeetus leucocephalus	BGEPA, BCC, CE, CFP		Nearby
Golden eagle	Aquila chrysaetos	BGEPA, BCC, CFP	Unlikely	Very close $(2/2/21)$
Red-tailed hawk	Buteo jamaicensis	FGC 3503.5		Adjacent
Ferruginous hawk	Buteo regalis	BCC, TWL, FGC 3503.5		Nearby
Swainson's hawk	Buteo swainsoni	BCC, CT		Very close
Rough-legged hawk	Buteo regalis	FGC 3503.5		Nearby
Red-shouldered hawk	Buteo lineatus	FGC 3503.5		Adjacent
Sharp-shinned hawk	Accipiter striatus	TWL, FGC 3503.5	Possible	Very close
Cooper's hawk	Accipiter cooperi	TWL, FGC 3503.5	Possible	Very close
Northern harrier	Circus cyaneus	SSC3, FGC 3503.5	Unlikely	Adjacent
White-tailed kite	Elanus leucurus	CFP, FGC 3503.5	Possible	Adjacent
American kestrel	Falco sparverius	FGC 3503.5		Adjacent
Merlin	Falco columbarius	TWL, FGC 3503.5		Nearby
Prairie falcon	Falco mexicanus	BCC, TWL, FGC 3503.5	Unlikely	Nearby
Peregrine falcon	Falco peregrinus	BCC, CFP	Unlikely	Nearby
Burrowing owl	Athene cunicularia	BCC, SSC2	Unlikely	Nearby
Great-horned owl	Bubo virginianus	FGC 3503.5		Nearby
Long-eared owl	Asio otus	SSC3, FGC 3503.5		In region
Short-eared owl	Asio flammeus	SSC3, FGC 3503.5		Nearby
Barn owl	Tyto alba	FGC 3503.5		Adjacent
Western screech-owl	Megascops kennicotti	FGC 3503.5		Nearby
Allen's hummingbird	Selasphorus sasin	BCC		Nearby

**Table 2.** Occurrence likelihoods of special-status species at the project site, based on records of sightings in eBird and iNaturalist. Entries in bold font under 'eBird, iNaturalist' represent species I observed at the site.

			Occurrence likelihood	
Species	Scientific name	Status <sup>1</sup>	RDEIR	eBird, iNaturalist
Rufous hummingbird	Selasphorus rufus	BCC		Nearby
Nuttall's woodpecker	Picoides nuttallii	BCC		Very close
Lewis's woodpecker	Melanerpes lewis	BCC		Nearby
Vaux's swift	Chaetura vauxi	SSC2		Nearby
Willow flycatcher	Epidomax trailii	CE, BCC		In region
Olive-sided flycatcher	Contopus cooperi	BCC, SSC2		In region
Oak titmouse	Baeolophus inornatus	BCC		Adjacent
Horned lark	Eremophila alpestris	TWL	Unlikely	Nearby
Loggerhead shrike	Lanius ludovicianus	BCC, SSC2	Possible	Nearby
Yellow-billed magpie	Pica nuttalli	BCC		In region
Common yellowthroat	Geothlypis trichas sinuosa	SSC3		Nearby
Yellow warbler	Setophaga petechia	BCC, SSC2		Nearby
Yellow-breasted chat	Icteria virens	SSC3		In region
Oregon vesper sparrow	Pooecetes gramineus affinis	SSC2		Nearby
Grasshopper sparrow	Ammodramus savannarum	SSC2		Nearby
Summer tanager	Piranga rubra	SSC1		Nearby
Tricolored blackbird	Agelaius tricolor	CT, BCC		Nearby
Yellow-headed blackbird	X. xanthocephalus	SSC3		In region
Lawrence's goldfinch	Spinus lawrencei	BCC		Nearby
Pallid bat	Antrozous pallidus	SSC, WBWG H	Unlikely	Neaby
Townsend's big-eared bat	Plecotus t. townsendii	SSC, WBWG H	Unlikely	Nearby
Western mastiff bat	Eumops perotis	SSC, WBWG H		Possible
Silver-haired bat	Lasionycteris noctivagans	WBWG:M		In region
Western red bat	Lasiurus blossevillii	SSC, WBWG H	Possible	In region
Little brown bat	Myotis lucifugus	WBWG:M	Unlikely	Nearby
Big brown bat	Episticus fuscus	WBWG:L		In region
California myotis	Myotis californicus	WBWG:L		Nearby
Canyon bat	Parastrellus hesperus	WBWG:M		In range
Small-footed myotis	Myotis cililabrum	WBWG M		In region
Long-eared myotis	Myotis evotis	WBWG M		In region
Fringed myotis	Myotis thysanodes	WBWG H		In region
Long-legged myotis	Myotis volans	WBWG H		In range

			Occurrence likelihood	
Species	Scientific name	Status <sup>1</sup>	RDEIR	eBird, iNaturalist
Yuma myotis	Myotis yumanensis	WBWG LM	Unlikely	In region
Hoary bat	Lasiurus cinereus	WBWG LM		Nearby
Ringtail	Bassariscus astutus	CFP		In range
American badger	Taxidea taxus	SSC	Unlikely	Nearby

<sup>1</sup> 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), FGC 3503.5 = 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), TWL = Taxa to Watch List (Shuford and Gardali 2008), WBWG = Western Bat Working Group with low, medium and high conservation priorities.

#### HABITAT LOSS

The RDEIR does not estimate the loss in bird nests and productivity that would result from the project. The project would contribute to an ongoing trend of declining birds in North America due to habitat loss and habitat fragmentation (Rosenberg et al. 2019). Habitat loss not only results in the immediate numerical decline of wildlife, but also in permanent loss of productive capacity. For example, a grassland/wetland/woodland complex at one study site had a total bird nesting density of 32.8 nests per acre (Young 1948). In another study on a similar complex of vegetation cover, the average annual nest density was 35.8 nests per acre (Yahner 1982). These densities averaged 34.3 nests per acre. Given that the homes would be developed upslope from Kelly Creek, it would destroy more grassland than woodland or wetland. A reasonable estimate would be that total avian nest density on the development area would be a third of that quantified at the Young (1948) and Yahner (1982) study sites, or about 11.4 nests per acre per year across 22.1 acres of permanent impacts.

Assuming a total breeding density of only a third of the mean between the Young (1948) and Yahner (1982) study sites, 252 nest sites (11.4 nests/acre/year × 22.1 acres) would be a great many nest sites. The loss of this many nest sites would qualify as a significant project impact that has not been addressed in the RDEIR. But the impact does not end with the immediate loss of nests as the site is graded for construction. The reproductive capacity of the site is lost. 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 731 fledglings per year. After 100 years and further assuming an average bird generation time of 5 years, the lost capacity of both breeders and annual fledgling production would total **83,180 birds** {(nests/year × chicks/nest × number of years) + (2 adults/nest  $\times$  nests/year)  $\times$  (number of years  $\div$ years/generation). The project's denial to California of 83,180 birds over the first century following construction would qualify as a significant and substantial impact. This impact is not been addressed in the RDEIR, nor does the RDEIR provide any compensatory mitigation for it. The RDEIR should be revised to appropriately analyze the project's impacts from habitat loss. The example analysis I provide above should be extended to other taxa including to herpetofauna and mammals.

#### WILDLIFE MOVEMENT

According to the RDEIR (p. 4.3-25), "The drainages tend to serve as movement corridors for larger wildlife species, such as deer, raccoon, and grey fox, particularly where dense growth provides protective cover and retreat habitat." I spent nearly 1,000 hours behind a FLIR T620 thermal-imaging camera fitted with an 88.9 mm telephoto lens to observe both volant and terrestrial wildlife among many stations across a large study area. I recorded the nocturnal movement patterns of many deer, raccoons, gray foxes and other species such as American badger. I was particularly interested in learning whether and to what degree mammals moved along drainages and other linear features of the environment. I found that many mammals did follow such linear features, but many did not. Many of the large mammals that I followed moved across wide valleys and broad slopes, where their encounter frequencies with other large

mammals were minimized. Animals moving along narrow reaches of the landscape, such as along drainages, are more likely to encounter other large mammals, some of which are larger and more dangerous. Therefore, the RDEIR's characterization of Kelly Creek and its tributary as being the only possible means for large mammals to move across the site is unfounded and misleading.

The focus of discussion on wildlife movement corridors implies that a project's interference with a corridor is the only means by which a project can interfere with wildlife movement. But this standard would be 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 all the more important for wildlife movement because it provides opportunities for stopover and staging of volant wildlife during migration, and for dispersal and home range patrol while opportunities nearby diminish as anthropogenic uses expand (Warnock 2010, Taylor et al. 2011, Runge et al. 2014). The project would cut wildlife off from stopover and staging opportunities, forcing volant wildlife to travel even farther between remaining patches of stopover refugia. The project would interfere with wildlife movement in the region. The RDEIR needs to be revised to analyze this type of impact.

#### **TRAFFIC IMPACTS ON WILDLIFE**

A shortfall of the RDEIR is its failure to analyze the impacts of the project's added road traffic on special-status species of wildlife, including to animals that would be killed far from the project's construction footprint; they would be crossing roads traversed by cars originating from or headed toward the project site. The project's impacts to wildlife would add to ongoing traffic impacts, and would reach as far from the project as cars and trucks travel to or from the project site. Evidence of such ongoing impacts was readily visible during my site visit, when I found a road-killed striped skunk on Windsor Drive between the two parcels where new homes are proposed.

Vehicle collisions have accounted for the deaths of many thousands of reptile, amphibian, mammal, bird, and arthropod fauna, and the impacts have often been found to be significant at the population level (Forman et al. 2003). Across North America traffic impacts have taken devastating tolls on wildlife (Forman et al. 2003). In Canada, 3,562 birds were estimated killed per 100 km of road per year (Bishop and Brogan 2013), and the US estimate of avian mortality on roads is 2,200 to 8,405 deaths per 100 km per year, or 89 million to 340 million total per year (Loss et al. 2014). Local impacts can be more intense than nationally.

In a recent study of traffic-caused wildlife mortality, investigators found 1,275 carcasses of 49 species of mammals, birds, amphibians and reptiles over 15 months of searches along a 2.5 mile stretch of Vasco Road in Contra Costa County, California (Mendelsohn et al. 2009). Using carcass detection trials performed on land immediately adjacent to the traffic mortality study (Brown et al. 2016) to adjust the found fatalities for the proportion of fatalities not found due to scavenger removal and searcher error, the estimated traffic-caused fatalities was 12,187. This fatality estimate translates to a rate of 3,900 wild animals per mile per year killed. In terms comparable to the national

20

20

estimates, the estimates from the Mendelsohn et al. (2009) study would translate to 243,740 animals killed per 100 km of road per year, or 29 times that of Loss et al.'s (2014) upper bound estimate and 68 times the Canadian estimate. An analysis is needed of whether increased traffic generated by the project site would similarly result in local impacts on wildlife.

Increased use of existing roads would increase wildlife fatalities (see Figure 7 in Kobylarz 2001). Wildlife roadkill is not randomly distributed, and so it can be predicted. Causal factors include types of roadway, human population density, and temperature (Chen and Wu 2014), as well as time of day and adjacency and extent of vegetation cover (Chen and Wu 2014, Bartonička et al. 2018), and intersections with streams and riparian vegetation (Bartonička et al. 2018). For example, species of mammalian Carnivora are killed by vehicle traffic within 0.1 miles of stream crossings >40 times other than expected (K. S. Smallwood, 1989-2018 unpublished data). Reptiles are killed on roads where roadside fences end or where fences are damaged (Markle et al. 2017). There has even been a function developed to predict the number of golden eagles killed along the road, where the function includes traffic volume and density of road-killed animals available for eagles to scavenge upon (Lonsdorf et al. 2018). These factors also point the way toward mitigation measures, which should be formulated in a revised RDEIR.

#### Predicting project-generated traffic impacts to wildlife

The RDEIR predicts 550,858 vehicle miles traveled per year (VMT) as a result of the project. The project's impacts to wildlife can be predicted to a reasonable degree of accuracy based on what scientific monitoring has learned from collision impacts of moving obstacles elsewhere in the lower atmosphere. One type of impact to consider is blunt-force injury and death caused by collisions with the front ends of vehicles. Assuming the average car frontal surface area is  $3.08 \text{ m}^2$  (average height of 1.7 m and average wheelbase of 1.81 m), then the predicted average annual volume of airspace intercepted by cars would be  $3.08 \text{ m}^2 \times 886,330,522 \text{ m}$  (1,609 m/mile × 550,858 miles) = 2729,898,008 m^3.

This volume of intercepted airspace would be equivalent to the intercepted winds of 32.2 2.3-MW wind turbines each of which in the Altamont Pass averages about 41 bird fatalities per year (my estimates of fatalities based on data in H.T. Harvey & Associates 2020, Great Basin Bird Observatory and H.T. Harvey & Associates 2020).<sup>1</sup> Therefore, front-end, blunt-force mortality would be predicted, in this example, to tally **1,320 birds annually**. It remains unknown whether collision risk is higher or lower for vehicles traveling forward to intercept airspace as compared to wind turbines remaining

<sup>&</sup>lt;sup>1</sup> A 2.3-MW wind turbine is rated at 14 m/s. It runs an average of about 8 hours per day with a blade area of about 210 m<sup>2</sup>. Daily volume of wind intercepted by the turbine blades is 210 m<sup>2</sup> × 14 m/s × 8 hr × 3600 s/hr = 84.67 million m<sup>3</sup>. Fatality monitoring at the Vasco Winds and Golden Hills projects resulted in fatality estimates that accounted for the proportion of fatalities never found by searchers.

stationary to intercept wind. Also, yet to be considered are the deaths and injuries to vertebrate wildlife caused by crushing under tires, broadside impacts of flying birds, and turbulence-induced injuries and deaths above, to the side, and in the wake of traveling cars. However, even if one or more assumptions prove inaccurate, the magnitude of the impact would remain very large.

Based on my assumptions and simple calculations, the project-generated traffic would cause substantial, significant impacts to wildlife. The RDEIR needs to be revised to analyze the project-generated traffic impacts to wildlife. Mitigation measures to improve wildlife safety along roads are available and are feasible, and they need exploration for their suitability with the proposed project.

## 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**

Predicting the number of bird collisions at a new project is challenging because the study of window collisions remains in its early stages. Collision rate metrics have varied, including collisions per building per year and collisions per m<sup>2</sup> of window. The problem with the temporal factor in the collision rate metrics has been monitoring time spans varying from a few days to 10 years, and even in the case of the 10-year span, monitoring was largely restricted to spring and fall migration seasons. Short-term monitoring during one or two seasons of the year cannot represent a 'year,' but monitoring has rarely spanned a full year. Using 'buildings' in the metric treats buildings as all the same size and height, when we know they are not. Using square meters of glass in the metric treats glass as the only barrier upon which birds collide against a building's façade, when we know it is not. It also treats all glass as equal, even though we know that collision risk varies by type of glass as well as multiple factors related to contextual settings.

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<sup>2</sup> 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

21

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<sup>2</sup> 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 RDEIR does not provide sufficient structural detail to measure the extent of glass windows, but it does provide the square footage (s.f.) of floorspace of the homes. I therefore applied my own measurements of 0.0147368 m<sup>2</sup> of glass window extent per s.f. of floorspace in modern homes. Based on my measured rate, the proposed project would add 1,215 m<sup>2</sup> of new glass windows. Aplying the mean fatality rate (above) to my estimate of 1,215 m<sup>2</sup> of glass windows predicts **89 bird deaths per year (95% CI: 53-125)**. The 100-year toll from this average annual fatality rate would be 8,900 bird deaths (95% CI: 5,300-12,500). 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 RDEIR, it is my opinion that the project would result in potentially address this impact.

Given the magnitude of bird-window collision impacts, there are obviously great opportunities for reducing and minimizing these impacts going forward. Existing structures can be modified or retrofitted to reduce impacts, and 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 would be introduced to the project site by residents of the proposed residential units. However, the RDEIR 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 RDEIR, the proposed project would add 77 new residents. The above rates applied to this number of new residents **would add 34 cats, which would kill 4,270 vertebrate wildlife per year**.

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*" (<u>http://www.evotis.org/ toxoplasma-gondii- sea-otters/</u>). According to the RDEIR, an outfall from the project would drain into Kelly Creek, which would then transport *Toxoplasma gondii* downstream where it could infect ringtail and eventually sea otters and other marine mammals. The RDEIR needs to be revised to address the impacts of house cats to wildlife.

#### **CUMULATIVE IMPACTS**

The RDEIR characterizes cumulative effects as simply residual impacts of incomplete mitigation of project-level impacts. It asserts that environmental review for other proposed projects in the area will ensure adequate protection and management of biological resources in Petaluma. 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 RDEIR'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. The RDEIR needs to refrain from assuring that the environmental reviews for other projects will avoid cumulative impacts. It needs to be revised to perform an appropriate, serious analysis of cumulative impacts.

#### MITIGATION

**Measure BIO-1a** – **Permits from resource agencies**. It goes without saying that take permits are required prior to construction, but acquisition of permits does not necessarily ensure impacts would be adequately mitigated. Acquisition of permits is more of a required step than it is a mitigation measure.

**Measure BIO-1b** – **Final California Red-Legged Frog Mitigation Plan.** It would help to provide more details related to this plan, because this plan would be critical to mitigating impacts to California red-legged frog, and because members of the public could potentially contribute to a better plan. As formulated, this measure defers the plan development to a time after RDEIR certification, thereby bypassing meaningful public input.

To exemplify my point, I will offer suggestions. I have seen the stock pond where California red-legged frogs were found, and I have seen portions of Kelly Creek. I have also surveyed many miles of streams for California red-legged frogs and I have performed research on the species and formulated a conservation plan involving the 23

management of breeding ponds on Naval Weapons Station, Seal Beach, Detachment Concord (Smallwood and Morrison 2008). The condition of the project site's stock pond reminded me of pond conditions where California red-legged frogs used to breed at Concord Naval Weapons Station. Ponds that were once used for breeding, but which ceased being used, were those that had either filled with silt or where earthen levees had failed. The stock pond on the project site is filling with silt and needs to be dredged. I suggest it be dredged in phases over two to three years. Its earthen levee also appears to be failing, as a gullied channel has appeared below its southern edge and extends all the way to Kelly Creek. The levee needs repair, and outflow from the pond needs to be better managed.

**Measure BIO-1c and BIO 1d** – **Preconstruction surveys for bird nests and bat roosts.** 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 the RDEIR, 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.

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.

**Measure BIO-4** – **Interpretive program and management of barriers to movement.** Whereas I concur that a visitor interpretive program would be helpful, and management of fencing could improve movement of large mammals into and out of the property, these measures do not compensate for project interference with wildlife movement in the region. The proposed measures do nothing to minimize or compensate for impacts to movement by volant species, which are largely unaffected by fences. Impacts to volant wildlife would be caused by habitat loss and infiltration of the open spaces by outdoor house cats and people. The proposed measures do nothing to offset the barrier effects the project would pose to nonvolant animals that would normally move between the project site and the remaining open spaces to the east and southeast of Windsor Drive and D Street. Interference with movement to those spaces should be regarded as additional habitat loss, for which compensatory mitigation is needed. 26

## **RECOMMENDED MITIGATION**

#### **Habitat Protection**

The RDEIR vaguely implies that habitat would be conserved by payment of a compensatory mitigation fee to be worked out later in a California Red-Legged Frog Mitigation Plan. However, I did not see any indication that loss of upland habitat of California red-legged frog would be mitigated. Nor did I see any compensatory mitigation for other species. Many more special-status species would be significantly and adversely affected by this project. Compensatory mitigation is also 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).

Internal to the project, residential yards should be covered to the extent feasible by natural vegetation. Native plants attract beneficial arthropods, and the increased abundance of arthropods combined with the structures of the plants themselves attract vertebrate wildlife for both stopover and permanent residence (Burghardt et al. 2008, Goddard et al. 2009, Lerman and Warren 2011, Narango et al. 2017, Adams et al. 2020, Berthon et al. 2021). Use of native vegetation would also minimize outflows of pesticides and synthetic fertilizers from the neighborhood to Kelly Creek.

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.

#### **Road Mortality**

I recommend funding one or more wildlife crossings at strategic locations along roads used by the project. I also recommend funding research into wildlife mortality caused by car traffic in the area. Traffic-calming measures would also help.

#### **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,

Shown Swallwood

Shawn Smallwood, Ph.D.

#### **REFERENCE CITED**

- Adams, B. J., E. Li, C. A. Bahlai, E. K. Meineke, T. P. McGlynn, and B. V. Brown. 2020. Local and landscape-scale variables shape insect diversity in an urban biodiversity hot spot. Ecological Applications 30(4):e02089. 10.1002/eap.2089
- Barton, C. M., C. S. Riding, and S. R. Loss. 2017. Magnitude and correlates of bird collisions at glass bus shelters in an urban landscape. Plos One 12. (6): e0178667. https://doi.org/10.1371/journal.pone.0178667

30

32

- Bartonička, T., R. Andrášik, M. Dula, J. Sedoník, and M. Bíl. 2018. Identification of local factors causing clustering of animal-vehicle collisions. Journal of Wildlife Management. Journal of Wildlife Management DOI: 10.1002/jwmg.21467
- Berthon, K., F. Thomas, and S. Bekessy. 2021. The role of 'nativenes' in urban greening to support animal biodiversity. Landscape and Urban Planning 205:103959. https://doi.org/10.1016/j.landurbplan.2020.103959
- Bishop, C. A. and J. M. Brogan. 2013. Estimates of Avian Mortality Attributed to Vehicle Collisions in Canada. Avian Conservation and Ecology 8:2. http://dx.doi.org/10.5751/ACE-00604-080202.
- Blancher, P. 2013. Estimated number of birds killed by house cats (*Felis catus*) in Canada. Avian Conservation and Ecology 8(2): 3. <u>http://dx.doi.org/10.5751/ACE-00557-080203</u>
- Borden, W. C., O. M. Lockhart, A. W. Jones, and M. S. Lyons. 2010. Seasonal, taxonomic, and local habitat components of bird-window collisions on an urban university campus in Cleveland, OH. Ohio Journal of Science 110(3):44-52.
- Boyles, J. G., P. M. Cryan, G. F. McCracken, and T. H. Kunz. 2011. Economic importance of bats in agriculture. Science 332:41-42.
- Brown, B. B., L. Hunter, and S. Santos. 2020. Bird-window collisions: different fall and winter risk and protective factors. PeerJ 8:e9401 <u>http://doi.org/10.7717/peerj.9401</u>
- Brown, K., K. S. Smallwood, J. Szewczak, and B. Karas. 2016. Final 2012-2015 Report Avian and Bat Monitoring Project Vasco Winds, LLC. Prepared for NextEra Energy Resources, Livermore, California.
- Burghardt, K. T., D. W. Tallamy, and W. G. Shriver. 2008. Impact of native plants on bird and butterfly biodiversity in suburban landscapes. Conservation Biology 23:219-224.
- CDFW (California Department of Fish and Wildlife). 2012. Staff Report on Burrowing Owl Mitigation. Sacramento, California.
- Calvert, A. M., C. A. Bishop, R. D. Elliot, E. A. Krebs, T. M. Kydd, C. S. Machtans, and G. J. Robertson. 2013. A synthesis of human-related avian mortality in Canada. Avian Conservation and Ecology 8(2): 11. <u>http://dx.doi.org/10.5751/ACE-00581-080211</u>
- Chen, X. and S. Wu. 2014. Examining patterns of animal–vehicle collisions in Alabama, USA. Human-Wildlife Interactions 8:235-244.
- City of Petaluma. 2013. Davidon Homes Tentative Subdivision Map and Rezoning Project Draft Environmental Impact Report and Technical Appendices. State Clearinghouse No. 2004072137. City of Petaluma, California.

- City of Petaluma. 2020. Scott Ranch Project Revised Draft Environmental Impact Report SCH No. 2004072137. Petaluma, California. Prepared by Impact Sciences.
- City of Portland Bureau of Environmental Services and Portland Audubon. 2020. Collisions at the Columbia Building: A synthesis of pre- and post-retrofit monitoring. Environmental Services of City of Portland, Oregon.
- Dauphiné, N. and R. J. Cooper. 2009. Impacts of free-ranging domestic cats (*Felis catus*) on birds in the United States: a review of recent research with conservation and management recommendations. Pages 205-219 in T. D. Rich, C. Arizmendi, D. W. Demarest, and C. Thompson, eds., Proceedings of the Fourth International Partners in Flight Conference: Tundra to Tropics.
- Dunn, E. H. 1993. Bird mortality from striking residential windows in winter. Journal of Field Ornithology 64:302-309.
- Erichsen, A. L., K. S. Smallwood, A. M. Commandatore, D. M. Fry, and B. Wilson. 1996.
  White-tailed Kite movement and nesting patterns in an agricultural landscape.
  Pages 166-176 in D. M. Bird, D. E. Varland, and J. J. Negro, eds., Raptors in human landscapes. Academic Press, London.
- Forman, T. T., D. Sperling, J. A. Bisonette, A. P. Clevenger, C. D. Cutshall, V. H. Dale, L. Fahrig, R. France, C. R. Goldman, K. Heanue, J. A. Jones, F. J. Swanson, T. Turrentine, and T. C. Winter. 2003. Road Ecology. Island Press, Covello, California.
- Goddard, M. A., A. J. Dougill, and T. G. Benton. 2009. Scaling up from gardens: biodiversity conservation in urban environments. Trends in Ecology and Evolution 25:90-98. doi:10.1016/j.tree.2009.07.016
- Gómez-Moreno, V. del C., J. R. Herrera-Herrera, and S. Niño-Maldonado. 2018. Bird collisions in windows of Centro Universitario Victoria, Tamaulipas, México. Huitzil, Revista Mexicana de Ornitología 19(2): 227-236. <u>https://doi.org/10.28947/</u> <u>hrmo.2018.19.2.347</u>
- Great Basin Bird Observatory and H. T. Harvey and Associates. 2020. Golden Hills North Wind Energy Center Postconstruction Fatality Monitoring Report: Year 1. Report to Golden Hills North Wind, LLC, Livermore, California.
- Hager, S. B., H. Trudell, K. J. McKay, S. M. Crandall, and L. Mayer. 2008. Bird density and mortality at windows. Wilson Journal of Ornithology 120:550-564.
- Hager S. B., B. J. Cosentino, K J. McKay, C. Monson, W. Zuurdeeg, and B. Blevins.
  2013. Window area and development drive spatial variation in bird-window collisions in an urban landscape. PLoS ONE 8(1): e53371.
  doi:10.1371/journal.pone.0053371

- H.T. Harvey & Associates. 2020. Golden Hills Wind Energy Center post-construction fatality monitoring report: Final 3-Year Report. Prepared for Golden Hills Wind, LLC, Livermore, California.
- Johnson, R. E., and G. E. Hudson. 1976. Bird mortality at a glassed-in walkway in Washington State. Western Birds 7:99-107.
- Kahle, L. Q., M. E. Flannery, and J. P. Dumbacher. 2016. Bird-window collisions at a west-coast urban park museum: analyses of bird biology and window attributes from Golden Gate Park, San Francisco. PLoS ONE 11(1):e144600 DOI 10.1371/journal.pone.0144600.
- Klem, D., Jr. 1990. Collisions between birds and windows: mortality and prevention. Journal of Field Ornithology 61:120-128.
- Kobylarz, B. 2001. The effect of road type and traffic intensity on amphibian road mortality. Journal of Service Learning in Conservation Biology 1:10-15.
- Kummer J. A., and E. M. Bayne. 2015. Bird feeders and their effects on bird-window collisions at residential houses. Avian Conservation and Ecology 10(2):6 DOI 10.5751/ACE-00787-100206.
- Kummer, J. A., E. M. Bayne, and C. S. Machtans. 2016. Use of citizen science to identify factors affecting bird-window collision risk at houses. The Condor: Ornithological Applications 118:624-639. DOI: 10.1650/CONDOR-16-26.1
- Kunz, T. H., and L. F. Lumsden. 2003. Ecology of cavity and foliage roosting bats. Pages 3–89 in T. H. Kunz and M. B. Fenton, Eds., Bat ecology. The University of Chicago Press, Chicago.
- Lerman, S. B. and P. S. Warren. 2011. The conservation value of residential yards: linking birds and people. Ecological Applications 21:1327-1339.
- Lonsdorf, E. C. A. Sanders-Reed, C. Boal, and T. D. Allison. 2018. Modeling golden eagle-vehicle collisions to design mitigation strategies. Journal of Wildlife Management 82:1633-1644.
- Loss, S. R., T. Will, and P. P. Marra. 2013. The impact of free-ranging domestic cats on wildlife of the United States. Nature Communications 2380. DOI: 10.1038/ncomms2380
- Loss, S. R., T. Will, and P. P. Marra. 2014. Estimation of Bird-Vehicle Collision Mortality on U.S. Roads. Journal of Wildlife Management 78:763-771.
- Loss, S. R., T. Will, S. S. Loss, and P. P. Marra. 2014. Bird–building collisions in the United States: Estimates of annual mortality and species vulnerability. The Condor: Ornithological Applications 116:8-23. DOI: 10.1650/CONDOR-13-090.1

- Loyd, K. A. T., S. M. Hernandez, and D. L. McRuer. 2017. The role of domestic cats in the admission of injured wildlife at rehabilitation and rescue centers. Wildlife Society Bulletin 41:55-61.
- Machtans, C. S., C. H. R. Wedeles, and E. M. Bayne. 2013. A first estimate for Canada of the number of birds killed by colliding with building windows. Avian Conservation and Ecology 8(2):6. <u>http://dx.doi.org/10.5751/ACE-00568-080206</u>
- Markle, C. E., S. D. Gillingwater, R. Levick, P. Chow-Fraser. 2017. The true cost of partial fencing: evaluating strategies to reduce reptile road mortality. Wildlife Society Bulletin 41:342-350.
- Micallef, S. 2018. Scott Ranch 28 Lot revised application updated biological assessment. Letter to S. Abbs, Davidon Homes, Walnut Creek, California.
- Mendelsohn, M., W. Dexter, E. Olson, and S. Weber. 2009. Vasco Road wildlife movement study report. Report to Contra Costa County Public Works Department, Martinez, California.
- Narango, D. L., D. W. Tallamy, and P. P. Marra. 2017. Native plants improve breeding and foraging habitat for an insectivorous bird. Biological Conservation 213:42-50.
- National Research Council. 1986. Ecological knowledge and environmental problemsolving: concepts and case studies. National Academy Press, Washington, D.C.
- Ocampo-Peñuela, N., R. S. Winton, C. J. Wu, E. Zambello, T. W. Wittig and N. L. Cagle . 2016. Patterns of bird-window collisions inform mitigation on a university campus. PeerJ4:e1652;DOI10.7717/peerj.1652
- O'Connell, T. J. 2001. Avian window strike mortality at a suburban office park. The Raven 72:141-149.
- Orff, K., H. Brown, S. Caputo, E. J. McAdams, M. Fowle, G. Phillips, C. DeWitt, and Y. Gelb. 2007. Bird-safe buildings guidelines. New York City Audubon, New York.
- Orloff, S. G. 2011. Movement patterns and migration distances in an upland population of California tiger salamander (*Ambystoma californiense*). Herpetological Conservation and Biology 6:266–276.
- Parkins, K. L., S. B. Elbin, and E. Barnes. 2015. Light, glass, and bird-building collisions in an urban park. Northeastern Naturalist 22:84-94.
- Porter, A., and A. Huang. 2015. Bird collisions with glass: UBC pilot project to assess bird collision rates in Western North America. UBC Social Ecological Economic Development Studies (SEEDS) Student Report. Report to Environment Canada, UBC SEEDS and UBC BRITE.

- Riding, C. S., T. J. O'Connell, and S. R. Loss. 2020. Building façade-level correlates of bird–window collisions in a small urban area. The Condor: Ornithological Applications 122:1–14.
- Rodhouse, T.J.; Rodriguez, R.M.; Banner, K.M.; Ormsbee, P.C.; Barnett, J.; Irvine, K.M. Evidence of regionwide bat population decline from long-term monitoring and Bayesian occupancy models with empirically informed priors. *Ecol. Evol.* **2019**, 1– 11, doi:10.1002/ece3.5612.
- Rosenberg, K. V., A. M. Dokter, P. J. Blancher, J. R. Sauer, A. C. Smith, P. A. Smith, J. C. Stanton, A. Panjabi , L. Helft , M. Parr, and P. P. Marra. 2019. Decline of the North American avifauna. Science 10.1126/science.aaw1313 (2019).
- Runge, C. A., T. G. Martin, H. P. Possingham, S. G. Willis, and R. A. Fuller. 2014. Conserving mobile species. Frontiers in Ecology and Environment 12(7): 395–402, doi:10.1890/130237.
- Sabo, A. M., N. D. G. Hagemeyer, A. S. Lahey, and E. L. Walters. 2016. Local avian density influences risk of mortality from window strikes. PeerJ 4:e2170; DOI 10.7717/peerj.2170
- San Francisco Planning Department. 2011. Standards for bird-safe buildings. San Francisco Planning Department, City and County of San Francisco, California.
- Schneider, R. M., C. M. Barton, K. W. Zirkle, C. F. Greene, and K. B. Newman. 2018. Year-round monitoring reveals prevalence of fatal bird-window collisions at the Virginia Tech Corporate Research Center. *PeerJ* 6:e4562 <u>https://doi.org/10.7717/ peerj.4562</u>
- Sheppard, C., and G. Phillips. 2015. Bird-friendly building design, 2nd Ed., American Bird Conservancy, The Plains, Virginia.
- Shuford, W. D., and T. Gardali, [eds.]. 2008. California bird species of special concern: a ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California.
- 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.
- Smallwood, K. S. and M. L. Morrison. 2008. Habitat Assessment for California Red-Legged Frog at Naval Weapons Station, Seal Beach, Detachment Concord, California. Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California.

- 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., 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.
- Taylor, R. A. J., and L. R. Taylor. 1979. A behavioral model for the evolution of spatial dynamics. Pp. 1-28 in R. M. Anderson, B. D. Turner, and L. R. Taylor (editors). Population dynamics. Blackwell Scientific Publications, Oxford.
- Taylor, P. D., S. A. Mackenzie, B. G. Thurber, A. M. Calvert, A. M. Mills, L. P. McGuire, and C. G. Guglielmo. 2011. Landscape movements of migratory birds and bats reveal an expanded scale of stopover. PlosOne 6(11): e27054. doi:10.1371/journal.pone.0027054.
- Warnock, N. 2010. Stopping vs. staging: the difference between a hop and a jump. Journal of Avian Biology 41:621-626.
- Yahner, R. H. 1982. Avian nest densities and nest-site selection in farmstead shelterbelts. The Wilson Bulletin 94:156-175.
- Young, H. 1948. A comparative study of nesting birds in a five-acre park. The Wilson Bulletin 61:36-47.



**Photo 11.** Western bluebird on the project site, 11 February 2021.

## Summary from Dr. Sawn Smallwood, Ecologist Site visit and Scott Ranch RDEIR Review, February 28, 2021

The RDEIR's characterization of baseline conditions and its analysis of potential project impacts to vertebrate wildlife are outdated, incomplete and flawed. The RDEIR does not provide the most basic information the reader needs to know about the surveys listed on pages 4.3-2. Decision-makers and the public need to know how much credibility to assign the surveys.

- Most of the surveys for biological resources were performed in 2003-2005. Wildlife populations tend to shift locations every generation or so, and given all the other changes to the landscape, to species' status, and to survey protocols, surveys performed nearly two decades ago are out of date.
- Multiple surveys and assessments performed for biological resources on the project site, most nearly two decades ago, but a few assessments more recently. Burrowing owl surveys in 2013 did not meet the standards of the CDFW (2012) guidelines
- The RDEIR should provide a detailed account of which species were seen and in what levels of abundance, what members of each species were doing, and in what environmental context.

## **California Red-Legged Frog**

Measure BIO-1a – Permits from resource agencies. It goes without saying that take permits are required prior to construction, but acquisition of permits does not necessarily ensure impacts would be adequately mitigated. Acquisition of permits is more of a required step than it is a mitigation measure.

Measure BIO-1b – Final California Red-Legged Frog Mitigation Plan. It would help to provide more details related to this plan, because this plan would be critical to mitigating impacts to California red-legged frog, and because members of the public could potentially contribute to a better plan. As formulated, this measure defers the plan development to a time after RDEIR certification, thereby bypassing meaningful public input.

However, I did not see any indication that loss of upland habitat of California red-legged frog would be mitigated. Nor did I see any compensatory mitigation for other species.

## California Tiger Salamander

The RDEIR presents a series of flawed and misleading conclusions regarding California tiger salamander. The RDEIR gives the false impression that it would be impossible for California tiger salamander to occur on site. Essentially, the RDEIR gives up on conserving California tiger salamander in the project area, which is the opposite of how risk assessment should proceed for rare and precious resources in the face of uncertainty.

## **Special Status Birds**

The RDEIR assesses impacts to only 10 (22%) of the 45 potentially occurring special-status species of birds (Table 2), thereby neglecting 35 (78%) special-status species of birds.

- The RDEIR states that the following special status species of birds are unlikely on the site: Golden eagle, northern harrier, peregrine falcon, prairie falcon.
- Photographed in Helen Putnam Regional Park: golden eagle (2 February 2021), northern harrier (23 November 2019), prairie falcon (1 February 2021—hunting western bluebirds). A peregrine falcon was recently seen east of the site in Petaluma.
- The RDEIR inappropriately absolves the project of any responsibility over what adverse impacts to Bald eagles or Merlin and ferruginous hawks, who are well known to migrate to the area in winter, and also well known to migrate north for breeding in spring and summer. No mention is made of what would befall these species should the project destroy the increasingly diminishing forage at the southern end of their winter migration.
- No biologist has yet to survey the grassland nor the trees for bird nests, nor for bird behaviors indicative of nesting. It is therefore inappropriate of the RDEIR to imply that bird nests are absent simply because they were not seen in reconnaissance-level surveys. Those surveys were not designed to record bird nests, so the outcomes of those surveys do not bear on any analysis of whether birds nest on site. The reader needs to know that reconnaissance-level surveys are not surrogates for detection surveys.
- According to the RDEIR (p. 4.3-21), western red bat is not currently recognized as a species of special concern by the California Department of Fish and Wildlife. But it is so recognized. Under the California Fish and Game Code, western red bat is a California Species of Special Concern.
- The RDEIR does not estimate the loss in bird nests and productivity that would result from the project.

## Wildlife Corridor

The focus of discussion on wildlife movement corridors implies that a project's interference with a corridor is the only means by which a project can interfere with wildlife movement. But this standard would be 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.

#### Adverse Effects of residential development

The RDEIR addresses none of the adverse effects of residential development that are additional to habitat loss, including from automobile traffic, glass windows, and outdoor house cats that come with the residents of new development.

- The impacts of the project's added road traffic on special-status species of wildlife, including to animals that would be killed far from the project's construction footprint; they would be crossing roads traversed by cars originating from or headed toward the project site.
- Vehicle collisions have accounted for the deaths of many thousands of reptile, amphibian, mammal, bird, and arthropod fauna, and the impacts have often been found to be significant at the population level.
- Window collisions are often characterized as either the second or third largest source or human-caused bird mortality. Given the predicted level of bird-window collision mortality, and the absence of proposed mitigation in the RDEIR, it is my opinion that the project would result in potentially significant adverse biological impacts.
- The RDEIR 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

# Comparison of Scott Ranch 4.3 Biological Resources with Analysis from Dr. Sawn Smallwood, Ecologist

https://cityofpetaluma.org/documents/rdeir-4-3-biological-resources/

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
Accompanied by Sean Micallef of Zentner	Shawn Smallwood visited the site of the proposed project for 3 hours on 11 February
Planning & Ecology	2021.
	P. 3
	Detected 43 species of vertebrate wildlife, 6 of which were special-status species.
	<b>Table 1.</b> Species of wildlife I observed during 3 hours on 11 February 2021.
	P. 6
	The RDEIR's characterization of baseline conditions and its analysis of potential project impacts to vertebrate wildlife are outdated, incomplete and flawed.
	P.6
	Since the 2013 DEIR, the status of multiple species has changed, as have survey
	protocols for special-status species, and as has our understanding of anthropogenic
	impacts to wildlife.
p. 43-41 Mitigation Measure BIO-1c is set forth	P. 6
below to restrict tree removal during nesting	We now know that the takings of habitat here and the takings there, along with the
season, and require that a qualified biologist	usual assurances of insignificant impacts or of mitigated impacts, have resulted in a
conduct preconstruction surveys if tree and	29% loss of total bird abundance across North American over the last half-century
grubbing is initiated during the nesting. season.	(Rosenberg et al. 2019).
With implementation of Mitigation Measure BIO-	
1c, project's impact on nesting birds would be	
less than significant. With implementation of	
Mitigation Measure BIO-1c, project's impact on	
nesting birds would be less than significant.	
Not addressed in RDEIR	P.6
	We also now know – and can quantify – the adverse effects of residential
	development that are additional to habitat loss, including from automobile traffic,
	glass windows, and outdoor house cats that come with the residents of new
	development. The RDEIR addresses none of these potential impacts.

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021	
<ul> <li>p. 43-2</li> <li>Biological Resources, Existing Conditions by Zander Associates (2003).</li> <li>California Red-legged Frog Protocol Surveys by Wildlife Research Associates (2003)</li> <li>Focused Special-Status Plant Survey by Zander Associates (2004c)</li> </ul>	p. 6 According to the RDEIR, most of the surveys for biological resources were performed in 2003-2005. Given that wildlife populations tend to shift locations every generation or so (Taylor and Taylor 1979), and given all the other changes to the landscape, to species' status, and to survey protocols, surveys performed nearly two decades ago are out of date.	
p. 4.3-4 Burrowing Owl, Badger and Fossorial Mammal Survey Results by Zentner and Zentner (2013).	p. 6-7 Even though burrowing owl surveys were performed later – in 2013 – those surveys did not meet the standards of the CDFW (2012) guidelines, which specify surveys separated by at least three weeks, including 1 survey prior to 15 April and the final survey between 15 June and 15 July. The surveys performed in 2013 did not meet the seasonal survey date thresholds.	
No list of species in RDEIR	p. 7 The RDEIR lists multiple surveys and assessments performed for biological resources on the project site, most nearly two decades ago, but a few assessments more recently. However, only Micallef (2018) is provided with the RDEIR. Other than maps of broad vegetation cover categories, nowhere in the RDEIR can I find a list of species detected by those who performed site visits.	
p. 4.3-2 Biological Resources, Existing Conditions by Zander Associates (2003). Request for Jurisdictional Determination by Zander Associates (2003).	p. 7 The RDEIR does not provide the most basic information the reader needs to know about the surveys listed on pages 4.3-2. Provision of the reports of field reconnaissance surveys would have been helpful, assuming there were reports. The dates of the reconnaissance surveys were reported in the 2013 DEIR, but neither the DEIR nor the RDEIR identifies the biologists who performed the surveys. The RDEIR should report when each survey began, how long it lasted, and how it was performed. The RDEIR should also provide a detailed account of which species were seen and in what levels of abundance, what members of each species were doing, and in what environmental context. Decision-makers and the public need to know how much credibility to assign the surveys.	
p. 4.3-19 The habitat assessment for CTS in 2003 concluded that the stock pond on the project site provides suitable aquatic breeding habitat for this species, but that because the site is located	p. 7 The RDEIR presents a series of flawed and misleading conclusions regarding the occurrence potentials of special-status species of wildlife. For example, when discussing the occurrence potential of California tiger salamander (p. 4.3-19), the RDEIR says "because the site is located outside the known potential range the	

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
outside the known potential range the species is not believed to be present (Wildlife Research Associates 2003).	species is not believed to be present." The appropriate wording would be 'the site is located outside the currently known range' By adding the word <i>potential</i> , the RDEIR gives the false impression that it would be impossible for California tiger salamander to occur on site.
), but all other known occurrences are over four miles north or west of the project site, and generally separated by the intensively developed area of central Petaluma and suburban residential development of the western hills, severely limiting the potential for any future dispersal to the project site	Considering that California tiger salamanders have been documented to disperse 2.2 km from breeding ponds (Orloff 2011), the 4 miles reported by the RDEIR as the distance to the nearest sites recorded to host California tiger salamanders does not seem insurmountable. The RDEIR claims that California tiger salamanders at known locations north and west of the site are "generally separated" from the project site by residential development, but aerial imagery shows sufficient open space north and west of the project site for tiger salamanders to disperse and for larger vertebrate wildlife to vector egg masses. Essentially, the RDEIR gives up on conserving California tiger salamander in the project area, which is the opposite of how risk assessment should proceed for rare and precious resources in the face of uncertainty (National Research Council 1986).

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
Table 4.3-1, p. 4.3-18	p. 7-8
Special-status species of bird potentially occur Cooper's hawk Sharp-shinned hawk White-tailed kite Loggerhead strike Special-status species of bird unlikely to occur Golden eagle Burrowing owl Northern harrier California horned lark	In another example, the RDEIR (p. 4.3-20) reports "Several special-status birds have varying potential to frequent the project site" Actually, the level of variation was binary: the RDEIR reported 6 special-status species of bird to be unlikely to occur and 4 to potentially occur. According to the RDEIR, the project site poses a bleak setting for special-status species of bird. Further, it claims that nesting habitat is generally unavailable and that no nesting was observed during reconnaissance visits. These conclusions are misleading. The RDEIR assesses impacts to only 10 (22%) of the 45 potentially occurring special-status species of birds. (Table 2), thereby neglecting 35 (78%) special-status species of birds. Of the 10 species it does assess, its conclusions do not comport with geographic range overlaps of the project site, with known habitat relationships, and with detection records of birds in the area (Table 2). Regarding its conclusion of no nesting habitat, the RDEIR falsely implies that birds do not nest on the ground and do not nest in the trees that are slated for removal.
<ul> <li>Prairie falcon</li> <li>Peregrine falcon</li> <li>p. 4.3-20</li> <li>However, nesting habitat is generally absent for most of these species or no evidence of nesting activity was observed during field reconnaissance surveys of the site</li> <li>Table 4.3-1, p. 4.3-18</li> <li>Golden eagle - Habitat Characteristics: Open mountains, foothills, and canyons</li> </ul>	p. 8 Nor do the occurrence likelihoods in the RDEIR comport with the habitat characterizations of each species – habitat characterizations that appear in the same lines as the occurrence likelihood determinations in Table 4.3-1 of the RDEIR. (The same Table that appeared in the 2013 DEIR.) For example, golden eagle habitat is said to be "Open mountains, foothills, and canyons." By open, I assume the RDEIR means treeless, but the habitat characterization is cursory and vague. I have studied golden eagles for many years, and since 2013 I have tracked 35 golden eagles via GPS telemetry. Our telemetered golden eagles use many types of environment from Canada to Mexico, including the type of environment at the project site. The highest golden eagle breeding density in the world occurs just north of the Altamont Pass in Contra Costa County, where patches of grassland and woodland are interspersed similar to the area of the project site. Based on my experience, there is no reason not to expect golden eagles in the project area. In fact, a golden eagle was photographed in Helen Putnam Regional Park as recently as 2 February 2021. The proposed project site provides habitat for golden eagle, which undoubtedly uses the site.

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
Table 4.3-1, p. 4.3-18 Burrowing owl - Habitat Characteristics: Open grassland and fields, farms, and ruderal areas p. 4.3-20 However, ground squirrel burrows necessary for nesting by burrowing owl were absent from the project site and there are no occurrences of burrowing owl reported in the project site vicinity by the CNDDB, which does monitor known nesting colonies. This species was not observed during detailed surveys conducted by in 2013 (Zentner and Zentner 2013).	p. 8 In the case of burrowing owl, the RDEIR characterizes habitat as "Open grassland and fields, farms, and ruderal areas," before determining the species is unlikely to occur at the site even though the site conditions match the RDEIR's habitat characterization. In the body of text, the RDEIR provides two explanations for this discordant determination. The first is that "ground squirrel burrows necessary for nesting by burrowing owl were absent from the project site." I have studied burrowing owls even longer than I have studied golden eagles, and along the way I have recorded hundreds of burrowing owl nest sites, including 800 at one of my project sites alone (Smallwood et al. 2013). Whereas burrowing owls are more likely to nest among burrow complexes of ground squirrels, they do not require ground squirrel burrows. This is well published in the scientific literature. I have recorded nest sites in metal culverts, rock piles, caves, the cavity of a downed electric distribution pole, under overhangs of concrete and asphalt pads, and under concrete half-round (Smallwood and Morrison 2018). Other investigators have reported burrowing owls in nest burrows of their own construction, sometimes starting with pocket gopher burrows. The first explanation given for why burrowing owls are unlikely on site is inaccurate.
	The second reason the RDEIR gives for why burrowing owls are unlikely on site is that no CNDDB records were found of burrowing owls nesting on site. This is a misuse of CNDDB. Whereas consulting CNDDB is fine for confirming presence of a species, it is inappropriate for determining absence and hence narrowing a list of potentially occurring species. CNDDB is voluntary and not based on scientific sampling or equal access to properties. The limitations of CNDDB are well-known, and are summarized in a warning presented by CDFW on the CNDDB web site (https://www.wildlife.ca.gov/ Data/CNDDB/About): "We work very hard to keep the CNDDB and the Spotted Owl Database as current and up-to-date as possible given our capabilities and resources. However, we cannot and do not portray the CNDDB as an exhaustive and comprehensive inventory of all rare species and natural communities statewide. Field verification for the presence or absence of sensitive species will always be an important obligation of our customers" The RDEIR needs to revise its analysis of potential project impacts to burrowing owl. As a first step, burrowing owl surveys should be performed to the standards of CDFW (2012).

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
Table 4.3-1, p. 4.3-18 Northern harrier- Habitat Characteristics: Marshes, fields, and grassland	p. 9 In another example of occurrence determinations not comporting with habitat characterizations, the RDEIR determines northern harrier as unlikely. The habitat is described as "Marshes, fields, and grassland." The project site is largely covered in grassland, so why then does the RDEIR determine the species to be unlikely? I have recorded northern harriers in grasslands hundreds of times, if not thousands of times. I studied northern harriers in grasslands for 21 years. I have recorded northern harrier nests in grasslands. As recently as 23 November 2019, a northern harrier was photographed in Helen Putnam Regional Park and the photo posted on eBird. The analysis of potential project impacts to northern harrier needs to be revised in the RDEIR.
Table 4.3-1, p. 4.3-18 California horned lark - Habitat Characteristics: Open habitat with sparse cover	p. 9 According to the RDEIR, horned lark is unlikely to occur at the project site because its habitat consists of "Open habitat with sparse cover." The RDEIR, however, describes only a narrow part of the species' habitat. Horned larks occur in greatest abundance in grasslands, which I can readily document with hundreds if not thousands of my own data. The horned lark is a grassland species, and nests in grasslands typical of the grassland of the project site.
<ul> <li>Table 4.3-1, p. 4.3-18</li> <li>Prairie falcon &amp; Peregrine falcon - Habitat Characteristics: Canyons, mountains, open grassland</li> <li>p. 4.3-20</li> <li>Suitable nesting habitat for prairie falcon, peregrine falcon, and golden eagle, which may occasionally forage in the vicinity, is absent from the site because of the lack of suitable cliff faces or ledges used by the falcons and the proximity to existing development which limits the suitability for golden eagle nesting</li> </ul>	p. 9 Similarly, the RDEIR pigeonholes prairie falcons and peregrine falcons into unrealistically narrow portions of the environment, in this case to "Canyons, mountains, open grassland." The RDEIR adds, "Suitable nesting habitat for prairie falcon, peregrine falcon, and golden eagle, which may occasionally forage in the vicinity, is absent from the site because of the lack of suitable cliff faces or ledges used by the falcons and the proximity to existing development which limits the suitability for golden eagle nesting." I have studied these species for years. I have recorded them in many types of environment, and not just in canyons, mountains and open grassland. I have recorded occurrences of these species across California, and I have observed and quantified their flight behaviors over grasslands, oak woodlands and groves of California buckeye. I have recorded nest sites of these species, which have sometimes been on cliff faces as reported in the RDEIR, but not always. Golden eagles often nest in trees. Peregrine falcons often nest on buildings. Prairie falcons nest opportunistically, including in the nacelles of derelict wind turbines. These species of falcon occur where birds are abundant, which means they likely use the site of the proposed project. According to eBird, a peregrine falcon was recently seen east of the site, in Petaluma, and a prairie falcon was observed hunting

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	western bluebirds in Helen Putnam Regional Park on 1 February 2021. The analysis of potential project impacts to peregrine and prairie falcons needs to be revised in the RDEIR.
p. 4.3-20 Most of these may forage to varying degrees in the grasslands and woodlands of the site vicinity. However, nesting habitat is generally absent for most of these species or no evidence of nesting activity was observed during field reconnaissance surveys of the site	p. 10 As part of its explanation for why the project would not cause significant impacts to golden eagle, peregrine falcon and prairie falcon, the RDEIR implies that impacts are limited to "nesting habitat." The RDEIR separates foraging and perching habitat from nesting habitat, and then claims the former types of habitat occur on the project site, but not the latter type. This separation of habitat types is contrived for convenience to minimalize conclusions of potential project impacts. In reality, there is only <i>habitat</i> , and all of it is critical for nest success and persistence of the species. No animal can successfully breed without having acquired sufficient forage and effective refuge during both the breeding season and non-breeding season and both along migration routes and at migration destinations. Any animal coming up short will either not have survived to nest in the next season or it will lack the energy stores and physical conditioning to successfully nest. For the RDEIR to acknowledge that the site provides foraging and perching opportunities is the same as to acknowledge that the site provides resources that are critical to nest success. The question over whether nest structures occur on site cannot be answered soundly by mere speculation, but only by experience and actual directed surveys.
p. 4.3-20 Other raptors, such as ferruginous hawk, merlin, and bald eagle may be infrequent winter migrants and uncommon aerial transients that may forage and roost in the project vicinity, but essential breeding habitat for these species is absent.	p. 10 The RDEIR continues its misdirection by claiming, "Other raptors, such as ferruginous hawk, merlin, and bald eagle may be infrequent winter migrants and uncommon aerial transients that may forage and roost in the project vicinity, but essential breeding habitat for these species is absent." Bald eagles will use the site year-round, mostly for foraging but also for stop-over opportunity during long- distance flights. Merlin and ferruginous hawks are well known to migrate to the area in winter, and they are also well known to migrate north for breeding in spring and summer. These species do not breed in the project area, but as I explained in the preceding paragraph, migratory species cannot successfully breed if they cannot successfully forage at their migratory destinations. It is, in fact, essential for merlin and ferruginous hawk to find sufficient forage in the project area so that they can breed at the other end of their migration route. The RDEIR inappropriately absolves the project of any responsibility over what adverse impacts would befall these species
Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
---	--
	should the project destroy the increasingly diminishing forage at the southern end of their winter migration.
<ul> <li>p. 4.3-2</li> <li>The site reconnaissance and review provided information on general resources in the area</li> <li>p.4.3-6</li> <li>The additional reconnaissance surveys were conducted on August 30 and December 2, 2004.</li> <li>Follow-up reconnaissance surveys were conducted on June 24 and August 3, 2009, then again on September 29 and October 2, 2011, and then in April, September, and October 2015. A field reconnaissance survey was conducted on May 21, 2019, to verify that field conditions have not changed considerably over the past four years.</li> </ul>	p. 11 The claim of no nesting habitat is also unfounded, as noted above, because it is based on the outcome of reconnaissance-level surveys. The surveys performed at the site were not detection surveys for breeding birds. The closest that any of the surveys came to breeding bird surveys was the burrowing owl survey, but that survey was focused only on burrowing owls and fell short of the CDFW (2012) breeding-season survey standards. No survey was otherwise directed toward breeding birds. Although springtime surveys were directed toward plants, frogs, burrowing owls and badgers, none were directed toward birds. As far as I can determine from the RDEIR, no biologist has yet to survey the grassland nor the trees for bird nests, nor for bird behaviors indicative of nesting. It is therefore inappropriate of the RDEIR to imply that bird nests are absent simply because they were not seen in reconnaissance-level surveys. Those surveys were not designed to record bird nests, so the outcomes of those surveys do not bear on any analysis of whether birds nest on site.
No detection surveys performed.	p. 11 Detection surveys capitalize on species' attributes that predispose them to detection, but they also rely on sufficient survey effort to account for the stochastic nature of individuals of a species being both available and detectable at the place under surveillance. Detection surveys are also used for supporting absence determinations, for improving the efficacy of preconstruction surveys, and for supporting the formulation of appropriate mitigation measures. The reader needs to know that reconnaissance-level surveys are not surrogates for detection surveys.
p. 4.3-21 No bats were actually encountered during the day-time surveys, and it is uncertain what species may use the buildings for roosting, although observed fecal pellets were of more common species such as myotis (Myotis sp.) and Brazilian free-tailed bat (Tadarida brasiliensis).	p. 11 The assessments performed for bats in 2004 and 2014 were performed without the aid of any means to actually detect bat activity other than looking for bat guano under barns and sheds. Based on what I can discern from the RDEIR, no use was made of acoustic detectors, thermal-imaging cameras or mist nets. An assessment without these tools is an unreliable foundation for determining habitat suitability of bats. Without these tools of detection, the assessment cannot rule out the occurrences of individual species.

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
p. 4.3-21 While the western red bat and western yellow bat are currently not recognized as SSC species by the CDFW,	p. 11 According to the RDEIR (p. 4.3-21), western red bat is not currently recognized as a species of special concern by the California Department of Fish and Wildlife. But it is so recognized. Under the California Fish and Game Code, western red bat is a California Species of Special Concern.
	p. 13 – Referring to Table 2 in the Smallwood report (p. 14-16) Overall, the RDEIR founds its analysis of occurrence likelihoods of special-status species on a very cursory, inadequate review of the available data. The RDEIR should also make use of eBird, iNaturalist, and local knowledge of wildlife occurrences. According to eBird and iNaturalist records, 66 special-status species of vertebrate wildlife have been recently detected nearby or within the region of the project site, or their geographic ranges overlap the site (Table 2). At the site, I detected 6 of the special-status species listed in Table 2, and this outcome required only 3 hours of my time. I am confident that with more survey time, including surveys during other times of year and using additional methods, I would also detect multiple other species including northern harrier, merlin, white-tailed kite, yellow warbler, and multiple species of bats. Multiple special-status species of bats likely roost in the trees and old structures on site (Kunz and Lumsden 2003). A larger effort is needed to inform the public and decision-makers about the potential project impacts to wildlife and how to mitigate them.
Not addressed in RDEIR	<ul> <li>p. 17</li> <li>Habitat Loss</li> <li>The RDEIR does not estimate the loss in bird nests and productivity that would result from the project. The project would contribute to an ongoing trend of declining birds in North America due to habitat loss and habitat fragmentation (Rosenberg et al. 2019). Habitat loss not only results in the immediate numerical decline of wildlife, but also in permanent loss of productive capacity.</li> <li>Given that the homes would be developed upslope from Kelly Creek, it would destroy more grassland than woodland or wetland. A reasonable estimate would be that total avian nest density on the development area would be a third of that quantified at the Young (1948) and Yahner (1982) study sites, or about 11.4 nests per acre per year across 22.1 acres of permanent impacts.</li> </ul>

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	Assuming a total breeding density of only a third of the mean between the Young (1948) and Yahner (1982) study sites, 252 nest sites (11.4 nests/acre/year $\times$ 22.1 acres) would be a great many nest sites. The loss of this many nest sites would qualify as a significant project impact that has not been addressed in the RDEIR.
	The reproductive capacity of the site is lost. 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 731 fledglings per year. After 100 years and further assuming an average bird generation time of 5 years, the lost capacity of both breeders and annual fledgling production would total <b>83,180 birds</b> {(nests/year × chicks/nest × number of years) + (2 adults/nest × nests/year) × (number of years ÷ years/generation)}. The project's denial to California of 83,180 birds over the first century following construction would qualify as a significant and substantial impact. This impact is not been addressed in the RDEIR, nor does the RDEIR provide any compensatory mitigation for it. The RDEIR should be revised to appropriately analyze the project's impacts from habitat loss. The example analysis I provide above should be extended to other taxa including to herpetofauna and mammals.
p. 325	p. 17 WILDLIEF MOVEMENT
The drainages tend to serve as movement corridors for larger wildlife species, such as deer, raccoon, and grey fox, particularly where dense growth provides protective cover and retreat habitat.	I spent nearly 1,000 hours behind a FLIR T620 thermal-imaging camera fitted with an 88.9 mm telephoto lens to observe both volant and terrestrial wildlife among many stations across a large study area. I recorded the nocturnal movement patterns of many deer, raccoons, gray foxes and other species such as American badger. I was particularly interested in learning whether and to what degree mammals moved along drainages and other linear features of the environment. I found that many mammals did follow such linear features, but many did not. Many of the large mammals that I followed moved across wide valleys and broad slopes, where their encounter frequencies with other large mammals were minimized. Animals moving along narrow reaches of the landscape, such as along drainages, are more likely to encounter other large mammals, some of which are larger and more dangerous. Therefore, the RDEIR's characterization of Kelly Creek and its tributary as being the only possible means for large mammals to move across the site is unfounded and misleading.

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	The focus of discussion on wildlife movement corridors implies that a project's interference with a corridor is the only means by which a project can interfere with wildlife movement. But this standard would be 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 all the more important for wildlife movement because it provides opportunities for stopover and staging of volant wildlife during migration, and for dispersal and home range patrol while opportunities nearby diminish as anthropogenic uses expand (Warnock 2010, Taylor et al. 2011, Runge et al. 2014). The project would cut wildlife off from stopover and staging opportunities, forcing volant wildlife to travel even farther between remaining patches of stopover refugia. The project would interfere with wildlife movement in the region. The RDEIR needs to be revised to analyze this type of impact.
Not addressed in the RDEIR	<ul> <li>p. 18</li> <li>TRAFFIC IMPACTS ON WILDLIFE</li> <li>A shortfall of the RDEIR is its failure to analyze the impacts of the project's added road traffic on special-status species of wildlife, including to animals that would be killed far from the project's construction footprint; they would be crossing roads traversed by cars originating from or headed toward the project site. The project's impacts to wildlife would add to ongoing traffic impacts, and would reach as far from the project as cars and trucks travel to or from the project site. Evidence of such ongoing impacts was readily visible during my site visit, when I found a road-killed striped skunk on Windsor Drive between the two parcels where new homes are proposed.</li> <li>Vehicle collisions have accounted for the deaths of many thousands of reptile, amphibian, mammal, bird, and arthropod fauna, and the impacts have often been found to be significant at the population level (Forman et al. 2003). Across North America traffic impacts have taken devastating tolls on wildlife (Forman et al. 2003).</li> </ul>
	In Canada, 3,562 birds were estimated killed per 100 km of road per year (Bishop and Brogan 2013), and the US estimate of avian mortality on roads is 2,200 to 8,405

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	deaths per 100 km per year, or 89 million to 340 million total per year (Loss et al. 2014). Local impacts can be more intense than nationally.
	In a recent study of traffic-caused wildlife mortality, investigators found 1,275 carcasses of 49 species of mammals, birds, amphibians and reptiles over 15 months of searches along a 2.5 mile stretch of Vasco Road in Contra Costa County, California (Mendelsohn et al. 2009). Using carcass detection trials performed on land immediately adjacent to the traffic mortality study (Brown et al. 2016) to adjust the found fatalities for the proportion of fatalities not found due to scavenger removal and searcher error, the estimated traffic-caused fatalities was 12,187. This fatality estimate translates to a rate of 3,900 wild animals per mile per year killed. In terms comparable to the national estimates, the estimates from the Mendelsohn et al. (2009) study would translate to 243,740 animals killed per 100 km of road per year, or 29 times that of Loss et al.'s (2014) upper bound estimate and 68 times the Canadian estimate. An analysis is needed of whether increased traffic generated by the project site would similarly result in local impacts on wildlife.
	Increased use of existing roads would increase wildlife fatalities (see Figure 7 in Kobylarz 2001). Wildlife roadkill is not randomly distributed, and so it can be predicted. Causal factors include types of roadway, human population density, and temperature (Chen and Wu 2014), as well as time of day and adjacency and extent of vegetation cover (Chen and Wu 2014, Bartonička et al. 2018), and intersections with streams and riparian vegetation (Bartonička et al. 2018). For example, species of mammalian Carnivora are killed by vehicle traffic within 0.1 miles of stream crossings >40 times other than expected (K. S. Smallwood, 1989-2018 unpublished data). Reptiles are killed on roads where roadside fences end or where fences are damaged (Markle et al. 2017). There has even been a function developed to predict the number of golden eagles killed along the road, where the function includes traffic volume and density of road-killed animals available for eagles to scavenge upon (Lonsdorf et al. 2018). These factors also point the way toward mitigation measures, which should be formulated in a revised RDEIR.
Not addressed in the RDEIR	p. 19 Predicting project-generated traffic impacts to wildlife

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	The RDEIR predicts 550,858 vehicle miles traveled per year (VMT) as a result of the project. The project's impacts to wildlife can be predicted to a reasonable degree of accuracy based on what scientific monitoring has learned from collision impacts of moving obstacles elsewhere in the lower atmosphere. One type of impact to consider is blunt-force injury and death caused by collisions with the front ends of vehicles. Assuming the average car frontal surface area is $3.08 \text{ m}^2$ (average height of $1.7 \text{ m}$ and average wheelbase of $1.81 \text{ m}$ ), then the predicted average annual volume of airspace intercepted by cars would be $3.08 \text{ m}^2 \times 886,330,522 \text{ m} (1,609 \text{ m/mile} \times 550,858 \text{ miles}) = 2729,898,008 \text{ m}^3$ .
	This volume of intercepted airspace would be equivalent to the intercepted winds of 32.2 2.3-MW wind turbines each of which in the Altamont Pass averages about 41 bird fatalities per year (my estimates of fatalities based on data in H.T. Harvey & Associates 2020, Great Basin Bird Observatory and H.T. Harvey & Associates 2020). Therefore, front-end, blunt-force mortality would be predicted, in this example, to tally <b>1,320 birds annually</b> . It remains unknown whether collision risk is higher or lower for vehicles traveling forward to intercept airspace as compared to wind turbines remaining stationary to intercept wind. Also, yet to be considered are the deaths and injuries to vertebrate wildlife caused by crushing under tires, broadside impacts of flying birds, and turbulence-induced injuries and deaths above, to the side, and in the wake of traveling cars. However, even if one or more assumptions prove inaccurate, the magnitude of the impact would remain very large.
	Based on my assumptions and simple calculations, the project-generated traffic would cause substantial, significant impacts to wildlife. The RDEIR needs to be revised to analyze the project-generated traffic impacts to wildlife. Mitigation measures to improve wildlife safety along roads are available and are feasible, and they need exploration for their suitability with the proposed project.
Not addressed in RDEIR	p. 21 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

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	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
	Predicting the number of bird collisions at a new project is challenging because the study of window collisions remains in its early stages. Collision rate metrics have varied, including collisions per building per year and collisions per m <sup>2</sup> of window. The problem with the temporal factor in the collision rate metrics has been monitoring time spans varying from a few days to 10 years, and even in the case of the 10-year span, monitoring was largely restricted to spring and fall migration seasons. Short-term monitoring during one or two seasons of the year cannot represent a 'year,' but monitoring has rarely spanned a full year. Using 'buildings' in the metric treats buildings as all the same size and height, when we know they are not. Using square meters of glass in the metric treats glass as the only barrier upon which birds collide against a building's façade, when we know it is not. It also treats all glass as equal, even though we know that collision risk varies by type of glass as well as multiple factors related to contextual settings.
	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 <sup>2</sup> 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 <sup>2</sup> of glass per year (95% CI: 0.042-0.102). This average and

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	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 RDEIR does not provide sufficient structural detail to measure the extent of glass windows, but it does provide the square footage (s.f.) of floorspace of the homes. I therefore applied my own measurements of 0.0147368 m <sup>2</sup> of glass window extent per s.f. of floorspace in modern homes. Based on my measured rate, the proposed project would add 1,215 m <sup>2</sup> of new glass windows. Aplying the mean fatality rate (above) to my estimate of 1,215 m <sup>2</sup> of glass windows predicts <b>89 bird deaths per year (95% CI: 53-125)</b> . The 100-year toll from this average annual fatality rate would be 8,900 bird deaths (95% CI: 5,300-12,500). 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 RDEIR, it is my opinion that the project would result in potentially significant adverse biological impacts. The RDEIR needs to be revised 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. Existing structures can be modified or retrofitted to reduce impacts, and 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. <b>Post-construction fatality monitoring should be an essential feature of any new building project</b> .
Not addressed in RDEIR	p. 21 HOUSE CATS
	House cats would be introduced to the project site by residents of the proposed residential units. However, the RDEIR does not address the impacts of house cats on wildlife. House cats serve as one of the largest sources of avian mortality in North

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	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 RDEIR, the proposed project would add 77 new residents. The above rates applied to this number of new residents would add 34 cats, which would kill 4,270 vertebrate wildlife per year.
	House cats also contribute to downstream loading of <i>Toxoplasma gondii</i> . According to a UC Davis wildlife health research program, " <i>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 andrain 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/). According to the RDEIR, an outfall from the project would drain into Kelly Creek, which would then transport <i>Toxoplasma gondii</i> downstream where it could infect ringtail and eventually sea otters and other marine mammals. The RDEIR needs to be revised to address the impacts of house cats to wildlife.</i>
p. 4.3-35	p. 22 CUMULATIVE IMPACTS
Based on the resources present on the project site and the types of impacts anticipated, the project Applicants would be required to obtain permits and authorizations from state and federal resource agencies under the CWA, FESA and CESA, and other laws. Those permitting processes would not conclude until after the Final EIR is prepared and certified	The RDEIR characterizes cumulative effects as simply residual impacts of incomplete mitigation of project-level impacts. It asserts that environmental review for other proposed projects in the area will ensure adequate protection and management of biological resources in Petaluma. 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 RDEIR's implied standard is not the standard of analysis of cumulative effects. CEQA defines cumulative impacts, and it outlines two general approaches for

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	performing the analysis. The RDEIR needs to refrain from assuring that the environmental reviews for other projects will avoid cumulative impacts. It needs to be revised to perform an appropriate, serious analysis of cumulative impacts.
p. 4.3-42 The project Applicants shall obtain all required permits from the USFWS, CDFW, RWQCB, and USACE (e.g., 1600 series permits, 404 and 401 permits), incidental take permits and any others. The project Applicants will submit with the permit application a Wetland Mitigation Program for review and approval by the regulatory agencies. The project Applicants shall implement mitigation measures, as required by federal and state law and included in the permits, to avoid, minimize, or offset impacts to any species listed under either the state or federal Endangered Species Acts or protected under any other state or federal law. Evidence that the project Applicants have secured all required authorization from these agencies shall be submitted to the Community Development Department of the City of Petaluma prior to issuance of any grading or building permits for the project.	p. 22 <b>Measure BIO-1a - Permits from resource agencies</b> . It goes without saying that take permits are required prior to construction, but acquisition of permits does not necessarily ensure impacts would be adequately mitigated. Acquisition of permits is more of a required step than it is a mitigation measure.
p. 4.3-42 <b>Measure BIO-1b</b> A Final California Red-Legged Frog Mitigation Plan (CRLFMP) shall be prepared by a qualified wildlife biologist to minimize and mitigate potential impacts of the project on CRLF. The Final CRLFMP shall be prepared in consultation	p. 22-23 <b>Measure BIO-1b – Final California Red-Legged Frog Mitigation Plan.</b> It would help to provide more details related to this plan, because this plan would be critical to mitigating impacts to California red-legged frog, and because members of the public could potentially contribute to a better plan. As formulated, this measure defers the plan development to a time after RDEIR certification, thereby bypassing meaningful public input.

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
with and be approved by the USFWS, CDFW, USACE, and City, and shall provide for the protection, replacement, and management of habitat for CRLF affected by proposed development and public open space use on the project site. The Final CRLFMP shall be required as a condition of approval for 4.3 Biological Resources Impact Sciences, Inc. 4.3-43 Scott Ranch Project Revised Draft EIR 1222.001 December 2020 the project Tentative Map, and shall include the following components and meet the following standards:	To exemplify my point, I will offer suggestions. I have seen the stock pond where California red-legged frogs were found, and I have seen portions of Kelly Creek. I have also surveyed many miles of streams for California red-legged frogs and I have performed research on the species and formulated a conservation plan involving the management of breeding ponds on Naval Weapons Station, Seal Beach, Detachment Concord (Smallwood and Morrison 2008). The condition of the project site's stock pond reminded me of pond conditions where California red-legged frogs used to breed at Concord Naval Weapons Station. Ponds that were once used for breeding, but which ceased being used, were those that had either filled with silt or where earthen levees had failed. The stock pond on the project site is filling with silt and needs to be dredged. I suggest it be dredged in phases over two to three years. Its earthen levee also appears to be failing, as a gullied channel has appeared below its southern edge and extends all the way to Kelly Creek. The levee needs repair, and outflow from the pond needs to be better managed.
<b>p.</b> 4.3-44, 45, <b>Measure BIO-1c</b> Any active nests of raptors or other birds protected under federal and state regulations in the vicinity of construction shall be avoided until young birds are able to leave the nest (i.e., fledged) and forage on their own. Avoidance may be accomplished either by scheduling grading, vegetation removal and demolition activities during the non-nesting period (August 30 through February 14), or if this is not feasible, by	p. 23 <b>Measure BIO-1c and BIO 1d – Preconstruction surveys for bird nests and bat roosts.</b> 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 the RDEIR, 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.
conducting a preconstruction survey for raptor and other bird nests. Provisions of the pre- construction survey and nest avoidance, if necessary, shall include the following: <b>BIO 1d –</b>	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
DIV 1u -	mortality caused by collisions with windows and automobiles, predation by house

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
Measures shall be taken to avoid possible loss of	cats, and by habitat loss. Compensatory mitigation is needed for these types of
bats during project construction. Any buildings	project impacts to wildlife.
that are approved for demolition, rehabilitation,	
or relocation shall be done using the following	
provisions:	
p. 4.3-58	p. 23
BIO-4a	Measure BIO-4 – Interpretive program and management of barriers to
An interpretive program shall be developed by a	movement. Whereas I concur that a visitor interpretive program would be helpful,
qualified biologist in cooperation with the project	and management of fencing could improve movement of large mammals into and
landscape architect which serves to educate park	out of the property, these measures do not compensate for project interference with
visitors and trail users of the sensitivity of Kelly	wildlife movement in the region. The proposed measures do nothing to minimize or
Creek and D Street tributary as wildlife	compensate for impacts to movement by volant species, which are largely unaffected
movement corridors, and the importance of	of the open spaces by outdoor house cats and people. The proposed measures do
remaining outside the southern portion of the	nothing to offset the barrier effects the project would nose to nonvolant animals that
site to protect the stock pond and surrounding	would normally move between the project site and the remaining open spaces to the
uplands to CRLF and other wildlife that are	east and southeast of Windsor Drive and D Street. Interference with movement to
sensitive to human disturbance	those spaces should be regarded as additional habitat loss, for which compensatory
	mitigation is needed.
	p. 24-25
	<b>RECOMMENDED MITIGATION</b>
	Habitat Protection
	The RDFIR vaguely implies that babitat would be conserved by payment of a
	compensatory mitigation fee to be worked out later in a California Red-Legged Frog
	Mitigation Plan. However, I did not see any indication that loss of upland habitat of
	California red-legged frog would be mitigated. Nor did I see any compensatory
	mitigation for other species. Many more special-status species would be significantly
	and adversely affected by this project. Compensatory mitigation is also 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

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	strategically implemented to reduce the effects of habitat fragmentation (Smallwood 2015).
	Internal to the project, residential yards should be covered to the extent feasible by natural vegetation. Native plants attract beneficial arthropods, and the increased abundance of arthropods combined with the structures of the plants themselves attract vertebrate wildlife for both stopover and permanent residence (Burghardt et al. 2008, Goddard et al. 2009, Lerman and Warren 2011, Narango et al. 2017, Adams et al. 2020, Berthon et al. 2021). Use of native vegetation would also minimize outflows of pesticides and synthetic fertilizers from the neighborhood to Kelly Creek.
	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.
	<b>Road Mortality</b> I recommend funding one or more wildlife crossings at strategic locations along roads used by the project. I also recommend funding research into wildlife mortality caused by car traffic in the area. Traffic-calming measures would also help.
	<b>Guidelines on Home Design to Minimize Bird-Window Collisions</b> 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

Scott Ranch 4.3 Biological Resources	Dr. Shawn Smallwood, Ecologist, February 28, 2021
	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.

## Kenneth Shawn Smallwood Curriculum Vitae

3108 Finch Street Davis, CA 95616 Phone (530) 756-4598 two. Cell (530) 601-6857 <u>puma@dcn.org</u> Born May 3, 1963 in Sacramento, California. Married, father of

## **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**

<u>Repowering wind energy projects</u> 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.

<u>Test avian safety of new mixer-ejector wind turbine (MEWT)</u>. Designed and implemented a beforeafter, 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.

<u>Reduce avian mortality due to wind turbines at Altamont Pass</u>. 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.

<u>Reduce avian mortality on electric distribution poles</u>. 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.

<u>Cook et al. v. Rockwell International et al., No. 90-K-181 (D. Colorado)</u>. 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.

<u>Hanford Nuclear Reservation Litigation</u>. 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.

<u>Expert testimony and declarations</u> 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).

<u>Protocol-level surveys for special-status species</u>. 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.

<u>Conservation of San Joaquin kangaroo rat.</u> 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.

<u>Impact of West Nile Virus on yellow-billed magpies</u>. 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.

<u>Workshops on HCPs</u>. 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.

<u>Mapping of biological resources along Highways 101, 46 and 41</u>. 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.

<u>GPS mapping and monitoring at restoration sites and at Caltrans mitigation sites</u>. 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.

<u>Mercury effects on Red-legged Frog</u>. 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.

<u>Opposition to proposed No Surprises rule</u>. 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.

<u>Natomas Basin Habitat Conservation Plan alternative</u>. 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

#### Smallwood CV

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.

<u>Mountain lion track count</u>. 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.

<u>Sumatran tiger and other felids</u>. 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.

<u>Wildlife in agriculture</u>. 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.

<u>Agricultural energy use and Tulare County groundwater study</u>. 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.

<u>Pocket gopher damage in forest clear-cuts</u>. 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.

<u>Risk assessment of exotic species in North America</u>. 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 71.
- Smallwood, K. S. and M. L. Morrison. 2018. Nest-site selection in a high-density colony of burrowing owls. Journal of Raptor Research 52:454-470.
- Smallwood, K. S., D. A. Bell, E. L. Walther, E. Leyvas, S. Standish, J. Mount, B. Karas. 2018. Estimating wind turbine fatalities using integrated detection trials. Journal of Wildlife Management 82:1169-1184.
- Smallwood, K. S. 2017. Long search intervals under-estimate bird and bat fatalities caused by wind turbines. Wildlife Society Bulletin 41:224-230.
- Smallwood, K. S. 2017. The challenges of addressing wildlife impacts when repowering wind energy projects. Pages 175-187 in Köppel, J., Editor, Wind Energy and Wildlife Impacts: Proceedings from the CWW2015 Conference. Springer. Cham, Switzerland.
- May, R., Gill, A. B., Köppel, J. Langston, R. H.W., Reichenbach, M., Scheidat, M., Smallwood, S., Voigt, C. C., Hüppop, O., and Portman, M. 2017. Future research directions to reconcile wind turbine–wildlife interactions. Pages 255-276 in Köppel, J., Editor, Wind Energy and Wildlife Impacts: Proceedings from the CWW2015 Conference. Springer. Cham, Switzerland.
- Smallwood, K. S. 2017. Monitoring birds. M. Perrow, Ed., Wildlife and Wind Farms Conflicts and Solutions, Volume 2. Pelagic Publishing, Exeter, United Kingdom. <u>www.bit.ly/2v3cR9Q</u>
- Smallwood, K. S., L. Neher, and D. A. Bell. 2017. Siting to Minimize Raptor Collisions: an example from the Repowering Altamont Pass Wind Resource Area. M. Perrow, Ed., Wildlife and Wind Farms - Conflicts and Solutions, Volume 2. Pelagic Publishing, Exeter, United Kingdom. www.bit.ly/2v3cR9Q
- Johnson, D. H., S. R. Loss, K. S. Smallwood, W. P. Erickson. 2016. Avian fatalities at wind energy facilities in North America: A comparison of recent approaches. Human–Wildlife Interactions 10(1):7-18.
- Sadar, M. J., D. S.-M. Guzman, A. Mete, J. Foley, N. Stephenson, K. H. Rogers, C. Grosset, K. S. Smallwood, J. Shipman, A. Wells, S. D. White, D. A. Bell, and M. G. Hawkins. 2015. Mange Caused by a novel Micnemidocoptes mite in a Golden Eagle (*Aquila chrysaetos*). Journal of Avian Medicine and Surgery 29(3):231-237.
- Smallwood, K. S. 2015. Habitat fragmentation and corridors. Pages 84-101 in M. L. Morrison and H. A. Mathewson, Eds., Wildlife habitat conservation: concepts, challenges, and solutions. John

Hopkins University Press, Baltimore, Maryland, USA.

- Mete, A., N. Stephenson, K. Rogers, M. G. Hawkins, M. Sadar, D. Guzman, D. A. Bell, J. Shipman, A. Wells, K. S. Smallwood, and J. Foley. 2014. Emergence of Knemidocoptic 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.
- Smallwood, K. S., D. A. Bell, B. Karas, and S. A. Snyder. 2013. Response to Huso and Erickson Comments on Novel Scavenger Removal Trials. Journal of Wildlife Management 77: 216-225.
- Bell, D. A., and K. S. Smallwood. 2010. Birds of prey remain at risk. Science 330:913.
- Smallwood, K. S., D. A. Bell, S. A. Snyder, and J. E. DiDonato. 2010. Novel scavenger removal trials increase estimates of wind turbine-caused avian fatality rates. Journal of Wildlife Management 74: 1089-1097 + Online Supplemental Material.
- Smallwood, K. S., L. Neher, and D. A. Bell. 2009. Map-based repowering and reorganization of a wind resource area to minimize burrowing owl and other bird fatalities. Energies 2009(2):915-943. <u>http://www.mdpi.com/1996-1073/2/4/915</u>
- Smallwood, K. S. and B. Nakamoto. 2009. Impacts of West Nile Virus Epizootic on Yellow-Billed Magpie, American Crow, and other Birds in the Sacramento Valley, California. The Condor 111:247-254.
- Smallwood, K. S., L. Rugge, and M. L. Morrison. 2009. Influence of Behavior on Bird Mortality in Wind Energy Developments: The Altamont Pass Wind Resource Area, California. Journal of Wildlife Management 73:1082-1098.
- Smallwood, K. S. and B. Karas. 2009. Avian and Bat Fatality Rates at Old-Generation and Repowered Wind Turbines in California. Journal of Wildlife Management 73:1062-1071.
- Smallwood, K. S. 2008. Wind power company compliance with mitigation plans in the Altamont Pass Wind Resource Area. Environmental & Energy Law Policy Journal 2(2):229-285.
- Smallwood, K. S., C. G. Thelander. 2008. Bird Mortality in the Altamont Pass Wind Resource Area, California. Journal of Wildlife Management 72:215-223.

- Smallwood, K. S. 2007. Estimating wind turbine-caused bird mortality. Journal of Wildlife Management 71:2781-2791.
- Smallwood, K. S., C. G. Thelander, M. L. Morrison, and L. M. Rugge. 2007. Burrowing owl mortality in the Altamont Pass Wind Resource Area. Journal of Wildlife Management 71:1513-1524.
- Cain, J. W. III, K. S. Smallwood, M. L. Morrison, and H. L. Loffland. 2005. Influence of mammal activity on nesting success of Passerines. J. Wildlife Management 70:522-531.
- Smallwood, K.S. 2002. Habitat models based on numerical comparisons. Pages 83-95 in Predicting species occurrences: Issues of scale and accuracy, J. M. Scott, P. J. Heglund, M. Morrison, M. Raphael, J. Haufler, and B. Wall, editors. Island Press, Covello, California.
- Morrison, M. L., K. S. Smallwood, and L. S. Hall. 2002. Creating habitat through plant relocation: Lessons from Valley elderberry longhorn beetle mitigation. Ecological Restoration 21: 95-100.
- Zhang, M., K. S. Smallwood, and E. Anderson. 2002. Relating indicators of ecological health and integrity to assess risks to sustainable agriculture and native biota. Pages 757-768 *in* D.J. Rapport, W.L. Lasley, D.E. Rolston, N.O. Nielsen, C.O. Qualset, and A.B. Damania (eds.), Managing for Healthy Ecosystems, Lewis Publishers, Boca Raton, Florida USA.
- Wilcox, B. A., K. S. Smallwood, and J. A. Kahn. 2002. Toward a forest Capital Index. Pages 285-298 in D.J. Rapport, W.L. Lasley, D.E. Rolston, N.O. Nielsen, C.O. Qualset, and A.B. Damania (eds.), Managing for Healthy Ecosystems, Lewis Publishers, Boca Raton, Florida USA.
- Smallwood, K.S. 2001. The allometry of density within the space used by populations of Mammalian Carnivores. Canadian Journal of Zoology 79:1634-1640.
- Smallwood, K.S., and T.R. Smith. 2001. Study design and interpretation of Sorex density estimates. Annales Zoologi Fennici 38:141-161.
- Smallwood, K.S., A. Gonzales, T. Smith, E. West, C. Hawkins, E. Stitt, C. Keckler, C. Bailey, and K. Brown. 2001. Suggested standards for science applied to conservation issues. Transactions of the Western Section of the Wildlife Society 36:40-49.
- Geng, S., Yixing Zhou, Minghua Zhang, and K. Shawn Smallwood. 2001. A Sustainable Agroecological Solution to Water Shortage in North China Plain (Huabei Plain). Environmental Planning and Management 44:345-355.
- Smallwood, K. Shawn, Lourdes Rugge, Stacia Hoover, Michael L. Morrison, Carl Thelander. 2001. Intra- and inter-turbine string comparison of fatalities to animal burrow densities at Altamont Pass. Pages 23-37 in S. S. Schwartz, ed., Proceedings of the National Avian-Wind Power Planning Meeting IV. RESOLVE, Inc., Washington, D.C.
- Smallwood, K.S., S. Geng, and M. Zhang. 2001. Comparing pocket gopher (*Thomomys bottae*) density in alfalfa stands to assess management and conservation goals in northern California.

Agriculture, Ecosystems & Environment 87: 93-109.

- Smallwood, K. S. 2001. Linking habitat restoration to meaningful units of animal demography. Restoration Ecology 9:253-261.
- Smallwood, K. S. 2000. A crosswalk from the Endangered Species Act to the HCP Handbook and real HCPs. Environmental Management 26, Supplement 1:23-35.
- Smallwood, K. S., J. Beyea and M. Morrison. 1999. Using the best scientific data for endangered species conservation. Environmental Management 24:421-435.
- Smallwood, K. S. 1999. Scale domains of abundance among species of Mammalian Carnivora. Environmental Conservation 26:102-111.
- Smallwood, K.S. 1999. Suggested study attributes for making useful population density estimates. Transactions of the Western Section of the Wildlife Society 35: 76-82.
- Smallwood, K. S. and M. L. Morrison. 1999. Estimating burrow volume and excavation rate of pocket gophers (Geomyidae). Southwestern Naturalist 44:173-183.
- Smallwood, K. S. and M. L. Morrison. 1999. Spatial scaling of pocket gopher (*Geomyidae*) density. Southwestern Naturalist 44:73-82.
- Smallwood, K. S. 1999. Abating pocket gophers (*Thomomys* spp.) to regenerate forests in clearcuts. Environmental Conservation 26:59-65.
- Smallwood, K. S. 1998. Patterns of black bear abundance. Transactions of the Western Section of the Wildlife Society 34:32-38.
- Smallwood, K. S. 1998. On the evidence needed for listing northern goshawks (*Accipter gentilis*) under the Endangered Species Act: a reply to Kennedy. J. Raptor Research 32:323-329.
- Smallwood, K. S., B. Wilcox, R. Leidy, and K. Yarris. 1998. Indicators assessment for Habitat Conservation Plan of Yolo County, California, USA. Environmental Management 22: 947-958.
- Smallwood, K. S., M. L. Morrison, and J. Beyea. 1998. Animal burrowing attributes affecting hazardous waste management. Environmental Management 22: 831-847.
- Smallwood, K. S, and C. M. Schonewald. 1998. Study design and interpretation for mammalian carnivore density estimates. Oecologia 113:474-491.
- Zhang, M., S. Geng, and K. S. Smallwood. 1998. Nitrate contamination in groundwater of Tulare County, California. Ambio 27(3):170-174.
- Smallwood, K. S. and M. L. Morrison. 1997. Animal burrowing in the waste management zone of Hanford Nuclear Reservation. Proceedings of the Western Section of the Wildlife Society Meeting 33:88-97.

- Morrison, M. L., K. S. Smallwood, and J. Beyea. 1997. Monitoring the dispersal of contaminants by wildlife at nuclear weapons production and waste storage facilities. The Environmentalist 17:289-295.
- Smallwood, K. S. 1997. Interpreting puma (*Puma concolor*) density estimates for theory and management. Environmental Conservation 24(3):283-289.
- Smallwood, K. S. 1997. Managing vertebrates in cover crops: a first study. American Journal of Alternative Agriculture 11:155-160.
- Smallwood, K. S. and S. Geng. 1997. Multi-scale influences of gophers on alfalfa yield and quality. Field Crops Research 49:159-168.
- Smallwood, K. S. and C. Schonewald. 1996. Scaling population density and spatial pattern for terrestrial, mammalian carnivores. Oecologia 105:329-335.
- Smallwood, K. S., G. Jones, and C. Schonewald. 1996. Spatial scaling of allometry for terrestrial, mammalian carnivores. Oecologia 107:588-594.
- Van Vuren, D. and K. S. Smallwood. 1996. Ecological management of vertebrate pests in agricultural systems. Biological Agriculture and Horticulture 13:41-64.
- Smallwood, K. S., B. J. Nakamoto, and S. Geng. 1996. Association analysis of raptors on an agricultural landscape. Pages 177-190 in D.M. Bird, D.E. Varland, and J.J. Negro, eds., Raptors in human landscapes. Academic Press, London.
- Erichsen, A. L., K. S. Smallwood, A. M. Commandatore, D. M. Fry, and B. Wilson. 1996. Whitetailed Kite movement and nesting patterns in an agricultural landscape. Pages 166-176 in D. M. Bird, D. E. Varland, and J. J. Negro, eds., Raptors in human landscapes. Academic Press, London.
- Smallwood, K. S. 1995. Scaling Swainson's hawk population density for assessing habitat-use across an agricultural landscape. J. Raptor Research 29:172-178.
- Smallwood, K. S. and W. A. Erickson. 1995. Estimating gopher populations and their abatement in forest plantations. Forest Science 41:284-296.
- Smallwood, K. S. and E. L. Fitzhugh. 1995. A track count for estimating mountain lion *Felis concolor californica* population trend. Biological Conservation 71:251-259
- Smallwood, K. S. 1994. Site invasibility by exotic birds and mammals. Biological Conservation 69:251-259.
- Smallwood, K. S. 1994. Trends in California mountain lion populations. Southwestern Naturalist 39:67-72.

- Smallwood, K. S. 1993. Understanding ecological pattern and process by association and order. Acta Oecologica 14(3):443-462.
- Smallwood, K. S. and E. L. Fitzhugh. 1993. A rigorous technique for identifying individual mountain lions *Felis concolor* by their tracks. Biological Conservation 65:51-59.
- Smallwood, K. S. 1993. Mountain lion vocalizations and hunting behavior. The Southwestern Naturalist 38:65-67.
- Smallwood, K. S. and T. P. Salmon. 1992. A rating system for potential exotic vertebrate pests. Biological Conservation 62:149-159.
- Smallwood, K. S. 1990. Turbulence and the ecology of invading species. Ph.D. Thesis, University of California, Davis.

## **Peer-reviewed Reports**

- Smallwood, K. S., and L. Neher. 2017. Comparing bird and bat use data for siting new wind power generation. Report CEC-500-2017-019, California Energy Commission Public Interest Energy Research program, Sacramento, California. <u>http://www.energy.ca.gov/2017publications/CEC-500-2017-019/CEC-500-2017-019.pdf</u> and <u>http://www.energy.ca.gov/2017publications/CEC-500-2017-019/CEC-500-2017-019-APA-F.pdf</u>
- Smallwood, K. S. 2016. Bird and bat impacts and behaviors at old wind turbines at Forebay, Altamont Pass Wind Resource Area. Report CEC-500-2016-066, California Energy Commission Public Interest Energy Research program, Sacramento, California. <u>http://www.energy.ca.gov/publications/displayOneReport.php? pubNum=CEC-500-2016-066</u>
- Sinclair, K. and E. DeGeorge. 2016. Framework for Testing the Effectiveness of Bat and Eagle Impact-Reduction Strategies at Wind Energy Projects. S. Smallwood, M. Schirmacher, and M. Morrison, eds., Technical Report NREL/TP-5000-65624, National Renewable Energy Laboratory, Golden, Colorado.
- Brown, K., K. S. Smallwood, J. Szewczak, and B. Karas. 2016. Final 2012-2015 Report Avian and Bat Monitoring Project Vasco Winds, LLC. Prepared for NextEra Energy Resources, Livermore, California.
- Brown, K., K. S. Smallwood, J. Szewczak, and B. Karas. 2014. Final 2013-2014 Annual Report Avian and Bat Monitoring Project Vasco Winds, LLC. Prepared for NextEra Energy Resources, Livermore, California.
- Brown, K., K. S. Smallwood, and B. Karas. 2013. Final 2012-2013 Annual Report Avian and Bat Monitoring Project Vasco Winds, LLC. Prepared for NextEra Energy Resources, Livermore, California. <u>http://www.altamontsrc.org/alt\_doc/p274\_ventus\_vasco\_winds\_2012\_13\_avian\_bat\_monitoring\_report\_year\_1.pdf</u>

- Smallwood, K. S., L. Neher, D. Bell, J. DiDonato, B. Karas, S. Snyder, and S. Lopez. 2009. Range Management Practices to Reduce Wind Turbine Impacts on Burrowing Owls and Other Raptors in the Altamont Pass Wind Resource Area, California. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. CEC-500-2008-080. Sacramento, California. 183 pp. <u>http://www.energy.ca.gov/</u> 2008publications/CEC-500-2008-080/CEC-500-2008-080.PDF
- Smallwood, K. S., and L. Neher. 2009. Map-Based Repowering of the Altamont Pass Wind Resource Area Based on Burrowing Owl Burrows, Raptor Flights, and Collisions with Wind Turbines. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. CEC-500-2009-065. Sacramento, California. <u>http:// www.energy.ca.gov/publications/displayOneReport.php?pubNum=CEC-500-2009-065</u>
- Smallwood, K. S., K. Hunting, L. Neher, L. Spiegel and M. Yee. 2007. Indicating Threats to Birds Posed by New Wind Power Projects in California. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. Submitted but not published. Sacramento, California.
- Smallwood, K. S. and C. Thelander. 2005. Bird mortality in the Altamont Pass Wind Resource Area, March 1998 – September 2001 Final Report. National Renewable Energy Laboratory, NREL/SR-500-36973. Golden, Colorado. 410 pp.
- Smallwood, K. S. and C. Thelander. 2004. Developing methods to reduce bird mortality in the Altamont Pass Wind Resource Area. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. 500-01-019. Sacramento, California. 531 pp. <u>http://www.altamontsrcarchive.org/alt\_doc/cec\_final\_report\_08\_11\_04.pdf</u>
- Thelander, C.G. S. Smallwood, and L. Rugge. 2003. Bird risk behaviors and fatalities at the Altamont Pass Wind Resource Area. Period of Performance: March 1998—December 2000. National Renewable Energy Laboratory, NREL/SR-500-33829. U.S. Department of Commerce, National Technical Information Service, Springfield, Virginia. 86 pp.
- Thelander, C.G., S. Smallwood, and L. Rugge. 2001. Bird risk behaviors and fatalities at the Altamont Wind Resource Area a progress report. Proceedings of the American Wind Energy Association, Washington D.C. 16 pp.

## **Non-Peer Reviewed Publications**

- Smallwood, K. S. 2009. Methods manual for assessing wind farm impacts to birds. Bird Conservation Series 26, Wild Bird Society of Japan, Tokyo. T. Ura, ed., in English with Japanese translation by T. Kurosawa. 90 pp.
- Smallwood, K. S. 2009. Mitigation in U.S. Wind Farms. Pages 68-76 in H. Hötker (Ed.), Birds of Prey and Wind Farms: Analysis of problems and possible solutions. Documentation of an International Workshop in Berlin, 21st and 22nd October 2008. Michael-Otto-Institut im NABU, Goosstroot 1, 24861 Bergenhusen, Germany. <u>http://bergenhusen.nabu.de/forschung/greifvoegel/</u>

- Smallwood, K. S. 2007. Notes and recommendations on wildlife impacts caused by Japan's wind power development. Pages 242-245 in Yukihiro Kominami, Tatsuya Ura, Koshitawa, and Tsuchiya, Editors, Wildlife and Wind Turbine Report 5. Wild Bird Society of Japan, Tokyo.
- Thelander, C.G. and S. Smallwood. 2007. The Altamont Pass Wind Resource Area's Effects on Birds: A Case History. Pages 25-46 in Manuela de Lucas, Guyonne F.E. Janss, Miguel Ferrer Editors, Birds and Wind Farms: risk assessment and mitigation. Madrid: Quercus.
- Neher, L. and S. Smallwood. 2005. Forecasting and minimizing avian mortality in siting wind turbines. Energy Currents. Fall Issue. ESRI, Inc., Redlands, California.
- Jennifer Davidson and Shawn Smallwood. 2004. Laying plans for a hydrogen highway. Comstock's Business, August 2004:18-20, 22, 24-26.
- Jennifer Davidson and Shawn Smallwood. 2004. Refined conundrum: California consumers demand more oil while opposing refinery development. Comstock's Business, November 2004:26-27, 29-30.
- Smallwood, K.S. 2002. Review of "The Atlas of Endangered Species." By Richard Mackay. Environmental Conservation 30:210-211.
- Smallwood, K.S. 2002. Review of "The Endangered Species Act. History, Conservation, and Public Policy." By Brian Czech and Paul B. Krausman. Environmental Conservation 29: 269-270.
- Smallwood, K.S. 1997. Spatial scaling of pocket gopher (Geomyidae) burrow volume. Abstract in Proceedings of 44th Annual Meeting, Southwestern Association of Naturalists. Department of Biological Sciences, University of Arkansas, Fayetteville.
- Smallwood, K.S. 1997. Estimating prairie dog and pocket gopher burrow volume. Abstract in Proceedings of 44th Annual Meeting, Southwestern Association of Naturalists. Department of Biological Sciences, University of Arkansas, Fayetteville.
- Smallwood, K.S. 1997. Animal burrowing parameters influencing toxic waste management. Abstract in Proceedings of Meeting, Western Section of the Wildlife Society.
- Smallwood, K.S, and Bruce Wilcox. 1996. Study and interpretive design effects on mountain lion density estimates. Abstract, page 93 in D.W. Padley, ed., *Proceedings 5th Mountain Lion Workshop*, Southern California Chapter, The Wildlife Society. 135 pp.
- Smallwood, K.S, and Bruce Wilcox. 1996. Ten years of mountain lion track survey. Page 94 in D.W. Padley, ed. Abstract, page 94 in D.W. Padley, ed., *Proceedings 5th Mountain Lion Workshop*, Southern California Chapter, The Wildlife Society. 135 pp.
- Smallwood, K.S, and M. Grigione. 1997. Photographic recording of mountain lion tracks. Pages 75-75 in D.W. Padley, ed., *Proceedings 5th Mountain Lion Workshop*, Southern California Chapter, The Wildlife Society. 135 pp.

- Smallwood, K.S., B. Wilcox, and J. Karr. 1995. An approach to scaling fragmentation effects. Brief 8, Ecosystem Indicators Working Group, 17 March, 1995. Institute for Sustainable Development, Thoreau Center for Sustainability – The Presidio, PO Box 29075, San Francisco, CA 94129-0075.
- Wilcox, B., and K.S. Smallwood. 1995. Ecosystem indicators model overview. Brief 2, Ecosystem Indicators Working Group, 17 March, 1995. Institute for Sustainable Development, Thoreau Center for Sustainability – The Presidio, PO Box 29075, San Francisco, CA 94129-0075.
- EIP Associates. 1996. Yolo County Habitat Conservation Plan. Yolo County Planning and Development Department, Woodland, California.
- Geng, S., K.S. Smallwood, and M. Zhang. 1995. Sustainable agriculture and agricultural sustainability. Proc. 7th International Congress SABRAO, 2nd Industrial Symp. WSAA. Taipei, Taiwan.
- Smallwood, K.S. and S. Geng. 1994. Landscape strategies for biological control and IPM. Pages 454-464 in W. Dehai, ed., Proc. International Conference on Integrated Resource Management for Sustainable Agriculture. Beijing Agricultural University, Beijing, China.
- Smallwood, K.S. and S. Geng. 1993. Alfalfa as wildlife habitat. California Alfalfa Symposium 23:105-8.
- Smallwood, K.S. and S. Geng. 1993. Management of pocket gophers in Sacramento Valley alfalfa. California Alfalfa Symposium 23:86-89.
- Smallwood, K.S. and E.L. Fitzhugh. 1992. The use of track counts for mountain lion population census. Pages 59-67 in C. Braun, ed. Mountain lion-Human Interaction Symposium and Workshop. Colorado Division of Wildlife, Fort Collins.
- Smallwood, K.S. and E.L. Fitzhugh. 1989. Differentiating mountain lion and dog tracks. Pages 58-63 in Smith, R.H., ed. Proc. Third Mountain Lion Workshop. Arizona Game and Fish Department, Phoenix.
- Fitzhugh, E.L. and K.S. Smallwood. 1989. Techniques for monitoring mountain lion population levels. Pages 69-71 <u>in</u> Smith, R.H., ed. Proc. Third Mountain Lion Workshop. Arizona Game and Fish Department, Phoenix.

# Reports to or by Alameda County Scientific Review Committee (Note: all documents linked to SRC website have since been removed by Alameda County)

Smallwood, K. S. 2014. Data Needed in Support of Repowering in the Altamont Pass WRA. SRC document P284, County of Alameda, Hayward, California.

Smallwood, K. S. 2013. Long-Term Trends in Fatality Rates of Birds and Bats in the Altamont

Pass Wind Resource Area, California. SRC document R68, County of Alameda, Hayward, California.

- Smallwood, K. S. 2013. Inter-annual Fatality rates of Target Raptor Species from 1999 through 2012 in the Altamont Pass Wind Resources Area. SRC document P268, County of Alameda, Hayward, California.
- Smallwood, K. S. 2012. General Protocol for Performing Detection Trials in the FloDesign Study of the Safety of a Closed-bladed Wind Turbine. SRC document P246, County of Alameda, Hayward, California.
- Smallwood, K. S., I. Neher, and J. Mount. 2012. Burrowing owl distribution and abundance study through two breeding seasons and intervening non-breeding period in the Altamont Pass Wind Resource Area, California. SRC document P245, County of Alameda, Hayward, California.
- Smallwood, K. S 2012. Draft study design for testing collision risk of Flodesign wind turbine in former AES Seawest wind projects in the Altamont Pass Wind Resource Area (APWRA). SRC document P238, County of Alameda, Hayward, California.
- Smallwood, L. Neher, and J. Mount. 2012. Winter 2012 update on burrowing owl distribution and abundance study in the Altamont Pass Wind Resource Area, California. SRC document P232, County of Alameda, Hayward, California.
- Smallwood, S. 2012. Status of avian utilization data collected in the Altamont Pass Wind Resource Area, 2005-2011. SRC document P231, County of Alameda, Hayward, California.
- Smallwood, K. S., L. Neher, and J. Mount. 2011. Monitoring Burrow Use of Wintering Burrowing Owls. SRC document P229, County of Alameda, Hayward, California.
- Smallwood, K. S., L. Neher, and J. Mount. 2011. Nesting Burrowing Owl Distribution and Abundance in the Altamont Pass Wind Resource Area, California. SRC document P228, County of Alameda, Hayward, California.
- Smallwood, K. S. 2011. Draft Study Design for Testing Collision Risk of Flodesign Wind Turbine in Patterson Pass Wind Farm in the Altamont Pass Wind Resource Area (APWRA). <u>http://www.altamontsrc.org/alt\_doc/p100\_src\_document\_list\_with\_reference\_numbers.pdf</u>
- Smallwood, K. S. 2011. Sampling Burrowing Owls Across the Altamont Pass Wind Resource Area. SRC document P205, County of Alameda, Hayward, California.
- Smallwood, K. S. 2011. Proposal to Sample Burrowing Owls Across the Altamont Pass Wind Resource Area. SRC document P155, County of Alameda, Hayward, California. SRC document P198, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Comments on APWRA Monitoring Program Update. SRC document P191, County of Alameda, Hayward, California.

- Smallwood, K. S. 2010. Inter-turbine Comparisons of Fatality Rates in the Altamont Pass Wind Resource Area. SRC document P189, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Review of the December 2010 Draft of M-21: Altamont Pass Wind Resource Area Bird Collision Study. SRC document P190, County of Alameda, Hayward, California.
- Alameda County SRC (Shawn Smallwood, Jim Estep, Sue Orloff, Joanna Burger, and Julie Yee). Comments on the Notice of Preparation for a Programmatic Environmental Impact Report on Revised CUPs for Wind Turbines in the Alameda County portion of the Altamont Pass. SRC document P183, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Review of Monitoring Implementation Plan. SRC document P180, County of Alameda, Hayward, California.
- Burger, J., J. Estep, S. Orloff, S. Smallwood, and J. Yee. 2010. SRC Comments on CalWEA Research Plan. SRC document P174, County of Alameda, Hayward, California.
- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). SRC Comments on Monitoring Team's Draft Study Plan for Future Monitoring. SRC document P168, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Second Review of American Kestrel-Burrowing owl (KB) Scavenger Removal Adjustments Reported in Alameda County Avian Monitoring Team's M21 for the Altamont Pass Wind Resource Area. SRC document P171, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Assessment of Three Proposed Adaptive Management Plans for Reducing Raptor Fatalities in the Altamont Pass Wind Resource Area. SRC document P161, County of Alameda, Hayward, California.
- Smallwood, K. S. and J. Estep. 2010. Report of additional wind turbine hazard ratings in the Altamont Pass Wind Resource Area by Two Members of the Alameda County Scientific Review Committee. SRC document P153, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Alternatives to Improve the Efficiency of the Monitoring Program. SRC document P158, County of Alameda, Hayward, California.
- Smallwood, S. 2010. Summary of Alameda County SRC Recommendations and Concerns and Subsequent Actions. SRC document P147, County of Alameda, Hayward, California.
- Smallwood, S. 2010. Progress of Avian Wildlife Protection Program & Schedule. SRC document P148, County of Alameda, Hayward, California. SRC document P148, County of Alameda, Hayward, California.
- Smallwood, S. 2010. Old-generation wind turbines rated for raptor collision hazard by Alameda County Scientific Review Committee in 2010, an Update on those Rated in 2007, and an Update

on Tier Rankings. SRC document P155, County of Alameda, Hayward, California.

- Smallwood, K. S. 2010. Review of American Kestrel-Burrowing owl (KB) Scavenger Removal Adjustments Reported in Alameda County Avian Monitoring Team's M21 for the Altamont Pass Wind Resource Area. SRC document P154, County of Alameda, Hayward, California.
- Smallwood, K. S. 2010. Fatality Rates in the Altamont Pass Wind Resource Area 1998-2009. Alameda County SRC document P-145.
- Smallwood, K. S. 2010. Comments on Revised M-21: Report on Fatality Monitoring in the Altamont Pass Wind Resource Area. SRC document P144, County of Alameda, Hayward, California.
- Smallwood, K. S. 2009. SRC document P129, County of Alameda, Hayward, California.
- Smallwood, K. S. 2009. Smallwood's review of M32. SRC document P111, County of Alameda, Hayward, California.
- Smallwood, K. S. 2009. 3<sup>rd</sup> Year Review of 16 Conditional Use Permits for Windworks, Inc. and Altamont Infrastructure Company, LLC. Comment letter to East County Board of Zoning Adjustments. 10 pp + 2 attachments.
- Smallwood, K. S. 2008. Weighing Remaining Workload of Alameda County SRC against Proposed Budget Cap. Alameda County SRC document not assigned. 3 pp.
- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). 2008. SRC comments on August 2008 Fatality Monitoring Report, M21. SRC document P107, County of Alameda, Hayward, California.
- Smallwood, K. S. 2008. Burrowing owl carcass distribution around wind turbines. SRC document P106, County of Alameda, Hayward, California.
- Smallwood, K. S. 2008. Assessment of relocation/removal of Altamont Pass wind turbines rated as hazardous by the Alameda County SRC. SRC document P103, County of Alameda, Hayward, California.
- Smallwood, K. S. and L. Neher. 2008. Summary of wind turbine-free ridgelines within and around the APWRA. SRC document P102, County of Alameda, Hayward, California.
- Smallwood, K. S. and B. Karas. 2008. Comparison of mortality estimates in the Altamont Pass Wind Resource Area when restricted to recent fatalities. SRC document P101, County of Alameda, Hayward, California.
- Smallwood, K. S. 2008. On the misapplication of mortality adjustment terms to fatalities missed during one search and found later. SRC document P97, County of Alameda, Hayward, California.

- Smallwood, K. S. 2008. Relative abundance of raptors outside the APWRA. SRC document P88, County of Alameda, Hayward, California.
- Smallwood, K. S. 2008. Comparison of mortality estimates in the Altamont Pass Wind Resource Area. SRC document P76, County of Alameda, Hayward, California.
- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). 2010. Guidelines for siting wind turbines recommended for relocation to minimize potential collisionrelated mortality of four focal raptor species in the Altamont Pass Wind Resource Area. SRC document P70, County of Alameda, Hayward, California.
- Alameda County SRC (J. Burger, Smallwood, K. S., S. Orloff, J. Estep, and J. Yee). 2007. First DRAFT of Hazardous Rating Scale First DRAFT of Hazardous Rating Scale. SRC document P69, County of Alameda, Hayward, California.
- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). December 11, 2007. SRC selection of dangerous wind turbines. Alameda County SRC document P-67. 8 pp.
- Smallwood, S. October 6, 2007. Smallwood's answers to Audubon's queries about the SRC's recommended four-month winter shutdown of wind turbines in the Altamont Pass. Alameda County SRC document P-23.
- Smallwood, K. S. October 1, 2007. Dissenting opinion on recommendation to approve of the AWI Blade Painting Study. Alameda County SRC document P-60.
- Smallwood, K. S. July 26, 2007. Effects of monitoring duration and inter-annual variability on precision of wind-turbine caused mortality estimates in the Altamont Pass Wind Resource Area, California. SRC Document P44.
- Smallwood, K. S. July 26, 2007. Memo: Opinion of some SRC members that the period over which post-management mortality will be estimated remains undefined. SRC Document P43.
- Smallwood, K. S. July 19, 2007. Smallwood's response to P24G. SRC Document P41, 4 pp.
- Smallwood, K. S. April 23, 2007. New Information Regarding Alameda County SRC Decision of 11 April 2007 to Grant FPLE Credits for Removing and Relocating Wind Turbines in 2004. SRC Document P26.
- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, and J. Burger [J. Yee abstained]). April 17, 2007. SRC Statement in Support of the Monitoring Program Scope and Budget.
- Smallwood, K. S. April 15, 2007. Verification of Tier 1 & 2 Wind Turbine Shutdowns and Relocations. SRC Document P22.

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

- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). April 3, 2007. Alameda County Scientific Review Committee replies to the parties' responses to its queries and to comments from the California Office of the Attorney General. SRC Document S20.
- Smallwood, S. March 19, 2007. Estimated Effects of Full Winter Shutdown and Removal of Tier I & II Turbines. SRC Document S19.
- Smallwood, S. March 8, 2007. Smallwood's Replies to the Parties' Responses to Queries from the SRC and Comments from the California Office of the Attorney General. SRC Document S16.
- Smallwood, S. March 8, 2007. Estimated Effects of Proposed Measures to be Applied to 2,500 Wind Turbines in the APWRA Fatality Monitoring Plan. SRC Document S15.
- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). February 7, 2007. Analysis of Monitoring Program in Context of 1/1//2007 Settlement Agreement.
- Smallwood, S. January 8, 2007. Smallwood's Concerns over the Agreement to Settle the CEQA Challenges. SRC Document S5.
- Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). December 19, 2006. Altamont Scientific Review Committee (SRC) Recommendations to the County on the Avian Monitoring Team Consultants' Budget and Organization.

## **Reports to Clients**

- Smallwood, K. S. 2020. Comparison of bird and bat fatality rates among utility-scale solar projects in California. Report to undisclosed client.
- Smallwood, K. S., D. Bell, and S. Standish. 2018. Skilled dog detections of bat and small bird carcasses in wind turbine fatality monitoring. Report to East Bay Regional Park District, Oakland, California.
- Smallwood, K. S. 2018. Addendum to Comparison of Wind Turbine Collision Hazard Model Performance: One-year Post-construction Assessment of Golden Eagle Fatalities at Golden Hills. Report to Audubon Society, NextEra Energy, and the California Attorney General.
- Smallwood, K. S., and L. Neher. 2018. Siting wind turbines to minimize raptor collisions at Rooney Ranch and Sand Hill Repowering Project, Altamont Pass Wind Resource Area. Report to S-Power, Salt Lake City, Utah.
- Smallwood, K. S. 2017. Summary of a burrowing owl conservation workshop. Report to Santa Clara Valley Habitat Agency, Morgan Hill, California.
- Smallwood, K. S., and L. Neher. 2018. Comparison of wind turbine collision hazard model performance prepared for repowering projects in the Altamont Pass Wind Resources Area. Report to NextEra Energy Resources, Inc., Office of the California Attorney General, Audubon

Society, East Bay Regional Park District.

- Smallwood, K. S., and L. Neher. 2016. Siting wind turbines to minimize raptor collisions at Summit Winds Repowering Project, Altamont Pass Wind Resource Area. Report to Salka, Inc., Washington, D.C.
- Smallwood, K. S., L. Neher, and D. A. Bell. 2017. Mitigating golden eagle impacts from repowering Altamont Pass Wind Resource Area and expanding Los Vaqueros Reservoir. Report to East Contra Costa County Habitat Conservation Plan Conservancy and Contra Costa Water District.
- Smallwood, K. S. 2016. Review of avian-solar science plan. Report to Center for Biological Diversity. 28 pp
- Smallwood, K. S. 2016. Report of Altamont Pass research as Vasco Winds mitigation. Report to NextEra Energy Resources, Inc., Office of the California Attorney General, Audubon Society, East Bay Regional Park District.
- Smallwood, K. S., and L. Neher. 2016. Siting Wind Turbines to Minimize Raptor collisions at Sand Hill Repowering Project, Altamont Pass Wind Resource Area. Report to Ogin, Inc., Waltham, Massachusetts.
- Smallwood, K. S., and L. Neher. 2015a. Siting wind turbines to minimize raptor collisions at Golden Hills Repowering Project, Altamont Pass Wind Resource Area. Report to NextEra Energy Resources, Livermore, California.
- Smallwood, K. S., and L. Neher. 2015b. Siting wind turbines to minimize raptor collisions at Golden Hills North Repowering Project, Altamont Pass Wind Resource Area. Report to NextEra Energy Resources, Livermore, California.
- Smallwood, K. S., and L. Neher. 2015c. Siting wind turbines to minimize raptor collisions at the Patterson Pass Repowering Project, Altamont Pass Wind Resource Area. Report to EDF Renewable Energy, Oakland, California.
- Smallwood, K. S., and L. Neher. 2014. Early assessment of wind turbine layout in Summit Wind Project. Report to Altamont Winds LLC, Tracy, California.
- Smallwood, K. S. 2015. Review of avian use survey report for the Longboat Solar Project. Report to EDF Renewable Energy, Oakland, California.
- Smallwood, K. S. 2014. Information needed for solar project impacts assessment and mitigation planning. Report to Panorama Environmental, Inc., San Francisco, California.
- Smallwood, K. S. 2014. Monitoring fossorial mammals in Vasco Caves Regional Preserve, California: Report of Progress for the period 2006-2014. Report to East Bay Regional Park District, Oakland, California.

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

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

- Smallwood, K. S. and M. L. Morrison. 2008. San Joaquin kangaroo rat (*Dipodomys n. nitratoides*) Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2008
   Progress Report (Inclusive of work during 2000-2008). Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 84 pp.
- Smallwood, K. S. and M. L. Morrison. 2008. Habitat Assessment for California Red-Legged Frog at Naval Weapons Station, Seal Beach, Detachment Concord, California. Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 48 pp.
- Smallwood, K. S. and B. Nakamoto. 2008. Impact of 2005 and 2006 West Nile Virus on Yellowbilled Magpie and American Crow in the Sacramento Valley, California. 22 pp.
- Smallwood, K. S. and M. L. Morrison. 2008. Former Naval Security Group Activity (NSGA), Skaggs Island, Waste and Contaminated Soil Removal Project (IR Site #2), San Pablo Bay, Sonoma County, California: Re-Vegetation Monitoring. Report to U.S. Navy, Letter Agreement – N68711-04LT-A0045. Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 10 pp.
- Smallwood, K. S. and M. L. Morrison. 2008. Burrowing owls at Dixon Naval Radio Transmitter Facility. Report to U.S. Navy. Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 28 pp.
- Smallwood, K. S. and M. L. Morrison. 2008. San Joaquin kangaroo rat (*Dipodomys n. nitratoides*) Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2007 Progress Report (Inclusive of work during 2001-2007). Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 69 pp.
- Smallwood, K. S. and M. L. Morrison. 2007. A Monitoring Effort to Detect the Presence of the Federally Listed Species California Clapper Rail and Salt Marsh Harvest Mouse, and Wetland Habitat Assessment at the Naval Weapons Station, Seal Beach, Detachment Concord, California. Installation Restoration (IR) Site 30, Final Report to U.S. Navy, Letter Agreement – N68711-05LT-A0001. U.S. Navy Integrated Product Team (IPT), West, Naval Facilities Engineering Command, San Diego, California. 8 pp.
- Smallwood, K. S. and M. L. Morrison. 2007. San Joaquin kangaroo rat (*Dipodomys n. nitratoides*) Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2006 Progress Report (Inclusive of work during 2001-2006). U.S. Navy Integrated Product Team (IPT), West, Naval Facilities Engineering Command, Southwest, Daly City, California. 165 pp.
- Smallwood, K. S. and C. Thelander. 2006. Response to third review of Smallwood and Thelander (2004). Report to California Institute for Energy and Environment, University of California, Oakland, CA. 139 pp.
- Smallwood, K. S. 2006. Biological effects of repowering a portion of the Altamont Pass Wind Resource Area, California: The Diablo Winds Energy Project. Report to Altamont Working Group. Available from Shawn Smallwood, <u>puma@yolo.com</u>. 34 pp.

- Smallwood, K. S. 2006. Impact of 2005 West Nile Virus on yellow-billed magpie and american crow in the Sacramento Valley, California. Report to Sacramento-Yolo Mosquito and Vector Control District, Elk Grove, CA. 38 pp.
- Smallwood, K. S. and M. L. Morrison. 2006. San Joaquin kangaroo rat (*Dipodomys n. nitratoides*) Conservation Research in Resource Management Area 5, Lemoore Naval Air Station: 2005 Progress Report (Inclusive of work during 2001-2005). U.S. Navy Integrated Product Team (IPT), West, Naval Facilities Engineering Command, South West, Daly City, California. 160 pp.
- Smallwood, K. S. and M. L. Morrison. 2006. A monitoring effort to detect the presence of the federally listed species California tiger salamander and California red-legged frog at the Naval Weapons Station, Seal Beach, Detachment Concord, California. Letter agreements N68711-04LT-A0042 and N68711-04LT-A0044, U.S. Navy Integrated Product Team (IPT), West, Naval Facilities Engineering Command, South West, Daly City, California. 60 pp.
- Smallwood, K. S. and M. L. Morrison. 2006. A monitoring effort to detect the presence of the federally listed species California Clapper Rail and Salt Marsh Harvest Mouse, and wetland habitat assessment at the Naval Weapons Station, Seal Beach, Detachment Concord, California. Sampling for rails, Spring 2006, Installation Restoration (IR) Site 1. Letter Agreement N68711-05lt-A0001, U.S. Navy Integrated Product Team (IPT), West, Naval Facilities Engineering Command, South West, Daly City, California. 9 pp.
- Morrison, M. L. and K. S. Smallwood. 2006. Final Report: Station-wide Wildlife Survey, Naval Air Station, Lemoore. Department of the Navy Integrated Product Team (IPT) West, Naval Facilities Engineering Command Southwest, 2001 Junipero Serra Blvd., Suite 600, Daly City, CA 94014-1976. 20 pp.
- Smallwood, K. S. and M. L. Morrison. 2006. Former Naval Security Group Activity (NSGA), Skaggs Island, Waste and Contaminated Soil Removal Project, San Pablo Bay, Sonoma County, California: Re-vegetation Monitoring. Department of the Navy Integrated Product Team (IPT) West, Naval Facilities Engineering Command Southwest, 2001 Junipero Serra Blvd., Suite 600, Daly City, CA 94014-1976. 8 pp.
- Dorin, Melinda, Linda Spiegel and K. Shawn Smallwood. 2005. Response to public comments on the staff report entitled Assessment of Avian Mortality from Collisions and Electrocutions (CEC-700-2005-015) (Avian White Paper) written in support of the 2005 Environmental Performance Report and the 2005 Integrated Energy Policy Report. California Energy Commission, Sacramento. 205 pp.
- Smallwood, K. S. 2005. Estimating combined effects of selective turbine removal and winter-time shutdown of half the wind turbines. Unpublished CEC staff report, June 23. 1 p.
- Erickson, W. and S. Smallwood. 2005. Avian and Bat Monitoring Plan for the Buena Vista Wind Energy Project Contra Costa County, California. Unpubl. report to Contra Costa County, Antioch, California. 22 pp.

- Lamphier-Gregory, West Inc., Shawn Smallwood, Jones & Stokes Associates, Illingworth & Rodkin Inc. and Environmental Vision. 2005. Environmental Impact Report for the Buena Vista Wind Energy Project, LP# 022005. County of Contra Costa Community Development Department, Martinez, California.
- Morrison, M. L. and K. S. Smallwood. 2005. A monitoring effort to detect the presence of the federally listed species California clapper rail and salt marsh harvest mouse, and wetland habitat assessment at the Naval Weapons Station, Seal Beach, Detachment Concord, California. Targeted Sampling for Salt Marsh Harvest Mouse, Fall 2005 Installation Restoration (IR) Site 30. Letter Agreement N68711-05lt-A0001, U.S. Department of the Navy, Naval Facilities Engineering Command Southwest, Daly City, California. 6 pp.
- Morrison, M. L. and K. S. Smallwood. 2005. A monitoring effort to detect the presence of the federally listed species California clapper rail and salt marsh harvest mouse, and wetland habitat assessment at the Naval Weapons Station, Seal Beach, Detachment Concord, California. Letter Agreement – N68711-05lt-A0001, U.S. Department of the Navy, Naval Facilities Engineering Command Southwest, Daly City, California. 5 pp.
- Morrison, M. L. and K. S. Smallwood. 2005. Skaggs Island waste and contaminated soil removal projects, San Pablo Bay, Sonoma County, California. Report to the U.S. Department of the Navy, Naval Facilities Engineering Command Southwest, Daly City, California. 6 pp.
- Smallwood, K. S. and M. L. Morrison. 2004. 2004 Progress Report: San Joaquin kangaroo rat (*Dipodomys nitratoides*) Conservation Research in Resources Management Area 5, Lemoore Naval Air Station. Progress report to U.S. Department of the Navy, Lemoore, California. 134 pp.
- Smallwood, K. S. and L. Spiegel. 2005a. Assessment to support an adaptive management plan for the APWRA. Unpublished CEC staff report, January 19. 19 pp.
- Smallwood, K. S. and L. Spiegel. 2005b. Partial re-assessment of an adaptive management plan for the APWRA. Unpublished CEC staff report, March 25. 48 pp.
- Smallwood, K. S. and L. Spiegel. 2005c. Combining biology-based and policy-based tiers of priority for determining wind turbine relocation/shutdown to reduce bird fatalities in the APWRA. Unpublished CEC staff report, June 1. 9 pp.
- Smallwood, K. S. 2004. Alternative plan to implement mitigation measures in APWRA. Unpublished CEC staff report, January 19. 8 pp.
- Smallwood, K. S., and L. Neher. 2005. Repowering the APWRA: Forecasting and minimizing avian mortality without significant loss of power generation. California Energy Commission, PIER Energy-Related Environmental Research. CEC-500-2005-005. 21 pp. [Reprinted (in Japanese) in Yukihiro Kominami, Tatsuya Ura, Koshitawa, and Tsuchiya, Editors, Wildlife and Wind Turbine Report 5. Wild Bird Society of Japan, Tokyo.]

Morrison, M. L., and K. S. Smallwood. 2004. Kangaroo rat survey at RMA4, NAS Lemoore.

Report to U.S. Navy. 4 pp.

- Morrison, M. L., and K. S. Smallwood. 2004. A monitoring effort to detect the presence of the federally listed species California clapper rails and wetland habitat assessment at Pier 4 of the Naval Weapons Station, Seal Beach, Detachment Concord, California. Letter Agreement N68711-04LT-A0002. 8 pp. + 2 pp. of photo plates.
- Smallwood, K. S. and M. L. Morrison. 2003. 2003 Progress Report: San Joaquin kangaroo rat (*Dipodomys nitratoides*) Conservation Research at Resources Management Area 5, Lemoore Naval Air Station. Progress report to U.S. Department of the Navy, Lemoore, California. 56 pp. + 58 figures.
- Smallwood, K. S. 2003. Comparison of Biological Impacts of the No Project and Partial Underground Alternatives presented in the Final Environmental Impact Report for the Jefferson-Martin 230 kV Transmission Line. Report to California Public Utilities Commission. 20 pp.
- Morrison, M. L., and K. S. Smallwood. 2003. Kangaroo rat survey at RMA4, NAS Lemoore. Report to U.S. Navy. 6 pp. + 7 photos + 1 map.
- Smallwood, K. S. 2003. Assessment of the Environmental Review Documents Prepared for the Tesla Power Project. Report to the California Energy Commission on behalf of Californians for Renewable Energy. 32 pp.
- Smallwood, K. S., and M. L. Morrison. 2003. 2002 Progress Report: San Joaquin kangaroo rat (*Dipodomys nitratoides*) Conservation Research at Resources Management Area 5, Lemoore Naval Air Station. Progress report to U.S. Department of the Navy, Lemoore, California. 45 pp. + 36 figures.
- Smallwood, K. S., Michael L. Morrison and Carl G. Thelander 2002. Study plan to test the effectiveness of aerial markers at reducing avian mortality due to collisions with transmission lines: A report to Pacific Gas & Electric Company. 10 pp.
- Smallwood, K. S. 2002. Assessment of the Environmental Review Documents Prepared for the East Altamont Energy Center. Report to the California Energy Commission on behalf of Californians for Renewable Energy. 26 pp.
- Thelander, Carl G., K. Shawn Smallwood, and Christopher Costello. 2002 Rating Distribution Poles for Threat of Raptor Electrocution and Priority Retrofit: Developing a Predictive Model. Report to Southern California Edison Company. 30 pp.
- Smallwood, K. S., M. Robison, and C. Thelander. 2002. Draft Natural Environment Study, Prunedale Highway 101 Project. California Department of Transportation, San Luis Obispo, California. 120 pp.
- Smallwood, K.S. 2001. Assessment of ecological integrity and restoration potential of Beeman/Pelican Farm. Draft Report to Howard Beeman, Woodland, California. 14 pp.

- Smallwood, K. S., and M. L. Morrison. 2002. Fresno kangaroo rat (*Dipodomys nitratoides*) Conservation Research at Resources Management Area 5, Lemoore Naval Air Station. Progress report to U.S. Department of the Navy, Lemoore, California. 29 pp. + 19 figures.
- Smallwood, K.S. 2001. Rocky Flats visit, April 4<sup>th</sup> through 6<sup>th</sup>, 2001. Report to Berger & Montaque, P.C. 16 pp. with 61 color plates.
- Smallwood, K.S. 2001. Affidavit of K. Shawn Smallwood, Ph.D. in the matter of the U.S. Fish and Wildlife Service's rejection of Seatuck Environmental Association's proposal to operate an education center on Seatuck National Wildlife Refuge. Submitted to Seatuck Environmental Association in two parts, totaling 7 pp.
- Magney, D., and K.S. Smallwood. 2001. Maranatha High School CEQA critique. Comment letter submitted to Tamara & Efren Compeán, 16 pp.
- Smallwood, K. S. and D. Mangey. 2001. Comments on the Newhall Ranch November 2000 Administrative Draft EIR. Prepared for Ventura County Counsel regarding the Newhall Ranch Specific Plan EIR. 68 pp.
- Magney, D. and K. S. Smallwood. 2000. Newhall Ranch Notice of Preparation Submittal. Prepared for Ventura County Counsel regarding our recommended scope of work for the Newhall Ranch Specific Plan EIR. 17 pp.
- Smallwood, K. S. 2000. Comments on the Preliminary Staff Assessment of the Contra Costa Power Plant Unit 8 Project. Submitted to California Energy Commission on November 30 on behalf of Californians for Renewable Energy (CaRE). 4 pp.
- Smallwood, K. S. 2000. Comments on the California Energy Commission's Final Staff Assessment of the MEC. Submitted to California Energy Commission on October 29 on behalf of Californians for Renewable Energy (CaRE). 8 pp.
- Smallwood, K. S. 2000. Comments on the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). Submitted to California Energy Commission on October 29 on behalf of Californians for Renewable Energy (CaRE). 9 pp.
- Smallwood, K. S. 2000. Comments on the Preliminary Staff Assessment of the Metcalf Energy Center. Submitted to California Energy Commission on behalf of Californians for Renewable Energy (CaRE). 11 pp.
- Smallwood, K. S. 2000. Preliminary report of reconnaissance surveys near the TRW plant south of Phoenix, Arizona, March 27-29. Report prepared for Hagens, Berman & Mitchell, Attorneys at Law, Phoenix, AZ. 6 pp.
- Morrison, M. L., K. S. Smallwood, and M. Robison. 2001. Draft Natural Environment Study for Highway 46 compliance with CEQA/NEPA. Report to the California Department of Transportation. 75 pp.

- Morrison, M.L., and K.S. Smallwood. 1999. NTI plan evaluation and comments. Exhibit C in W.D. Carrier, M.L. Morrison, K.S. Smallwood, and Vail Engineering. Recommendations for NBHCP land acquisition and enhancement strategies. Northern Territories, Inc., Sacramento.
- Smallwood, K. S. 1999. Estimation of impacts due to dredging of a shipping channel through Humboldt Bay, California. Court Declaration prepared on behalf of EPIC.
- Smallwood, K. S. 1998. 1998 California mountain lion track count. Report to the Defenders of Wildlife, Washington, D.C. 5 pages.
- Smallwood, K.S. 1998. Draft report of a visit to a paint sludge dump site near Ridgewood, New Jersey, February 26th, 1998. Unpublished report to Consulting in the Public Interest.
- Smallwood, K.S. 1997. Science missing in the "no surprises" policy. Commissioned by National Endangered Species Network and Spirit of the Sage Council, Pasadena, California.
- Smallwood, K.S. and M.L. Morrison. 1997. Alternate mitigation strategy for incidental take of giant garter snake and Swainson's hawk as part of the Natomas Basin Habitat Conservation Plan. Pages 6-9 and *iii* illustrations in W.D. Carrier, K.S. Smallwood and M.L. Morrison, Natomas Basin Habitat Conservation Plan: Narrow channel marsh alternative wetland mitigation. Northern Territories, Inc., Sacramento.
- Smallwood, K.S. 1996. Assessment of the BIOPORT model's parameter values for pocket gopher burrowing characteristics. Report to Berger & Montague, P.C. and Roy S. Haber, P.C., Philadelphia. (peer reviewed).
- Smallwood, K.S. 1997. Assessment of plutonium releases from Hanford buried waste sites. Report Number 9, Consulting in the Public Interest, 53 Clinton Street, Lambertville, New Jersey, 08530.
- Smallwood, K.S. 1996. Soil Bioturbation and Wind Affect Fate of Hazardous Materials that were Released at the Rocky Flats Plant, Colorado. Report to Berger & Montague, P.C., Philadelphia.
- Smallwood, K.S. 1996. Second assessment of the BIOPORT model's parameter values for pocket gopher burrowing characteristics and other relevant wildlife observations. Report to Berger & Montague, P.C. and Roy S. Haber, P.C., Philadelphia.
- Smallwood, K.S., and R. Leidy. 1996. Wildlife and their management under the Martell SYP. Report to Georgia Pacific, Corporation, Martel, CA. 30 pp.
- EIP Associates. 1995. Yolo County Habitat Conservation Plan Biological Resources Report. Yolo County Planning and Development Department, Woodland, California.
- Smallwood, K.S. and S. Geng. 1995. Analysis of the 1987 California Farm Cost Survey and recommendations for future survey. Program on Workable Energy Regulation, University-wide Energy Research Group, University of California.

- Smallwood, K.S., S. Geng, and W. Idzerda. 1992. Final report to PG&E: Analysis of the 1987 California Farm Cost Survey and recommendations for future survey. Pacific Gas & Electric Company, San Ramon, California. 24 pp.
- Fitzhugh, E.L. and K.S. Smallwood. 1987. Methods Manual A statewide mountain lion population index technique. California Department of Fish and Game, Sacramento.
- Salmon, T.P. and K.S. Smallwood. 1989. Final Report Evaluating exotic vertebrates as pests to California agriculture. California Department of Food and Agriculture, Sacramento.
- Smallwood, K.S. and W. A. Erickson (written under supervision of W.E. Howard, R.E. Marsh, and R.J. Laacke). 1990. Environmental exposure and fate of multi-kill strychnine gopher baits. Final Report to USDA Forest Service –NAPIAP, Cooperative Agreement PSW-89-0010CA.
- Fitzhugh, E.L., K.S. Smallwood, and R. Gross. 1985. Mountain lion track count, Marin County, 1985. Report on file at Wildlife Extension, University of California, Davis.

# Comments on Environmental Documents (Year; pages)

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

- Replies on UCSF Comprehensive Parnassus Heights Plan EIR (2021; 13);
- 14 Charles Hill Circle Design Review (2021; 11);
- SDG Commerce 217 Warehouse IS, American Canyon (2021; 26);
- Mulqueeney Ranch Wind Repowering Project DSEIR (2021; 98);
- Clawiter Road Industrial Project IS/MND, Hayward (2021; 18);
- Garnet Energy Center Stipulations, New York (2020);
- Heritage Wind Energy Project, New York (2020: 71);
- Ameresco Keller Canyon RNG Project IS/MND, Martinez (2020; 11);
- Cambria Hotel Project Staff Report, Dublin (2020; 19);
- Central Pointe Mixed-Use Staff Report, Santa Ana (2020; 20);
- Oak Valley Town Center EIR Addendum, Calimesa (2020; 23);
- Coachillin Specific Plan MND Amendment, Desert Hot Springs (2020; 26);
- Stockton Avenue Hotel and Condominiums Project Tiering to EIR, San Jose (2020; 19);
- Cityline Sub-block 3 South Staff Report, Sunyvale (2020; 22);
- Station East Residential/Mixed Use EIR, Union City (2020; 21);
- Multi-Sport Complex & Southeast Industrial Annexation Suppl. EIR, Elk Grove (2020; 24);
- Sun Lakes Village North EIR Amendment 5, Banning, Riverside County (2020; 27);
- 2<sup>nd</sup> comments on 1296 Lawrence Station Road, Sunnyvale (2020; 4);
- 1296 Lawrence Station Road, Sunnyvale (2020; 16);
- Mesa Wind Project EA, Desert Hot Springs (2020; 31);
- 11th Street Development Project IS/MND, City of Upland (2020; 17);
- Vista Mar Project IS/MND, Pacifica (2020; 17);
- Emerson Creek Wind Project Application, Ohio (2020; 64);

- Replies on Wister Solar Energy Facility EIR, Imperial County (2020; 12);
- Wister Solar Energy Facility EIR, Imperial County (2020; 28);
- Crimson Solar EIS/EIR, Mojave Desert (2020, 35) not submitted;
- Sakioka Farms EIR tiering, Oxnard (2020; 14);
- 3440 Wilshire Project IS/MND, Los Angeles (2020; 19);
- Replies on 2400 Barranca Office Development Project EIR, Irvine (2020; 8);
- 2400 Barranca Office Development Project EIR, Irvine (2020; 25);
- Replies on Heber 2 Geothermal Repower Project IS/MND, El Centro (2020; 4);
- 2<sup>nd</sup> 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);
- 2<sup>nd</sup> comments on Beale WAPA Interconnection Project EA & CEQA checklist (2020; 34);
- Beale WAPA Interconnection Project EA & CEQA checklist (2020; 30);
- Levine-Fricke Softball Field Improvement Addendum, UC Berkeley (2020; 16);
- Greenlaw Partners Warehouse and Distribution Center Staff Report, Palmdale (2020; 14);
- Humboldt Wind Energy Project DEIR (2019; 25);
- Sand Hill Supplemental EIR, Altamont Pass (2019; 17);
- 1700 Dell Avenue Office Project, Campbell (2019, 28);
- 1180 Main Street Office Project MND, Redwood City (2019; 19:
- Summit Ridge Wind Farm Request for Amendment 4, Oregon (2019; 46);
- Shafter Warehouse Staff Report (2019; 4);
- Park & Broadway Design Review, San Diego (2019; 19);
- Pinnacle Pacific Heights Design Review, San Diego (2019; 19);
- Pinnacle Park & C Design Review, San Diego (2019; 19);
- Preserve at Torrey Highlands EIR, San Diego (2019; 24);
- Santana West Project EIR Addendum, San Jose (2019; 18);

- The Ranch at Eastvale EIR Addendum, Riverside County (2020; 19);
- Hageman Warehouse IS/MND, Bakersfield (2019; 13);
- Oakley Logistics Center EIR, Antioch (2019; 22);
- 27 South First Street IS, San Jose (2019; 23);
- 2<sup>nd</sup> replies on Times Mirror Square Project EIR, Los Angeles (2020; 11);
- Replies on Times Mirror Square Project EIR, Los Angeles (2020; 13);
- Times Mirror Square Project EIR, Los Angeles (2019; 18);
- East Monte Vista & Aviator General Plan Amend EIR Addendum, Vacaville (2019; 22);
- Hillcrest LRDP EIR, La Jolla (2019; 36);
- 555 Portola Road CUP, Portola Valley (2019; 11);
- Johnson Drive Economic Development Zone SEIR, Pleasanton (2019; 27);
- 1750 Broadway Project CEQA Exemption, Oakland (2019; 19);
- Mor Furniture Project MND, Murietta Hot Springs (2019; 27);
- Harbor View Project EIR, Redwood City (2019; 26);
- Visalia Logistics Center (2019; 13);
- Cordelia Industrial Buildings MND (2019; 14);
- Scheu Distribution Center IS/ND, Rancho Cucamonga (2019; 13);
- Mills Park Center Staff Report, San Bruno (2019; 22);
- Site visit to Desert Highway Farms IS/MND, Imperial County (2019; 9);
- Desert Highway Farms IS/MND, Imperial County (2019; 12);
- ExxonMobil Interim Trucking for Santa Ynez Unit Restart SEIR, Santa Barbara (2019; 9);
- Olympic Holdings Inland Center Warehouse Project MND, Rancho Cucamonga (2019; 14);
- Replies to responses on Lawrence Equipment Industrial Warehouse, Banning (2019; 19);
- PARS Global Storage MND, Murietta (2019; 13);
- Slover Warehouse EIR Addendum, Fontana (2019; 16);
- Seefried Warehouse Project IS/MND, Lathrop (2019; 19)
- World Logistics Center Site Visit, Moreno Valley (2019; 19);
- Merced Landfill Gas-To-Energy Project IS/MND (2019; 12);
- West Village Expansion FEIR, UC Davis (2019; 11);
- Site visit, Doheny Ocean Desalination EIR, Dana Point (2019; 11);
- Replies to responses on Avalon West Valley Expansion EIR, San Jose (2019; 10);
- Avalon West Valley Expansion EIR, San Jose (2019; 22);
- Sunroad Otay 50 EIR Addendum, San Diego (2019; 26);
- Del Rey Pointe Residential Project IS/MND, Los Angeles (2019; 34);
- 1 AMD Redevelopment EIR, Sunnyvale (2019; 22);
- Lawrence Equipment Industrial Warehouse IS/MND, Banning (2019; 14);
- SDG Commerce 330 Warehouse IS, American Canyon (2019; 21);
- PAMA Business Center IS/MND, Moreno Valley (2019; 23);
- Cupertino Village Hotel IS (2019; 24);
- Lake House IS/ND, Lodi (2019; 33);
- Campo Wind Project DEIS, San Diego County (DEIS, (2019; 14);
- Stirling Warehouse MND site visit, Victorville (2019; 7);
- Green Valley II Mixed-Use Project EIR, Fairfield (2019; 36);

- We Be Jammin rezone MND, Fresno (2019; 14);
- Gray Whale Cove Pedestrian Crossing IS/ND, Pacifica (2019; 7);
- Visalia Logistics Center & DDG 697V Staff Report (2019; 9);
- Mather South Community Masterplan Project EIR (2019; 35);
- Del Hombre Apartments EIR, Walnut Creek (2019; 23);
- Otay Ranch Planning Area 12 EIR Addendum, Chula Vista (2019; 21);
- The Retreat at Sacramento IS/MND (2019; 26);
- Site visit to Sunroad Centrum 6 EIR Addendum, San Diego (2019; 9);
- Sunroad Centrum 6 EIR Addendum, San Diego (2018; 22);
- North First and Brokaw Corporate Campus Buildings EIR Addendum, San Jose (2018; 30);
- South Lake Solar IS, Fresno County (2018; 18);
- Galloo Island Wind Project Application, New York (not submitted) (2018; 44);
- Doheny Ocean Desalination EIR, Dana Point (2018; 15);
- Stirling Warehouse MND, Victorville (2018; 18);
- LDK Warehouse MND, Vacaville (2018; 30);
- Gateway Crossings FEIR, Santa Clara (2018; 23);
- South Hayward Development IS/MND (2018; 9);
- CBU Specific Plan Amendment, Riverside (2018; 27);
- 2<sup>nd</sup> replies to responses on Dove Hill Road Assisted Living Project MND (2018; 11);
- Replies to responses on Dove Hill Road Assisted Living Project MND (2018; 7);
- Dove Hill Road Assisted Living Project MND (2018; 12);
- Deer Ridge/Shadow Lakes Golf Course EIR, Brentwood (2018; 21);
- Pyramid Asphalt BLM Finding of No Significance, Imperial County (2018; 22);
- Amáre Apartments IS/MND, Martinez (2018; 15);
- Petaluma Hill Road Cannabis MND, Santa Rosa (2018; 21);
- 2<sup>nd</sup> comments on Zeiss Innovation Center IS/MND, Dublin (2018: 12);
- Zeiss Innovation Center IS/MND, Dublin (2018: 32);
- City of Hope Campus Plan EIR, Duarte (2018; 21);
- Palo Verde Center IS/MND, Blythe (2018; 14);
- Logisticenter at Vacaville MND (2018; 24);
- IKEA Retail Center SEIR, Dublin (2018; 17);
- Merge 56 EIR, San Diego (2018; 15);
- Natomas Crossroads Quad B Office Project P18-014 EIR, Sacramento (2018; 12);
- 2900 Harbor Bay Parkway Staff Report, Alameda (2018; 30);
- At Dublin EIR, Dublin (2018; 25);
- Fresno Industrial Rezone Amendment Application No. 3807 IS (2018; 10);
- Nova Business Park IS/MND, Napa (2018; 18);
- Updated Collision Risk Model Priors for Estimating Eagle Fatalities, USFWS (2018; 57);
- 750 Marlborough Avenue Warehouse MND, Riverside (2018; 14);
- Replies to responses on San Bernardino Logistics Center IS (2018; 12);
- San Bernardino Logistics Center IS (2018; 19);
- CUP2017-16, Costco IS/MND, Clovis (2018; 11);
- Desert Land Ventures Specific Plan EIR, Desert Hot Springs (2018; 18);

- Ventura Hilton IS/MND (2018; 30);
- North of California Street Master Plan Project IS, Mountain View (2018: 11);
- Tamarind Warehouse MND, Fontana (2018; 16);
- Lathrop Gateway Business Park EIR Addendum (2018; 23);
- Centerpointe Commerce Center IS, Moreno Valley (2019; 18);
- Amazon Warehouse Notice of Exemption, Bakersfield (2018; 13);
- CenterPoint Building 3 project Staff Report, Manteca (2018; 23);
- Cessna & Aviator Warehouse IS/MND, Vacaville (2018; 24);
- Napa Airport Corporate Center EIR, American Canyon (2018, 15);
- 800 Opal Warehouse Initial Study, Mentone, San Bernardino County (2018; 18);
- 2695 W. Winton Ave Industrial Project IS, Hayward (2018; 22);
- Trinity Cannabis Cultivation and Manufacturing Facility DEIR, Calexico (2018; 15);
- Shoe Palace Expansion IS/MND, Morgan Hill (2018; 21);
- Newark Warehouse at Morton Salt Plant Staff Report (2018; 15);
- Northlake Specific Plan FEIR "Peer Review", Los Angeles County (2018; 9);
- Replies to responses on Northlake Specific Plan SEIR, Los Angeles County (2018; 13);
- Northlake Specific Plan SEIR, Los Angeles County (2017; 27);
- Bogle Wind Turbine DEIR, east Yolo County (2017; 48);
- Ferrante Apartments IS/MND, Los Angeles (2017; 14);
- The Villages of Lakeview EIR, Riverside (2017; 28);
- Data Needed for Assessing Trail Management Impacts on Northern Spotted Owl, Marin County (2017; 5);
- Notes on Proposed Study Options for Trail Impacts on Northern Spotted Owl (2017; 4);
- Pyramid Asphalt IS, Imperial County (Declaration) (2017; 5);
- San Gorgonio Crossings EIR, Riverside County (2017; 22);
- Replies to responses on Jupiter Project IS and MND, Apple Valley (2017; 12);
- Proposed World Logistics Center Mitigation Measures, Moreno Valley (2017, 2019; 12);
- MacArthur Transit Village Project Modified 2016 CEQA Analysis (2017; 12);
- PG&E Company Bay Area Operations and Maintenance HCP (2017; 45);
- Central SoMa Plan DEIR (2017; 14);
- Suggested mitigation for trail impacts on northern spotted owl, Marin County (2016; 5);
- Colony Commerce Center Specific Plan DEIR, Ontario (2016; 16);
- Fairway Trails Improvements MND, Marin County (2016; 13);
- Review of Avian-Solar Science Plan (2016; 28);
- Replies on Pyramid Asphalt IS, Imperial County (2016; 5);
- Pyramid Asphalt IS, Imperial County (2016; 4);
- Agua Mansa Distribution Warehouse Project Initial Study (2016; 14);
- Santa Anita Warehouse MND, Rancho Cucamonga (2016; 12);
- CapRock Distribution Center III DEIR, Rialto (2016: 12);
- Orange Show Logistics Center IS/MND, San Bernardino (2016; 9);
- City of Palmdale Oasis Medical Village Project IS/MND (2016; 7);
- Comments on proposed rule for incidental eagle take, USFWS (2016, 49);
- Replies on Grapevine Specific and Community Plan FEIR, Kern County (2016; 25);
- Grapevine Specific and Community Plan DEIR, Kern County (2016; 15);

- Clinton County Zoning Ordinance for Wind Turbine siting (2016);
- Hallmark at Shenandoah Warehouse Project Initial Study, San Bernardino (2016; 6);
- Tri-City Industrial Complex Initial Study, San Bernardino (2016; 5);
- Hidden Canyon Industrial Park Plot Plan 16-PP-02, Beaumont (2016; 12);
- Kimball Business Park DEIR (2016; 10);
- Jupiter Project IS and MND, Apple Valley, San Bernardino County (2016; 9);
- Revised Draft Giant Garter Snake Recovery Plan of 2015 (2016, 18);
- Palo Verde Mesa Solar Project EIR, Blythe (2016; 27);
- Reply on Fairview Wind Project Natural Heritage Assessment, Ontario, Canada (2016; 14);
- Fairview Wind Project Natural Heritage Assessment, Ontario, Canada (2016; 41);
- Reply on Amherst Island Wind Farm Natural Heritage Assessment, Ontario (2015, 38);
- Amherst Island Wind Farm Natural Heritage Assessment, Ontario (2015, 31);
- Second Reply on White Pines Wind Farm, Ontario (2015, 6);
- Reply on White Pines Wind Farm Natural Heritage Assessment, Ontario (2015, 10);
- White Pines Wind Farm Natural Heritage Assessment, Ontario (2015, 9);
- Proposed Section 24 Specific Plan Agua Caliente Band of Cahuilla Indians DEIS (2015, 9);
- Replies on 24 Specific Plan Agua Caliente Band of Cahuilla Indians FEIS (2015, 6);
- Willow Springs Solar Photovoltaic Project DEIR, Rosamond (2015; 28);
- Sierra Lakes Commerce Center Project DEIR, Fontana (2015, 9);
- Columbia Business Center MND, Riverside (2015; 8);
- West Valley Logistics Center Specific Plan DEIR, Fontana (2015, 10);
- Willow Springs Solar Photovoltaic Project DEIR (2015, 28);
- Alameda Creek Bridge Replacement Project DEIR (2015, 10);
- World Logistic Center Specific Plan FEIR, Moreno Valley (2015, 12);
- Elkhorn Valley Wind Power Project Impacts, Oregon (2015; 143);
- Bay Delta Conservation Plan EIR/EIS, Sacramento (2014, 21);
- Addison Wind Energy Project DEIR, Mojave (2014, 32);
- Replies on the Addison Wind Energy Project DEIR, Mojave (2014, 15);
- Addison and Rising Tree Wind Energy Project FEIR, Mojave (2014, 12);
- Palen Solar Electric Generating System FSA (CEC), Blythe (2014, 20);
- Rebuttal testimony on Palen Solar Energy Generating System (2014, 9);
- Seven Mile Hill and Glenrock/Rolling Hills impacts + Addendum, Wyoming (2014; 105);
- Rising Tree Wind Energy Project DEIR, Mojave (2014, 32);
- Replies on the Rising Tree Wind Energy Project DEIR, Mojave (2014, 15);
- Soitec Solar Development Project PEIR, Boulevard, San Diego County (2014, 18);
- Oakland Zoo expansion on Alameda whipsnake and California red-legged frog (2014; 3);
- Alta East Wind Energy Project FEIS, Tehachapi Pass (2013, 23);
- Blythe Solar Power Project Staff Assessment, California Energy Commission (2013, 16);
- Clearwater and Yakima Solar Projects DEIR, Kern County (2013, 9);
- West Antelope Solar Energy Project IS/MND, Antelope Valley (2013, 18);
- Cuyama Solar Project DEIR, Carrizo Plain (2014, 19);
- Desert Renewable Energy Conservation Plan (DRECP) EIR/EIS (2015, 49);
- Kingbird Solar Photovoltaic Project EIR, Kern County (2013, 19);

- Lucerne Valley Solar Project IS/MND, San Bernardino County (2013, 12);
- Tule Wind project FEIR/FEIS (Declaration) (2013; 31);
- Sunlight Partners LANDPRO Solar Project MND (2013; 11);
- Declaration in opposition to BLM fracking (2013; 5);
- Blythe Energy Project (solar) CEC Staff Assessment (2013;16);
- Rosamond Solar Project EIR Addendum, Kern County (2013; 13);
- Pioneer Green Solar Project EIR, Bakersfield (2013; 13);
- Replies on Soccer Center Solar Project MND (2013; 6);
- Soccer Center Solar Project MND, Lancaster (2013; 10);
- Plainview Solar Works MND, Lancaster (2013; 10);
- Alamo Solar Project MND, Mojave Desert (2013; 15);
- Replies on Imperial Valley Solar Company 2 Project (2013; 10);
- Imperial Valley Solar Company 2 Project (2013; 13);
- FRV Orion Solar Project DEIR, Kern County (PP12232) (2013; 9);
- Casa Diablo IV Geothermal Development Project (2013; 6);
- Reply on Casa Diablo IV Geothermal Development Project (2013; 8);
- Alta East Wind Project FEIS, Tehachapi Pass (2013; 23);
- Metropolitan Air Park DEIR, City of San Diego (2013; );
- Davidon Homes Tentative Subdivision Rezoning Project DEIR, Petaluma (2013; 9);
- Oakland Zoo Expansion Impacts on Alameda Whipsnake (2013; 10);
- Campo Verde Solar project FEIR, Imperial Valley (2013; 11pp);
- Neg Dec comments on Davis Sewer Trunk Rehabilitation (2013; 8);
- North Steens Transmission Line FEIS, Oregon (Declaration) (2012; 62);
- Summer Solar and Springtime Solar Projects Ism Lancaster (2012; 8);
- J&J Ranch, 24 Adobe Lane Environmental Review, Orinda (2012; 14);
- Replies on Hudson Ranch Power II Geothermal Project and Simbol Calipatria Plant II (2012; 8);
- Hudson Ranch Power II Geothermal Project and Simbol Calipatria Plant II (2012; 9);
- Desert Harvest Solar Project EIS, near Joshua Tree (2012; 15);
- Solar Gen 2 Array Project DEIR, El Centro (2012; 16);
- Ocotillo Sol Project EIS, Imperial Valley (2012; 4);
- Beacon Photovoltaic Project DEIR, Kern County (2012; 5);
- Butte Water District 2012 Water Transfer Program IS/MND (2012; 11);
- Mount Signal and Calexico Solar Farm Projects DEIR (2011; 16);
- City of Elk Grove Sphere of Influence EIR (2011; 28);
- Sutter Landing Park Solar Photovoltaic Project MND, Sacramento (2011; 9);
- Rabik/Gudath Project, 22611 Coleman Valley Road, Bodega Bay (CPN 10-0002) (2011; 4);
- Ivanpah Solar Electric Generating System (ISEGS) (Declaration) (2011; 9);
- Draft Eagle Conservation Plan Guidance, USFWS (2011; 13);
- Niles Canyon Safety Improvement Project EIR/EA (2011; 16);
- Route 84 Safety Improvement Project (Declaration) (2011; 7);
- Rebuttal on Whistling Ridge Wind Energy Power DEIS, Skamania County, (2010; 6);
- Whistling Ridge Wind Energy Power DEIS, Skamania County, Washington (2010; 41);
- Klickitat County's Decisions on Windy Flats West Wind Energy Project (2010; 17);

- St. John's Church Project DEIR, Orinda (2010; 14);
- Results Radio Zone File #2009-001 IS/MND, Conaway site, Davis (2010; 20);
- Rio del Oro Specific Plan Project FEIR, Rancho Cordova (2010;12);
- Results Radio Zone File #2009-001, Mace Blvd site, Davis (2009; 10);
- Answers to Questions on 33% RPS Implementation Analysis Preliminary Results Report (2009; 9);
- SEPA Determination of Non-significance regarding zoning adjustments for Skamania County, Washington (Second Declaration) (2008; 17);
- Draft 1A Summary Report to CAISO (2008; 10);
- Hilton Manor Project Categorical Exemption, County of Placer (2009; 9);
- Protest of CARE to Amendment to the Power Purchase and Sale Agreement for Procurement of Eligible Renewable Energy Resources Between Hatchet Ridge Wind LLC and PG&E (2009; 3);
- Tehachapi Renewable Transmission Project EIR/EIS (2009; 142);
- Delta Shores Project EIR, south Sacramento (2009; 11 + addendum 2);
- Declaration in Support of Care's Petition to Modify D.07-09-040 (2008; 3);
- The Public Utility Commission's Implementation Analysis December 16 Workshop for the Governor's Executive Order S-14-08 to implement a 33% Renewable Portfolio Standard by 2020 (2008; 9);
- The Public Utility Commission's Implementation Analysis Draft Work Plan for the Governor's Executive Order S-14-08 to implement a 33% Renewable Portfolio Standard by 2020 (2008; 11);
- Draft 1A Summary Report to California Independent System Operator for Planning Reserve Margins (PRM) Study (2008; 7.);
- SEPA Determination of Non-significance regarding zoning adjustments for Skamania County, Washington (Declaration) (2008; 16);
- Colusa Generating Station, California Energy Commission PSA (2007; 24);
- Rio del Oro Specific Plan Project Recirculated DEIR, Mather (2008: 66);
- Replies on Regional University Specific Plan EIR, Roseville (2008; 20);
- Regional University Specific Plan EIR, Roseville (2008: 33);
- Clark Precast, LLC's "Sugarland" project, ND, Woodland (2008: 15);
- Cape Wind Project DEIS, Nantucket (2008; 157);
- Yuba Highlands Specific Plan EIR, Spenceville, Yuba County (2006; 37);
- Replies to responses on North Table Mountain MND, Butte County (2006; 5);
- 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) 13<sup>th</sup> 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

#### Smallwood CV

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.

Smallwood CV

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.

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	

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

Journal	Journal	
Environmental Management	Southwestern Naturalist	
Functional Ecology	The Wildlife SocietyWestern 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	Captures; habitat assessment
	distichlus	-
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	Desmocerus californicus	Monitored success of relocation and habitat
beetle	dimorphus	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

### **RESPONSES TO I-SMALLWOOD LETTER**

**Response I-Smallwood-1:** Observations made by the commentor during a site reconnaissance are noted. These are consistent with the habitat conditions and characteristic species described in **the RDEIR**, **Section 4.3, Biological Resources**. As described on **page 4.3-6 of the RDEIR**, the mosaic of natural community types, available surface water, and the extent of adjacent largely undeveloped land to the south and southwest of the project site contributes to generally high wildlife habitat values.

**Response I-Smallwood-2:** The concerns of the commentor over population declines in vertebrate wildlife and the biological data used in preparing the biological resources section of the RDEIR is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. As concluded in the RDEIR and confirmed during the 2021 updated surveys described in **Master Response 1 – Need for Updated Biological Surveys**, no further detailed surveys for sensitive biological resources were considered necessary by the City's independent biological consultant in describing baseline conditions or completing the CEQA review of the proposed project. Nonetheless, the City's independent biologist conducted an additional series of site reconnaissance surveys throughout 2021 and as recently as March 2022 to inform responses to comment. Recent correspondence between the City and CDFW served to confirm that earlier concerns and comments raised by CDFW in their letter (dated April 15, 2013) regarding the Draft EIR on the previous 93-lot development application for the site have been addressed as a result of the major changes to the Scott Ranch Project, the updated studies, and information provided in the RDEIR (see **Comment A-CDFW-2-**1).

**Response I-Smallwood-3:** The concerns of the commentor over conclusions on presence or absence of special-status species on the site, which they believe are "flawed and misleading", is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. Regarding California tiger salamander presence or absence, as concluded on **page 4.3-36 of the RDEIR**, this species is not expected to be present because the site is outside the known potential range as identified by the USFWS and CDFW. Additionally, representatives of these agencies have not requested protocol surveys for this species at any point during communications with the City staff. Regarding special-status bird species, **Master Response 4 – Special-Status Species Present at the Project Site** provides a thorough description of what constitutes a special-status species under CEQA review, the potential for occurrence of special-status birds on the site, and how mitigation measures identified in the RDEIR would address any potential adverse impacts. **Mitigation Measure BIO-1c** in the RDEIR would serve to ensure avoidance of any nesting special-status bird species in the instance that new nests are established in advance of construction. **Mitigation Measure BIO-1c** would also serve to ensure avoidance of any nesting special-status bird species in the instance that new nests are established in advance of construction. **Mitigation Measure BIO-1c** would also serve to ensure avoidance of any nesting special-status bird species in the instance that new nests are established in advance of construction. **Mitigation Measure BIO-1c** would also serve to ensure avoidance of any nesting special-status bird species in the instance that new nests are established in advance of construction. **Mitigation Measure BIO-1c** would also serve to ensure avoidance of any nests of common bird species not considered to be of special-status under CEQA, ensuring compliance with state and federal regulations and fully addressing potential impacts on nesting birds as concluded in the RDEIR.

**Response I-Smallwood-4:** The concerns of the commentor over conclusions on presence or absence of special-status species and that habitat characterizations being "cursory and vague", is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. With regard to the possible presence of special-status bird species in the site vicinity, the discussion on **page 4.3-20 of the RDEIR** states that most of these species may in fact forage in the grasslands and open woodlands of the site vicinity, including golden eagle, contrary to the assertions by Dr. Smallwood. The species information in **Table 4.3-1** on **page 4.3-18 of the RDEIR**, describes occurrence within the project site and provides a brief summary of typical habitat characteristics and occupation on the site. For bird species listed in **Table 4.3-1**, occupation for bird species assumed presence of active nesting or other essential habitat, not simply a potential for occasional foraging or flyovers through the area. Because no active golden eagle nests have been reported or observed at the project site or surrounding area during the various surveys conducted since 2004, their occurrence on the site is considered to be "unlikely," as described in **Table 4.3-1**.

Golden eagle is a very large, conspicuous species which would have been detected, by the numerous biologists that have conducted surveys at the project site, if a nest were present. While it has been observed foraging through grassland habitat in the vicinity, no records of any nesting have been reported by the CDNNB or other information sources in the surrounding area. Golden eagles tend to be sensitive to human disturbance and select nesting locations that reflect that sensitivity. The proximity of heavily used roadways, residential development and visitor use of Helen Putnam Regional Park likely limits the suitability for use of trees at the project site for nesting, as reflected in the "unlikely" characterization in **Table 4.3-1**. These factors were all considered as part of the habitat assessment performed by the City's independent consulting biologist in determining the likelihood of occurrence and nesting on the site. Regardless, **Mitigation Measure BIO-1c** identified in the RDEIR would serve to ensure avoidance of any nesting special-status and more common bird species in an instance that new nests are established in advance of construction. This would include golden eagle, although nesting on the site would be highly unlikely.

A majority of the site would be retained as undeveloped open space as part of the project and would continue to be available for foraging opportunities by golden eagle and other special-status bird species if present. No significant adverse impacts due to the limited loss of suitable foraging habitat for special-status bird species was identified in the RDEIR or is anticipated based on the negative findings of the 2021 updated surveys (see **Master Response 1 – Need for Updated Biological Surveys**) and the further reduction in potential impacts associated with the revisions to the proposed project.

**Response I-Smallwood-5:** The concerns of the commentor over conclusions on presence or absence of special-status species is noted. See **Master Response 1 – Need for Updated Biological Surveys, Master Response 3 – American Badger and Western Burrowing Owl**, and **Master Response 4 – Special-Status Species Present at the Project Site**. No burrowing owl were observed during detailed surveys conducted in 2013 as part of the *Burrowing Owl, Badger and Fossorial Mammal Survey Results*.<sup>16</sup> Additionally, no individuals or their signs of presence were observed during subsequent site visits including during the 2021 updated surveys (see **Master Response 1 - Regarding Need for Updated Biological Surveys**). All of the fossorial mammal burrow openings were too small to be used by either of these species. The absence of California ground squirrel on the site is likely a critical limitation to suitability of the grasslands on the site for occupation by burrowing owl, as indicated on **page 4.3-20 of the RDEIR**.

As explained in **Response I-Smallwood-4**, the species information in **Table 4.3-1** on **page 4.3-18 of the RDEIR**, includes occurrence within the project site and provides a brief summary of typical habitat characteristics regarding occupation at the project site. Because no active burrowing owl nests have been reported or observed at the site or surrounding area during the various surveys conducted from 2004 through 2022, their occurrence at the site was considered to be "unlikely," as documented in **Table 4.3-1**.

The reference on **page 4.3-20 of the RDEIR** to the fact that the CNDDB records show no occurrences of burrowing owl in the site vicinity, as indicated on **Figure 4.3-5** on **page 4.3-17 of the RDEIR**, was simply to note the lack of known occurrences in the area. Contrary to the assertion by the commentor, it was not to imply that the lack of occurrence records in a particular location demonstrates absence of this species at the site. That confirmation was demonstrated during the 2013 survey and subsequent negative surveys. No fossorial burrows suitable for occupation by burrowing owl were detected anywhere on the site during the 2021 updated surveys, as summarized in **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 3 – American Badger and Western Burrowing Owl**. Occupation of the site is still considered unlikely, as indicated in **Table 4.3-1**.

The assertion by the commentor that additional burrowing owl surveys should be conducted according to California Department of Fish and Wildlife standards is unwarranted based on the results of the past surveys and results of the 2021 updated surveys. The *Staff Report on Burrowing Owl Mitigation*<sup>17</sup> and *Burrowing Owl Survey Protocol and Mitigation Guidelines*<sup>18</sup> both call for a habitat assessment as the first step in conducting surveys for burrowing owl, to determine whether suitable burrows or other nesting

<sup>&</sup>lt;sup>16</sup> Zentner and Zentner. 2013. Burrowing Owl, Badger and Fossorial Mammal Survey Results. Prepared for Davidon Homes. October.

<sup>&</sup>lt;sup>17</sup> California Department of Fish and Game. 2012. Staff Report on Burrowing Owl Mitigation. March 7.

<sup>&</sup>lt;sup>18</sup> California Burrowing Owl Consortium. 1993. *Burrowing Owl Survey Protocol and Mitigation Guidelines*. April.

opportunities are present. Where suitable ground burrows or indications of burrowing owl presence are not detected on a site, further detailed surveys are not warranted according to the survey methodology described in these protocols. The 2013 survey, which was not solely focused on burrowing owl presence or absence, included detailed surveys during the nesting season (February 1 through August 31) even though no ground squirrel or other fossorial burrows suitable for occupation by burrowing owl were detected on the site. Surveys were completed at least three weeks apart with at least one visit after June 15, with surveys conducted on May 1, May 23, June 14, and August 19, 2013, spacing the surveys at threeweek intervals as recommended in the survey protocols. Because California ground squirrel still does not occur on the site based on the findings of the 2021 updated surveys, and suitable fossorial burrows needed for nesting by burrowing owls are absent, additional protocol surveys are not warranted.

No significant adverse impact on burrowing owl was identified in the RDEIR or are anticipated based on the negative findings of past surveys and 2021 updated surveys. **Mitigation Measure BIO-1c** would serve to ensure avoidance of nesting raptors such as burrowing owl in the remote instance that new nests are established in advance of construction. While the likelihood of presence of burrowing owl on the site is highly unlikely based on the results of past studies and the 2021 updated surveys, there remains a remote possibility that this species could nest on the site in the future before construction proceeds. In response to concerns over the potential for future occupation of the site by this species, **Mitigation Measure BIO-1b** on **page 4.3-42 of the RDEIR** has been refined to clarify that preconstruction surveys for these species be conducted in advance of construction, as indicated in the **Response A-CDFW-2-5** (See revisions to **Mitigation Measures Bio-1b** in **Chapter 5.0**, **Revisions to the RDEIR**). This additional provision would ensure that any burrowing owls are protected, in the remote instance that a nest was established in advance of construction.

**Response I-Smallwood-6:** The concerns of the commentor over conclusions on presence or absence of special-status species is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. Northern harrier is a conspicuous raptor which tends to forage close to the ground and typically nests on the ground or in low shrubs. No nests or even individual foraging activity for this species was observed during the numerous field reconnaissance surveys conducted between 2004 and 2019 by the City's independent consulting biologist, or in the 2021 updated surveys. As explained in **Response I-Smallwood-4**, the species information in **Table 4.3-1** on **page 4.3-18 of the RDEIR**, includes occurrence within the project site and provides a brief summary of typical habitat characteristics regarding occupation on the site. It is not intended to provide a comprehensive description. Because no active northern harrier nests have been reported or observed on the site or surrounding area during the various surveys conducted since 2004, their occurrence on the site was considered to be "unlikely," as documented in **Table 4.3-1**. Regardless,

**Mitigation Measure BIO-1c** would serve to ensure avoidance of nesting raptors such as northern harrier in the remote instance that new nests are established in advance of construction.

**Response I-Smallwood-7:** The concerns of the commentor over conclusions on presence or absence of special-status species is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. As indicated in **Table 3-1 in Master Response 4 – Special-Status Species Present at the Project Site**, horned lark is not considered a special-status species under CEQA review. However, protection of active native bird nests would be provided under **Mitigation Measure BIO-1c**, addressing any impacts of the remote potential of this species nesting on the site in the future in advance of construction. It was previously considered a Species of Special Concern by the California Department of Fish and Wildlife, which is why it remained in **Table 4.3-1** on **page 4.3-18 of the RDEIR**.

As indicated on **page 4.3-20 of the RDEIR**, the grasslands at the site and surrounding area provide suitable foraging habitat and potential nesting locations for the horned lark and other grassland-dependent species, contrary to the assertions by the commentor. Although horned lark is a relatively small passerine species, it is easily discernable because of the conspicuous tufts and bright coloration on its head and tendency to forage in flocks. No nests or even individual foraging activity for this species was observed during the numerous field reconnaissance surveys conducted between 2004 and 2019 by the City's independent consultant biologist, or in the 2021 updated surveys. Preconstruction surveys provided under **Mitigation Measure BIO-1c** would ensure protection of any active nests, in the remote possibility they were established in advance of construction.

A majority of the project site would be retained as undeveloped open space as part of the project and would continue to be available for foraging opportunities by special-status and more common bird species. No significant adverse impacts due to the limited loss of suitable foraging habitat for special-status bird species was identified in the RDEIR or is anticipated based on the negative findings of the 2021 updated surveys (see **Master Response 1 – Need for Updated Biological Surveys**) and the further reduction in potential impacts associated with the revisions to the proposed project.

**Response I-Smallwood-8:** The concerns of the commentor over conclusions on presence or absence of special-status species is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. As explained in **Response I-Smallwood-4**, the species information in **Table 4.3-1** on **page 4.3-18 of the RDEIR**, including potential for occurrence on the project site, provides a brief summary of typical habitat characteristics and conclusion regarding occupation on the site. It is not intended to provide a comprehensive description. As indicated on **page 4.3-20 of the RDEIR**, although peregrine and prairie falcon may occasionally forage in the

vicinity of the site, suitable nesting habitat is absent because of a lack of cliff faces or ledges used by the falcons. As pointed out by the commentor, these species have been reported to nest on tall buildings and wind turbines. However, these types of structures are not present on the site or surrounding lands. Because no active peregrine or prairie falcon nests have been reported or observed on the site or surrounding area during various surveys, and typical nesting substrate is absent from the site, their nesting occurrence on the site was considered to be "unlikely," as documented in **Table 4.3-1**. Preconstruction surveys provided under **Mitigation Measure BIO-1c** would ensure protection of any active nests, in the remote event they were established in advance of construction.

A majority of the site would be retained as undeveloped open space as part of the project and would continue to be available for foraging opportunities by special-status and more common bird species. No significant adverse impacts due to the limited loss of suitable foraging habitat for special-status bird species was identified in the RDEIR or is anticipated based on the negative findings of the updated surveys conducted in 2021 (see **Master Response 1 – Need for Updated Biological Surveys**) and the further reduction in potential impacts associated with the revisions to the proposed project.

**Response I-Smallwood-9:** The concerns of the commentor over conclusions on presence or absence of special-status species is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. The discussion on **page 4.3-20 of the RDEIR** regarding raptor use of the site accurately describes potential use of the site, including absence of essential breeding habitat for in frequent winter migrants and uncommon aerial transients such as ferruginous hawk, merlin and bald eagle. The intent was not to absolve the project in any way as asserted by the commentor, but to provide a conclusion regarding potential significant impacts. The proposed project would preserve a majority of the project site as open space and would continue to be available for foraging opportunities by special-status and more common bird species. No significant adverse impacts due to the limited loss of suitable foraging habitat for special-status bird species was identified in the RDEIR or is anticipated based on the negative findings of the 2021 updated surveys (see **Master Response 1 – Need for Updated Biological Surveys**) and the further reduction in potential impacts associated with the revisions to the proposed project.

**Response I-Smallwood-10:** The concerns of the commentor over conclusions regarding nesting habitat on the site and presence or absence of special-status species is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. As indicated on **page 4.3-20 of the RDEIR**, the grasslands on the site and surrounding area provide suitable foraging habitat and potential nesting locations for loggerhead shrike, white-tailed kite, both of which are identified as possibly occupying the site, as documented in **Table 4.3-1 of the RDEIR**. No nests for either of these species were observed during the numerous field reconnaissance surveys conducted between 2004 and 2019 by the City's independent consulting biologist, or in the 2021 updated surveys. Preconstruction surveys provided under **Mitigation Measure BIO-1c** would ensure protection of any active nests if they were established in advance of construction.

A majority of the project site would be retained as open space and would continue to be available for foraging opportunities by special-status and more common bird species. No significant adverse impacts due to the limited loss of suitable foraging habitat for special-status bird species was identified in the RDEIR or is anticipated based on the negative findings of the 2021 updated surveys (see **Master Response 1 – Need for Updated Biological Surveys**) and the further reduction in potential impacts associated with the revisions to the proposed project. See also **Response I-Smallwood-4** to **Response I-Smallwood-9**.

**Response I-Smallwood-11:** The concerns of the commentor over conclusions regarding nesting habitat on the site and presence or absence of special-status species is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site.** The commentor is incorrect that no surveys for nesting birds were performed on the site. Nesting activity by common bird species was detected on structures, in trees and in ground locations over the course of the field reconnaissance surveys conducted by the City's independent consultant biologist between 2004 and 2019, and as part of the 2021 updated surveys summarized in **Master Response 1 – Need for Updated Biological Surveys.** However, the focus of the field surveys was on the potential presence of nesting by special-status species not more common bird species. No nests of loggerhead shrike, white-tailed kite, or other special-status bird species listed in **Table 4.3-1 of the RDEIR** were ever detected during the course of the survey efforts. Preconstruction surveys provided under **Mitigation Measure BIO-1c of the RDEIR** would ensure protection of any active nests if they were established in advance of construction.

**Response I-Smallwood-12:** The concerns of the commentor over conclusions regarding bat roosting and presence or absence of special-status species is noted. See **Master Response 4 – Special-Status Species Present at the Project Site**. Acoustic detectors, thermal-imaging cameras, or mist nets were not used as part of the bat surveys conducted in 2004 and 2014, the results of which are summarized on **page 4.3-21 of the RDEIR**. However, bat presence observed during the 2014 survey indicate only presence of common species - Brazilian free-tailed bat (*Tadarida brasiliensis*) and an unidentified species of myotis (*Myotis sp.*); however, nothing characteristic of special-status bat species that would have warranted more detailed study. The survey effort included a thorough inspection of all accessible portions of the existing structures, not simply "looking for bat guano under bans and sheds" as claimed by the commentor. Regardless, **Mitigation Measure BIO-1d** requires detailed restrictions and controls to ensure avoidance of possible loss of special status bats if present onsite during project construction and no acoustical
surveys are considered necessary to adequately characterize use of the project site, including the existing structures and trees. If observations made during the surveys conducted in 2004 and 2014 indicated the potential for maternity roosting, concentrations of roosting activity, or possible presence of highly sensitive special-status bat species, then additional acoustical surveys may have been warranted, but that was not the case for the project site.

**Response I-Smallwood-13:** The commentor is correct that western red bat is recognized as a California Special Concern Species (SSC) by the CDFW, as indicated in **Table 4.3-1** on **page 4.3-18 of the RDEIR**. The reference to western red bat not being a SSC on **page 4.3-21 of the RDEIR** was excerpted from the 2004 survey report by Wildlife Research Associates, before this species was recognized as a SSC, as was the case with western yellow bat as well. The sentence regarding western red bat and western yellow bat on **page 4.3-21 of the RDEIR** regarding their SSC status has been deleted as follows, with deletions shown in <del>overstrike</del>. These revisions would not change the analysis or the findings presented in the RDEIR.

[...] As indicated in Table 4.3-1, most of these are considered to be SSC species by the CDFW and three were previously recognized as federal Special Concern species before this designation was eliminated by the USFWS. While the western red bat and western yellow bat are currently not recognized as SSC species by the CDFW, they are classified as High Priority species in the region by the Western Bat Working Group (1998) [...]

**Response I-Smallwood-14:** The concerns of the commentor over the biological data used in preparing the biological resource section of the RDEIR is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site.** As described on **page 4.3-2 of the RDEIR**, the biological resources analysis was developed through the compilation and review of available information and reconnaissance-level field surveys by the City's biological consultant to provide an independent peer review of studies prepared by the applicant's consulting specialists, assess potential impacts of the proposed project, and develop mitigation measures to reduce significant impacts. Contrary to the assertion by the commentor, "detection surveys" were in fact conducted where habitat assessments indicated a potential for occurrence of sensitive resources, including special-status plants and special-status bats. The detailed surveys and mapping prepared for the project site extend from 2004 through 2022 and provide far more documentation on conditions associated with the project site than is typically available during the environmental review process. The City's independent consultant biologist conducted site reconnaissance surveys to confirm field conditions described in the

applicant's detailed studies and mapping, and to assess potential impacts of the proposed project in 2004, 2009, 2011, 2015, and 2019, as listed on **page 4.3-6 of the RDEIR**.

Collectively, the reconnaissance-level field surveys conducted by the City's independent biological consultant served to characterize existing conditions; verify conclusions regarding the possible presence of special-status species, sensitive natural communities, and regulated waters; determine whether any additional detailed surveys were necessary; and allow for an assessment of potential impacts and need for any mitigation measures. The results of the background review and field reconnaissance surveys were incorporated directly into the description of site conditions and impact analysis contained in **Section 4.3**, **Biological Resources, of the RDEIR**.

In response to comments received on the RDEIR and claims that field conditions may have changed, the City's independent biological consultant conducted updated detailed surveys and mapping of the project site in the spring and summer of 2021. This included systematic surveys for special-status plant species, refinement of the mapping of native grasslands, and an update of the wildlife habitat assessment to determine whether conditions described in the RDEIR are still accurate. A copy of the results of findings report from the 2021 updated surveys is contained in **Appendix RTC-A** of this document, including lists of plant and animal species observed on the site. Also, see **Master Response 1 – Need for Updated Biological Surveys** 

As concluded in the RDEIR and confirmed during the 2021 updated surveys, no further detailed surveys for sensitive biological resources were considered necessary by the City's independent biological consultant in completing the CEQA review of the proposed project. No additional protocol surveys to confirm presence or absence of special-status animal species on the project site were considered necessary based on the results of the 2021 updated surveys, beyond the preconstruction clearance surveys identified in the RDEIR to ensure avoidance or incidental take of CRLF (**Mitigation Measure BIO-1b**), nesting raptors and other native birds (**Mitigation Measure BIO-1c**), and roosting bats (**Mitigation Measure BIO-1d**). No other special-status species have been reported or are suspected to occur on the project site that wouldn't be adequately protected and avoided with implementation of these mitigation measures.

**Response I-Smallwood-15:** The concerns of the commentor over the biological data used in preparing the Biological Resource section of the RDEIR is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site.** The commentor's claims that "the number of species detected is a function of survey effort" do not consider the larger factors in the number of species detected at a particular location, including the size of the study area and the habitat quality and complexity, as well as the presence or absence of critical features such as available water, food source and conditions necessary for successful reproduction. Where vegetative

cover and complexity are limited and water and other essential habitat characteristics are absent, such as an urbanized area with paved surfaces and structures, the species diversity and density of wildlife will be comparatively less than locations with natural habitat, available water, food and protective cover necessary for survival and reproduction. The purpose of reconnaissance-level surveys is to assess and document habitat conditions and to determine whether or not further detailed studies are necessary to provide confirmation on presence or absence of sensitive resources. This is part of standard practice in conducting biological assessments as part of CEQA review, as was performed by the City's independent consultant biologist during preparation of the biological resources section in the RDEIR.

**Response I-Smallwood-16:** The concerns of the commentor over the biological data used in preparing the Biological Resource section of the RDEIR is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. The commentor's assertion that a "...greater survey effort increases the likelihood that listed species will be detected..." oversimplifies the purpose and need of habitat assessments and detailed surveys. If suitable habitat is not present as necessary to support occupation by a special-status species, no amount of detailed survey effort will increase the likelihood of detection. If suitable habitat isn't present, then the special-status species cannot survive in that location. Any observation of a listed species in an area of unsuitable habitat is likely because the individual is passing through or dispersing for some reason not related to habitat conditions in that location.

The commentor's confidence in forecasting the number of species that could be detected with longer surveys or the likelihood of detecting a listed species is noted. However, this is not based on common practices or consideration of habitat suitability. Assessing the potential for habitat suitability of a special-status species requires more than spending additional time on a particular site or assigning some probability based on the total number of species observed. It requires consideration of habitat suitability of a particular location in combination with known distribution, connectivity, and other factors. All of which were considered as part of the habitat suitability assessment conducted during preparation of the RDEIR by the City's independent consultant biologist.

**Response I-Smallwood-17:** The concerns of the commentor over the biological data used in preparing the Biological Resource section of the RDEIR is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. Claims of the commentor over the number of "special-status" animal species that have the potential to occur at the site is an inaccurate characterization of their status and distorts the significance of potential impacts of the Scott Ranch Project, as discussed in **Master Response 4 – Special-Status Species Present at the Project Site**. It should also be noted that resources such as eBird and iNaturalist that were used by the commentor, in determining the "occurrence likelihood" in Table 2 of their comments, are citizen-science

projects that often include unverified accounts and unreliable locational information from nonprofessional contributors. The use of these resources has not been accepted by the regulatory agencies to determine the potential for occurrence of special-status species or analysis of adverse effects for the purposes of CEQA. While they can be useful as a source of background information, they are not comparable to the CNDDB records and other information that was used in preparing **Table 4.3-1** on **page 4.3-18 of the RDEIR**. The use of the CNDDB records in determining the distribution of special-status species in the vicinity of a project site is an accepted practice by professional biologists evaluating the likelihood of occurrence and assessing potential impacts of a proposed development as part of CEQA review. According to the eBird and iNaturalist records listed by the commentor, none of these species listed in Table 2 of their comments have actually been reported at the project site. Just because a species has been reported by these two data sources for occurring "in region" should not be assumed to mean that they have a potential for presence at the project site, which would depend on whether suitable habitat is present.

As concluded in the RDEIR and confirmed during the 2021 updated survey effort, no further detailed surveys for sensitive biological resources were considered necessary by the City's independent biological consultant in completing the CEQA review of the proposed project. No additional protocol surveys to confirm presence or absence of special-status animal species on the project site were considered necessary based on the results of the 2021 updated survey effort, beyond the preconstruction clearance surveys recommended to ensure avoidance or incidental take of CRLF (**Mitigation Measure BIO-1b**), nesting raptors and other native birds (**Mitigation Measure BIO-1c**), and roosting bats (**Mitigation Measure BIO-1d**). No other special-status species have been reported or are suspected to occur on the project site that wouldn't be adequately protected and avoided with implementation of these mitigation measures. See also **Response I-Smallwood-4** to **Response I-Smallwood-16**.

**Response I-Smallwood-18:** The concerns of the commentor over the loss of bird nest productivity and data used in preparing the Biological Resource section of the RDEIR is noted. See **Master Response 1** – **Need for Updated Biological Surveys** and **Master Response 4** – **Special-Status Species Present at the Project Site**. The projections by the commentor regarding loss of "reproductive capacity" of the site is interesting, as is their calculated estimate that a total lost capacity of 83,180 birds after 100 years as a result of project construction and habitat conversion of 22.1 acres of the site.

First, the 22.1 acres of permanent impact noted by the commentor was for a previous version of the proposed project. As described in **Master Response 1 – Need for Updated Biological Surveys**, no occurrences of any plant species considered to be of special-status were observed during the systematic field surveys of the site conducted in 2021. These negative results are consistent with the negative results

of previous survey efforts conducted in 2003/2004 and 2013. Special-status plant species are not expected to occur on the site given the negative findings from the systematic surveys since 2003.

Second, as described in Master Response 5 – Revisions to Proposed Project and Associated Reduction of Impacts on Biological Resources, a majority of the site would be permanently retained as open space and would continue to provide nesting and foraging opportunities to bird species into the future. In addition, Mitigation Measure BIO-1c identified in the RDEIR would serve to protect any nests of raptors or other birds when in active use, by ensuring compliance with federal and state regulations. If any occupied nests are encountered in the future during required preconstruction surveys, Mitigation Measure BIO-1c requires the development of appropriate restrictions to prevent nest abandonment when in active use. Implementation of Mitigation Measure BIO-1c, identified in the RDEIR, would serve to avoid loss of any nests on the site as a result of project implementation, contrary to the assumptions used by the commentor in their calculations of loss in reproductive capacity of the site.

**Response I-Smallwood-19:** The concerns of the commentor over the loss of wildlife movement opportunities and data used in preparing the Biological Resource section of the RDEIR is noted. As described on **page 4.3-6 of the RDEIR**, "wildlife use and movement are currently unrestricted across the site and onto the adjacent undeveloped lands to the south and southwest", contrary to the assertion in the comment that wildlife use is somehow restricted to drainages. As proposed, the project would limit residential development to a 6-acre portion of the site adjacent to existing development including nearby subdivisions and Windsor Drive. The balance of the project site including 5 acres of private open space and 47 acres as an extension of Helen Putnam park, would be preserved and available for wildlife movement including stopover during migration. A detailed discussion of the potential impacts of project implementation on wildlife movement opportunities is provided under **Impact BIO-4 on pages 4.3-57 through 4.3-59 of the RDEIR**. Also, see **C-Barnacle-9** and **C-Fischer-40**.

**Response I-Smallwood-20:** The concerns of the commentor over the loss of special-status wildlife as a result of project-generated traffic and data used in preparing the biological resource section of the RDEIR is noted. Wildlife mortality as a result of collisions with vehicle traffic is a known risk and will not be exacerbated by the project since no new arterial roadways are being constructed (D Street and Windsor Drive are existing roadways). The proposed A and B streets are not major arterials and would only serve the proposed residences operating at relatively slow speeds where the risk of vehicle collisions would be relatively low. The proposed project would not contribute substantial volume of traffic, rather it would introduce pedestrian and roundabout improvements that would result in traffic calming, which would reduce speeds and risk of vehicle collisions. However, applying mortality data from a study conducted along a rural stretch of a road in Contra Costa County and using it to formulate an estimate of wildlife loss from project-generated traffic is conjecture and not supportable by standard CEQA review practices.

Given the project's minimal contribution to existing roadway volumes, there would be no substantial adverse effect to protected and more common wildlife species. No additional analysis is necessary in response to the comment.

**Response I-Smallwood-21:** The concerns of the commentor over the risk of bird collisions with new windows and structures associated with the proposed project is noted. The proposed residences would not be out of character with the existing adjacent residences in terms of building height, mass, and fenestration. The project proposes 28 single-family homes of one and two stories, which would not result in an elevated rate of window collisions. Using an assemblage of studies on bird collisions to develop fatality rates that are then applied by the commentor in estimating bird loss from the new residences on the site is conjecture and not supportable by professional standards. No additional analysis or mitigation is considered necessary in response to the comment. This includes post-construction fatality monitoring recommended by the commentor, which is not warranted for the Davidon (28-lot) Residential Project component given the relatively restricted footprint and proximity to existing residences of similar mass and height. This type of post-construction fatality monitoring is sometimes recommended for high rises or buildings with massive footprints and heights, not single-family residences.

**Response I-Smallwood-22:** The concerns of the commentor over the likelihood that future residents of the site would have house cats that would likely pose a risk to wildlife is noted. The Davidon (28-Lot) Residential Project component would be located adjacent to areas with existing residences that likely have house cats that frequent the surrounding area. The commentor is correct that house cats do pose one of the largest sources of avian mortality in North America based on numerous studies. However, using an assemblage of studies on bird predation by house cats and then applying them to estimate the number of vertebrate wildlife killed as a result of future residents of the site with pet cats is conjecture and not supportable by professional standards. Similarly, using research on the parasite *Toxoplasma gondii* which can infect domesticated cats, and then inferring that pet house cats from the proposed residences on the site "could infect ringtail and eventually sea otters and other marine mammals" because of drainage into Kelly Creek is conjecture and further analysis is not warranted under standard professional practices. No additional analysis or mitigation is considered necessary in response to the comment.

**Response I-Smallwood-23:** The concerns of the commentor over the cumulative effects and the analysis contained in the RDEIR is noted. As discussed under **Section 4.3.4.5 on page 4.3-71 of the RDEIR**, the potential impacts of cumulative development on biological resources tends to be site specific, and the overall cumulative effect would be dependent on the degree to which significant vegetation and wildlife resources are protected on each property. Cumulative development contributes to an incremental reduction in the amount of existing wildlife habitat, particularly for birds and larger mammals. Habitat for species intolerant of human disturbance would be lost as development encroaches into previously

undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained within parks, private open space, or undeveloped properties. The City's General Plan is intended to balance development within the Urban Growth Boundary with feathering of lower density along city margins. While approximately 6 acres of the project site would be converted to residential development, approximately 47 acres would be permanently protected as open space and enhanced as part of the proposed project and 5 acres would be retained as private open space, which would continue to support biological resources. Therefore, the project would not make a cumulatively considerable contribution to cumulative impacts to biological resources as discussed in **Section 4.3.4.5** of RDEIR.

Response I-Smallwood-24: Mitigation Measure BIO-1a, identified in the RDEIR, and as refined herein, is part of a comprehensive set of measures to address potential impacts of the proposed project on special-status species. As called for in Mitigation Measure BIO-1a, the project Applicants must demonstrate to the City that identified compensatory replacement ratios for impacts have been fulfilled and obtain all required permits from the USFWS, CDFW, RWQCB, and USACE (e.g., 1600 series permits, 404 and 401 permits, and incidental take permits) in advance of any disturbance to existing habitat, and must comply with all conditions associated with these agency authorizations to avoid, minimize, or offset impacts to any species listed under either the state or federal Endangered Species Acts or protected under any other state or federal law. Further review and authorizations would be necessary from the USFWS, CDFW and other regulatory agencies, as discussed on pages 4.3-41 and 4.3-56 of the RDEIR. Evidence that the project Applicants have secured all required authorization from these agencies must be submitted to the City prior to issuance of any grading or building permits for the project, which provides assurance that any concerns of these agencies have been fully addressed in advance of any disturbance to existing habitat on the site. This requirement to confirm the status of regulatory agency authorization is just part of a comprehensive suite of mitigation to address potential impacts on special-status species, sensitive natural communities, regulated waters, and wildlife movement opportunities called for in the RDEIR. In addition to the regulatory requirements, Mitigation Measures BIO-1a has been refined to clarify the City's identified compensatory mitigation ratios for impacts to CRLF habitat (see Master Response 2 – California Red-Legged Frog Surveys and Chapter 5.0, Revisions to the RDEIR). Collectively this mitigation would serve to mitigate identified significant impacts on biological and wetland resources to a less-than-significant level, as concluded in Section 4.3, Biological Resources, of the RDEIR.

**Response I-Smallwood-25:** The concerns of the commentor over the adequacy of the Final CRLF Mitigation Plan called for in **Mitigation Measure BIO-1a of the RDEIR** is noted and as described in **Master Response 2- California Red-Legged Frog Surveys**, **Mitigation Measure BIO-1a** has been refined to clarify the City's identified mitigation compensation ratios for impacts to CRLF habitat. Future treatment of the stock pond on the site and need for possible dredging and maintenance would be detailed as part of the Final CRLF Mitigation Plan as reviewed and approved by the regulatory agencies. See Master Response 1 – Need for Updated Biological Surveys and Master Response 2 – California Red-Legged Frog Surveys.

**Response I-Smallwood-26:** The concerns of the commentor over the need for "detection" surveys is noted. Preconstruction surveys required in **Mitigation Measures BIO-1c** and **BIO-1d** of the RDEIR would serve to confirm whether any nesting birds or bats are present on the site in advance of construction-related disturbance, and to define appropriate avoidance measures if detected. As concluded in the RDEIR and confirmed during the 2021 updated surveys summarized in **Master Response 1 – Need for Update Biological Surveys**, no further detailed surveys for sensitive biological resources were considered necessary by the City's independent biological consultant in completing the CEQA review of the proposed project. There is no basis for assuming that most bird nests and bat roosts would be missed by preconstruction surveys, as contended by the commentor. These surveys are performed to ensure compliance with state and federal regulations protecting native species. Compensatory mitigation for inadvertent loss of bird nests and bat roosts is not warranted given the provision of preconstruction surveys identified in the mitigation measures. See **Master Response 1 – Need for Update Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**.

**Response I-Smallwood-27:** The concerns of the commentor over the impact of the project on wildlife movement opportunities is noted. Analysis under **Impact BIO-4 on pages 4.3-57 through 4.3-59 of the RDEIR** provides a discussion of potential impacts on wildlife use and movement. As noted on **page 4.3-58 of the RDEIR**, visitors and their pets would disrupt wildlife use and proposed residential development in the northwestern portion of the project site would limit opportunities for deer and other terrestrial wildlife through this area, although movement corridors are proposed all along the west and northern edges of the residential area. Collectively, the potential impacts of the project on wildlife movement were determined to be potentially significant and mitigation measures were identified in the RDEIR, including the interpretive program called for in **Mitigation Measure BIO-4a**. **Mitigation Measures BIO-4b** through **BIO-4d** were recommended to control future visitors access into sensitive habitat areas and to improve wildlife movement opportunities by removing existing impediments. Predation and disturbance to wildlife by domesticated pets of future residents and visitors to the site is a risk. However, reinforcement of leash controls through the interpretive program called for in **Mitigation Measure BIO-4a** would address this concern. **Mitigation Measure BIO-1b** also requires that methods be detailed and implemented as part of the Final CRLF Mitigation Plan to minimize the potential for

harassment or take of listed and non-listed species as a result of increased human activity associated with the residential development and open space use of the site.

**Response I-Smallwood-28:** The concerns of the commentor over compensatory mitigation for CRLF and other special-status species is noted. A discussion of the likely on-site and possible off-site components of the compensatory mitigation program to address potential impacts of the project on CRLF is provided on **page 4.3-40 of the RDEIR**. The proposed project would result in the transfer of title of approximately 47 acres of the project site to the Sonoma County Regional Parks to be retained for public recreation and as open space and protected habitat, with the expectation that two conservation easements would be established. In addition, approximately 5 acres would be preserved as private open space. Lands conserved for CRLF would also be available for use by other special-status species known or suspected to occur on the site. Annual monitoring reports for any lands permanently protected as part of compensatory mitigation would be provided in perpetuity as part of the management agreements with the regulatory agencies. The Landscape and Vegetation Management Plan required under **Mitigation Measure BIO-2a**, identified in the RDEIR, calls for an emphasis on the use of native plant species as requested in this comment. See **Master Response 2 – California Red-Legged Frog Surveys** and **Master Response 5 – Revisions to the Project and Associated Reduction of Impacts on Biological Resources**.

**Response I-Smallwood-29:** The recommendations by the commentor that the project funds wildlife crossings and research into wildlife mortality cause by traffic in the area is noted. This type of crossing is typically applied where there is a concentrated pattern of wildlife movement in a specific location and limited options for safe crossings in other areas, such as a freeway or heavily used arterial. Wildlife movement across the segments of Windsor Drive and D Street that border the site are not concentrated in one area and do not connect to permanently preserved open space to the north or east, so funding and maintaining a wildlife crossing would be of little value, as would research into the incidence of wildlife mortality cause by vehicle collisions. There is a risk of vehicle collisions, but the project contribution to this risk would be less than significant and no additional mitigation is warranted. See **Response I-Smallwood-20**.

**Response I-Smallwood-30:** The recommendations by the commentor that the project adheres to Bird-Safe Design Guidelines in designing future residences and provides monitoring and compensatory mitigation for possible bird collision hazards is noted. See **Response I-Smallwood-20** and **Response I-Smallwood-21**.

**Response I-Smallwood-31:** The recommendations by the commentor that the project fund a long-term management program for house cats and include a program to spade and neuter cats is noted. See **Response I-Smallwood-22.** 

**Response I-Smallwood-32:** The recommendations by the commentor that compensatory mitigation should include funding wildlife rehabilitation facilities to treat injuries from vehicle collisions, window strikes and attacks by house cats is noted. See **Response I-Smallwood-20**, **Response I-Smallwood-21**, and **Response I-Smallwood-22**.

## Ervin, Olivia

From:	info@extendputnampark.org
Sent:	Monday, February 8, 2021 6:23 PM
То:	City Clerk
Subject:	Scott Ranch Park Extension and Limited Housing Project

To the Members of the Petaluma City Council and the Planning Commission:

I write today to share my support for the proposed Scott Ranch project, which includes plans to extend Putnam Park by 44 acres and a limited 28-home development on the least environmentally sensitive portions of the property. I appreciate how much work has gone into improving this project over the years and ensuring that its environmental impacts are kept to a minimum.

The Revised Draft Environmental Impact Report now before you is a comprehensive document that has evaluated and mitigated the potential impacts of this project effectively. I hope you will vote in support of the completeness of this revised draft EIR so that a final EIR can be prepared that responds to all comments received. And, ultimately, I hope you will approve this project as proposed.

Sincerely, Mariah Steinmetz

Mariah Steinmetz

Petaluma

mariahsteinmetz4@yahoo.com

# **RESPONSES TO I-STEINMETZ LETTER**

Response to I-Steinmetz-1: Comment noted.

## Ervin, Olivia

From:	info@extendputnampark.org
Sent:	Wednesday, February 24, 2021 1:43 PM
То:	Ervin, Olivia
Subject:	Scott Ranch Park Extension and Limited Housing Project

----Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---To the Members of the Petaluma City Council and the Planning Commission:

I write today to share my support for the proposed Scott Ranch project, which includes plans to extend Putnam Park by 44 acres and a limited 28-home development on the least environmentally sensitive portions of the property. I appreciate how much work has gone into improving this project over the years and ensuring that its environmental impacts are kept to a minimum.

The Revised Draft Environmental Impact Report now before you is a comprehensive document that has evaluated and mitigated the potential impacts of this project effectively. I hope you will vote in support of the completeness of this revised draft EIR so that a final EIR can be prepared that responds to all comments received. And, ultimately, I hope you will approve this project as proposed.

Sincerely,

**Robert Stires** 

Petaluma

Bob.stires@gmail.com

# **RESPONSES TO I-STIRES LETTER**

Response to I-Stires-1: Comment noted.

1

## Ervin, Olivia

From:	info@extendputnampark.org
Sent:	Monday, February 8, 2021 4:11 PM
То:	City Clerk
Subject:	Scott Ranch Park Extension and Limited Housing Project

To the Members of the Petaluma City Council and the Planning Commission:

I write today to share my support for the proposed Scott Ranch project, which includes plans to extend Putnam Park by 44 acres and a limited 28-home development on the least environmentally sensitive portions of the property. I appreciate how much work has gone into improving this project over the years and ensuring that its environmental impacts are kept to a minimum.

The Revised Draft Environmental Impact Report now before you is a comprehensive document that has evaluated and mitigated the potential impacts of this project effectively. I hope you will vote in support of the completeness of this revised draft EIR so that a final EIR can be prepared that responds to all comments received. And, ultimately, I hope you will approve this project as proposed.

So often in policy decisions it is easier to let the perfect be the enemy of the good. Please honor the hard work and compromise that has resulted in a fair balance between conservation and development.

Sincerely,

Matthew Stone

Petaluma

M.d.stone@me.com

# **RESPONSES TO I-STONE-1 LETTER**

Response to I-Stone-1-1: Comment noted.

1

## Ervin, Olivia

From:	Matt Stone <info@extendputnampark.org></info@extendputnampark.org>
Sent:	Thursday, March 11, 2021 2:50 PM
То:	Ervin, Olivia
Subject:	Scott Ranch Park Extension and Limited Housing Project

----Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---To the Members of the Petaluma City Council and the Planning Commission:

I wish to register my emphatic support for the Scott Ranch/Helen Putnam Extension Project.

I have toured this site, attended the Planning Commission meeting and reviewed the communications regarding this project. All planning decisions represent a balance of competing interests.

While some have raised traffic and parking concerns and others have expressed concerns about habitat disruption non of those can outweigh the overall benefits of this project.

Developer and the Project promoters have worked diligently to address scope and scale problems with previous iterations and it is now time to move forward and complete the project.

Please do not let the perfect be the enemy of the good. Approve the project as submitted!

Sincerely,

Matt Stone

Petaluma

M.d.stone@me.com

# **RESPONSES TO I-STONE-2 LETTER**

Response to I-Stone-2-1: Comment noted.

From: Moira Sullivan

Date: 3/15/21 1:14 AM (GMT-08:00) To: Teresa Barrett <<u>teresa4petaluma@gmail.com</u>>, <u>cityclerk@cityofpetaluma.org</u>, <u>dking@cityofpetaluma.org</u>, <u>mhealy@cityofpetaluma.org</u>, <u>kmcdonnell@cityofpetaluma.org</u>, <u>dfischer@cityofpetaluma.org</u>, <u>dpocekay@cityofpetaluma.org</u>, <u>bbarnacle@cityofpetaluma.org</u> Subject: RE: Scott Ranch Project

Dear City Council members,

I am writing to oppose the Scott Ranch project proposed for West Petaluma, on the periphery of the wildland/urban interface adjacent to Helen Putnam Park. I am both a Petaluma resident and a scientist with the State of CA. I have spent many hours going over the biological resources section of the RDEIR in detail, and highlighting points of concern (attached) and in no way, shape or form does this project merit your approval.

In light of the numerous significant environmental impacts that accompany this project, it's really clear that no one should build on or in proximity to this fragile ecosystem. This project would consume 22 acres of native grassland habitat, and cut down in excess of 18 trees (mostly native oaks). It would *permanently* imperil a number of sensitive habitats: Kelly Creek, riparian woodland, wetlands, seasonal wetlands, a freshwater marsh, and seeps and drainages that are vital to the survival of the biodiversity on this site. The project site constitutes exceptionally high-value wildlife habitat, and comprises rare and precious ecological resources. There are as many as 66 Special Status Species on this project site (see Dr. Smallwood's letter dated 2/21 to Heather Hines). Per the Helen Putnam Park website, 90% of California's rare and endangered plant species live in grasslands. The developer's consultant biological surveys were very poorly conducted and, in a number of instances, do not meet CA Dept of Fish & Wildlife survey standards. This has the effect of providing you with woefully inadequate and misleading information, and grossly miscalculates the true environmental impacts of this project.

Increasingly, the loss of biodiversity is being seen as an even bigger concern than

1

2

# **I-Sullivan**

climate change. Northern CA is one of only 5 Mediterranean regions in the world, and Sonoma County is a global biodiversity hotspot (see the Pepperwood Preserve link). Most of the Scott Ranch project site constitutes federally designated critical habitat for the CA Red-Legged Frog. This special status species would be significantly and adversely affected by this project. Per the CA Fish & Wildlife Service, the CA Red-Legged Frog has sustained a 70% reduction in its geographic range; only a few small habitats, including this one, remain. And that is just one imperiled species at this project site. "Taking" of habitats such as this, rich in biodiversity, translate into large losses of wildlife. Per Jane Goodall, we've lost more than 50% of species in just the last 40 years. We have entered an era of rapidly accelerating species extinction, and are facing the irreversible loss of plant and animal species.

The level of mitigation required for this project is off the charts. The project has a mitigation ratio of 3:1, meaning that for every acre that is built on, 3 acres have to be set aside (due to the richness and abundance of plant and wildlife here). There isn't even enough acreage within the 58 total acres to achieve this; hence the developer has to acquire 6.1 more acres elsewhere as a part of the mitigation, and this land has not yet even been identified. Whenever you see this level of required mitigation, it's indicative of a very bad project, and completely inadvisable. These habitat values will be permanently lost.

Building here will require periodic fire fuel maintenance and this will be extremely destructive to the remaining plant and animal communities (*e.g.*, chopping down native grass stands, limbing trees, destroying nests/habitat). Frankly, the special status species here, including the federally-listed Red Legged Frog, don't stand a chance with the intended paved trails, dogs, horses, pedestrians, parking lot, bridges, roads, and homes. That's really clear when looking at the RDEIR's environmental impacts. Of course the M group says - as per the usual - that everything can be mitigated. It absolutely can't. This project significantly, and irreversibly, undermines the natural infrastructure of the site.

Critically, this project is not in line with the City's stated Climate Action Goals for VMT and carbon sequestration. In addition to serving as habitat and wildlife corridors, grasslands serve as an important sink for sequestering carbon (see UC

5

4

6

8

# **I-Sullivan**

Davis link below). Per UC Davis, in wildfire prone CA "grasslands store more carbon than forests because they are impacted less by droughts and wildfires. When fire burns grasslands, the carbon fixed underground tends to stay in the roots and soil, making them more adaptive to climate change".

We need to set all 58 acres of this land aside as open space and protected parkland. Since Helen Putnam Park was established in 1986, when the population of Petaluma was at 35,000, we've nearly doubled (to 63,000 people) in size, and we've added almost NO new parkland other than ball/sports fields. Just because we can build here, doesn't mean we should. We've declared a climate emergency and grasslands and wetlands, found in abundance on this project site, are vital to maintain for carbon sequestration, yes, but also to allow plant and animal species to adapt to a rapidly changing climate.

We are built out in excess of 820% of our RHNA numbers for luxury housing in just this building cycle alone. We don't need, and can't afford (from an environmental standpoint) this type of continued encroachment into our wildlands. One just doesn't do this in 2021.

Thank you for reading, and for your careful consideration.

Sincerely,

Moira Sullivan M.S.

https://www.pepperwoodpreserve.org/about-us/ecology/

https://climatechange.ucdavis.edu/news/grasslands-more-reliable-carbon-sinkthan-trees/

https://www.fws.gov/arcata/es/amphibians/crlf/crlf.html

9

# Scott's Ranch (Davidon) DEIR March 10, 2021

**The CA Red-legged frog is an IUCN** threatened species (Int'l Union for Conservation of Nature): IUCN is the global authority on the status of the natural world, and the measures needed to safeguard it. It's a member organization comprised of 1400 member nations and the input of more than 17,000 experts.

https://storage.googleapis.com/proudcity/petalumaca/uploads/2020/12/4.0\_Envi ronmental Impacts1.pdf

## From the DEIR:

#### 4.0 Environmental Impact Analysis:

**The claim:** "The proposed project would not result in the loss of forest land or conversion of forest land to non- forest use. There would be less than significant impact. Native tree species form woodland cover along Kelly Creek, D Street tributary, and the southwestern portion of the project site. <u>Although this</u> woodland cover could be considered a "land that can support 10-percent native tree cover" as defined in PRC Section 12220(g). The proposed project would remove 12 native coast live oak. However, approximately 159 oak trees of various sizes would be planted throughout the development areas. Therefore, implementation of the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, this impact would be less than significant".

#### **Operation**

The proposed project includes development of residential uses and a public park extension. **Future residents, landscapers**, and park rangers would utilize limited quantities of common cleaning and maintenance materials **[how the hell did they come up with this?]**. Based on the amounts and materials involved, the transport, use, and disposal of these materials would not pose a significant hazard to the public or the environment. The impact would be less than significant.

https://storage.googleapis.com/proudcity/petalumaca/uploads/2020/12/4.3 Biol ogical Resources1-compressed.pdf

## 4.3 - Biological Resources

Scott's Ranch is within UGB. Just because we can (i.e., within UGB), doesn't mean we should.

10

11

"Impacts to biological resources from the construction of the homes and operation of the proposed regional park trail" (Western boundary of the project site to the existing ridge trail in the park)

## Project site:

"Northern parcel consists of undeveloped land covered by grasslands w/oaks, bay and buckeye trees. The southern parcel is largely undeveloped and is characterized by rolling hills grazed by cattle. (A section of) Kelly Creek is located on the Southern parcel. Other major water areas include <u>several wetland areas</u>. The creek (D Street tributary) and wetlands are jurisdictional waters regulated by state and federal agencies, with <u>seasonal wetlands</u> scattered among them. In addition to grasslands that occupy most of the Southern parcel – there are appox 500 trees in scattered woodlands, and stands of trees, present on this parcel".

**Damage it will do:** (4.3-35) "Implementation of the proposed project would still require disturbance of an estimated 22.1 acres of the site. Vegetation within the anticipated limits of grading would be **removed** as part of recontouring in the northwestern portion of the site to accommodate residential development, as well as localized grading for roadway, parking, and pathway construction in the public park areas for improved public access and habitat enhancement. Most of the affected vegetation would consist of grasslands, including an estimated 1.21 acres that gualify as native grasslands. Sensitive resources which would still be adversely affected by the proposed project include areas of riparian habitat for bridge crossings and drainage outfall improvements, stands of native grasslands, jurisdictional waters for trail crossings, dispersal and foraging habitat for CRLF, and existing wildlife habitat and opportunities for wildlife movement in the northwestern portion of the site where residential development is proposed. Vegetation on the site would also be managed and treated in accordance with the Fuel Management Program (Section 3.0, Project Description) to reduce risks from wildfire".

"<u>Based on the [biological] resources present on the project site and the types</u> <u>of impacts anticipated</u>, the project Applicants would be required to obtain permits and authorizations from state and federal resource agencies under the CWA, FESA and CESA, and other laws. Those permitting processes would not conclude until after the Final EIR is prepared and certified. The City recognizes that these permitting processes will likely result in the imposition of compensatory mitigation requirements relating to impacts on aquatic resources and CRLF... "

"The **proposed project** would not affect special-status plant species **[I disagree – it significantly impacts grassland habitat as the DEIR clearly shows]** but would **result in substantial adverse effects on special-status wildlife species**, including California red-legged frog, nesting birds, and roosting bats. (*Potentially Significant; Less than Significant with Mitigation*)

14

15

16

California tiger salamanders are <u>"not expected"</u> to occur on the site" [but they do not know for sure – it is a hypothetical based on a single survey "snapshot" and later they contradict themselves]

**(4.3 -36):** "Construction activity under the proposed project in addition to postconstruction occupancy of the residences and human activity associated with the management and use of the on-site public park extension **would adversely affect the occurrence of CRLF** on the project site. Potential impacts to this species as a result of the proposed project are summarized below, and include possible CRLF mortality during construction and post-construction maintenance, **impact on breeding habitat, impact on foraging and estivation [dormancy during hot or dry period] habitat, impact on dispersal and movement, and indirect impact on CRLF.** As detailed below, while these potential **impacts on CRLF would be significant, Mitigation Measures BIO-1a** and **BIO- 1b** would reduce the impacts to a less-than-significant level **[this is INSANE].** 

Project construction activities would entail clearing of vegetation, grading to accommodate residential development, trails, trail head facilities, parking, rerouting and enhancement of the stock pond drainages, construction of pedestrian bridges and a livestock crossing over Kelly Creek, and installation of stormwater outfalls into Kelly Creek. Long-term management of permanent open space areas would require routine treatment of existing vegetative cover to reduce fire fuel loads, as specified in the <u>Fuel Management</u> Program identified in the *Fuel Management Plan* report and described in Section 3.0, Project Description. <u>These activities and the associated degradation of water quality could result in direct loss of CRLF both in aquatic habitat and uplands on the project site [so that is a <u>SIGNIFICANT, unmitigated impact].</u></u>

(4.3-37) Given the presence of the stock pond breeding location, the entire project site provides suitable foraging and estivation **[dormancy during hot or dry period]** habitat for CRLF. The proposed project would develop approximately 11.7 acres of CRLF suitable habitat on the project site with residences, roadways, and two detention basins along Windsor Drive. An estimated additional 10.4 acres would be temporarily disturbed by grading. **New roadways, extensive grading, residential development, and public trails would create potential barriers and obstacles to movement of CRLF [CA red-legged frog]**, converting most of the northwestern portion of the site to residential use and <u>disrupting opportunities</u> **for movement along Kelly Creek and across upland areas**. **Of particular concern is the disruption of movement opportunities between the stock pond and Kelly Creek to the north.** The paved multi-use trail could interrupt movement of individual frogs depending on the intensity of pedestrian, bicycle, and equestrian use of the trail along the south side of Kelly Creek.

#### **Indirect Impacts during Project Occupancy**

Individual **frogs would be vulnerable** during project occupancy **given the increased human activity on the project site, including** *future* **recreational** 

17

access to the site and adjacent Helen Putnam Regional Park, maintenance and use of residential and open space areas, and likely increased presence of domesticated dogs and cats. <u>New residents, visitors to the site</u> (including pedestrians, bicyclists, and equestrians), <u>and their pets would increase the potential for</u> <u>harassment and predation of CRLF</u>, particularly given the proximity of the proposed multi-use trail bisecting the likely dispersal corridors between the stock pond and Kelly Creek. The proximity of <u>new residences</u> in the northwestern portion of the project site could <u>create new light and glare</u> across portions of Kelly Creek and the Putnam Park Extension Project component, <u>which can be disruptive to amphibian behavior and</u> <u>may alter the movement of any CRLF dispersing or foraging at night in the vicinity</u>.

The **proposed** multi-use **trail [will squash frogs]** along the south side of Kelly Creek would place trail users in the likely path of dispersing CRLF attempting to access the creek, and would increase the likelihood of **future encounters** when frogs are dispersing from the stock pond. Similarly, the multi-use trail along the north side of the Kelly Creek corridor could interrupt opportunities for CRLF dispersal into the hillside slopes to the north, although <u>most of this existing</u> **grassland habitat would be replaced by the Davidon (28-lot) Residential Project [Hello! Grasslands are vital for wildlife corridors, habitat, carbon sequestration]** component. Future trail users and their dogs would be attracted to the creek channel and possibly the nearby stock pond, particularly during the hot summer months. The proposed project includes fencing and signage to control access to the stock pond and the undeveloped open space in the southern portion of the project site. However, given the relatively remote location of the site, measures to control access may not be fully effective.

Fire fuel management activities would be performed on an annual basis as specified in the Fuel Management Program, identified in the *Fuel Management Plan* report and described in **Section 3.0, Project Description**. Most of the open space areas would continue to be grazed by cattle or other livestock, but unfenced areas along the riparian corridors, the open space area below the Davidon (28-Lot) Residential Project component, and around the stock pond would only be <u>treated on a</u> <u>periodic basis using flash grazing, weed whacking or other controlled</u> <u>methods</u>. All workers involved in implementation of the Fuel Management Program would receive training regarding the presence of CRLF on the site, and appropriate precautions would be used to minimize the <u>potential for loss as a result of fuel</u> <u>management activities</u>. However, there is a possibility that individual CRLF could be inadvertently injured or taken during these practices.

#### The **proposed project would affect sensitive natural communities, including riparian habitat, native grasslands, and regulated seasonal wetlands**.

(*Potentially Significant; Less than Significant with Mitigation*). Proposed grading would generally occur in areas dominated by non-native grassland and **largely [this is an eco-crime]** avoids the Kelly Creek and D Street tributary riparian corridors. However, an estimated 1.21 acres of native grasslands and small areas of riparian habitat and seasonal wetlands would be affected, which would represent significant

impacts on sensitive natural communities, as detailed below. Continued grazing in fenced open space areas and <u>fire fuel management activities called for in the</u> <u>Fuel Management Program would also affect the vegetative cover on the site</u>, which could include stands of native grassland and the riparian corridors as part of periodic fuel reduction. Periodic treatment for fire fuel reduction <u>along the riparian</u> <u>corridors could include flash grazing, weed whacking and limbing of lower</u> <u>branches on trees as part of implementing the Fuel Management Program</u>.

(4.3-49) "Maintenance standards identified in the Fuel Management Program include conditions to delay <u>cutting of native grasslands</u> if the Fire Department concurs that these plants do not constitute a means of rapidly transmitting fire to any structure". [So, by encroaching here with structures, it requires fire mgmt., which will further degrade/damage habitat and imperil the species there]

(4.3- 49) Freshwater Marsh and other Wetlands: "Fire fuel management activities specified in the Fuel Management Program would also periodically affect wetland and riparian vegetation along these <u>regulated</u> site features" [wetlands sequester the most carbon of all ecosystems and they are the most productive ecosystem on earth - vital to plant and animal species. Are there other wetlands in other parts of the park?]. Potential <u>impacts on these wetland-related</u> natural community types (riparian woodlands, native grasslands, and freshwater marsh and other wetlands) would require avoidance and compensatory mitigation as part of the permit authorization by the USACE, CDFW, and RWQCB, as discussed in detail under Impact BIO-3.

<u>Trees not directly removed by grading or other improvements may be</u> <u>inadvertently damaged or adversely affected during construction or as a</u> <u>result of long-term changes to drainage patterns, irrigation, exposure and</u> <u>other factors. Mature oaks and other trees are sensitive to changes in canopy</u> <u>structure, drainage patterns, soil compaction, trenching, landscape irrigation,</u> <u>and other modifications within the root zone.</u>

**4.3-48 says this :** "The Tree Replacement Program would determine the location of new plantings while taking into account the need to avoid and protect the **native grasslands on the site, which are also a sensitive natural community type**" [but then they keep claiming that the grasslands aren't a sensitive natural community type [!]; a sensitive natural community requires special treatment and this game they are playing allows them to skirt that responsibility].

(4.3-55). The proposed **project would have a substantial** *adverse* **effect on state and federally protected wetlands** (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (*Potentially Significant; Less than Significant with Mitigation*). **[how bad does it have to get to have a project denied?].** The proposed project would require fills and modifications to scattered areas of freshwater seeps, seasonal wetlands, and riparian habitat as a result of proposed grading and construction on the sitel Fire

22

fuel management activities specified in the Fuel Management Program would also periodically affect wetland and riparian vegetation along these regulated site features. In addition to impacts on regulated waters, indirect changes that could result include the increased potential for erosion and water quality degradation from increased urban runoff volumes and velocities from paved parking, trails and introduced hardscape surfaces. Soils exposed during grading and construction would contribute to increased sediment loads if adequate erosion control measures are not implemented.

## The **proposed project would interfere** *substantially* with the movement of 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. (*Potentially Significant; Less than Significant with Mitigation*). As

noted earlier, wildlife use and movement is currently unrestricted across the project site and onto the adjacent undeveloped lands to the south and southwest. Opportunities for movement across the project site and to surrounding undeveloped lands would be affected by proposed development. Residential development would be set back 100 feet from the centerline of Kelly Creek. Nonetheless, the new multi-use trails would border the southern and northern edges of Kelly Creek corridor, increasing pedestrian activity along this movement corridor for wildlife. Putnam Park Extension Project component visitors and their pets would disrupt wildlife use of the site. Visitors venturing into the creek corridors and the southern portion of the site, including the stock pond, would be disruptive to CRLF and other wildlife. Proposed residential development in the northwestern portion of the project site would limit opportunities for deer and other terrestrial wildlife through this area, although narrow 5-foot wide movement corridors are proposed along the west and northern edges of the site (see Figure 3.0-4). Collectively, the potential impacts of the project on wildlife movement would be potentially significant.

Implementation of the proposed regional park trail project could result in potential impacts to special-status plant and wildlife species, including California red-legged frog, special-status plant species, and nesting birds, <u>which would be a significant</u> <u>impact.</u> (Potentially Significant; Less than Significant with Mitigation). <u>Construction, maintenance and use of the proposed regional park trail could result in adverse impacts to a number of special-status species, all of which would be potentially significant impacts. Construction activities such as grading and short cutting could lead to disturbance or loss of populations of one or more special-status plant species. <u>The impact on special-status plant species, would be potentially significant. The proposed regional park trail alignment through this portion of the regional park trail at this location would lead to an increase in pedestrian, bicycle, equestrian, and most likely dog use.</u></u>

(4.3-67) Implementation of the proposed regional park trail project would result in potential impacts to a sensitive natural community as a result of **trail construction**,

which would be a significant impact. (*Potentially Significant; Less than Significant with Mitigation*). Based on surveys conducted by Zentner and Zentner in 2016, the proposed regional park trail alignment would pass through several stands of native grasslands…However, given native grasslands are a sensitive natural community type, even with limited disturbance areas, this would be a significant impact.

(4.3-70) **Construction of the proposed regional park trail** project would result in potential impacts to jurisdictional waters. (*Potentially Significant; Less than Significant with Mitigation*). The proposed regional park trail alignment would cross two ephemeral drainages and would be located in the vicinity of a number of wetland seeps. **Because of the sensitivity of regulated habitat, this would be a significant impact on jurisdictional waters**.

Implementation of the proposed regional **park trail** project would **result in** significant conflicts with local plans and policies. (Potentially Significant; Less *than Significant with Mitigation*). The potential impacts of the regional park trail on the occurrence of CRLF on the site, the removal of native grasslands and disturbance to jurisdictional waters would all conflict with the intent of these relevant policies which call for the preservation of sensitive natural resources. (4.3-72) <u>Cumulative Impacts</u>. The proposed Scott Ranch project and the regional park trail project, in conjunction with other past, present and reasonably foreseeable future development, could result in significant cumulative impacts on biological resources. (Potentially Significant; Less than Significant with *Mitigation*). Cumulative development contributes to an incremental **reduction in** the amount of existing wildlife habitat, particularly for birds and larger **mammals**. Grading associated with construction activities generally **increases** erosion and sedimentation, and urban pollutants from new development would **reduce water quality**. With regard to development of the project site and its relationship to surrounding habitat, the proposed project would contribute to a cumulative loss of grassland and woodland habitat in the area, converting approximately 12 acres of grassland to suburban residential development [grasslands are vital habitat and breeding grounds, wildlife corridors and for sequestering carbon].

Opportunities for foraging and dispersal from Helen Putnam Regional Park across the site and to locations to the east and southeast would be reduced as a result of proposed development and the effects of increased activity by humans and their pets.

## Conclusions (4.3-40)

"Mitigation for potential impacts on CRLF would presumably be achieved through a combination of on-site and possibly off-site habitat preservation and enhancement".

Permanent habitat impacts (habitat lost as a result of development) would presumably be mitigated at a 3:1 ratio, consistent with USFWS practices for impacts

on CRLF. Based on preliminary estimates of permanent impacts to 16.2 acres of the project site for both the Davidon (28- lot) Residential Project component and the Putnam Park Extension Project component, protection of an estimated 48.6 acres would be required at a minimum. *Assuming* all of the on-site open space lands would qualify as conservation easement lands, about 42.4 acres would be available for mitigation purposes on- site. A minimum of 6.1 acres, at a yet to be identified off-site location, would be required to meet the standard mitigation ratio for permanent impacts. These estimates assume that the regulatory agencies would agree to a proposed mitigation program, which *presumably* would include permanent protection of on-site habitat by preserving the open space and mitigating the temporary impacts associated with grading and other construction-related disturbance onsite.

#### \*\***Ryan Olah of the USFWS** and on January 9, 2019 with **James Hansen of the** <u>CDFW</u>

# **Plants**

**[Vegetation].** "In general, the project site supports a cover of non- native grassland, with oak-dominated woodlands occupying the Kelly Creek corridor and hillside slopes in the southwestern portion of the site. Smaller stands of woodland occur along D Street tributary in the southeastern portion of the site and a small stand of trees occurs north of Windsor Drive in the northeastern portion of the site. Freshwater marsh habitat occurs in the form of seasonal wetlands, seeps, and smaller drainages on the hillside south of Kelly Creek. A large thicket of willow occurs south of the stock pond and a smaller stand of willows occurs along the D Street tributary at the southeastern edge of the project site".

"Grasslands form *the predominant cover* on the project site...Because of their rarity, where **native grasslands** remain relatively intact (generally where they contribute to 10 percent or more of the grassland cover over a relatively broad area), they are now considered a sensitive natural community by the California Department of Fish and Wildlife (CDFW). Grasslands occupy much of the **hillside slopes** along the southern edge of the project site. Native species in the stands of native grassland vary in abundance and species composition. Characteristic native grass species include purple needle grass (*Stipa pulchra*), foothill needlegrass (*S. lepida*), California oatgrass (*Danthonia californica*), creeping wildrye (Leymus triticoides), among others. Native forbs include soap plant (Chlorogalum sp.), California poppy (Eschscholzia californica), yarrow (Achillea millefolium), blue-eyed grass (Sisyrinchium bellum), lupines (Lupinus spp.), and Bermuda buttercup (Ranunculus californicus), tritelia (Triteleia lugens), among others. [Also, critically, sequester carbon] - provide a link https://climatechange.ucdavis.edu/news/grasslands-more-reliable-carbonsink-than-trees/

**RE:** Sensitive Natural Communities In addition to species-oriented management, protecting habitat on an ecosystem-level is increasingly recognized as vital to the protection of natural diversity in the state. Although sensitive natural communities have no legal protective status under the state or federal Endangered Species Acts, they are provided some level of protection under CEQA (The CEQA *Guidelines* identify potential impacts on a sensitive natural community as one of six significance criteria). Sensitive natural community types on the project site include the riparian woodlands along Kelly Creek, areas of freshwater marsh wetlands, willow riparian scrub near the stock pond, woodlands dominated by valley oak, and stands of native grasslands. Each of these natural community types are considered to **have a high inventory priority** by the CNDDB. Both of the identified woodlands are dominated by valley oaks, comprising over 60 percent of the tree cover, and therefore are considered sensitive natural community types. Freshwater marsh and riparian habitat are sensitive natural community types that are also regulated as jurisdictional state and federal waters, as discussed further below. The stands of native grasslands, generally with a native species component of 10 percent or higher, are considered a sensitive natural community type by the CDFW. As indicated in Figure 4.3-2, an estimated 11.3 acres of native grasslands occur on the site, with a range in native species component from 15 to 65 percent. These native grasslands were not observed as distinct stands during earlier surveys of the site, including the special-status plant surveys conducted in 2003 and 2004, and the biological resource assessments prepared in 2003 and 2009. As noted previously, the now conspicuous stands of native grasslands became apparent during a field reconnaissance in spring of 2015, and detailed field assessment and mapping was then prepared and refined (Zentner and Zentner 2016a). These include very high-quality stands on the north and northeastfacing hillside slopes in the southwestern portion of the site. Although they now qualify as native grasslands and are mapped as such in **Figure 4.3-2**, the stands on the south and south-east facing slopes in the northwestern portion of the site appear to be newer stands, with less native species diversity and lower native cover class values, and are typically dominated by only a few native species such as purple needlegrass, hayfield tarweed (*Hemizonia congesta*), and silver bush lupine (*Lupinus albifrons*), along with common non-native grasses and forbs. Areas dominated by non-native grasslands, non-native trees, and ruderal cover are not considered sensitive natural communities. Introduced non-native species form the predominant cover in these locations [bull puckey; maybe from grazing, but they can be restored – and should be!!]. As noted previously, native grass species do occur in portions of the non-native grassland on the site, but not at densities where they would be considered a sensitive natural community type [This is a shell game. These grasslands are vital as wildlife corridor and as habitat and for carbon sequestration, a goal of the CAC].

**<u>RE: Sensitive vegetation communities</u>** are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly

high wildlife value. These resources have been defined by federal, state, and local conservation plans, policies or regulations. The CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its CNDDB. Sensitive vegetation communities are also identified by the CDFW on its List of California Natural Communities Recognized by the CNDDB. Impacts to sensitive natural communities and habitats identified in local or regional plans, policies, regulations or by federal or state agencies must be considered and evaluated under CEQA (CCR: Title 14, Div. 6, Chap. 3, Appendix G). Although **sensitive natural communities** have no legal protective status under FESA and CESA, they are provided some level of protection under CEOA. The CEQA Guidelines identify potential impacts on a sensitive natural community as one of six significance criteria. As an example, a discretionary project that has a substantial adverse effect on any riparian habitat, native grassland, valley oak woodland, or other sensitive natural community would normally be considered to have a significant effect on the environment. Further loss of a sensitive natural community could be interpreted as substantially diminishing habitat, depending on its relative abundance, quality and degree of past disturbance, and the anticipated impacts to the specific community type. Where determined to be a significant impact under CEQA, the potential impact would require mitigation through avoidance, minimization of disturbance or loss, or some type of compensatory mitigation when unavoidable.

**<u>Oak Woodlands</u>**: "Oaks and other native tree species form woodland cover along Kelly Creek, D Street tributary, and the southwestern portion of the project site… These stands of woodland continue off-site into Helen Putman Regional Park where they form a continuous canopy through much of the upgradient watershed".

"Several black walnut (*Juglans hindsii*) trees also grow near the collapsed farm house, presumably planted in the garden area, and are <u>therefore not considered of</u> <u>native origin</u>" [This is a native species - per the CA Native Plant Society]. <u>https://calscape.org/loc-California/Juglans-hindsii-(Northern-California-Black-Walnut)?srchcr=sc6049c9174d380</u>

<u>"Freshwater marsh</u> vegetation and seasonal wetlands occur in areas of wetland seeps and smaller drainages on the project site... Characteristic species associated with the seasonal seeps and wetlands include meadow barley (*Hordeum brachyantherum*), rabbitfoot grass (*Polypogon monspeliensis*), and iris-leaved rush (*Juncus xiphioides*). Clumps of cattail (*Typha latifolia*) are scattered around the perimeter of the stock pond, but are heavily grazed and trampled by cattle during the summer dry season. A stand of native willow (*Salix lasiolepis*) occurs to the south of the stock pond, providing important protective cover at its margin. The stock pond occupies approximately 0.2 acres of largely unvegetated open waters".

**Re: Wetlands:** Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration and purification functions. The CDFW, Regional Water Quality Control Board (RWQCB), and USACE have jurisdiction over modifications to river banks, lakes, stream channels and other wetland features. The USACE issued a preliminary jurisdictional determination, on December 4, 2020 depicting wetlands and other waters of the U.S. on the site (see Figure 4.3-6). This map shows the extent of waters subject to the USACE's regulatory authority under Section 404 of the Clean Water Act (USACE 2020). Mapped jurisdictional waters on the project site consist of wetlands, drainages, and the open water of the stock pond. According to the preliminary jurisdictional determination by the USACE, a total of 0.74 acres of federal jurisdictional waters occur on the project site. These consist of 0.271 acres of seasonal wetlands associated with scattered seeps on the hillside slopes 0.317 acres of unvegetated drainages, and 0.152 acres of open water associated with the stock pond. The unvegetated drainages include 0.235 acres along Kelly Creek, 0.062 acres along the D Street Tributary, and 0.02 acres along smaller tributary channels.

**Re: Special Status (Plant) Species:** "Figure 4.3-4, Special-Status Plant Species, and Figure 4.3-5, Special-Status Wildlife Species, show the known distribution of specialstatus plant and wildlife species reported by the CNDDB in the Petaluma vicinity. These include: occurrences of yellow larkspur (Delphinium luteu) and showy Indian clover (Trifolium amoenum) along D Street to the south of the site; and numerous historic collections of several plant species from the central Petaluma area, such as alkali milk-vetch (Astragalus tener var. tener), Franciscan onion (Allium peninsulare var. franciscanum), Point Reyes checkerbloom (Sidalcea calycosa ssp. rhizomata), round-leaved filaree (Erodium macrophyllum), and Sonoma spineflower (Chorizanthe valida). The habitat assessment by Zander Associates (2003) focused on 17 specialstatus plant species considered to have the highest potential for occurrence on the project site. In addition, as discussed previously, detailed surveys for special-status plant species were conducted in 2003 and 2004 (Zander Associates 2003 and 2004) and again in 2013 (Zentner and Zentner 2013) according to the CDFW and CNPS guidelines. The surveys indicate that no [!] populations of special-status plant species occur on the project site, and no supplemental surveys are considered necessary. Stands of native grasslands were observed during surveys conducted in 2016 [before they said 2015; no "boots on the ground" in 6 years] but these are not considered to be special-status plant species and their sensitivity is discussed below under Section 4.3.2.5, Sensitive Natural Communities.

(4.3-62) Although no occurrences of special-status plant species have been reported at the regional park according to the CNDDB records (see Figure 4.3-4, Special-Status Plant Species), <u>the relatively undisturbed conditions and</u> <u>extensive areas of intact native grasslands provide an indication that one or</u> <u>more populations of special-status plant species may be present</u>. Unlike the project site, where systematic surveys have been conducted verifying that no occurrences of special-status plants species are present, <u>systematic appropriately</u> <u>timed surveys have NOT been conducted along the proposed regional park</u> <u>trail alignment through the regional park. Therefore, there remains a</u> <u>potential for one or more population of special-status plant species known</u> <u>from grasslands and woodlands in the Petaluma vicinity to occur along the</u> <u>trail alignment.</u>

# **Wildlife**

Re: Wildlife Movement Corridors: "Wildlife corridors are pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or manmade obstacles such as urbanization. Fragmentation of natural habitat creates isolated "islands" of habitat that may not provide sufficient area or resources to accommodate sustainable populations for a number of species, adversely affecting both genetic and species diversity. Wildlife corridors partially or largely mitigate the adverse effects of fragmentation by (1) allowing animals to move between remaining habitats to replenish depleted populations and increase the gene pool available, (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fire or disease) will result in population or species extirpation from the local area or extinction for more vulnerable special-status species with severely isolated distribution, and (3) serving as travel paths for individual animals moving throughout their home range in search of food, water, mates, and other needs, or for dispersing juveniles in search of new home ranges". As noted above in Section 4.3.2.3, wildlife use and movement is currently unrestricted across the project site and onto the adjacent largely undeveloped lands to the south and southwest. About five acres of the southern edge of the project site are mapped as part of a Regional Habitat Linkage that extends across southern Sonoma and north Marin County area that was prepared by the Bay Area Open Space Council and Conservation Lands Network as part of the Bay Area Critical Linkages project. These mapped regional linkages are not regulated habitats and site-specific conditions for wildlife movement opportunities are addressed in this section of the RDEIR. Under the proposed project, the portion of the site mapped as part of a Regional Habitat Linkage would remain as permanent open space, and the project would not conflict with its function for wildlife movement opportunities...existing residential development limits opportunities for dispersal to remaining areas of natural habitat [Yes! That is what the human built environment does and if you add more houses and encroach on more acreage, you will yet impact this further need to leave this part of the UGB alone where there is an important tributary here - Kelly Creek] to the east and northeast. As the DEIR says (4.3-25), "The drainages tend to **serve as movement corridors** for larger wildlife species, such as deer, raccoon, and grey fox, particularly where dense growth provides protective

cover and retreat habitat. Kelly Creek continues as an open channel both upgradient and downgradient of the project site, and most likely serves as an <u>important</u> <u>movement corridor</u> to terrestrial and aquatic-dependent species".

**[Wildlife].** "The mosaic of natural community types, available surface water, and the extent of adjacent **largely undeveloped land** to the south and southwest of the project site **contributes to generally high wildlife habitat values on the project site [which will go away if you build the 28 homes here!]**. Wildlife use and movement is currently unrestricted across the site and onto the adjacent undeveloped lands to the south and southwest. An open wire fence along the border with Helen Putnam Regional Park currently disrupts movement by larger wildlife species to the west, but signs of access under the fence by black-tailed deer and other wildlife are evident". [As the DEIR states here, "Roadways and vehicle traffic **along D Street and Windsor Drive also disrupt wildlife movement, and existing residential development limits opportunities for dispersal to remaining areas of natural habitat to the east and northeast"**. What do they imagine yet more **encroachment/development will achieve/result in?**]

"Kelly Creek and the D Street tributary <u>function as wildlife movement corridors</u> <u>across the project site</u>, continuing downstream under D Street and the residential neighborhood to the northeast, and upstream into the adjacent Helen Putnam Regional Park to the west and the rolling grasslands and scattered residences to the southeast".

<u>"Special-status species</u> are plants and wildlife that are legally protected under the state and/or federal endangered species acts or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts and other essential habitat. Species with legal protection under the Endangered Species Acts often represent major constraints to development; particularly when they are wide ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take" of these species.

"Records maintained by the CNDDB indicate that <u>a number of special-status</u> <u>species are known or are considered likely to occur in the Petaluma area</u>. Prior to the discovery of California red-legged frog during surveys at the project site listed in <u>Section 4.3.2.2</u>, <u>Project Site Surveys and Mapping</u>, above, no occurrences of special- status species had been specifically reported from the project site. "Figure 4.3-4, <u>Special-Status Plant Species</u>, and <u>Figure 4.3-5</u>, <u>Special-Status Wildlife</u> <u>Species</u>, show the known distribution of special-status plant and wildlife species reported by the CNDDB in the Petaluma vicinity. These include occurrences of <u>California red-legged frog</u> (*Rana draytonii*) along Western Avenue to the west and San Antonio Creek to the southwest of the project site; <u>pallid bat</u> (*Antrozous pallidus*) along I Street to the east of the site".

# <u>"California red-legged frog</u> (CRLF) is listed by the USFWS <u>[federally-listed CRLF</u> and will "require securing authorization from the USFWS under the ESA; also have to get permits from CDFW, RWOCB, USACE to do this! 4.3-39] as

threatened and is recognized as a California Species of Special Concern (SSC) by the CDFW. Adult CRLF are capable of dispersing long distances from aquatic habitat, and may utilize ephemeral water sources during the wet season. A majority of the site (see Figure 4.3-5, Special-Status Wildlife Species), is contained within one of the Critical Habitat Units (SON-3) identified by the USFWS for this species (4.3 – pg. 15)... Approximately 20 adult CRLF were observed in the pond during the night survey [this is very few in number]. The evaluation report concluded that Kelly Creek contains some pools that are potentially deep enough to support breeding by CRLF, but it is unlikely they are used for this purpose because of a lack of emergent vegetation on which to lay egg masses [this is nothing but a supposition on their part]. The lack of emergent vegetation would also limit the potential for survival of any larvae and adult CRLF from predators. Because of the shallow waters, lack of emergent vegetation, and lack of refugia along the creek, it was also concluded that D Street tributary was not currently used for breeding [from one outing!]. The evaluation report states that it IS likely that CRLF young of the year and first year frogs use the tributary for refugia when dispersing and escaping adults in the stock pond A dense stand of cattail and other herbaceous freshwater marsh vegetation was observed by the biologist along the tributary at the southern edge of the project site during a field reconnaissance in 2015 that would provide protective cover for dispersing adults, as would the adjacent thicket of willows.

**<u>Re: CA Species of Special Concern:</u>** California Species of Special Concern (SSC) are broadly defined as species not listed under the FESA or CESA, but which are nonetheless of concern to the CDFW because **they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist**. This designation is intended to result in special consideration for these species by the CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation is also intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. **Although these species** *generally* **have no special legal status, they are given <b>special consideration under CEQA during proposed project review. [This includes the CRLF]** 

**CA Tiger Salamander: [Note: this assessment is based on ONE field survey in Jan 2005].** The habitat assessment for CTS in 2003 concluded that the stock pond on the project site provides suitable aquatic breeding habitat for this species, but that because the site is located outside the known potential range the **species is not believed to be present [this is not a scientific analysis]** (Wildlife Research Associates 2003). The USFWS and CDFW have identified the potential range for the Sonoma County CTS population as occurring north of Pepper Road, east of Highway 116, south of Windsor, and west of Old Redwood Highway, Petaluma Hill Road and 29

Lichau Creek (USFWS 2003). The Recovery Plan for the Santa Rosa Plain includes a map showing the distribution of the Sonoma County CTS (USFWS, 2016), which shows an extirpated occurrence of CTS in the downtown Petaluma area (about 1.5 miles northeast of the project site), but all other known occurrences are over four miles north or west of the project site, and generally separated by the intensively developed area of central Petaluma and suburban residential development of the western hills, severely limiting the potential for any future dispersal to the project site.

**<u>Re: Birds:</u>** Several special-status birds have varying potential to frequent the project site, as indicated in **Table 4.3-1**. <u>Most of these may forage to varying degrees in</u> the grasslands and woodlands of the site vicinity. However, nesting habitat is generally absent [vague, meaningless, not quantified, not acceptable level of data analysis] for most of these species or no evidence of nesting activity was observed during field reconnaissance surveys of the site [which consisted of what? How many days and how often and was it during breeding season?]</u>... there are no occurrences of burrowing owl reported in the project site vicinity by the CNDDB, which does monitor known nesting colonies [with what frequency?]. This species was not observed during detailed surveys [what did these consist of and that was now 8 years ago?] conducted by in 2013 (Zentner and Zentner 2013). [They say all these various bird species weren't seen – I'd look at the CNDDB to see which bird species have been seen here, and not rely on the Scott Ranch consultant biologists]

**Note:** Destruction of a bird nest when in active use (generally between February 15 and August 31) is a violation of the State Fish and Game Code and Migratory Bird Treaty Act (MBTA). Due to the proposed tree removal and construction in the vicinity of other trees, there remains a potential that one or more active bird nests protected under the MBTA and State Fish and Game Code could be adversely affected by the proposed project. **This is considered a potentially significant impact**. Removal of trees with non-active nests is permitted outside the nesting season (generally between September 1 and February 14).

**Re: Bats: Evidence of bat activity** encountered during the bat survey provides an indication of roosting in several of the buildings on the project site. **A number of special-status bat species** are known or expected to occur within the Petaluma vicinity. In 2004 and 2014, habitat assessments were conducted onsite to determine the potential for occurrence on the project site (Wildlife Research Associates 2004 and 2014). **Bat species initially considered to be of particular concern for potential occurrence on the site included:** pallid bat (*Antrozous pallidus*), Townsend's western big-eared bat (*Corynorhinus tonwsendii*), western red bat (*Lasiurus blossevillii*), western yellow bat (*Lasiurus xanthinus*), little brown bat (*Myotis lucifugus*), and Yuma bat (*Myotis yumanensis*). As indicated in **Table 4.3-1**, most of these are considered to be **SSC species by the CDFW** and three were previously recognized as federal Special Concern species before this designation
was eliminated by the USFWS. While the western red bat and western yellow bat are currently not recognized as SSC species by the CDFW, they are classified as High Priority species in the region by the Western Bat Working Group (1998). [They failed to classify the bat species that they saw evidence of]

(4.3-42) Bat surveys conducted at the project site did not identify any important roosting activity in the site structures (Wildlife Research Associates 2004 and 2014). However, the project would include demolition, rehabilitation and/or relocation of the existing structures, and there is a possibility that new bat roosts could be established before structures are demolished or disturbed. There is also a possibility that solitary tree roosting bats could be inadvertently taken during tree removal, which is **considered a potentially significant impact**. Mitigation Measure BIO-1d requires consideration of possible bat use of the site before demolition or renovation of any existing building or tree removal. With implementation of Mitigation Measure BIO-1d, project's impact on potential bat-roosting activities would be less than significant **[the DEIR says the proposed project would "result in substantial adverse effects on special-status animal species, including roosting bats" (exec summary)]** 

**<u>Re: Grasslands:</u>** "Many species of wildlife use the grasslands for foraging and breeding, such as western meadowlark, savannah sparrow, Brewer's blackbird, western fence lizard, gopher snake, deer mice. Bottae pocket gopher, and striped skunk. Scattered rock outcrops occasionally form a distinct habitat type within the grasslands, providing perching and sunning locations for lizards and birds. Numerous deer were observed browsing on the grassland slopes and oak woodlands on and upslope of the project site to the south, and in the adjacent Helen Putnam Regional Park. A number of predatory birds and mammals rely on the insects and smaller mammals and birds of the grasslands as an important source of prey. These include species observed or suspected to utilize the site for foraging such as American kestrel, red-tailed hawk, great-horned owl, barn owl, prairie falcon, red fox, grav fox, and covote. The proximity of the project site to undeveloped grassland and woodland habitat to the south and west contributes to its use by larger mammals and raptors. In addition to the more common bird and mammal predators, mountain lions have been observed in the adjacent Helen Putnam Regional Park and may occasionally forage or move over portions of the project site.

**<u>Re: Oaks:</u>** The <u>trees and shrubs of the woodlands provide important potential</u> <u>nesting and foraging habitat</u> for numerous species of birds, and protective cover for mammals such as deer mouse, grey fox, and bobcat. The trees provide important habitat for cavity-nesting birds and small mammals, including Nuttall's woodpecker, northern flicker, western bluebird, and ash-throated flycatcher. The abundant seed crops provided by oak and bay trees are important food sources for deer, scrub and Stellar's jay, woodpeckers, and other wildlife species. The tree canopy provides foraging habitat for songbirds, such as ruby-crowned kinglet, orange-crowned warbler, and warbling vireo, and may be used for nesting by raptors. While no large

nests were observed during the field reconnaissance surveys, including the last survey conducted on May 21, 2019, these trees provide important perching habitat for birds and could support nests in the future.

**Re: Freshwater Marsh & Seasonal Wetlands**: "**Factors affecting the value of riparian and wetland habitat to wildlife include** the extent of protective cover, complexity of vegetation, availability of surface water, <u>the proximity of existing</u> **development, and the potential for disturbance by humans and their pets**". "The stock pond occupies approximately 0.2 acres of largely unvegetated open waters. It **provides essential breeding habitat for California red-legged frog** and a source of drinking water for other wildlife... **Drainages tend to serve as movement corridors** for larger wildlife species, such as deer, raccoon, and grey fox, particularly where dense growth provides protective cover and retreat habitat. Kelly Creek continues as an open channel both upgradient and downgradient of the project site, and most likely <u>serves as an important movement corridor to</u> **terrestrial and aquatic-dependent species**.

- Scott Ranch <u>Native Grassland Survey</u> by Zentner and Zentner (2016a). This report provides information on native grasslands on the site based on field mapping conducted on April 21 and 30, 2015.
- Helen Putnam Park <u>Native Grassland Survey</u> by Zentner and Zentner (2016b). This report provides information on native grasslands on the adjacent Helen Putman Regional Park found along the proposed trail alignment that would extend from the site along the Kelly Creek corridor.
- <u>Tree Removal for Helen Putnam Park Extension</u> by Prunuske Chatham, Inc. (2019a). This tabulated summary identifies trees proposed for removal <u>to accommodate alternative trail alignments</u> for the Scott Ranch project through the eastern edge of the project site.
- [Was prior one in 2004] At the time of the April 2015 survey, large stands of native grasslands were observed on both the parklands and the project site. Scattered clumps of native grasses and forbs had been observed on the site in previous inspections, but not to the current degree where they can now be classified as a sensitive natural community [but 6 years have now since expired since that survey and no doubt, the native grasslands these "large stands" have no doubt increased and may well constitute a "sensitive natural community" now], presumably due to a reduction in the intensity of grazing on the site. Further surveys of Helen Putnam Regional Park were conducted in September 2015 to prepare maps showing the extent of native grasslands along the proposed regional park trail corridor through the Helen Putnam Regional Park.
- Updated Biological Assessment by Zentner Planning & Ecology (2018). This report provides an updated biological assessment of the potential impacts of the Davidon (28-lot) Residential Project component of the Scott Ranch

project, and compares the significance levels to previous residential development plans.

In addition to the field reconnaissance surveys and assessments listed above, additional surveys were conducted between 2004 and 2019, as described below, to confirm existing conditions and assess potential impacts on biological resources associated with the developments previously proposed at the project site and the currently proposed project, as well as the regional park trail project at Helen Putnam Regional Park. The additional reconnaissance surveys were conducted on August 30 and December 2, 2004. Follow-up reconnaissance surveys were conducted on June 24 and August 3, 2009, then again on September 29 and October 2, 2011, and then in April, September, and October 2015. A field reconnaissance survey was conducted on May 21, 2019, to verify that field conditions have not changed considerably over the past four years.

#### **RE: Identification of biological resources:**

- "Some of these documents were prepared as part of the analysis for the proposed developments of the project site **over the past 16 years**".
- Biological Resources, Existing Conditions by Zander Associates (2003).
- "Results of detailed surveys for special-status plant species <u>conducted on</u> March 12 and April 18, <u>2003</u> by Kelley Associates, protocol surveys for California red-legged frog conducted on May 30 and June 2, <u>2003</u> by Wildlife Research Associates, and the findings of a preliminary <u>wetland delineation</u>" [no boots on the ground for wetland delineation since 2003?]
- "The USACE verified the wetland delineation in their letter of November 13, 2003"
- <u>"Of the four required surveys for California red-legged frog</u>, <u>only two</u> <u>were conducted</u>. The surveys consisted of one day-time survey on May 30, 2003 and one-night survey on June 2, 2003. Additional surveys were considered unnecessary because California red-legged frogs were encountered during the first night survey".
- "Special-Status <u>Plant Survey</u> by Zander Associates (<u>2004</u>c). This letter report presents the results of supplemental survey for special-status plant species conducted on May 25, 2004". [Original surveys]
- Special Status <u>Plant Species</u> Assessment by Zentner and Zentner (2013). This report summarizes the results of supplemental surveys for specialstatus plants, where <u>surveys were conducted</u> because of the length of time <u>since the original surveys were conducted in 2003 and 2004</u>. Systematic surveys were conducted on March 13, May 23, and August 19, 2013.
- "Pre-Construction Notification by Zander Associates (2004a). This report
  was submitted to the USACE as part of a Pre-Construction Notification (PCN)
  for fills in waters of the United States that would occur as a result of the
  previous 93 single-family home development proposal. The PCN included:
  maps of the project, proposed at that time, and limits of jurisdictional waters,

34

cross-sections of stream crossings, map showing location of proposed replacement wetlands, summary of proposed approach to creating replacement wetlands and mitigation monitoring".

- "Bat Habitat Assessment and Results of Bat Habitat Assessment and Surveys by Wildlife Research Associates (2004, 2014). These letter reports summarize information on bat ecology, regulatory background, methods, results, and discussion. Recommendations were made to avoid possible impacts on bat species on the project site as a result of project construction"
- "California Tiger Salamander Site Assessment by Wildlife Research Associates (2005b). This letter report provides an expanded assessment addressing the potential for occurrence of California tiger salamander. A supplemental field survey was conducted on January 11, 2005, which entailed walking the perimeter of the stock pond to look for any egg sacs on floating debris and emergent vegetation. A map was prepared showing the closest known occurrences of California tiger salamander in relation to the site, located over five miles to the northwest. The report concluded that California tiger salamander does not occur on the site in the professional opinion of the consultant because of a number of factors, including distance to closest reported occurrence, substantial barriers in the intervening area, absence of any egg sacks in the stock pond [would you expect to see tiger salamander egg sacs in January? Breeding season continues into February – at which point the females lav jelly egg sacs], and fact that the site is outside of the known range of this species as mapped by the U.S. Fish and Wildlife Service (USFWS 2003).

#### **RESPONSES TO I-SULLIVAN LETTER**

**Response I-Sullivan-1**: This comment does not raise issues concerning the adequacy or accuracy of the RDEIR's coverage of environmental impacts under CEQA. The comment may be considered and weighed by city decision-makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration will be carried out independent of the environmental review process.

**Response I-Sullivan-2**: The concerns of the commentor over the potential impacts of the project on sensitive habitat and special-status species associated with the site is noted. **Section 4.3**, **Biological Resources**, of the RDEIR, includes a description of existing habitat conditions and a thorough review of potential impacts of the proposed project, including loss of existing natural habitat and native grasslands, removal of trees, fills and modification of regulated waters, and effects on special-status species. See Master Response 1 – Need for Updated Biological Surveys and Master Response 4 – Special-Status Species Present at the Project Site. See also Responses to I-Smallwood.

**Response I-Sullivan-3**: The concerns of the commentor over the adequacy of surveys conducted on the site, which they believe were very poorly conducted and, in some instances, do not meet agency standards, is noted. See **Master Response 1 – Need for Updated Biological Surveys** and **Master Response 4 – Special-Status Species Present at the Project Site**. As summarized in **Master Response 1 – Need for Updated Biological Surveys**, the reconnaissance-level field surveys conducted by the City's independent biological consultant served to confirm existing conditions; verify conclusions regarding the possible presence of special-status species, sensitive natural communities, and regulated waters; determine whether any additional detailed surveys were necessary; and allow for an assessment of potential impacts and need for any mitigation measures. The results of the background review and field reconnaissance surveys were incorporated directly into the description of site conditions and impact analysis contained in **Section 4.3, Biological Resources, of the RDEIR**. See also **Responses to I-Smallwood**.

**Response I-Sullivan-4**: The concerns of the commentor over potential impacts on CRLF and designated critical habitat for this species is noted. As described in **Chapter 2.0**, **Revised Project Description**, the revisions to the proposed project further reduce the footprints of the homes and the residential component would be sited farther north of Kelly Creek and entirely outside of the critical habitat line. A detailed assessment of potential impacts on CRLF is provided under **Impact BIO-1** on **pages 4.3-35** through **4.3-41 of the RDEIR**. See **Master Response 1 – Need for Updated Biological Surveys**, **Master Response 2 – California Red-Legged Frog Surveys**, and **Master Response 4 – Special-Status Species Present at the Project Site**.

**Response I-Sullivan-5**: A detailed assessment of the potential impacts of the proposed project on CRLF is provided under **Impact BIO-1** on **page 4.3-36** through **page 4.3-41 of the RDEIR**. Where proposed development would impact suitable habitat for this species, including the portion of the site outside designated Critical Habitat, compensatory mitigation has been identified as discussed in detail on **pages 4.3-40** through **4.3-41 of the RDEIR** and defined in **Mitigation Measure BIO-1b**. The standard mitigation ratio used by the USFWS for permanent impacts on occupied CRLF habitat is a 3:1 ratio, which is not a reflection of habitat quality as inferred in the comment. The final mitigation acreage would depend on the estimated permanent and temporary impacts of the project on suitable habitat as negotiated with the USFWS. Based on refinements to the proposed project, which further reduces the acreage of existing habitat affected by development, compensatory mitigation could be accommodated on-site within the approximately 47 acres to be retained for public recreation and as open space and protected habitat, with the expectation that two conservation easements would be established. See **Master Response 1 – Need for Updated Biological Surveys, Master Response 2 – California Red-Legged Frog Surveys, and Master Response 4 – Special-Status Species Present at the Project Site.** 

Response I-Sullivan-6: The potential direct and indirect effects of implementing the proposed Fuel Management Program, identified in the Fuel Management Plan prepared for the proposed project, were reviewed and considered as part of the biological resources analysis prepared for the proposed project and document in Section 4.3, Biological Resources, of the RDEIR. The City's independent consulting biologist reviewed and provided comments on the Fuel Management Plan (dated November 2020) and Revised Fuel Management Plan (dated September 2021) and found that the proposed Fuel Management Program does not present conflicts with regard to protecting and enhancing sensitive habitat areas to be retained as permanent open space on the site. Refinements to the Fuel Management Program (September 2021) included conditions to minimize adverse effects on sensitive habitats, such as the Kelly Creek riparian corridor, native grasslands and the stock pond used for breeding by CRLF, This included providing necessary worker training regarding the possible presence of CRLF on the site, as discussed on page 4.3-39 of the RDEIR, and restrictions on treatment of native grasslands and riparian habitat as part of management activities in the Fuel Management Program as discussed on pages 4.3-49 of the RDEIR. Therefore, the RDEIR appropriately concludes on page 4.3-46 that fuel maintenance and management activities in and off themselves would not have a significant impact on the sensitive biological resources on the site given the controls that would be implemented as part of the Fuel Management Program and recommended mitigation measures.

**Response I-Sullivan-7**: The concerns of the commentor over the magnitude of the potential impacts on biological resources is noted. Refer to the analysis under **Impact BIO-4** on **pages 4.3-57** through **4.3-59 of the RDEIR** for a discussion of potential impacts on wildlife use and movement. As noted on **page 4.3-58** 

of the RDEIR, visitors and their pets would disrupt wildlife use of the site and proposed residential development in the northwestern portion of the project site would limit opportunities for deer and other terrestrial wildlife through this area. Collectively, the potential impacts of the project on wildlife movement were determined to be potentially significant and mitigation was recommended in the RDEIR. Mitigation Measure BIO-4a calls for an interpretive program to educate park visitors and trail users of the sensitivity of the site to wildlife and importance of remaining outside sensitive habitat areas such as the Kelly Creek corridor and stock pond. Mitigation Measures BIO-4b through BIO-4d were recommended to control future visitor access into sensitive habitat areas and to improve wildlife movement opportunities by removing existing impediments. Mitigation Measure BIO-1b also requires that methods be identified and implemented as part of the Final CRLF Mitigation Plan to minimize the potential for harassment or take of listed and non-listed species, as a result of increased human activity associated with development and open space use of the site, which is to include an educational program for future residents and visitors, fencing and interpretive signage at access points into natural open space, use of sensitive grade changes, culverted undercrossings, and bridged overcrossings in uplands where roadways or trails bisect movement corridors, and possible use of permanent exclusionary fencing, among other treatments. As concluded in Section 4.3, Biological Resources, of the RDEIR, potentially significant impacts would be mitigated to a less-than-significant level with implementation of the identified mitigation measures.

In addition, **Mitigation Measure BIO-1a** as revised requires that the project applicants demonstrate compliance with identified replacement ratios for impacts on CRLF habitat at a minimum 3:1 ratio for permanent impacts and 1:1 ratio for temporary impacts and additionally obtain all required permits from the USFWS, CDFW, RWQCB, and USACE (e.g., 1600 series permits, 404 and 401 permits, and incidental take permits) in advance of any disturbance to existing habitat. Further review and authorizations would be necessary from the USFWS, CDFW, and other regulatory agencies, as discussed on **pages 4.3-41** and **4.3-56 of the RDEIR**. Evidence that the project applicants have secured all required authorization from these agencies must be submitted to the City prior to issuance of any grading or building permits for the project. Collectively, these measures and controls would serve to ensure that potential impacts are fully addressed and successfully implemented as part of the proposed project.

# Response I-Sullivan-8: See Master Response 6 – Greenhouse Gas Emissions and Compliance with Climate Action Framework.

**Response I-Sullivan-9**: This comment does not raise issues concerning the adequacy or accuracy of the RDEIR's coverage of environmental impacts under CEQA. The comment may be considered and weighed by city decision-makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration will be carried out independent of the environmental review process.

With respect to RHNA, see Response O-PRP-2-1.

#### Response I-Sullivan-10: See Response I-Sullivan-5.

Response I-Sullivan-11: A review of potential impacts on tree resources is provided on page 4.3-47 through page 4.3-49 of the RDEIR. The proposed project would largely avoid native and non-native woodland habitat along Kelly Creek and the D Street tributary. As shown on Figure 4.3-3, Trees Locations and Proposed Removals, of the RDEIR, a total of 11 trees would be removed to accommodate the improvements for the Putnam Park Extension Project component, including the trail through the barn center, the footbridge over Kelly Creek, and the Class I trail adjacent to D Street. The residential component, as revised after the publication of the RDEIR, would result in the removal of 16 trees (See Chapter 2.0, Revised Project Description). This would account for a total of 27 trees that would potentially be removed to accommodate the proposed project. In addition, there may be up to three trees that would require trimming or removal for the D Street off-site sidewalk improvement. The RDEIR states that approximately 30 trees would be removed and notes in the footnotes of pages 3.0-36 and 4.3-48 that the 30 trees assumed to be removed account for a few trees that may require trimming or removal for the D Street off-site sidewalk gap closure improvement. The proposed project would plant 327 trees including 112 oak trees of various sizes as part of the residential component and at least 215 additional native trees as part of the restoration of the riparian corridor within the Putnam Park Extension Project component. Furthermore, the Tree Replacement Program called for in Mitigation Measure BIO-2c would fully address the anticipated tree removal, mitigating this potentially significant impact to a less than significant level and ensuring compliance with relevant City codes.

**Response I-Sullivan-12**: As described in the **RDEIR**, **Section 4.0.4.2**, **Hazard and Hazardous Resources**, the use of cleaning materials for the residential components and maintenance materials for the residential landscaped areas would be of limited quantities equivalent to household uses of single-family residences. Any herbicide use in the park extension portion of the site would have to be done in conformance with County and State regulations, and follow protocols required by the Sonoma County Regional Parks or defined as part of the Final CRLF Mitigation Plan called for in **Mitigation Measure BIO-1b of the RDEIR** that must be reviewed and approved by USFWS, CDFW, USACE, and the City. Invasive plant species are currently not a major challenge on the site that would warrant herbicide application as part of open space management, and no significant adverse impacts on aquatic habitat or other sensitive biological resources are anticipated as a result of possible future use as part of the project.

**Response I-Sullivan-13:** See **Response I-Sullivan-3** for concerns regarding impacts of the proposed project on biological resources. The proposed regional park trail analyzed in the RDEIR as a related project would be located within the Helen Putnam Regional Park and not on the project site. As described

on **page 3.0-56 of the RDEIR**, this trail would allow for an extension of the proposed on-site multi-use trail through Helen Putnam Regional Park, to eventually connect to an existing trail on the Regional Park property. The RDEIR **Section 4.3, Biological Resources**, on **page 4.3-60** through **page 4.3-71** addresses the construction and operation impacts of the regional park trail.

**Response I-Sullivan-14**: See **Response I-Sullivan-2** and **Master Response 5** – **Revisions to the Project and Associated Reduction of Impacts to Biological Resources**, which clarify that approximately 47 acres of the site would be permanently protected as open space. The 22.1 acres of disturbance noted by the commentor was for a previous version of the proposed project. As described in **Master Response 1** - **Need for Updated Biological Surveys**, no occurrences of any plant species considered to be of special-status were observed during the systematic field surveys of the site conducted in 2021. These negative results are consistent with the negative results of previous survey efforts conducted in 2003/2004 and 2013. Special-status plant species are not expected to occur on the site given the negative findings from the systematic surveys since 2003.

**Response I-Sullivan-15**: As noted in Section 4.3, Biological Resources, of the RDEIR, on pages 4.3-19 - 4.3-20, based on surveys and site reconnaissance, California tiger salamander is not present at the project site. As indicated in **Comment Letter A-CDFW-2**, no further surveys are considered necessary by the CDFW.

**Response I-Sullivan-16**: The concerns of the commentor over potential impacts on CRLF are noted. See **Response I-Sullivan-5**.

Response I-Sullivan-17: See Response I-Sullivan-5 and Response I-Sullivan-6.

Response I-Sullivan-18: See Response I-Sullivan-5 and Response I-Sullivan-7.

Response I-Sullivan-19: See Response I-Sullivan-5 and Response I-Sullivan-7.

**Response I-Sullivan-20**: Section 4.3, Biological Resources, of the RDEIR, under Impact BIO-2 on page 4.3-46 through page 4.3-55, includes a description of existing habitat conditions and a thorough review of potential impacts of the proposed project on sensitive natural communities. See Response I-Sullivan-2 and Response I-Sullivan-6, Response I-Sullivan-7.

**Response I-Sullivan-21**: See **Response I-Sullivan-11**. **Mitigation Measure BIO-2e**, identified in the RDEIR, calls for preparation of a Native Grassland Avoidance and Replacement Program which would include control measures to ensure protection of the native grassland stands on the site.

**Response I-Sullivan-22**: Assessment of potential impacts on regulated waters at the project site is provided under **Impact BIO-3** on **page 4.3-55** through **page 4.3-57** of the **RDEIR**. Potential impacts on wetlands and regulated waters are discussed under **Impact BIO-3** on **pages 4.3-55** and **4.3-56** of the **RDEIR**. As discussed in **Master Response 5** – **Revisions to the Project and Associated Reduction of Impacts on Biological Resources**, a total of 0.129 acres of state and federal regulated waters that cannot be avoided would be provided at a minimum 2:1 ratio as called for in **Mitigation Measure BIO-3a** on **page 4.3-56 of the RDEIR**. This compensation measure would occupy an area of less than 0.3 acre. Sufficient land area is available to provide on-site replacement of any regulated waters that cannot be avoided by the implementation of the proposed project. Substantial enhancement has also been proposed as part of the Putnam Park Extension Project component of the project, including enhancement of existing degraded wetlands and restoration of Kelly Creek and the D Street Tributary.

**Response I-Sullivan-23**: An assessment of potential impacts on native grasslands on the site is provided under **Impact BIO-2** on **page 4.3-49 of the RDEIR**. As noted in the comment, studies have demonstrated that the potential to sequester carbon by improving grassland practices is substantial – of the same order as that of agricultural and forestry sequestration.<sup>19</sup> **Mitigation Measure BIO-2e** identified in the RDEIR requires the development of a Native Grassland Avoidance and Replacement Program to ensure native grasslands are successfully reestablished, existing and restored grasslands remain viable, and grazing managed appropriately to maintain and enhance grassland cover. Furthermore, the project would preserve a majority of the site as undisturbed habitat, in addition to areas that would be temporarily disturbed but restored to natural habitat, including grasslands. Therefore, as proposed, the project would preserve and restore native grassland, which would continue to provide existing and enhanced carbon sequestration.

**Response I-Sullivan-24**: Review of potential impacts on tree resources is provided on **page 4.3-47** through **page 4.3-49 of the RDEIR**. As noted in the RDEIR, the proposed project would largely avoid native and non-native woodland habitat along Kelly Creek and the D Street Tributary, including the black walnut trees in question. The commentor is correct that black walnut is a native species, but as described on **page 4.3-13 of the RDEIR** they are not believed to be of native origin because of their proximity to the collapsed farm house and likelihood that they are from a planted source. Native black walnut is used as the rootstock of English walnut because it is much hardier and survives well as a native

<sup>&</sup>lt;sup>19</sup> Food and Agriculture Organization (FAO), 2010, Challenges and Opportunities for Carbon Sequestration in Grasslands Systems, A technical Report on Grassland Management, and Climate Change Methodology, Volume 9-2010.

species. When planted walnut orchards and individual trees are abandoned, the black walnut sprouts and takes over the planting and eventually flowers and provides a seed source for establishment of more black walnut trees, which is presumably what happened on the site.

**Response I-Sullivan-25**: As discussed under **Impact BIO-1** on **page 4.3-35** of the RDEIR, no specialstatus plant species have been encountered during past surveys of the site and none are expected to be present given the negative findings from the systematic surveys conducted at three different time periods over the past 18 years. The updated appropriately timed surveys conducted in 2021 confirmed this to be the case (see **Master Response 1 – Need for Updated Biological Surveys**). No occurrences of any plant species considered to be of special-status were observed during the systematic field surveys of the site conducted in 2021. These negative results are consistent with the negative results of previous survey efforts conducted in 2003/2004 and 2013. Given the repeated negative results since 2003, no occurrences of special-status plants are suspected to occur on the site. As noted in the comment, there remains a potential for presence of one or more special-status plant species to occur in the vicinity of the proposed regional park trail alignment which could be impacted during construction. However, **Mitigation Measure RPT BIO-1d**, on **page 4.3-66 of the RDEIR**, requires systematic surveys be performed in advance of future trail construction and appropriate avoidance or mitigation be provided, mitigating this impact to a less-than-significant level. No additional mitigation is considered necessary to address potential impacts on special-status plants.

Response I-Sullivan-26: See Response I-Sullivan-7.

Response I-Sullivan-27: See Response I-Sullivan-7.

Response I-Sullivan-28: See Response I-Sullivan-5.

**Response I-Sullivan-29**: See **Response I-Sullivan-5**. The information regarding California Species of Special Concern (SSC) excerpted by the commentor is from the regulatory discussion on **page 4.3-28 of the RDEIR**. As indicated in **Table 4.3-1** on **page 4.3-18 of the RDEIR**, CRLF is recognized as an SSC, as noted by the commentor.

Response I-Sullivan-30: See Response I-Sullivan-15.

**Response I-Sullivan-31**: See Master Response 1 – Need for Updated Biological Surveys and Master Response 4 – Special-Status Species Present at the Project Site. A detailed review of each of the bird species listed in Table 4.3-1 of the RDEIR is provided in Response I-Smallwood-4 through Response I-Smallwood-4. Preconstruction surveys required by Mitigation Measure BIO-1c, identified in the RDEIR, would serve to protect any nests of raptors or other birds when in active use, ensuring compliance with federal and state regulations. If any occupied nests are encountered in the future during required preconstruction surveys, appropriate restrictions would be developed as called for in **Mitigation Measure BIO-1c** to prevent abandonment when in active use.

A majority of the site would be retained as undeveloped open space as part of the project and would continue to be available for foraging opportunities by special-status and more common bird species. No significant adverse impacts due to the limited loss of suitable foraging habitat for special-status bird species was identified in the RDEIR or is anticipated based on the negative findings of the updated surveys conducted in 2021 described in **Master Response 1 – Need for Updated Biological Surveys**.

**Response I-Sullivan-32**: See Master Response 1 – Need for Updated Biological Surveys and Master Response 4 – Special-Status Species Present at the Project Site. Bat surveys at the project site were conducted in 2004 and 2014. The results of these surveys are summarized on page 4.3-21 of the RDEIR. Signs of bat activity observed during the 2014 survey indicate only presence of common species - Brazilian free-tailed bat (*Tadarida brasiliensis*) and an unidentified species of myotis (*Myotis sp.*); however, nothing characteristic of special-status bat species that would have warranted more detailed study. The survey effort included a thorough inspection of all accessible portions of the existing structures. Preconstruction surveys for bats called for in Mitigation Measure BIO-1d of the RDEIR, requires detailed restrictions and controls to ensure avoidance of possible loss of bats during project construction.

**Response I-Sullivan-33**: See Master Response 1 – Need for Updated Biological Surveys and Master Response 2 – California Red-Legged Frog Surveys, and Master Response 4 – Special-Status Species Present at the Project Site. City's independent biological consultant conducted updated detailed surveys and mapping of the project site in the spring and summer of 2021. This included systematic surveys for special-status plant species, refinement of the mapping of native grasslands, and an update of the wildlife habitat assessment to determine whether conditions described in the RDEIR are still accurate. A copy of the results of findings report from the 2021 survey effort is contained in Appendix RTC-A of this document, including lists of plant and animal species observed on the site. Also, see Master Response 1 – Need for Updated Biological Surveys.

**Mitigation Measure BIO-2e** identified in the RDEIR requires the development of a Native Grassland Avoidance and Replacement Program to ensure native grasslands are successfully reestablished, existing and restored grasslands remain viable, and grazing managed appropriately to maintain and enhance grassland cover. Furthermore, the project would preserve a majority of the site as undisturbed habitat. In addition, site areas that would be temporarily disturbed would be restored to natural habitat, including grasslands.

Response I-Sullivan-34: See Master Response 1 – Need for Updated Biological Surveys, Master Response 2 – California Red-Legged Frog Surveys, and Master Response 4 – Special-Status Species Present at the Project Site.

1

Pascoe, Samantha
Pascoe, Samantha
FW: Scott Ranch Traffic
Monday, March 15, 2021 4:29:03 PM

From: james terrell

Sent: Monday, March 15, 2021 4:22 PM

To: Barrett,Teresa <tbarrett@cityofpetaluma.org>; Barnacle, Brian <bbarnacle@cityofpetaluma.org>; Fischer, D'Lynda <dfischer@cityofpetaluma.org>; Healy, Mike <mhealy@cityofpetaluma.org>; King, Dave <dking@cityofpetaluma.org>; McDonnell, Kevin <kmcdonnell@cityofpetaluma.org>; Pocekay, Dennis <dpocekay@cityofpetaluma.org>; -- City Clerk <CityClerk@cityofpetaluma.org> Subject: Scott Ranch Traffic

I have lived in Petaluma for over 40 years.

My feeling is that growth very often manifests as a sort of cancer : non-stop and thus unconsciously destructive.

The added traffic in all directions and West side neighborhoods is just one aspect of adding developers' selfagrandizing profit centers.

Petaluma will not be a charming and comfortable town but a "hive town" reminiscent of the Los Angeles basin .

I urge you to vote to not allow this spoliation.

Thank You, James Terrell

#### **RESPONSES TO I-TERRELL LETTER**

**Response I-Terrell-1:** With respect to traffic concerns associated with the proposed project, see **Master Response 7 – Trip Generation** and **Master Response 8 – Traffic Operations**.

Concerns related to project merit, do not raise issues concerning the adequacy or accuracy of the RDEIR's coverage of environmental impacts under CEQA. These comments may be considered and weighed by city decision-makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration will be carried out independent of the environmental review process.

#### Ervin, Olivia

From:	Larry Tracey <info@extendputnampark.org></info@extendputnampark.org>
Sent:	Saturday, February 27, 2021 8:50 AM
То:	Ervin, Olivia
Subject:	Scott Ranch Park Extension and Limited Housing Project

To the Members of the Petaluma City Council and the Planning Commission:

I write today to share my support for the proposed Scott Ranch project, which includes plans to extend Putnam Park by 44 acres and a limited 28-home development on the least environmentally sensitive portions of the property. I appreciate how much work has gone into improving this project over the years and ensuring that its environmental impacts are kept to a minimum.

The Revised Draft Environmental Impact Report now before you is a comprehensive document that has evaluated and mitigated the potential impacts of this project effectively. I hope you will vote in support of the completeness of this revised draft EIR so that a final EIR can be prepared that responds to all comments received. And, ultimately, I hope you will approve this project as proposed.

Sincerely,

Larry Tracey

Petaluma

ltracey60@comcast.net

1

# **RESPONSES TO I-TRACEY LETTER**

Response I-Tracey-1: Comment noted.

#### Ervin, Olivia

From:	Danielle Venton <info@extendputnampark.org></info@extendputnampark.org>
Sent:	Monday, March 8, 2021 4:33 PM
То:	Ervin, Olivia
Subject:	Scott Ranch Park Extension and Limited Housing Project

----Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---To the Members of the Petaluma City Council and the Planning Commission:

I'm writing to urge to to move forward with the revised draft EIR for the Scott Ranch project proposal to expand Helen Putnam Park. I'm impressed by the compromise that has been struck by the Kelly Creek Protection Project and hope the project, as proposed, will be approved and completed. I worry that if the project is not approved Davidon Homes will pursue a larger housing development.

I've grown up in Petaluma and spending time at Hel Put has been an important part of my life. I am now starting my own family here and look forward to hiking with my son in an expanded park, visiting the butterfly garden, seeing the cows, hearing the frogs by the creek, and knowing that the rural land will be protected longterm.

Sincerely, Danielle Venton

**Danielle Venton** 

Petaluma

danielle.venton@gmail.com

1

# **RESPONSES TO I-VENTON LETTER**

Response I-Venton-1: Comment noted.

#### Ervin, Olivia

From:	Pete Vilmur <info@extendputnampark.org></info@extendputnampark.org>
Sent:	Thursday, March 11, 2021 6:13 PM
То:	Ervin, Olivia
Subject:	Scott Ranch Park Extension and Limited Housing Project

----Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---To the Members of the Petaluma City Council and the Planning Commission:

I very much welcome this project to our neighborhood. I live in Westridge, so the D Street access to Putnam Park will be a fantastic amenity, as the trailhead will be easily reached by walking or cycling from home. Putnam is pretty much my go-to trail once or twice a week, so the extension will be a wonderful new feature and experience for local hikers. As someone who's also very interested in preserving Petaluma history, I'm heartened to know the barns will be preserved and used for educational purposes, so that the past may continue to help guide our future.

I wholeheartedly support this project, and look very forward to the council approving it in the near future.

Pete

Pete Vilmur

Petaluma

p.vilmur@sbcglobal.net

1

# **RESPONSES TO I-VILMUR LETTER**

Response I-Vilmur-1: Comment noted.

#### Ervin, Olivia

From:	Jennifer Wheeler <kismet52@msn.com></kismet52@msn.com>
Sent:	Monday, March 8, 2021 8:46 PM
То:	Barrett,Teresa; Barnacle, Brian; Fischer, D'Lynda; Healy, Mike; King, Dave; McDonnell, Kevin; Ervin, Olivia
Subject:	Reject Davidon Development

---Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---

Are we to have no places left to walk and enjoy wild birds, wild life, and natural settings and where will the wildlife go? Petaluma is sorely lacking public outdoor spaces to hike and view nature. The trails at Helen Putnam have been overused due to the limited size of the park. It needs to be expanded to meet the demand of the large and growing population surrounding the area.

Please do not approve the Davidon development on environmentally sensitive land that can be such an addition to Helen Putnam park and the citizens of Petaluma.

The environmental review is inadequate to say the least and needs updating.

Thank you, Jennifer Wheeler Petaluma, CA.

#### **RESPONSES TO I-WHEELER LETTER**

**Response I-Wheeler-1:** This comment does not raise issues concerning the adequacy or accuracy of the RDEIR's coverage of environmental impacts under CEQA. The comment may be considered and weighed by city decision-makers as part of their decision to approve, modify, or disapprove the proposed project. This consideration will be carried out independent of the environmental review process.

#### Ervin, Olivia

From:	Sydney Wolfe <info@extendputnampark.org></info@extendputnampark.org>
Sent:	Friday, February 26, 2021 4:32 PM
То:	Ervin, Olivia
Subject:	Scott Ranch Park Extension and Limited Housing Project

To the Members of the Petaluma City Council and the Planning Commission:

I write today to share my support for the proposed Scott Ranch project, which includes plans to extend Putnam Park by 44 acres and a limited 28-home development on the least environmentally sensitive portions of the property. I appreciate how much work has gone into improving this project over the years and ensuring that its environmental impacts are kept to a minimum.

The Revised Draft Environmental Impact Report now before you is a comprehensive document that has evaluated and mitigated the potential impacts of this project effectively. I hope you will vote in support of the completeness of this revised draft EIR so that a final EIR can be prepared that responds to all comments received. And, ultimately, I hope you will approve this project as proposed.

Sincerely,

Sydney Wolfe

Santa Rosa

sydneytwolfe@gmail.com

1

# **RESPONSES TO I-WOLFE LETTER**

Response I-Wolfe-1: Comment noted.

PROJECT APPLICANT

**Responses to Comments** 

1

From: Peter Cohn pgcohn@comcast.net>
Sent: Friday, February 5, 2021 5:26 PM
To: heidibauer2000@gmail.com <heidibauer2000@gmail.com>; Fischer, D'Lynda
<dfischer@cityofpetaluma.org>; richard@lacehouselinen.com <richard@lacehouselinen.com>;
alonsoplanningpet@gmail.com <a heidibauer2000@gmail.com>; sandi.lee.potter@gmail.com</a>
<a heidibauer2000@gmail.com</a>; bmhooper1@gmail.com</a>; sandi.lee.potter@gmail.com</a>; Ellis, Evelyn
<eellis@cityofpetaluma.org>
Cc: 'Greg Colvin' <a heigits bm and a mean set of the set o

Subject: Petaluma Planning Commission Teleconference Meeting: February 9, 2021 at 7:00 pm

Dear Chairperson Bauer, Planning Commission Members and Petaluma City Clerk,

On behalf of Greg Colvin, Director of Kelly Creek Protection Project (KCPP), and Steve Abbs, Vice President of Davidon Homes, we would like to share with you a brief and informative 9 minute video related to the Scott Ranch Project and the Revised Draft Environmental Impact Report that will be a subject of the upcoming February 9, 2021, Petaluma Planning Commission Meeting at 7:00 pm. The video can easily be viewed if you open the link at the following website: https://vimeo.com/505039086/91f21a772b.

We hope you find the video helpful for your deliberations.

With every best wish,

Peter Cohn KCPP Secretary/Treasurer Email: <u>pgcohn@comcast.net</u>

Greg Colvin KCPP Director Email: <u>greglcolvin@gmail.net</u>

Steve Abbs Vice President, Davidon Homes Email: <u>Sabbs@davidonhomes.com</u>

# **RESPONSES TO KCPP-1 LETTER**

Response KCPP-1: Comment noted.

# KCPP-2

From: Jared Emerson-Johnson <jared@basound.com>
Sent: Monday, February 08, 2021 2:17 PM
To: heidibauer2000@gmail.com; Fischer, D'Lynda <dfischer@cityofpetaluma.org>;
richard@lacehouselinen.com; alonsoplanningpet@gmail.com; sandi.lee.potter@gmail.com;
bmhooper1@gmail.com; Ellis, Evelyn <eellis@cityofpetaluma.org>; Flynn, Peggy
<PFlynn@cityofpetaluma.org>; Hines, Heather <hhines@cityofpetaluma.org>
Cc: Steve Abbs <Sabbs@davidonhomes.com>; Greg Colvin <greglcolvin@gmail.com>; Peter Cohn
<pgcohn@comcast.net>
Subject: Re: Petaluma Planning Commission Teleconference Meeting: February 9, 2021 at 7:00 pm

---Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---

Dear Chairperson Bauer, Planning Commission Members, Petaluma City Clerk, City Manager Flynn, and Planning Manager Hines,

In addition to the 9 minute informational video about the Scott Ranch Project, we would like to share a full recording of the Community Meeting we held this past Thursday:

https://www.youtube.com/watch?v=teOi4uCHMRM

We are very much looking forward to tomorrow evening's Planning Commission Meeting.

On behalf of Greg Colvin, Peter Cohn, and myself of the Kelly Creek Protection Project, and Steve Abbs of Davidon Homes, we hope you'll find these additional materials useful as you consider our proposals.

best, Jared Emerson-Johnson

Jared Emerson-Johnson Assistant Director Kelly Creek Protection Project jared@basound.com 707-338-0704

# **RESPONSES TO KCPP-2 LETTER**

Response KCPP-2: Comment noted.

From: Peter Cohn <pgcohn@comcast.net>
Sent: Tuesday, February 09, 2021 9:26 AM
To: heidibauer2000@gmail.com; Fischer, D'Lynda <dfischer@cityofpetaluma.org>;
richard@lacehouselinen.com; alonsoplanningpet@gmail.com; sandi.lee.potter@gmail.com;
bmhooper1@gmail.com; Ellis, Evelyn <eellis@cityofpetaluma.org>; Flynn, Peggy
<PFlynn@cityofpetaluma.org>; Hines, Heather <hhines@cityofpetaluma.org>; Barrett,Teresa
<tbarrett@cityofpetaluma.org>
Cc: 'Greg Colvin' <greglcolvin@gmail.com>; 'Steve Abbs' <Sabbs@davidonhomes.com>
Subject: Petaluma Planning Commission Teleconference Meeting: February 9, 2021 at 7:00 pm - Peter

Cohn's Letter of Support for the Scott Ranch DEIR

Dear Chairperson Bauer, Planning Commission Members, City Manager Peggy Flynn, City Planner Heather Hines and Mayor Teresa Barrett,

I am Peter Cohn – a 34+ year resident of Petaluma, a social worker, civil rights lawyer and Secretary/Treasurer of the Kelly Creek Protection Project. Because I anticipate that your hearing schedule today regarding the Scott Ranch Project might be quite busy, I wanted to share with you my reflections and support for the DEIR regarding this project. I believe these views – which were also shared during the Kelly Creek Protection Project and David Homes' February 4, 2021, Community Zoom Meeting – are highly relevant to your and the City's deliberations regarding the Scott Ranch DEIR. They are as follows:

#### **CLOSING REFLECTIONS ON THE BENEFITS AND VALUE OF THE SCOTT RANCH PROJECT**

GOOD EVENING, I AM PETER COHN – THE SECRETARY/TREASURER OF THE KELLY CREEK PROTECTION PROJECT.

AS A 5-YEAR-OLD, I GREW UP WITH A SINGLE MOM, 4 OLDER SISTERS AND A BROTHER ON AID TO FAMILIES WITH DEPENDENT CHILDREN IN THE URBAN CORE OF LONG BEACH. DUE TO MY WISE MOM, I HAD THE INVALUABLE EXPERIENCE OF WALKING - WITH MY SIBLINGS - THE 10 BLOCKS TO OUR LOCAL MCARTHUR PARK – A ONE SQUARE BLOCK PARK AREA – THAT, AT THE TIME, I THOUGHT WAS HUGE. BUT THAT SMALL PARK WITH ITS CARING STAFF WAS AN OASIS IN OUR LIVES – THAT INSTILLED IN US NOT ONLY THE POWER OF PARKS IN PEOPLES' LIVES BUT ALSO THE VALUE OF CAREERS IN PUBLIC SERVICE.

I HAVE HAD THE HONOR OF RETURNING THOSE LIFE FAVORS THROUGH CHURCH WORK, SOCIAL WORK, COMMUNITY MENTAL HEALTH, AND NAACP CIVIL RIGHTS WORK. IT WAS MY LEGAL WORK AT THE NAACP THAT ULTIMATELY CONNECTED ME TO ANOTHER PUBLIC INTEREST LAWYER IN PETALUMA – GREG COLVIN.

I UNDERTOOK – AS A PRO BONO ATTORNEY - TO VOLUNTEER WITH GREG AND OTHERS TO WORK ON THE KELLY CREEK PROTECTION PROJECT.

I SAW THE VALUE OF PARKS AND THE OUTDOORS TO ADVANCE HEALTH AND WELLBEING FOR ALL INDIVIDUALS – ESPECIALLY IN THIS TIME OF A GLOBAL PANDEMIC.

WE SEE THE SIGNS AND DEEDS ACROSS PETALUMA WELCOMING ALL PEOPLE, AFFIRMING THAT BLACK, LATINO AND IMMIGRANT LIVES MATTER. WE HAVE ALSO SEEN THIS GENEROSITY OF SPIRIT IN OUR FELLOW RESIDENTS WHO SAW THE CLEAR BENEFITS OF THIS SETTLEMENT AND CAME FORWARD TO FINANCIALLY SUPPORT KELLY CREEK PROTECTION PROJECT'S \$5.1 MILLION DOLLAR PARKLAND GIFT TO SONOMA COUNTY REGIONAL PARKS.

DONATIONS FROM OVER 230 FAMILY LEADERS WERE IN THE RANGE OF \$10 TO \$10,000. THE KIND NOTES OF SUPPORT FOR KCPP THAT ACCOMPANIED THOSE DONATIONS WERE VERY TOUCHING.

**AND WHY DID THEY DO IT?** PETALUMANS WANTED TO BE A PART OF AN AMAZING KCPP, PHILANTHROPIC, PETALUMA CITY, SONOMA COUNTY, AG & OPEN SPACE DISTRICT, AND REGIONAL PARKS PARTNERSHIP THAT ULTIMATELY AND SO FORTUNATELY INCLUDED STEVE AND DAVIDON HOMES.

MOREOVER, OUR SUPPORTERS DID IT TO PRESERVE AND GIFT AS MUCH OF THE SCOTT RANCH AS POSSIBLE TO SONOMA COUNTY REGIONAL PARKS TO RETURN THE VERY FAVORS - **THAT SOME OF US HAD RECEIVED AS CHILDREN** – TO ALL THE STUDENTS AND THEIR FAMILIES AND ESPECIALLY THOSE UNDERSERVED FAMILIES/FAMILIES OF COLOR WHO MIGHT NOT HAVE EASY ACCESS TO THE PARKS AND THE OUTDOORS IN PETALUMA AND SONOMA COUNTY.

THIS GENEROUS GIFT WILL PROVIDE A SCENIC DOWNTOWN PORTAL TO HELEN PUTNAM PARK FOR THE **DISABLED, CHILDREN, FAMILIES, WALKERS AND BIKERS FROM THE ENTIRE COMMUNITY – EASTSIDE AND WESTSIDE**.

NO ONE SHOULD EVER SUGGEST TO OUR COMMUNITY THAT, IN WORKING TOGETHER, PETALUMANS CANNOT FIND COMMON GROUND ON LAND DEVELOPMENT CONTROVERSIES BECAUSE – IF THE CITY APPROVES THE PARK AND RESIDENTIAL PLANS HERE – <u>PETALUMANS TOGETHER</u> WILL HAVE EFFECTIVELY <u>PRESERVED FOREVER 84% OF THE ENTIRE 58 ACRE RANCH</u> FOR PARKLAND AND OPEN SPACE – THIS IS AN HISTORIC ACHIEVEMENT – A WIN-WIN FOR ALL.

I hope you find the above remarks and analysis helpful for your deliberations in positively determining that the Scott Ranch DEIR should go forward to the Mayor and City Council for approval.

With every best wish,

Peter Cohn KCPP Secretary/Treasurer Email: pgcohn@comcast.net

# **RESPONSES TO KCPP-3 LETTER**

Response KCPP-3: Comment noted.

#### Ervin, Olivia

From:	Greg Colvin <greglcolvin@gmail.com></greglcolvin@gmail.com>
Sent:	Sunday, March 7, 2021 8:18 AM
То:	Barrett,Teresa; brian barnacle; Michael Healy; Dave King; McDonnell, Kevin; dlyndaf@gmail.com; dennis pocekay
Cc:	Ervin, Olivia; Hines, Heather; Flynn, Peggy; Ellis, Evelyn
Subject:	Councilmembers: please watch 9 min video, read Argus editorial re Scott Ranch

----Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.----All:

Our joint Scott Ranch RDEIR with Davidon comes before you on Monday March 15.

We want to be very efficient during our KCPP presentation as the applicant for the 44-acre expansion of Helen Putnam Park.

So, we would like to suggest that -- if you haven't already -- you take a look at our 9 minute virtual video tour of Scott Ranch and my guest editorial in the Argus Courier from February 3, linked below, at a convenient moment beforehand.

https://vimeo.com/505039086/91f21a772b.

https://www.petaluma360.com/article/opinion/guest-editorial-end-scott-ranch-dispute-extend-putnam-park/

We plan to devote our 10 minutes at the hearing to the most important concerns and considerations arising from the EIR given the posture of this land use issue at this time.

If you have any question, let me know, and thank you for all you do.

**Greg Colvin** 

**KCPP** director

415-518-6522 (call or text, no voicemail)

1

# **RESPONSES TO KCPP-4 LETTER**

Response KCPP-4: Comment noted.

# **EARTH** KELLY CREEK I S L A N D PROTECTION PROJECT

March 8, 2021

The Honorable Teresa Barrett The Honorable Members of the City Council City of Petaluma 11 English Street Petaluma, CA 94952

Dear Mayor Barrett and Members of the City Council,

I write today to share information with you about the Revised Draft EIR for the proposed Scott Ranch project, which will come before you at your March 15 meeting. Enclosed here you will find a series of common questions we have heard since the RDEIR was released at the end of December and our answers to them. I have also enclosed a list of environmental benefits associated with our project. I hope this information is helpful as you review the adequacy of the environmental document now before you.

The resolution of the longstanding Scott Ranch land use controversy is a clear victory for Petaluma and Sonoma County residents. The Kelly Creek Protection Project brought together the necessary partnerships and resources from our neighbors, philanthropists, Sonoma County Regional Parks, Sonoma County Ag + Open Space District and Board of Supervisors and, of course, the property owner - Davidon Homes - to achieve breakthrough results for our community. KCPP sees the compromise project now before you as a win for all, and an exciting opportunity for Petaluma to see a beloved park improved and extended to provide easier access to residents in all parts of the city.

On behalf of the entire KCPP team, I hope the City Council will favorably view the RDEIR and the Scott Ranch Project as an opportunity to put a longstanding local land dispute to rest. I look forward to providing additional information and answering your questions on March 15.

Sincerely,

Greg Colom

Greg Colvin Director, Kelly Creek Protection Project
## **Responses to Questions Raised About the Scott Ranch Project**

### 1. <u>Public Participation</u>

# How has the public participated in the formation of the Scott Ranch parkland/housing proposal that is before the City Council?

This proposal represents the culmination of over 15 years of substantial public discussion about the ultimate best practical use of the old 58-acre Scott Ranch since Davidon Homes purchased it in 2003 for \$7.8 million. Kelly Creek Protection Project (KCPP) entered negotiations with Davidon in 2017. KCPP's position in these negotiations was fully informed by the range of public concerns raised in 2017 during the Planning Commission and City Council hearings as well as those expressed in hundreds of written comments regarding Davidon's initial massive residential plans going back to 2013 and earlier. At all times during the negotiations, KCPP kept front and center the very valuable community perspectives on the importance of protecting this beautiful and historic ranch land.

The \$4.1 million purchase agreement – to acquire three-quarters of the ranch for half the price Davidon paid for the entire property in 2003 – achieves the stated desire of so many members of the public: to protect the most environmentally sensitive portions of the property and make the land accessible as a public park. Hundreds of community members have signaled their support for KCPP's approach through direct donations. If the City approves the current proposal for Scott Ranch, this legally enforceable agreement will protect 84% of the Scott Ranch forever as public parkland (44 acres) and private open space (5 acres).

Community members can also continue to share their comments and questions about the project with decisionmakers as the City of Petaluma invites feedback at public hearings and in response to the EIR now under review.

## What are some examples of how this plan is responsive to public comment submitted on previous versions of the Scott Ranch development plan?

The Davidon Homes portion of the Scott Ranch plan takes into account hundreds of comments submitted on previous iterations of this project. If the project is approved, Davidon will be legally bound to building no more than the minimum number of homes allowed on this property per Petaluma's General Plan. The proposed limited 28-home residential plan is attractively spread out with natural landscaping across nine acres of the property, leaving five additional acres of open space within the housing development envelope.

The housing development will consist of mostly single-story homes with multiple environmentally sustainable features, such as solar panels and electric car charging stations in every home. These homes will be built with fire resistant materials and will be a nice complement to the adjacent pastoral park area with open wildlife corridors. Ten of the homes will be located north of Windsor and away from the pastureland. The remaining 18 homes will be well to the north of Kelly Creek.

Unlike previous proposals, the plan before the Council leaves the red barns and pastureland undisturbed. Davidon has also committed to constructing infiltration basins that will capture and clean the stormwater flowing from the new homes and existing roads before it enters Kelly Creek and runs through downstream properties.

Additional benefits provided by Davidon in the current proposal include water and sewer utilities to the new park extension, grading parking lots and trails, and adding sidewalks including along Windsor Drive and D Street. Davidon will also construct a roundabout at Windsor Drive and D Street that will greatly enhance public safety and access to the park while reducing the speed of traffic along D Street.

Although the next round of planning for the region's housing needs has not yet been completed, drafts issued by the Association of Bay Area Governments confirm that Petaluma will need significant numbers of new housing units at all levels of affordability.

### Why did KCPP and Davidon Homes settle on 28 homes as part of their negotiations?

The community effectively challenged the 2017 EIR because that document had failed to give serious consideration to the "environmentally superior alternative" of a 28-home residential plan. The City Council heard those concerns and specifically requested a new RDEIR focusing on a 28-home plan. In response, the Scott Ranch plan provides the public with a far superior, limited 28-home alternative footprint, which covers only nine acres of the entire 58-acre ranch.

#### Why were negotiations between KCPP and Davidon Homes held in private?

As is typical in complex real estate transactions, we at KCPP found it necessary to engage in a few months of private negotiations with Davidon to hammer out the details of a legal purchase agreement. The concerns raised by hundreds of Petaluma residents were all brought to the table by KCPP's representatives. We believe we would never have brought this land dispute to a head and garnered so many concessions from Davidon or so many benefits for our community if we had done it any other way. Indeed, our final agreement with Davidon included an option to buy out the entire ranch so that no homes would be built, but we were unable to raise those additional funds.

#### Why is the Scott Ranch Project so important to the entire community?

The resolution of the long-standing Scott Ranch land use controversy is a clear victory for all the residents of Petaluma and Sonoma County. KCPP has merely served as a vehicle to bring together the necessary community partnerships and resources from our neighbors, the philanthropic community, Sonoma County Regional Parks, Sonoma County Ag + Open Space District and Board of Supervisors and, of course, the property owner - Davidon Homes - to

achieve these breakthrough results for our community. KCPP sees achieving this favorable settlement as a major gift to our City and County and a win for all. We hope the City Council will favorably view the RDEIR and the Scott Ranch Project through this exceptional and groundbreaking lens.

### 2. <u>Traffic, VMT, and Climate</u>

#### How will the Scott Ranch project affect traffic in the neighborhood?

Traffic congestion is no longer a CEQA issue, but the RDEIR analyzes traffic congestion nevertheless. This analysis shows that traffic congestion in the neighborhood will decrease as a result of the project. This is because the project will add a traffic circle at the intersection of D Street and Windsor Drive, which will slow down traffic along D Street and make it easier both to turn onto Windsor Drive from D Street and turn onto D Street from Windsor.

Traffic congestion is measured by the amount of delay drivers experience at particular locations (measured as levels of service – LOS A through F – with LOS A having no delay and LOS F resulting in delays of over a minute). The project will improve existing traffic conditions at the corner of D Street and Windsor Drive from LOS E to LOS B during the afternoon commute and from LOS B to LOS A during the morning commute.

#### How will the Scott Ranch project affect VMT and climate change?

While traffic congestion in the neighborhood will improve, the RDEIR determined that the Scott Ranch project will result in a significant transportation impact because of the vehicle miles travelled (VMT) by project residents. According to the RDEIR, to avoid a significant VMT impact, per capita VMT for project residents must be at least 15% *below* the City's average VMT for existing residents. Because of its location, the RDEIR concludes that the Scott Ranch project cannot meet this threshold. Indeed, unless located downtown, most future residential projects will also exceed this standard.

While the City is working to develop a program of measures to reduce VMT that new development can help fund, because such a program is not yet in place, the RDEIR concludes the VMT impact is unavoidable. This is the case even though Davidon will contribute its fair share to measures that are later developed as part of the City's program.

There are a number of factors that the RDEIR did not consider in its appropriately conservative calculation of VMT. For example, the VMT calculations do not consider that the project's new public parking lots on the east side of Putnam Park will mean park users will not have to drive further west to access the Chileno Valley Road parking lot. And with the proximity of the park extension to downtown (just a 20-minute walk) and the new multipurpose trail and sidewalk improvements along D Street, more park users will walk and bike to the park rather than drive. The RDEIR also includes assumptions about each future resident's driving patterns that do not

take into account that residents in the existing neighborhoods adjacent to the property currently walk and bike more than residents in other City neighborhoods, as shown in GPS data.

Many view VMT as a stand-in for greenhouse gasses since driving contributes to climate change. Notably, the RDEIR concludes that the project will *not* "generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment." (RDEIR 4.7-27).

The Scott Ranch project incorporates many measures to avoid climate change and achieve the goals of the City's Climate Emergency Framework. Both new parking lots for the park will have electric vehicle charging stalls, and each residence will have solar panels and electric vehicle charger connections. The resulting use of electric rather than gas powered cars is not considered in VMT calculations, which is one reason why VMT is an imperfect proxy for greenhouse gas emissions. New residences will also generate enough energy from renewable sources to offset the electricity they use.

The project's preservation of 44 acres of open space land including wetlands, tributaries, critical habitat, and mature trees will also further the City's climate action goals. A majority of the open space land is currently grazed. Cattle access Kelly Creek at several locations, leaving many areas denuded of vegetation and actively eroding. Excluding cattle from sensitive areas as part of the park plan will improve site conditions, decrease runoff, and increase vegetative cover. Increased vegetative cover and properly managed soils, which will result from implementing the proposed park plan, will enhance carbon sequestration. Bank and gully stabilization, native grass restoration, and native tree plantings will further enhance and preserve the land consistent with the goals of the City's Climate Emergency Framework by creating more resilient and sustainable environmental site conditions.

The project's post-development storm drainage system includes detention and infiltration basins and vegetated swales within the park boundary to capture, treat, and slow stormwater runoff before discharge into Kelly Creek, thus providing a nature-based stormwater management system that will contribute to ecosystem health and climate change resiliency. A majority of the park plan area will be protected by conservation easements, which will protect the improved site conditions and provide long-term site resiliency. In addition, the project will install sidewalks, bicycle lanes, and multi-use pathways, furthering opportunities for outdoor recreation and reducing car trips by making walking and biking safer and more appealing.

In addition to the on-site benefits this project provides, Davidon will pay substantial Traffic Impact fees that will fund pedestrian, bike and transit improvements and will pay VMT fees to help fund future City-adopted measures that reduce car trips. All these measures will help to fight climate change.

Perhaps most importantly, our project plan's biggest contribution to saving our natural environment and fighting climate change may be the preservation of 49 acres of property within the city limits—land that has been designated for residential development in the General

Plan. This opportunity for public and private open space in perpetuity is a huge and hopeful step forward for a sustainable city and planet.

### 3. <u>Red-Legged Frogs</u>

### How will the California red-legged frog and other wildlife species be protected?

The portion of Scott Ranch south of Kelly Creek contains excellent habitat for the threatened California red-legged frog in the region, and the frogs are known to breed in the stock pond. By protecting Kelly Creek and the land surrounding it, particularly all of the site to the south, this habitat will be permanently preserved – providing an irreplaceable haven for this species and others that rely on a healthy riparian and aquatic environment. Our park development plan will additionally improve this habitat through planting native understory and canopy vegetation, excluding livestock from the stock pond and creek, repairing erosion, and restoring creek tributaries.

The southern portion of Scott Ranch is the northern end of a critical red-legged frog habitat unit defined by the U.S. Fish & Wildlife Service that extends 2,230 acres south all the way into Marin County and calls for special consideration for management of the habitat. When USFWS defines a critical habitat, it does not mean that no human entry or human-made structures are permitted. There are already many homes, ranches, and roads within this habitat unit.

While the red line on the project maps shows the northern edge of this large habitat area, in discussions with state and federal resource agencies, they confirmed that the most valuable habitat is south of Kelly Creek. Notwithstanding the location of the red line, the RDEIR treats the *entire* property as red-legged habitat and provides detailed mitigation measures to protect red-legged frogs. In addition, KCPP and Davidon have been working, and will continue to work, with the state and federal resource agencies to best protect the frogs throughout the development process.

#### Were new surveys conducted for the red-legged frog?

Both the California Department of Fish and Wildlife and the United States Fish and Wildlife Service have confirmed that no additional red-legged frog surveys need be conducted. Conducting such surveys can actually harm the red-legged frogs. Instead, the RDEIR assumes that the frogs could be anywhere on the Scott Ranch and includes measures to reduce to an insignificant level the impacts the new homes and park improvements might cause.

### Were former biological reports updated for the RDEIR?

Prior to preparation of the RDEIR, biologists, including the City's biological consultant, reviewed the biological reports prepared for earlier iterations of the project and visited Scott Ranch to determine if the prior biological studies still accurately described the biological resources on the

property. They confirmed that the early reports were still accurate. Thus, the RDEIR appropriately relied on those reports in its analysis of biological impacts.

### 4. Neighborhood Parking

## Will the new parking lots proposed as part of the Scott Ranch plan address the parking and traffic challenges currently faced by residents of the Victoria and West Haven developments?

About a dozen existing residents near Scott Ranch have shared their concern about park users parking on Windsor Drive to access the park instead of using the fee-based parking lot managed by Sonoma County Regional Parks on Chileno Valley Road. For context, a Regional Parks annual parking pass ranges in cost from \$5-\$69, depending on the driver's status (senior, low-income, etc.). Alternatively, park users can pay \$7/day to park in a Regional Parks lot.

Some residents have expressed their fear that planned parking lots, which will adhere to Sonoma County Regional Parks' paid parking policy, will not alleviate neighborhood parking and traffic impacts.

<u>Based on our observations, it is not true that most people avoid parking in paid Regional Parks</u> <u>lots</u>. Increasingly, the Chileno lot is full, even though it has spaces for 50+ vehicles. We have observed more park visitors pay to park at Chileno than park for free on Windsor. For instance, on Saturday, February 27, at noon there were 42 cars on Windsor near Oxford and 48 at Chileno. On Sunday, February 28, at noon there were 34 cars on Windsor and 53 at Chileno; the lot was full and visitors had to wait for a spot or turn away.

If our proposal to expand Putnam Park down to D Street by the red barns is approved along with the Davidon 28-home plan, two new parking lots with a total of 37 spaces will be available to visitors. Those lots will offer visitors more attractive entrances with amenities like restrooms and a playground.

Also, Regional Parks plans to install a 31-space parking lot on Windsor near the West Haven roundabout this year, with a restroom and trail connection to Victoria. The annual county pass or daily fee will be required, but if Chileno is any indication, it will be well-utilized.

At this point, speculation about the degree to which park users will continue to park on neighborhood streets after the three new planned and proposed parking lots are added is premature. We have every reason to believe that the new lots will be well used and therefore relieve traffic and congestion on surrounding streets. However, if that proves not to be the case, it will ultimately be up to the City of Petaluma to consider options like a parking permit system or time-limited parking on the streets near the park. (For instance, the City has placed a sign at the foot of Oxford Court closing it to thru traffic, to the great relief of its residents.) These and other policy tools for managing traffic and parking challenges are available to the City and could be implemented if needed after the new lots are in place.

### 5. <u>Wildfire and Evacuation</u>

## How would the Scott Ranch Project affect wildfire risk for existing residents in the neighborhoods around the property?

Scott Ranch is not within the state's high fire hazard severity zone but is within the City's Wildland Urban Interface area (WUI) – areas with dense housing adjacent to vegetation that can burn in a wildfire. That's why the Scott Ranch Project includes a Fuel Management Program that analyzes fire behavior and identifies measures to reduce the risk of wildfire. Those measures are all now part of the project.

The statewide map published by the California PUC was <u>created</u> to "designate areas where there is an elevated hazard for power-line fires to occur and spread rapidly." This part of Petaluma is designated as "elevated" but not "extreme." The designation provides no more information about the area's fire risk than is already disclosed and analyzed in the RDEIR.

<u>The analysis in the RDEIR concludes</u> that the combination of wildfire-wise management practices planned for the park portion of the property and the vegetation management, defensible space, and fire-safe building materials planned for the Davidon homes will reduce the risk of wildfire for existing homes in the area. These excerpts from the RDEIR explain how the project reduces the level of risk currently facing neighborhood residents:

"The proposed project would offset the increased ignition risk by replacing approximately 15 acres of fuel (current vegetation) with fire-resistant residences and landscaping. In addition, the residential component would include improved access, water supply, water delivery systems, and restriction on dangerous fire-related behavior.

"The proposed project would include several improved fuel characteristics that would make the site less prone to ignition and less likely to spread rapidly or burn with intensity. The following characteristics would result from the proposed project:

- Areas of low fuel in the residential portion of the site.
- Firebreaks in the form of parking lots, and development of trails.
- Removal of flammable abandoned buildings.
- Minimization of grass volume through grazing, and as needed flash grazing.
- Increased moisture of portions of the grassland through habitat restoration projects that alter the species to more moisture-loving types of herbaceous plants.
- Two infiltration basins that would support plants with higher levels of moisture than currently existing vegetation."

## How would the Scott Ranch Project affect the ability of the neighborhood to evacuate safely in the case of a wildfire?

To ensure the Scott Ranch Project would not clog traffic during a wildfire evacuation, the RDEIR analyzed the capacity of local roadways and how 28 homes would impact the ability to safely evacuate. The RDEIR concluded that, "the proposed project would not exacerbate nearby roadway network capacity during worst-case traffic conditions."

To reach this conclusion, the City's traffic consultant, Fehr & Peers, considered whether there would be sufficient capacity on the most congested streets during a wildfire evacuation, assuming all vehicles would use the same streets to evacuate (D Street and Western Drive, depending on the location of the fire). Even under this worst-case scenario, streets would flow even while maintaining one lane for emergency access. Again, this was a worst-case analysis. So, if residents drove on other streets and further dispersed traffic, the impact of the 28 homes would be even less.

The usual recommendation for emergency evacuations is to get out as quickly as possible and for families to stay together. Even so, the evacuation analysis recognized that some would leave in more than one car. Based on a survey conducted after the Tubbs fire and other studies, the evacuation study assumed that on average, 1.75 cars would evacuate from each of the Scott Ranch homes. It's good to know that if there is a wildfire, neighborhood streets won't become clogged and hinder safe evacuations.

## 6. <u>Park Plan Implementation</u>

# How would the 44 acres of Scott Ranch land become part of Helen Putnam Park— owned and operated by Sonoma County Regional Parks?

Once a Final EIR for the Scott Ranch project is certified by the Petaluma City Council, followed by the necessary reviews and entitlements related to Davidon's 28-home development, KCPP can close escrow and acquire title to the 44-acre heart of Scott Ranch. The first steps of our park extension development and all the legal arrangements for transfer of title to Regional Parks will begin promptly after we complete the purchase of the 44 acres.

### Is Sonoma County Regional Parks on board with the park extension plan developed by KCPP?

KCPP has a strong, solid relationship with Sonoma County Regional Parks going back to 2013. We have consulted with Parks every step of the way, including on the presentation of our conceptual design to the City Council in 2017 as an alternative to the Davidon 66-home proposal. That consultation continued as we negotiated our Purchase & Sale Agreement with Davidon, applied to the Ag + Open Space District for matching funds, and developed the specifics of park construction presented in the Revised Draft EIR.

#### How and when would the park facilities be installed for public access?

The various elements of the Putnam Park Extension Project component would be implemented in three phases, based on guidance from Regional Parks planning staff:

- Phase 1 would last approximately three to four months and would include grading the upper parking lot and completing the construction of the lower parking lot, two pedestrian bridges, temporary restroom, and the north segment of the loop trail, which will connect to Helen Putnam Regional Park and the barn center. We expect this phase to be completed before residents move into the new Davidon homes.
- Phase 2 would last approximately six to nine months and would include construction of the upper parking lot off Windsor Drive, permanent restroom, playground, group picnic area, trail along D Street and Windsor Drive to the barn center, internal bracing of the barns, ephemeral drainages restoration, pasture improvements, planting, and irrigation.
- Phase 3 would last approximately three to four months and would include completion of the southern portion of the loop trail, installation of the third footbridge, and barn restoration.

Once the property is transferred to Sonoma County Regional Parks, the exact timing for implementation of the different phases of the Putnam Park extension project will depend on funding and priorities of Parks. We know Parks is excited about the project and that the Sonoma County Parks Foundation has a strong fundraising track-record that gives us every confidence the project will be completed as envisioned.

KCPP plans to collaborate with Parks in pursuing grant funding to support the improvements described in our park plan. But that can occur only after the City approves the project and we have closed escrow on the 44 acres Davidon has agreed to sell to KCPP. As the Project Description in the RDEIR indicates, we expect to open public access to the Scott Ranch extension of Putnam Park at the same time that the new homes built by Davidon would begin to be occupied.

## What funds are already available to make the park improvements called for in the Scott Ranch concept design plan?

We have raised over \$5.1 million for both acquisition of the Scott Ranch land and to help pay for Phase 1 improvements. That includes \$4.1 million of public and philanthropic donations, which we deposited into escrow for the purchase, \$1 million from the county's Ag + Open Space matching grant program, and tens of thousands of dollars from generous donors.

## Scott Ranch Project Elements Promoting Climate Sustainability

- Location: The residential project constitutes infill rather than sprawl; it is within City limits and adjacent to existing residential development. The project implements General Plan policy to promote residential development within the Urban Growth Boundary.
- Zero Net Electricity Residences: As described in the RDEIR (pp. 3.0-26 3.0-27), each residence will be designed to generate at least as much electricity from renewable sources as it uses. The Scott Ranch project will achieve this through a combination of highly efficient building systems and solar power generation at each residence.
- Wildfire Resistance: Through its Fuel Management Plan, the fuel breaks and fire equipment access created by new streets and trails, and the fuel breaks created by new fire-resistant homes and infiltration basins, the project reduces the risk of substantial GHG emissions from wildfire.
- Tree Planting and Native Vegetation Enhancements: The residential project alone includes the planting of 159 oak trees, far exceeding the City's requirements. The Putnam Park extension project includes native vegetation rehabilitation and improvements, including native grass restoration, native tree plantings, and vegetated swales to capture, treat, and slow stormwater runoff before discharge into Kelly Creek. Increased vegetative cover and properly managed soils will enhance carbon sequestration compared to existing conditions.
- **Preservation of 84 Percent of Site as Open Space/Park:** The project would permanently preserve 49 acres of the project site as public (Putnam Park Extension) and private (residential project) open space, maintaining the carbon sequestration benefits of the project in perpetuity.
- Improved Land Management and Permanent Protection: The land designated as an extension of Putnam Park will be permanently protected as parkland by a conservation easement and will include a multipurpose loop trail linking to the existing Helen Putnam park. The park plan calls for exclusion of cows from creek and sensitive resources as well as bank and gully stabilization to reduce erosion into Kelly Creek.
- Electric Vehicle Charging Facilities: The residential project will provide "EV ready" charging outlets in every residence, which exceeds the Building Code requirement for "EV capable" wiring. The Putnam Park Extension Project will provide EV chargers in its parking lots. Research indicates that under existing conditions which are expected to improve over time the availability of residential EV charging alone leads to an average of 25% of home-based vehicle miles traveled being made by EV.
- **Mobility Improvements:** Project elements will encourage walking and bike riding and shorten certain vehicle trips by providing:
  - new sidewalks along Windsor Drive and D Street, and a new bike lane along D Street;

11

- new crosswalks on Windsor Drive and at the new roundabout at Windsor Drive/D Street
- improvements to the off-site sidewalk on the east side of D Street to bring it up to City code
- parking for Helen Putnam Park to shorten vehicle trips currently being made to the parking lot on Chileno Valley Road.

1346550.7

## **RESPONSES TO KCPP-5 LETTER**

Response KCPP-5: Comment noted.

### Ervin, Olivia

From:	Greg Colvin <greglcolvin@gmail.com></greglcolvin@gmail.com>
Sent:	Monday, March 15, 2021 11:07 AM
То:	Ervin, Olivia
Subject:	Scott Ranch: further assurances on Putnam Park extension build-out

---Warning: Use caution before clicking any attachments. THIS EMAIL IS FROM OUTSIDE OUR EMAIL SYSTEM.---To: Petaluma City Council members

From: Greg Colvin, Director, Kelly Creek Protection Projection

Date: March 15, 2021

Re: Scott Ranch RDEIR - Putnam Park extension plans

Regarding the costs, funding, and intentions of KCPP and Sonoma County Regional Parks to build out the public amenities described in the three phases of work set forth in the EIR Project Description, we offer the following assurances, as best we can anticipate the future:

\* Phase 1 is expected to cost \$1 million to \$2 million. As we have said, after the close of escrow and receipt of the \$1 million matching grant from Ag + Open Space District for the \$4.1 million purchase of 44 acres, we will have over \$1 million on hand, in private nonprofit donations held by Earth Island Institute, for Phase 1 construction.

\* Phase 1 will occur so that the public will have access to the Scott Ranch land with a parking lot off D Street, restroom, and a trail along the north side of Kelly Creek connecting to existing trails within Putnam Park. Phase 1 should be completed by the time the Davidon homes would be occupied by new residents.

\* As soon as we acquire the land, we will get started on fundraising to cover any further Phase 1 costs as well as Phases 2 and 3. We will be in a position to benefit from multiple funding opportunities, including but not limited to (1) applying for a second round of support in 2022 from Ag + Open Space, for park improvements this time, as a match to the \$1 million in private funds we will have on hand, (2) working closely with Sonoma County Regional Parks Foundation to raise more donations from the community, (3) pursuing government agency grants under the state's Prop 68 and the county's Measure M, and (4) working with grant staff at Regional Parks to leverage funding from a variety of sources that have been developed for improvements to the whole county park system. We know Regional Parks is excited about all three phases of the park extension.

\* We have seen the great skill and resources of Regional Parks and its supporting Foundation at work already to improve the trails and existing facilities of Helen Putnam Park. An

## KCPP-6

1

anonymous challenge grant of \$50,000 in 2016 quickly generated an equal amount of public donations, starting a sequence of matching grants from other agencies that has exceeded \$300,000 so far. The result is evident to the thousands of hikers and bikers who today enjoy a completely rehabilitated trail system throughout Putnam Park.

We hope this further explanation has been helpful.

## **RESPONSES TO KCPP-6 LETTER**

Response KCPP-6: Comment noted.