Appendix A – NOP Comments

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

September 7, 2022

Jen Santos
City of Santa Rosa
Recreation and Parks Department
55 Stony Point Road
Santa Rosa, CA 95401
jsantos@srcity.org

Subject: Roseland Creek Community Park Master Plan, Notice of Preparation of a Draft Environmental Impact Report, SCH No. 2022080148, Sonoma County

Dear Ms. Santos:

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) from the City of Santa Rosa (City) for the Roseland Creek Community Park Master Plan (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

CDFW is submitting comments on the NOP to inform the City, as the Lead Agency, of potentially significant impacts to biological resources associated with the Project.

CONSULTATION HISTORY

In June 2022, WRA, Inc. consulted with CDFW on behalf of the Project regarding potential project impacts to California tiger salamander (CTS, *Ambystoma californiense*), a state threatened and federally endangered species. CDFW provided the below information to WRA.

- Based on the figures provided, it appears that the Project would remove oak woodland/grassland habitat which is potentially suitable habitat for CTS and may be occupied by dispersing or aestivating CTS if refugia such as leaf litter, cracks, or burrows are present on or adjacent to the impact site (subterranean refugia may extend laterally). If impacts to CTS habitat would occur, compensatory habitat mitigation is warranted pursuant to the Santa Rosa Plain Conservation Strategy, and to comply with the California Endangered Species Act (CESA), the City should obtain an Incidental Take Permit (ITP). Please note that ITP habitat mitigation requirements are often consistent with the Santa Rosa Plain Conservation Strategy; however, they may differ based on site-specific conditions or other factors.

[1] CEQA is codified in the California Public Resources Code in Section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with Section 15000.

- Three projects in the vicinity of the Project obtained ITPs for CTS: A housing development approximately 160 feet to the south, a housing development a few parcels to the south, and the Burbank Elementary School across the street.

- If suitable habitat for state and federally listed plants, such as Sebastopol meadowfoam (*Limnanthes vinculans*), Sonoma sunshine (*Blennosperma bakeri*), and Burke's goldfields (*Lasthenia burkei*), may be directly or indirectly impacted, two years of protocol botanical surveys should be conducted during appropriate conditions pursuant to the Santa Rosa Plain Conservation Strategy. If impacts to state listed plants may occur based on the above surveys, the City should also obtain an ITP for those species.

- The City should consult with the U.S. Fish and Wildlife Service (USFWS) for impacts to CTS and any federally listed plant habitat for compliance with the federal Endangered Species Act.

- Impacts to the Roseland Creek bed, bank, or channel would likely require submitting a Lake and Streambed Alteration (LSA) notification to CDFW.

CDFW ROLE

CDFW is a **Trustee Agency** with responsibility under CEQA pursuant to CEQA Guidelines section 15386 for commenting on projects that could impact fish, plant, and wildlife resources. CDFW is also considered a **Responsible Agency** if a project would require discretionary approval, such as permits issued under CESA, the LSA Program, or other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources.

PROJECT DESCRIPTION AND LOCATION

The Project would construct a new community park to serve the Roseland neighborhood on an approximately 19.49-acre site. The Project includes two vehicle entrances to the park, both from Burbank Avenue; a small parking lot, the northerly lot containing 19 parking spaces and the southerly lot containing 17 parking spaces; a multi-use trail running from the southwest corner of the site to the northeast corner, following the south side of the Roseland Creek riparian corridor across the southern portion of the site and crossing the creek near the eastern park boundary; and a network of smaller trails and walkways providing pedestrian circulation throughout the park. Permeable paving would be used except where required for extra stability at Americans with Disabilities Act parking areas, walkways, and multi-use trails. The Project is located at 1027 McMinn Avenue, and 1360, 1370, and 1400 Burbank Avenue in the Roseland area of Santa Rosa, Sonoma County, at approximately 38.423308°N and -122.733105°W.

The CEQA Guidelines require that the draft EIR incorporate a full project description, including reasonably foreseeable future phases of the Project, that contains sufficient information to evaluate and review the Project's environmental impact (CEQA Guidelines, §§ 15124 & 15378). Please include a complete description of the following Project components in the Project description, as applicable:

- Footprints of permanent Project features and temporarily impacted areas, such as staging areas and access routes.
- Area and plans for any proposed buildings/structures, ground disturbing activities, fencing, paving, stationary machinery, landscaping, or stormwater systems.
- Operational features of the Project, including level of anticipated human presence (describe seasonal or daily peaks in activity, if relevant), artificial lighting/light reflection, noise, traffic generation, and other features.
- Construction schedule, activities, equipment, and crew sizes.

REGULATORY AUTHORITY

California Endangered Species Act

Please be advised that a CESA ITP must be obtained if the Project has the potential to result in take[2] of plants or animals listed under CESA, either during construction or over the life of the Project. If the Project will impact CESA listed species, early consultation with CDFW is encouraged, as significant modification to the Project and mitigation measures may be required to obtain an ITP. **The Project may impact CTS and CESA listed plants as described above.** Issuance of an ITP is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program.

CEQA requires a Mandatory Finding of Significance if a Project is likely to substantially restrict the range or reduce the population of a threatened or endangered species (Pub. Resources Code, §§ 21001, subd. (c), 21083; CEQA Guidelines, §§ 15380, 15064, & 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with CESA.

[2] Take is defined in Fish and Game Code section 86 as hunt, pursue, catch, capture, or kill, or attempt any of those activities.

Lake and Streambed Alteration

CDFW requires an LSA notification, pursuant to Fish and Game Code section 1600 et seq., for Project activities affecting lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake, or stream. Work within ephemeral streams, drainage ditches, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. In addition, infrastructure installed beneath such aquatic features, such as through hydraulic directional drilling, is also subject to notification. **The Project may impact Roseland Creek through construction of bridges or other Project activities. Any impacts to Roseland Creek or any other streams would likely require an LSA Notification as described above.** CDFW, as a responsible agency under CEQA, will consider the EIR for the Project. CDFW may not execute the final LSA Agreement until it has complied with CEQA as the responsible agency.

Nesting Birds

CDFW also has authority over actions that may disturb or destroy active nest sites or take birds. Fish and Game Code sections 3503, 3503.5, and 3513 protect birds, their eggs, and nests. Migratory birds are also protected under the federal Migratory Bird Treaty Act.

Fully Protected Species

Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (Fish & G. Code, §§ 3511, 4700, 5050, & 5515).

ENVIRONMENTAL SETTING

The draft EIR should provide sufficient information regarding the environmental setting ("baseline") to understand the Project's, and its alternative's (if applicable), potentially significant impacts on the environment (CEQA Guidelines, §§ 15125 & 15360).

CDFW recommends that the draft EIR provide baseline habitat assessments for special-status plant, fish, and wildlife species located and potentially located within the Project area and surrounding lands, including but not limited to all rare, threatened, or endangered species (CEQA Guidelines, § 15380). The draft EIR should describe aquatic habitats, such as wetlands, vernal pools, and/or waters of the U.S. or State, and

any sensitive natural communities[3] or riparian habitat occurring on or adjacent to the Project site. Fully protected, threatened or endangered, and other special-status species and sensitive natural communities that are known to occur, or have the potential to occur in or near the Project area, include but are not limited to CTS and its federally designated critical habitat, the above CESA listed plants, burrowing owl (*Athene cunicularia*), white-tailed kite (*Elanus leucurus*), American badger (*Taxidea taxus*), western pond turtle (*Emys marmorata*), pallid bat (*Antrozous pallidus*), and valley oak woodland.

Habitat descriptions and the potential for species occurrence should include information from multiple sources, such as aerial imagery; historical and recent survey data; field reconnaissance; scientific literature and reports; the Santa Rosa Plain Conservation Strategy; USFWS' Information, Planning, and Consultation System; findings from positive occurrence databases such as the California Natural Diversity Database (CNDDB); California Aquatic Resources Inventory; and sensitive natural community information available on the Sonoma County fine scale vegetation map. Based on the data and information from the habitat assessment, the draft EIR should adequately assess which special-status species or sensitive natural communities are likely to occur on or near the Project site.

CDFW recommends that prior to Project implementation, surveys be conducted for special-status species with potential to occur, following recommended survey protocols[4] if available.

Botanical surveys[5] for special-status plant species, including those with a California Rare Plant Rank[6], must be conducted during the blooming period for all species potentially impacted by the Project within the Project area and adjacent habitats that may be indirectly impacted by, for example, changes to hydrology, and require the identification of reference populations. More than one year of surveys may be necessary given environmental conditions.

IMPACT ANALYSIS AND MITIGATION MEASURES

The draft EIR should discuss all direct and indirect impacts (temporary and permanent), including reasonably foreseeable impacts, that may occur with implementation of the Project (CEQA Guidelines, §§ 15126, 15126.2, & 15358). This includes evaluating and describing impacts such as:

---

[3] For sensitive natural communities see https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities
[4] Survey and monitoring protocols and guidelines are available at https://wildlife.ca.gov/Conservation/Survey-Protocols.
[5] Please refer to CDFW protocols for surveying and evaluating impacts to rare plants, and survey report requirements at https://wildlife.ca.gov/Conservation/Plants
[6] http://www.cnps.org/cnps/rareplants/inventory/

- Encroachments into riparian habitats, drainage ditches, wetlands, or other sensitive areas.
- Potential for impacts to special-status species or sensitive natural communities.
- Loss or modification of breeding, nesting, dispersal, and foraging habitat, including vegetation removal, alteration of soils and hydrology, and removal of habitat structural features (e.g., snags, rock outcrops, overhanging banks).
- Permanent and temporary habitat disturbances associated with ground disturbance, noise, lighting, reflection, air pollution, traffic, or human presence.
- Obstruction of movement corridors, fish passage, or access to water sources and other core habitat features.

The draft EIR should also identify reasonably foreseeable future projects in the Project vicinity, disclose any cumulative impacts associated with these projects, determine the significance of each cumulative impact, and assess the significance of the Project's contribution to the impact (CEQA Guidelines, § 15355). Although a project's impacts may be less-than-significant individually, its contributions to a cumulative impact may be considerable; a contribution to a significant cumulative impact, e.g., reduction of habitat for a special-status species, should be considered cumulatively considerable.

Based on the comprehensive analysis of the direct, indirect, and cumulative impacts of the Project, the CEQA Guidelines direct the Lead Agency to consider and describe all feasible mitigation measures to avoid potentially significant impacts in the draft EIR and mitigate potentially significant impacts of the Project on the environment (CEQA Guidelines, §§ 15021, 15063, 15071, 15126.4 & 15370). This includes a discussion of impact avoidance and minimization measures for special-status species, which are recommended to be developed in early consultation with CDFW, USFWS, and the National Marine Fisheries Service. Project-specific measures should be incorporated as enforceable Project conditions to reduce impacts to biological resources to less-than-significant levels.

The draft EIR should include measures to ensure complete avoidance of fully protected species, such as white-tailed kite.

ENVIRONMENTAL DATA

CEQA requires that information developed in EIRs and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to CNDDB. The CNNDB online field survey form and other methods for

submitting data can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported to CNDDB can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/Plantsand-Animals.

FILING FEES

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish & G. Code, § 711.4; Pub. Resources Code, § 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP to assist the City in identifying and mitigating Project impacts on biological resources. If you have any questions, please contact Melanie Day, Senior Environmental Scientist (Supervisory), at (707) 210-4415 or Melanie.Day@wildlife.ca.gov; or Craig Weightman, Environmental Program Manager, at (707) 339-1332 or Craig.Weightman@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Erin Chappell
B77E9A6211EF486...

Erin Chappell
Regional Manager
Bay Delta Region

ec: State Clearinghouse (SCH No. 2022080148)

Brian Freiermuth, WRA, Inc., Freiermuth@wra-ca.com

Vincent Griego, U.S. Fish and Wildlife Service, Vincent_Griego@fws.gov

Kaete King, North Coast Regional Water Quality Control Board, Kaete.King@waterboards.ca.gov

To: Director Jen Santos
Santa Rosa Recreation and Parks Department
City Manager Marakeisha Smith
Santa Rosa City Hall
100 Santa Rosa, Ave.
Santa Rosa, Ca. 95401

6 Sep 2022

From: Duane De Witt
Box 3068
Santa Rosa, CA. 95402

Re: Alternative proposal for Roseland Creek Preserve & Neighborhood Park EIR

Alternative proposal for Roseland Creek Preserve with a separate Roseland Creek Neighborhood Park during the Scoping for the City of Santa Rosa Environmental Impact Report for Roseland Creek Park.

This alternative will be a Superior Environmental Alternative for the habitat protection of Roseland Creek and the existing Oak Woodland habitat within this project area. Seeking the Superior environmental alternative for the best climate adaptive, resilient, sustainable Roseland Creek Preserve, plus a Neighborhood Park and Trail is in line with city of Santa Rosa statements.

Santa Rosa city documents state, "The park is designed to preserve and enhance habitat values of the existing grassland, oak woodland, riparian and purple needlegrass habitat areas on the site." City of Santa Rosa: Aug 8, 2022 Notice of Preparation & Notice of Scoping Meeting for an Environmental Impact Report: Roseland creek Community Park Master Plan.

With this in mind preservation and enhancement of habitat areas has to be first and foremost for the Roseland Creek Preserve with nearby Roseland Creek Neighborhood Park. This alternative does this. This is a feasible alternative and must be fully studied by the city and their consultants

This alternative envisions the land at 1027 McMinn Ave., 1360 Burbank Ave. and 1370 Burbank Ave. being Roseland Creek Preserve. with the Conservation Easement currently in place for 1027 McMinn Ave., 1360 Burbank Ave. being extended over 1370 Burbank Ave. in an even stronger manner for true conservation of the natural habitat area and Roseland Creek Riparian Corridor. Current Conservation Easements must be strengthened.

1400 Burbank Ave. would become Roseland Creek Neighborhood Park. Neither site should have off street parking spaces installed on the land. Neither site should have dangerous Barbeque pits or "open fire" sites, as numerous fires have originated there at 1360 Burbank Ave. recently which could threaten nearby homes and residents. On Sunday Sep. 4 at approximately 11:45 am another fire burned close to half an acre in the center area of the oak woodland habitat. (See Tues 6 Sep. 22 Press Democrat article by writer Paulina Pineda.)

The parking lot construction and road building projects as proposed by the city of Santa Rosa in the officially proposed project of development of Roseland Creek Community Park will cause multiple significant environmental impacts. This runs counter to the city claim to "preserve and enhance" the local natural habitats and the riparian corridor of Roseland Creek existing at the addresses of 1400 Burbank Ave and 1370 Burbank. Also the Oak Woodland habitat at 1360 Burbank Ave. will be under stress while the meadows at 1027 McMinn Ave. will suffer irreparable harm from the proposed 14 ft. wide paved roadway to be forced into the 11 acre area of an existing Conservation Easement. These comments presented here are an official request for each topic mentioned to be fully explored in the scoping for an Environmental Impact. The topics should be fully addressed in the actual Environmental Impact Report prepared by the city consultants.

Because I am a Respiratory Care Practitioner my comments will begin with the request for an accurate, complete, full establishment of baseline current data regarding traffic counts on Burbank Ave and Hearn Ave. This is because the traffic is generating airborne pollution already causing exposure of sensitive populations in the Roseland Creek area. Increasing traffic will lead to substantial air pollution near the project. Measurement of Particulate Matter (PM) pollution which can be inhaled into the lungs and induce adverse health effects must be accurately and adequately measured and extrapolated into the future. (California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10). Immense amounts of automobile traffic spurred by the construction of Roseland Creek Elementary School and Roseland Accelerated Middle School across the street from what local residents term Roseland NeighborWood, is already negatively impacting local residents.

Environmental analysis needs to be accurate regarding how many vehicles will be using roadways proposed by Santa Rosa City into and out of the Roseland Creek Preserve at 1370 Burbank Ave. & 1027 McMinn Ave as well as the Neighborhood Park at 1400 Burbank Ave to the south.

My Alternative proposal is a superior environmental alternative because there would not be any automobile traffic into and onto the land. Visitors would walk onto the land or bicycle to the site. Wheelchair users already access the sites so it will not be problematic to choose this alternative. Because there are multiple sensitive receptors near the site of the project it would be prudent to work with local residents pursuant to Assembly Bill 617 ("AB617") to develop and adopt an emissions reduction plan that identifies goals, targets, and strategies to reduce pollution and improve health and wellbeing in the Roseland Creek and Roseland Census Districts.

Please analyze and adopt all feasible and enforceable alternatives and mitigation measures to reduce the city's proposed project's impacts on Roseland residents. Windblown dust and particulates (PM) emanating from the project construction and the aftermath need to be accurately and adequately assessed.

California Environmental Quality Act Guidelines section 15126.6, subdivision (a) states an EIR, "must contain sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project." The Roseland Nature Preserve

and Roseland Creek Neighborhood Park proposal is feasible so an in depth discussion is required by the city.

The discussion should look at the hydrology of the site in regards to aquifer recharge being diminished if paving is put into place. The hydrology for the Roseland Creek Riparian Corridor needs to be analyzed to account for removal of concrete barriers placed by previous owners of the land into the actual creek waterway area. Allowing the creek to remain as natural as possible is also important for the potential for storm water retention. Perhaps new storm water retention basins could also be included in the analysis please? Restoration of riparian corridor meanders can help also.

A Biological assessment meeting and addressing these needs please, "Habitat for protected species identified as candidate, sensitive, or species of special status by state or federal agencies, fully protected species, or species protected by the federal Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 et seq.), the California Endangered Species Act (Chapter 1.5 (commencing with Section 2050) of Division 3 of the Fish and Game Code), or the Native Plant Protection Act (Chapter 10 (commencing with Section 1900) of Division 2 of the Fish and Game Code)."

Flora and fauna need to be accurately and adequately assessed. Birds and mammals as well as amphibians such as the California Tiger Salamander must be accurately and adequately assessed. Native heritage trees such as Valley Oak must also be accurately and adequately assessed, as well as conserved, protected and maintained. Because some of the large old trees host nests for hawks and owls it is imperative for an accurate bird count to be done also. Nesting Birds are especially important to assess in a project area. Especially habitat for species protected under the Federal Migratory Bird Act.

Veterans living in the Roseland area have long expressed a desire to help make a Veterans Trail on the south side of the creek from Burbank Ave. to McMinn Ave. This proposal accepts this activity in the Roseland Creek Neighborhood Park. There is on street parking on McMinn Ave. for people wishing to drive to the site for walks along the trail. It could be made into a multi-use bike path also without having to pave any part of the trail. The site of the Veterans Grove would be at the Burbank Ave. side of the property on the north bank of the Roseland Creek Riparian Corridor. A Veterans Healing Garden could be on the southern side of the creek at 1400 Burbank Ave with the appropriate setbacks from the creek and the bike path/greenway built.

A fifty foot (50 ft.) setback from the creek bank is also preferable to avoid any negative effects from development upon the creek waterway. Invasive species of flora and fauna also need to be identified in order to remove them from the Nature Preserve and Neighborhood Park. The natural resources in place now need to be conserved, protected and where needed restored. Unpaved access paths and roadways such as the Sonoma County Water Agency uses near creeks and waterways should be studied in the alternative.

Cultural resources from Native American ancestors near the eastern portion of the site along the southern bank of the creek need to be studied also. The original planning by local

neighbors for the Roseland Creek Preserve made a point of stating Pomo Indian heritage for the Roseland Creek area needed to be conserved, protected and restored. This alternative seeks to have a Pomo Interpretive Village sited at the eastern edge of the 1400 Burbank Ave. park.

One of the most important aspects of the EIR is for the consultants to accurately assess how the city of Santa Rosa Staff will handle implementation, management, maintenance of the lands as well as the stewardship of the various habitats mentioned by the city. "The park is designed to preserve and enhance habitat values of the existing grassland, oak woodland, riparian and purple needlegrass habitat areas on the site." The alternative I have put forward here will do all of these things better than any other alternative besides the "no project" alternative.

More scoping comments will follow.

With kind regards,

Duane De Witt
Box 3068
Santa Rosa, CA. 95402

From: fred@ecostewards.org <fred@ecostewards.org>
Sent: Monday, August 15, 2022 8:02 PM
To: Santos, Jen <JSantos@srcity.org>
Cc: Alvarez, Eddie <EAlvarez@srcity.org>; Trish Tatarian <trishtatarian@gmail.com>
Subject: [EXTERNAL] Re: Comments toward the proposed EIR on Roseland Creek

hello Jen Santos,

Here are my comments on the proposed EIR for the Roseland Creek Park.

I am only addressing one issue regarding the park's emerging EIR and that involves the degraded state of the creek and dangers for the park and neighborhood from future catastrophic rainfall and the consequences that result from the City and County's past efforts at channelization.

But I am leading with a note on the problems associated with the use of ZOOM as a method of dialogue between the City and the Roseland public. It may seem advantageous to the City to use ZOOM, but for most of our neighbors it is not a method for which they have access.

Therefore I am requesting that we meet in person and not use ZOOM. This method is know to stifle inspiration and is no longer needed as the pandemic is no longer with us.

See my letter below.

yours sincerely,

Fred Krueger

cc: several

Frederick W. Krueger
1100 Hughes Avenue
Santa Rosa, California 95407

Jen Santos
City of Santa Rosa
Parks and Recreation Department
Santa Rosa, California 95401

Re: Public Comments on emerging EIR for Roseland Creek Park

Two Topics:

First the use of ZOOM zoom format. When the City uses ZOOM, you lose an ability to have contact and participation from most of our neighbors. The use of ZOOM may be fine for City administrative discussions, but for a community meeting ZOOM denies a majority of citizens the ability to meet and examine the issues of this proposed EIR.

Studies at Stanford University show that the ZOOM format for meetings is more demanding, more taxing and finds that fewer members of the community are likely to participate.

When the City proposes a community meeting via ZOOM, the base of public participation is reduced and the city has an advantage over citizens as city staff are more familiar with the format and most of those in Roseland still have not engaged this system which should be considered elitist and therefore anti-democratic because it requires the use of a computer and internet connection to participate.

For these reasons I wish to object to the use of the ZOOM format and officially submit that this system not be used for city - public meetings that require citizen input on issues.

Further recent research by Stanford University suggests that ZOOM or video calling may be more taxing than in person communication.

Stanford University's study suggests that the disadvantages of ZOOM meetings as opposed to public in person meetings are highly psychological. The downside of too much online communication and meetings are slowly taking a toll on our mental state. While our bodies may enjoy the comfort, our psyche is suffering.

https://moderright.com/uncategorized/zoom-vs-in-person-meetings-which-one-wins/

Another deficiency of the system is the absence of interaction.

A further consideration is that Interaction is definitely more challenging in Zoom meetings.

Second, on the proposed EIR, a big issue regarding the park and the region is the impact of past channelization of Roseland Creek throughout the Roseland area, and within the park.

Historically Roseland Creek meandered across Roseland with deep curving bends back and forth. This allowed much more water to be held in the stream channel. This facilitated percolation into groundwater, it kept groundwater levels high enough so that Roseland Creek flowed year round. Older neighbors still witness to steelhead trout spawning in the stream as recently as the 1970s. Surface subsidence in Roseland did not exist in that decade.

During the 1970s the City and County channelized Roseland Creek. The creek channel was both deepened and narrowed. It was then also lined with six to ten inches of concrete. This caused a reduced percolation of stream water into groundwater, the gradual desication of the neighboring field/s, a decline in groundwater levels, surface subsidence began by the 1990s, and this in turn has caused the cracking of house foundations in the area. Without the original meanders to the stream percolation was reduced which has caused a drying of the region and this made survival more difficult for the California Tiger Salamander which historically thrived in this area prior to agricultural and orchard uses. It might also be noted that the overdrafting of groundwater across the Santa Rosa plain further contributed to this measurable drop in groundwater levels.

Now with climate change increasingly upon Santa Rosa, we are increasingly vulnerable to occasional catastrophic and torrential rainfall. The channelization which has taken place will cause accelerated upstream flows, causing increased erosion, but downstream flooding above and beyond what would have previously taken place. This leaves neighbors more vulnerable to flooding during peak episodes of rainfall. Who will be responsible for this flooding which would not have been as destructive if the natural original meanders were left in place?

Additionally the channelization used concrete sides and bottoms to the stream bed to avoid the natural tendency toward restoration of meanders. That concrete from more than 45 years ago is now breaking up from the force of stream runoff during peak rainfall. This concrete coupled with channelization has inhibited percolation into groundwater. While the intent may have originally been to reduce flood water spilling over into the stream's natural flood plain, this is now becoming an issue of ecogeomorphology.

Channelization of stream systems in Roseland included a deepening and narrowing of the stream channel. This appears to have been intended to get the water out as rapidly as possible. In the process it both shortens the stream's channel length but increases the stream's gradient. The consequence is that storm water will rush at a greater speed and force, and over time become more erosive and destructive. I suspect the original intent was to move stream water out more quickly compared to pre-channelization conditions. But the long term consequence is that this has become a force in the dewatering of Roseland Creek, the desication of the surrounding area, and the surface subsidence affecting nearby home foundations.

To repeat, the channelization of Roseland creek has likely increased the water flow upstream, but downstream in its lower reaches, during peak rainfall events, it will cause higher levels of flooding. This will increasingly cause the degrading to the water channel, but also effect the Roseland groundwater table level. Historically the water table was only eight feet below the surface. Now it is over ten feet or twelve feet down. This is all because of the City's efforts at channelization.

More specifically channelization can reduce upstream flooding, particularly above the Dutton Avenue stream crossing, but for the lower reaches below Hughes Avenue we will experience an increase in peak flood levels and have a higher frequency of flooding. We already see this now as every year Roseland Creek will overtop the Hughes Avenue bridge.

My perspective is that with new conditions caused by higher atmospheric co2 and other greenhouse gases, we will experience greater flood probability in the future. This means we will certainly need a new and larger capacity bridge at the Hughes Avenue crossing. It only takes a single two day rainfall for water volume to overtop the small capacity bridge on Hughes Avenue, or just one modest storm coupled with a shopping cart in the creek to cause stream blockage and calamitous flooding over and around the too small capacity bridge.

The increased stream power that characterizes channelized streams also facilitates increased rates of sediment transport within these altered systems. Typically, channelized systems will accumulate large amounts of sediment in the lower reaches of the system because of decreased stream gradients and channel obstructions that occur in these areas, which reduce stream velocities and initiate sediment deposition. This means that within the park, we will see a build up of the stream bottom, and more flooding across Burbank Avenue and the areas around the Burbank Avenue school. With greater mud and trash deposition rates in these lower reaches we will see reduced channel capacity and therefore a widening of the stream channel. This will take place on the near time horizon. This will create geomorphic recovery of channelized streams. Nature wants this stream to

meander and this will be the tendency of the forces we are facing in the Roseland Creek Park area. Over time we are likely to witness a steady tendency to reversion back to the original shape and character of the creek. But because so much of the historical stream side vegetation is now missing, we are also likely to see higher levels of erosion, more sediment accumulation and so accumulation increasingly blocking stream flow with sediment.

Submitted by Fred Krueger

August 16, 2022

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

Via E-mail

September 9, 2022

Jen Santos, Deputy Director
City of Santa Rosa
Recreation and Parks Department
55 Stony Point Road
Santa Rosa, CA 95401
jsantos@srcity.org

Alisa Rawson, Administrative Technician
arawson@srcity.org

Re: Scoping Comment for the Environmental Impact Report, Roseland Creek Community Park

Dear Ms. Santos and Ms. Rawson:

I am writing on behalf of Roseland Action, an unincorporated ad hoc community organization founded by six Roseland residents in 1993, regarding the Environmental Impact Report which is going to be prepared for the Project known as Roseland Creek Community Park Project, located in the City of Santa Rosa ("Project").

We are writing to share our comments in response to the Notice of Preparation for Environmental Impact Review published on August 8, 2022 by the City of Santa Rosa. We attach hereto and incorporate by reference our previous comments submitted to the City Council with regard to the MND which had previously been prepared for the Project, and which we submitted on September 20, 2021. (Exhibit A). We request that the City review those comments in its preparation of the EIR, which include the comments of expert wildlife ecologist Shawn Smallwood.

I. LEGAL STANDARD

Section 15083 of the CEQA Guidelines states that "[p]rior to completing the draft EIR, the lead agency may [] consult directly with any person or organization it believes will be concerned with the environmental effects of the project." (CCR tit. 14 § 15083). Although consultation with members of the public is not required, CEQA guidelines recommend it because scoping can be used by a lead agency on a project to "identify[] the range of actions, alternatives, mitigation measures, and significant effects to be

analyzed in depth in an EIR." (*Id.*).

As for an agency's consideration of scoping comments, CEQA mandates that "information or other comments [on a CEQA document] may be submitted in any format, **shall be considered by the public agency**, and may be included, in whole or in part, in any report or declaration." (PRC § 21081.2 [emphasis added]). Similarly, the CEQA guidelines state:

> Any person, including the applicant, may submit information or comments to the lead agency to assist in the preparation of the draft EIR. The submittal may be presented in any format, including the form of a draft EIR. The lead agency must consider all information and comments received.

(CCR tit. 14 § 15084(c)). Additionally, although a lead agency can begin working on the EIR immediately after publishing a notice of preparation, the agency "shall not circulate a draft EIR for public review before the time period for responses to the notice of preparation has expired." (CCR tit. 14 § 15082(a)(4)).

The Supreme Court of California has held that "[i]n general, an EIR should set forth the alternatives that were considered by the lead agency and rejected as infeasible during the scoping process, and the reasons underlying the agency's determination." (*Citizens of Goleta Valley v. Bd. of Supervisors*, (1990) 52 Cal. 3d 553, 568). "Without meaningful analysis of alternatives in the EIR, neither the courts nor the public can fulfill their proper roles in the CEQA process. . . 'To facilitate CEQA's informational role, the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions.'" (*Laurel Heights Improvement Assn. v. Regents of Univ. of California* (1988) 47 Cal. 3d 376, 403).

II. DISCUSSION

A. The EIR Should Assess an Alternative Which Sets Aside a Larger Portion of the Project Site as a Nature Preserve.

As discussed in the comments submitted in September 2021, and reiterated below, the Project site represents a natural area which it is of the utmost importance to preserve. As such, Roseland Action proposes an alternative which preserves 1027 McMinn Ave., 1360 Burbank Ave., and 1370 Burbank Ave. There is a Conservation Easement currently in place for the first two parcels, and this alternative recommends that the easement be extended to the third parcel as well. The 1400 Burbank Ave. parcel could then be used as the Roseland Creek Neighborhood Park ("Park"). Roseland Action proposes that neither the preserved area nor the Park have parking

spaces developed on them, and that any development be constructed with a fifty-foot setback from the creek bank. Additionally, Roseland Action proposes that the Park not include barbeque pits or open fire sites, which could threaten the natural environment and nearby residents. This proposal would limit the amount of automobile traffic on and around the Project site.

B. The EIR Should Consider the Project's Potential Emissions from Traffic.

Roseland Action requests that the EIR fully evaluate the potential environmental impacts of a parking lot or paved roadway onsite.

The EIR should also consider and share with the public an adequate baseline of traffic data for Burbank Ave. and Hearn Ave., due to the traffic's potential to cause harmful Diesel Particulate Matter (DPM) emissions, which could impact the health of nearby residents, especially sensitive populations. DPM emissions should be adequately reviewed in the EIR, with a focus on sensitive receptors.

Lastly, the EIR should prepare adequate reports on the traffic that would be potentially generated by the Project, including how many vehicles would be using the roadways which lead to and are adjacent to the Project. The EIR should analyze pedestrian safety impacts related to traffic generated by the Project. Relatedly, the EIR should consider collaborating with local residents to develop an emissions reduction plan which identifies goals, targets, and strategies to reduce pollution and improve health in the area, pursuant to AB 617.

C. The EIR Should Consider the Project's Potential Impacts on Biological Resources, including the Federally Endangered California Tiger Salamander.

Every CEQA document must start from a "baseline" assumption. The CEQA "baseline" is the set of environmental conditions against which to compare a project's anticipated impacts. (*Communities for a Better Envt. v. So. Coast Air Qual. Mgmt. Dist*. (2010) 48 Cal. 4th 310, 321). An unclear baseline "mislead[s] the public" by engendering inaccurate analyses of environmental impacts and mitigation measures for biological resources. (*See San Joaquin Raptor Rescue Center v. County of Merced,* 149 Cal.App.4th 645, 656; *Woodward Park Homeowners Assn., Inc. v. City of Fresno,* 150 Cal.App.4th 683, 708-711).

Roseland Action's previous comments, submitted on September 30, 2021, contained the expert comments of Dr. Shawn Smallwood, a wildlife ecologist. In support of those comments, Dr. Smallwood surveyed the project area and observed 38 vertebrate wildlife species, 5 of which were special-status. The EIR for the Project should consider Dr. Smallwood's findings and his comments as to the inadequacy of the biological resources survey conducted by the consultants for the MND. The EIR should ensure that the biological resources analysis for the Project conducts adequate surveys and reviews all relevant databases, including the California Natural Diversity Data Base, eBird, and iNaturalist.

In particular, the EIR must adequately assess the potential impacts on the California Tiger Salamander ("CTS"), a species which is both endangered and threatened as determined by the U.S. Environmental Protection Agency. The Project is located in the CTS's critical habitat. Dr. Smallwood's September 2021 comments noted that the MND's analysis of the potential for CTS habitat onsite was flawed, and that additional detection surveys and a more comprehensive assessment were necessary.

Dr. Smallwood concluded his September 2021 comments by stating that "the most appropriate mitigation would be a reduction of the scope of the project." Unlike the previously prepared MND's characterization of the project as one that would preserve and enhance the area, Dr. Smallwood's assessment from September 2021 demonstrated that it would in fact destroy much of the natural area through ground disturbance and other damage, bring higher levels of foot traffic, add pollutants, and degrade habitats.

III. CONCLUSION

We respectfully request that the City consider all comments contained in this letter and in the attached letter and exhibit from September 2021 in preparing the Environmental Impact Report for the Project.

Sincerely,

Amalia Bowley Fuentes
LOZEAU DRURY LLP

EXHIBIT A

LOZEAU DRURY LLP

T 510.836.4200
F 510.836.4205

1939 Harrison Street, Ste. 150
Oakland, CA 94612

www.lozeaudrury.com
richard@lozeaudrury.com

Via E-mail and U.S. First Class Mail

September 20, 2021

Mayor Chris Rogers and
Honorable Members of the City Council
City of Santa Rosa
100 Santa Rosa Avenue
Santa Rosa, CA 95404
crogers@srcity.org

Jen Santos, Deputy Director
City of Santa Rosa
Recreation and Parks Department
55 Stony Point Road
Santa Rosa, CA 95401
jsantos@srcity.org

Alisa Rawson, Administrative Technician
arawson@srcity.org

Re: Comment on the Mitigated Negative Declaration, Roseland Creek Community Park

Dear Mayor Rogers, Honorable Members of the City Council, and Ms. Santos:

I am writing on behalf of Roseland Action, an unincorporated ad hoc community organization founded by six Roseland residents in 1993, regarding the Initial Study and Mitigated Negative Declaration ("MND") prepared for the Project known as Roseland Creek Community Park Project, located in the City of Santa Rosa ("Project").

After reviewing the IS/MND, we conclude that it fails to analyze all environmental impacts and implement all necessary mitigation measures, and that there is a fair argument that the Project may have adverse environmental impacts. Roseland Action respectfully requests that the City withdraw the IS/MND and instead prepare an environmental impact report ("EIR") for the Project.

These comments have been prepared with the assistance of wildlife biologist Shawn Smallwood, Ph.D. Dr. Smallwood's comment and curriculum vitae are attached as Exhibit A hereto and are incorporated herein by reference and entirety.

I. PROJECT DESCRIPTION

The Project proposes to develop a community park on approximately 19.49 acres of City-owned property located at 1027 McMinn Avenue and 1360, 1370, and 1400 Burbank Avenue. The proposed park would include a nature center, an outdoor classroom/community garden, picnic areas, a shade structure, a multi-use turf area, a nature-themed play area, sports court, parking areas, and a network of universally accessible trails including two footbridges across Roseland Creek. Roseland Creek flows through the lower portion of the site and the site is surrounded by single- and multi-family residential land uses on the north and east, rural residential uses to the south, and an elementary school to the west. The project site itself is mostly undeveloped and contains grassland, oak woodland, and riparian habitat zones.

According to the General Plan, the area is currently zoned as Medium-Density Residential and the project site is also identified as Parks/Recreation and a Proposed Community Park. The area is zoned as Open Space – Recreation (OSR-SR) and Multi Family Residential (R-3-18-SR) in a Scenic Road combining district (-SR).

Approvals and permits that may be required for the project include, but are not limited to: General Plan Amendment, Specific Plan Amendment, Tree Removal Permit, Grading Permit, Building Permit, USFWS Consultation, Lake and Streambed Alteration Agreement (CDFW), Sonoma County Agricultural Preservation and Open Space District (SCAPOSD) Conservation Easement, and SCAPOSD Master Plan Approval.

II. LEGAL STANDARD

As the California Supreme Court has held, "[i]f no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR." *Communities for a Better Env't v. South Coast Air Quality Mgmt. Dist.* (2010) 48 Cal.4th 310, 319-320 (*CBE v. SCAQMD*) (citing *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75, 88; *Brentwood Assn. for No Drilling, Inc. v. City of Los Angeles* (1982) 134 Cal.App.3d 491, 504–505). "Significant environmental effect" is defined very broadly as "a substantial or potentially substantial adverse change in the environment." Pub. Res. Code ("PRC") § 21068; *see also* 14 CCR § 15382. An effect on the environment need not be "momentous" to meet the CEQA test for significance; it is enough that the impacts are "not trivial*." No Oil, Inc.*, 13 Cal.3d at 83. "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope

of the statutory language." *Communities for a Better Env't v. Cal. Res. Agency* (2002) 103 Cal.App.4th 98, 109 (*CBE v. CRA*).

The EIR is the very heart of CEQA. *Bakersfield Citizens for Local Control v. City of Bakersfield (*2004) 124 Cal.App.4th 1184, 1214 (*Bakersfield Citizens*); *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 927. The EIR is an "environmental 'alarm bell' whose purpose is to alert the public and its responsible officials to environmental changes before they have reached the ecological points of no return." *Bakersfield Citizens*, 124 Cal.App.4th at 1220. The EIR also functions as a "document of accountability," intended to "demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." *Laurel Heights Improvements Assn. v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 392. The EIR process "protects not only the environment but also informed self-government." *Pocket Protectors*, 124 Cal.App.4th at 927.

An EIR is required if "there is substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment." PRC § 21080(d); see also *Pocket Protectors*, 124 Cal.App.4th at 927. In very limited circumstances, an agency may avoid preparing an EIR by issuing a negative declaration, a written statement briefly indicating that a project will have no significant impact thus requiring no EIR (14 CCR § 15371), only if there is not even a "fair argument" that the project will have a significant environmental effect. PRC, §§ 21100, 21064. Since "[t]he adoption of a negative declaration . . . has a terminal effect on the environmental review process," by allowing the agency "to dispense with the duty [to prepare an EIR]," negative declarations are allowed only in cases where "the proposed project will not affect the environment at all." *Citizens of Lake Murray v. San Diego* (1989) 129 Cal.App.3d 436, 440.

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

Under the "fair argument" standard, an EIR is required if any substantial evidence in the record indicates that a project may have an adverse environmental effect—even if contrary evidence exists to support the agency's decision. 14 CCR § 15064(f)(1);

Pocket Protectors, 124 Cal.App.4th at 931; *Stanislaus Audubon Society v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-51; *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602. The "fair argument" standard creates a "low threshold" favoring environmental review through an EIR rather than through issuance of negative declarations or notices of exemption from CEQA. *Pocket Protectors*, 124 Cal.App.4th at 928.

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

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

Kostka & Zishcke*, Practice Under CEQA*, §6.29, pp. 273-274. The Courts have explained that "it is a question of law, not fact, whether a fair argument exists, and the courts owe no deference to the lead agency's determination. Review is de novo, with *a preference for resolving doubts in favor of environmental review*." *Pocket Protectors*, 124 Cal.App.4th at 928 (emphasis in original).

CEQA requires that an environmental document include a description of the project's environmental setting or "baseline." CEQA Guidelines § 15063(d)(2). The CEQA "baseline" is the set of environmental conditions against which to compare a project's anticipated impacts. *CBE v. SCAQMD*, 48 Cal.4th at 321. CEQA Guidelines section 15125(a) states, in pertinent part, that a lead agency's environmental review under CEQA:

> …must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time [environmental analysis] is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant.

See Save Our Peninsula Committee v. County of Monterey (2001) 87 Cal.App.4th 99, 124–25 ("*Save Our Peninsula*").) As the court of appeal has explained, "the impacts of

the project must be measured against the 'real conditions on the ground,'" and not against hypothetical permitted levels. *Id*. at 121–23.

III. DISCUSSION

A. The Project Will Have Significant Impacts on Biological Resources That the IS/MND Fails to Adequately Analyze and Mitigate.

Shawn Smallwood, PhD reviewed the IS/MND's analysis of the Project's biological impacts. Dr. Smallwood's comment letter and CV are attached as Exhibit A.

1. The IS/MND is both incomplete and inaccurate in its characterization of the environmental setting as it relates to wildlife.

The evening of August 24, 2021, Dr. Smallwood visited the project site and its vicinity and performed a reconnaissance level survey of wildlife utilizing the area of the Project. Ex. A, p. 1. Dr. Smallwood reconnoitered the area for 3 hours and 31 minutes. *Id*. During that brief visit, he observed the presence of 38 species of vertebrate wildlife at the Project site. *Id*. at 5. Of the species he observed, 3 were non-native and 35 were endemic, which amounted to less than 8% of species observed being non-native. *Id.* Based on this, Dr. Smallwood was able to conclude that the park is "relatively intact, ecologically, and [] rich in wildlife." *Id.* Dr. Smallwood also forecasted that had he stayed at the project site longer, or conducted surveys at different times of day, he could have observed many additional species. *Id.* at 10-11. He notes that although he did not observe special-status species during the course of his survey, a greater survey effort with appropriate survey methods likely would have revealed the presence of these species. *Id.* at 12.

Dr. Smallwood first notes that the biological resources survey conducted by WRA Environmental Consultants ("WRA") was missing "the most basic information" necessary for the public and decision-makers to adequately assess the Project's impact on biological resources. *Id.* at 13. Specifically, Dr. Smallwood states that the survey should have included information on "how many biologists performed the survey, names and qualifications of survey personnel, time of day the survey took place, how long the survey lasted, and which specific methods were used." *Id.* This lack of information about the details of WRA's survey also meant that Dr. Smallwood was unable to assess why the WRA found such a small number of species in their survey – WRA reported detecting only 6 species, while Dr. Smallwood detected 6 species in only his first 6 minutes on the site. *Id.*

Every CEQA document must start from a "baseline" assumption. The CEQA "baseline" is the set of environmental conditions against which to compare a project's anticipated impacts. *Communities for a Better Envt. v. So. Coast Air Qual. Mgmt. Dist*.

(2010) 48 Cal. 4th 310, 321. Unfortunately, the IS/MND's failure to explain the details of their survey resulted in an unclear baseline. An unclear baseline such as the one used by the City here ultimately "mislead[s] the public" by engendering inaccurate analyses of environmental impacts and mitigation measures for biological resources. *See San Joaquin Raptor Rescue Center,* 149 Cal.App.4th 645, 656; *Woodward Park Homeowners,* 150 Cal.App.4th 683, 708-711.

Dr. Smallwood next found error in the literature and database reviews conducted by WRA. *Id.* WRA only used the California Natural Diversity Data Base (CNDDB) as a reference for which species had been seen in the area, and did not report having interviewed any local experts, which resulted in WRA's conclusion that only 36 special-status species were known in the vicinity. *Id.* Dr. Smallwood, however, reviewed two other databases, eBird and iNaturalist, which revealed the possible presence of 62 special-status species in the area. *Id.*

2. <u>The IS/MND's biological resources section premised its conclusions about possible impacts on overly narrow characterizations of species' habitats.</u>

Dr. Smallwood identified three main areas in which the IS/MND failed to accurately characterize species habitats, which led to a skewed analysis of the Project's potential impact on these habitats. The three areas are discussed below.

a. California Tiger Salamander habitat

The first flaw that Dr. Smallwood found was in the IS/MND's discussion of the California tiger salamander ("CTS") and its conclusion that the CTS would likely not be impacted. The IS/MND admits that the Project is located within the CTS's designated critical habitat. However, the IS/MND concluded that the CTS was unlikely to occur in the area because of a lack of suitable habitat at the site itself and a barrier between the site and the "nearest documented extant breeding occurrence of the species." Ex. A, p.14; IS/MND, p. 37. Dr. Smallwood points out that this analysis fails to consider whether there are barriers to *undocumented* extant breeding occurrences. *Id.* Without having conducted detection surveys on properties south of the Project site, Dr. Smallwood notes that the IS/MND could not have determined that there were no CTSs on those properties. *Id.*

Dr. Smallwood states that based on his research, the CST's habitat is more extensive than what was stated in the IS/MND, leading to the IS/MND's erroneous conclusion that the CTS could not be sustained on the Project site. *Id.* Dr. Smallwood points out that the IS/MND also wrongly concluded that CTSs were unlikely to occur on the Project site in part because there were no mammal burrows observed. IS/MND, p. 36-37. According to Dr. Smallwood, CTSs also use soil cracks to enter and exit

subterranean environments, and Dr. Smallwood in fact has previously observed a CTS exiting a soil crack. Ex. A, p. 14-15, Photo 21.

b. Incorrect conclusions about breeding habitat

The next aspect of the IS/MND that Dr. Smallwood found lacking was the conclusion that the only significant habitat impacts were those to breeding habitat. *Id.* at 16. The IS/MND relied on this distinction between breeding habitat and other types of habitats to conclude that as long as there was not breeding habitat for any particular species on site, there would not be a significant impact. *Id.* However, Dr. Smallwood states that "all of a species' habitat is of critical importance to the species regardless of where breeding sites are located." *Id.*

c. Northern California black walnut habitat

Lastly, Dr. Smallwood found mischaracterizations in the IS/MND's discussion of the California black walnuts on the Project site. *Id.* Dr. Smallwood considered it misleading to have omitted these trees from certain maps and discussions in the IS/MND. *Id.* While the IS/MND characterized the walnut trees as dead and dying in order to omit them from certain aspects of the report, Dr. Smallwood points out that the old nature of the trees in fact makes them more valuable to species, which take advantage of cavities in the trees to create granaries and nests. *Id.* The IS/MND also categorized what Dr. Smallwood identified as black walnut savannah as non-native grassland, further misleading the public as to the environmental setting of the Project. *Id.*

Based on his studies of the site and databases, Dr. Smallwood concluded the following:

> Of the special-status species in Table 2, I conclude 8 certainly occur in the Park, 35 probably occur, and 17 possibly occur. Of the 4 species WRA determined have no chance of occurring, I conclude 1 is possible and 3 are probable. Of the 10 species WRA determined unlikely, I agree 2 are unlikely but I conclude 5 are possible and 3 are probable. I conclude that California tiger salamander possibly occurs on site, depending on whether the species can find opportunities for subterranean aestivation and pools at least occasionally remaining inundated until May. If California tiger salamanders occur in Roseland Creek Community Park, then the proposed project would have a significant adverse impact on the species. The only way to determine whether California tiger salamanders use the Park would be to perform protocol-level detection surveys for the species during the appropriate time of year both within the Park and on neighboring properties to the south.

Id. at 16-20, *see* Table 2. Because Dr. Smallwood has provided substantial evidence of a fair argument that this impact from the Project may be significant, the City must analyze such impacts in an EIR.

3. The IS/MND failed to complete a full analysis of the degree of habitat loss that would occur on the Project site.

Regarding mitigation on the site, the IS/MND states that it will mitigate for the loss of 1.37 acres of CTS habitat. IS/MND, p. 43. However, it then goes on to say that improvements from the Project will not result in more than 20% impervious surfaces on the property, which Dr. Smallwood fairly assumes means 20% of the Project site will be replaced with impervious surfaces. Ex. A, p. 20. This in turn would mean that at least 3.9 acres of wildlife habitat would be eliminated by the Project, a much greater amount than that being accounted for in the IS/MND. *Id.* Dr. Smallwood states that the impacts of this habitat loss must be analyzed, because habitat loss can result in both "immediate numerical decline of wildlife" and "permanent loss of productive capacity." *Id.* Extrapolating from previous studies, Dr. Smallwood estimates that the estimated loss of habitat due to the Project could lead to about 44,000 fewer birds in California over the next century. *Id.*

Because this impact was not addressed in the IS/MND and Dr. Smallwood has presented substantial evidence of a fair argument that habitat loss will impact species, the City must prepare an EIR to analyze the impact.

4. The IS/MND failed to address the cumulative impacts of past, ongoing, and future projects on wildlife.

The IS/MND fails to assess cumulative impacts on wildlife. Ex. A, p. 20; CEQA Guidelines § 15065(a) ("A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur . . . The project has possible environmental effects that are individually limited but cumulatively considerable"). An EIR is needed to analyze the cumulative impacts from loss of habitat and other potential disturbances caused by the Project.

5. The IS/MND's proposed mitigation measures are insufficient to address the potential impacts identified by Dr. Smallwood's survey.

Dr. Smallwood's final critique of the IS/MND is that its proposed mitigation measures are insufficient to reduce impacts to less than significant levels. The IS/MND proposes to conduct preconstruction, take-avoidance surveys for several species, which Dr. Smallwood agrees are appropriate, but still misleading. Ex. A, p. 21. He points out that "it must be understood by decision-makers and the public that such surveys typically detect small fractions of the animals targeted" due to the targeted species' ability to conceal themselves. *Id.* In addition, he notes that such preconstruction surveys

do not prevent habitat loss, and are largely inconsequential without first performing detection surveys, a step that Dr. Smallwood recommends. *Id.*

Dr. Smallwood concludes his comments by stating that "the most appropriate mitigation would be a reduction of the scope of the project." *Id.* Unlike the IS/MND's characterization of the project as one that would preserve and enhance the area, Dr. Smallwood's assessment demonstrates that it would in fact destroy much of the natural area through ground disturbance and other damage, bring higher levels of foot traffic, add pollutants, and degrade habitats. *Id.*

IV. CONCLUSION

In light of the above comments, the City must prepare an EIR for the Project and the draft EIR should be circulated for public review and comment in accordance with CEQA. Thank you for considering these comments.

Sincerely,

Richard Toshiyuki Drury
LOZEAU DRURY LLP

EXHIBIT A

Shawn Smallwood, PhD
3108 Finch Street
Davis, CA 95616

Jen Santos, Deputy Director
City of Santa Rosa
Recreation and Parks Department
55 Stony Point Road
Santa Rosa, CA 95401

7 September 2021

RE: Roseland Creek Community Park Project

Dear Ms. Santos,

I write to comment on the Initial Study/Mitigated Negative Declaration (IS/MND) prepared for the proposed Roseland Creek Community Park Project (City of Santa Rosa 2019 + 2021 Master Plan map). I understand the Project would add the following to the 19.49-acre Park: parking lots with artificial lighting, nature center and restrooms, covered picnic areas with BBQ facilities, an outdoor classroom, community gardens, paved 10-foot-wide paths through the forests, a play area, a multi-use turf area, fitness stations, and a sports court. WRA (2019) further identifies a dog park as part of the Project. And all of this would be added to a Park "… designed to preserve and enhance the habitat values of the existing grassland, oak woodland, riparian and purple needlegrass habitat areas on the site" (City of Santa Rosa 2019).

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 and 31 minutes on 24 August 2021, starting at 06:46 hours. With binoculars, I walked around the site, stopping periodically to perform visual scans for vertebrate wildlife. Conditions were overcast with coastal fog and cool with no wind. Pedestrians, joggers and dog-walkers occasionally traversed the Park during my survey.

The site's vegetation cover centers around riparian forest along Roseland Creek (Photo 1), including annual and perennial grassland (Photo 2), woodland savannah (Photos 3 and 4), oak woodland, and some ornamentals around the cleared pads of two abandoned home sites (Photo 5). Prominent in the Park are the many cavities in trunks and limbs of mature trees, many used in granaries of acorn woodpeckers and some as nest sites (Photos 6 and 7). Surrounding the site to the east, west and north are residential neighborhoods, and to the south are grasslands or rural homes.

Photo 1. *Riparian forest along the creek portion of Roseland Creek Community Park, 24 August 2021.*

Photo 2. *Grassland, including purple needlegrass in the distance, at the Roseland Creek Community Park, 24 August 2021.*

Photo 3. *Annual grassland/savannah at the Roseland Creek Community Park, 24 August 2021.*

Photo 4. *Site of former residence at the Roseland Creek Community Park, 24 August 2021.*

Photo 5. *Naked ladies are scattered around the sites of former homes within the Roseland Creek Community Park, 24 August 2021.*

Photos 6 and 7. *Acorn woodpecker granary (left) and nest cavities (right) at the Roseland Creek Community Park, 24 August 2021.*

While visiting the site, I detected 38 species of vertebrate wildlife, 5 of which were special-status species (Table 1). The site supports oak titmouse, of which there are many, and Anna's hummingbirds (Photos 8 and 9). I saw Nuttall's woodpeckers and a colony of acorn woodpeckers (Photos 10 and 11), Pacific-slope flycatcher and black phoebe (Photos 12 and 13), California scrub-jays and mourning doves (Photos 14 and 15), hooded orioles (Photo 16) and turkey vultures (Photo 17), among other species. I also saw invasive species, including wild turkeys and Eastern fox squirrels, both species of which were introduced to California from their natural ranges east of the Mississippi River, and a house cat on the hunt (Photo 18). Occurrences of non-native species, and more explicitly the ratio of non-native to endemic species, reflect on the ecological integrity of a place (Smallwood 1994). In the case of Roseland Creek Community Park, the ratio of 3 non-native to 35 endemic species of vertebrate wildlife, or <8% of the species I detected, indicates a high degree of ecological integrity. Given its interior location within the City of Santa Rosa, I would have expected a higher percentage of non-native species. The Park is relatively intact, ecologically, and it is rich in wildlife.

Missing, however, were small mammal burrows. In my experience, the lack of mammal burrows is unusual, and tends to reflect clay soils or intense eradication efforts.

Table 1. *Species of wildlife I observed during 3.5 hours on 24 August 2021.*

Common name	**Species name**	**Status[1]**	**Notes**
Wild turkey	*Meleagris gallopavo*	Non-native	Feathers, calls
Turkey vulture	*Cathartes aura*	BOP	Roosting
Red-shouldered hawk	*Buteo lineatus*	BOP	Calling
Cooper's hawk	*Accipiter cooperii*	WL, BOP	Calling
Mourning dove	*Zenaida macroura*		
Anna's hummingbird	*Calypte anna*		Territory defense
Belted kingfisher	*Ceryle alcyon*		Flyover
Acorn woodpecker	*Melanerpes formicivorus*		Colony/granaries
Downy woodpecker	*Picoides pubescens*		Foraged
Nuttall's woodpecker	*Pica nuttalli*	BCC	Foraged
Pacific-slope flycatcher	*Empidonax difficilis*		
Black phoebe	*Sayornis nigricans*		Foraged
Warbling vireo	*Vireo gilvus*		Foraged
Hutton's vireo	*Vireo huttoni*		Foraged
California scrub-jay	*Aphelocoma californica*		Social drama
Common raven	*Corvus corax*		
American crow	*Corvus brachyrhynchos*		Foraged
Oak titmouse	*Baeolophus inornatus*	BCC	Many
Bushtit	*Psaltiparus minimus*		
White-breasted nuthatch	*Sitta carolinensis*		Many; foraged
Bewick's wren	*Thryomanes bewickii*		Foraged
Western bluebird	*Sialia mexicana*		Fledglings
American robin	*Turdus migratorius*		Fledglings
Northern mockingbird	*Mimus polyglottos*		
Cedar waxwing	*Bombycilla cedrorum*		Fledglings
Orange-crowned warbler	*Vermivora celata*		
Wilson's warbler	*Wilsonia pusilla*		
California towhee	*Pipilo crissalis*		
Black-headed grosbeak	*Pheucticus melanocephalus*		Fledglings
Dark-eyed junco	*Junco hyemalis*		
Hooded oriole	*Icterus cucullatus*		
House finch	*Carpodacus mexicanus*		Fledglings
Lesser goldfinch	*Carduelis psaltria*		
American goldfinch	*Carduelis tristis*		
Black-tailed jackrabbit	*Lepus californicus*		
Eastern fox squirrel	*Sciurus niger*	Non-native	
Western gray squirrel	*Sciurus griseus*		
House cat	*Felis catus*	Non-native	

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

Photos 8 and 9. *Oak titmouse (left) and Anna's hummingbird (above) at the Roseland Creek Community Park, 24 August 2021.*

Photos 10 and 11. *Nuttall's woodpecker (left) and acorn woodpecker at its granary (right) within the Roseland Creek Community Park, 24 August 2021.*

Photos 12 and 13. *Pacific-slope flycatcher (left) and black phoebe (right) at the Roseland Creek Community Park, 24 August 2021.*

Photos 14 and 15. *California scrub-jay (left) and mourning dove (right) at the Roseland Creek Community Park, 24 August 2021.*

Photo 16. *Hooded oriole within the Roseland Creek Community Park, 24 August 2021.*

Photo 17. *Turkey vulture roosts within the riparian forest of Roseland Creek Community Park, 24 August 2021.*

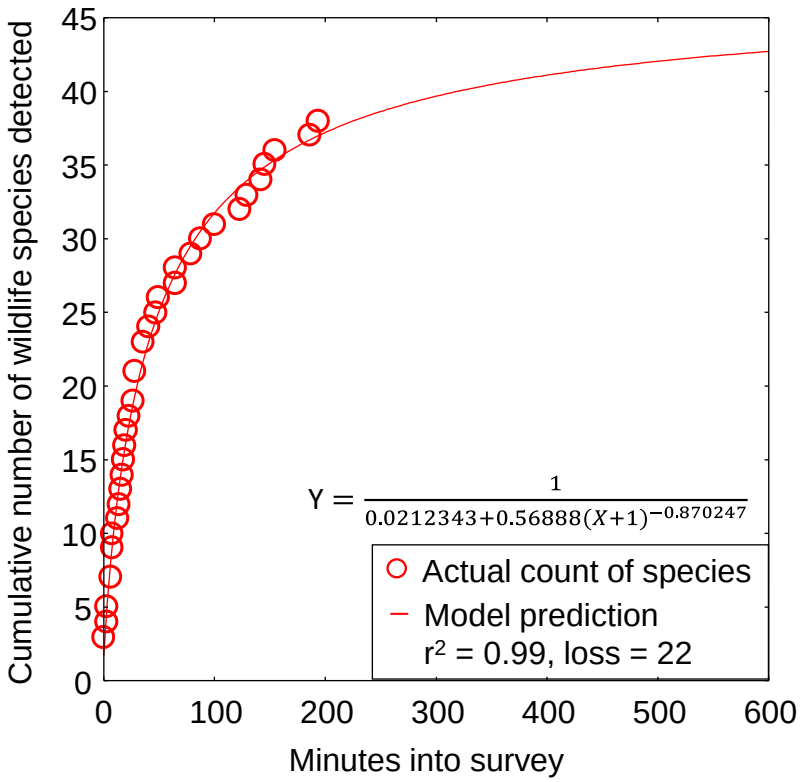
Photo 18. *House cat in Roseland Creek Community Park, 24 August 2021.*

My detections of 38 species of vertebrate wildlife should be interpreted within the context of my survey effort, because my detection of 38 species does not mean that only those 38 species occur at the site. This point is important because it goes to WRA's (2019) survey effort and its interpretation, which I will address below. The results of one reconnaissance-level survey should qualify as thin empirical foundation for characterizing the wildlife community as part of the environmental setting of a proposed project site. Such surveys better serve as starting points toward characterization of a site's wildlife community. With only so many species detectable in the short time I had to perform visual-scan surveys on 24 August 2021, I would have been remiss to have reported or implied that only 38 species of wildlife occur in the Park. However, when surveys are diligently performed and their outcomes analyzed appropriately and fully reported, the number of species detected within the survey effort can inform of the number of species likely to be detected with a larger survey effort during the same times of year. This potential is of critical importance when making determinations about occurrence likelihoods of special-status species.

By recording when I detected each species, I was able to forecast the number of species likely to be detected with a longer effort using the same visual scan method. Figure 1 shows my cumulative count of species detected with increasing time into my survey on 24 August 2021. 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 my cumulative count, and the model showed progress towards the inevitable asymptote of the number of species detectable over a longer time period using the same survey method. In the case of this project site, my model predicted I would have eventually

detected another 9 species on the 24th of August. The pattern in the data from the project site indicates that I would have kept detecting species as the day progressed.

Figure 1. *Actual and predicted relationships between the number of vertebrate wildlife species detected and the elapsed survey time based on visual scans on 24 August 2021 at the project site. Note that the relationship would differ if the survey was based on another method or during night or another season. Also note that the cumulative number of vertebrate species across all methods, times of day, and seasons would increase substantially.*



I could have detected many more species than predicted by also performing surveys at other times of day to detect nocturnal and crepuscular species, or surveys in different seasons and years to detect migrants and species with multi-annual cycles of abundance, or surveys of different methods such as by use of acoustic detectors or thermal-imaging for bats, owls, and nocturnally migratory birds, and live-trapping for small mammals. As it was, I detected 38 species on 24 August 2021. My reconnaissance-level survey, performed carefully and analyzed appropriately, informs me that the Park is home to numerous species of wildlife, many as yet to be documented in biological surveys. What my survey does not inform me, and what detection surveys could, is which of the potentially occurring special-status species actually occur at the site in addition to those I had the good fortune to detect.

The likelihood of detecting special-status species is typically lower than that of more common species. This difference can be explained by rarity of special-status species, which 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 largely a function of survey effort. Therefore, greater survey effort

increases the likelihood that listed species will be detected, which by the way, is the first tenet of detection surveys for special-status species. Based on the outcomes of 152 previous surveys that I performed at sites of proposed projects, my survey effort at the project site carried a 50% chance of detecting a listed species, whereas the survey effort of WRA (2019) carried a 10% chance of detecting a listed species (Figure 2). As it turned out, I did not have the good fortunate to detect a listed species, but the odds are that I would if I tried again. Given the odds, WRA would need to perform another 9 surveys at the level of their 2 May 2017 survey to have a reasonable chance of detecting a listed species. My main point is that more survey effort is needed before determining whether listed species of wildlife are absent from the Park. Not only is a greater survey effort needed, but also the appropriate survey methods.

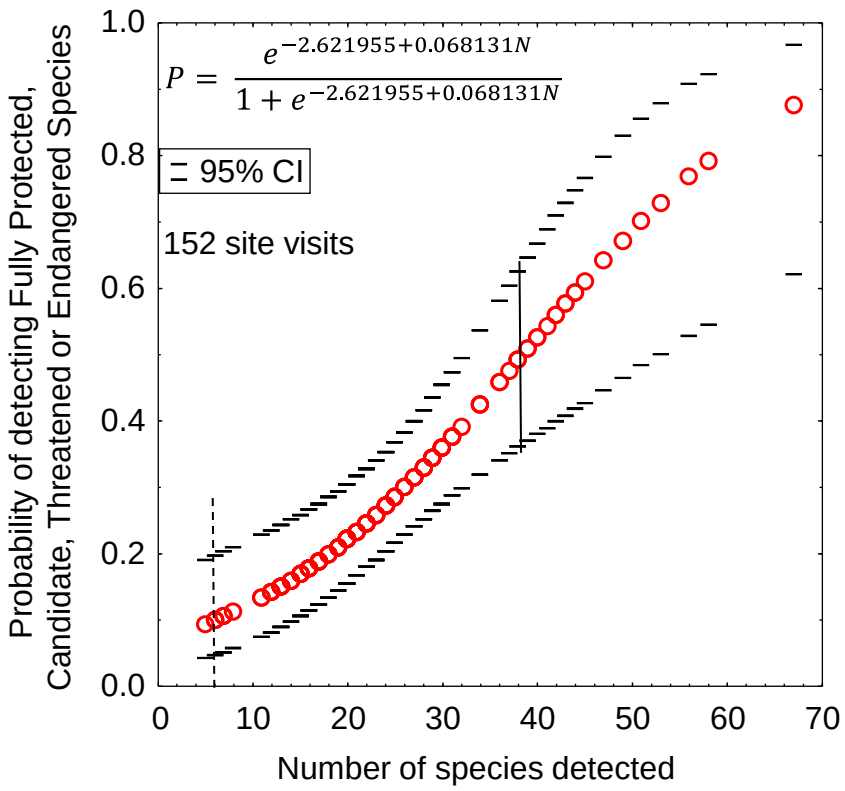


Figure 2. *Probability of detecting ≥1 Candidate, Threatened or Endangered Species of wildlife listed under California or federal Endangered Species Acts, based on survey outcomes that I logit-regressed on the number of wildlife species I detected as an expert witness during 152 site visits across California. The dashed vertical line represents the number of species WRA (2019) detected, and the solif vertical line represents the number of species I detected at the project site on 24 August 2021.*

BIOLOGICAL IMPACTS ASSESSMENT

The first step in analysis of potential project impacts to biological resources is to accurately characterize the existing environmental setting, including the species that use the site, their relative abundances, how they use the site, key ecological relationships, and known and ongoing threats to those species with special status. Methods to achieve this first step typically include surveys of the site for biological resources and reviews of literature, data bases and local experts for documented occurrences of special-status species. The IS/MND, however, is both incomplete and inaccurate in its characterization of the environmental setting as it relates to wildlife. The survey of the site for biological resources was too cursory. The supporting review of literature and data bases was also

much too cursory. I found additional problems with the premises used to determine occurrence likelihoods, and with the interpretation of available information. I will comment on these problems, but first I will comment on the biological resources survey.

In support of the IS/MND, WRA (2019) performed a biological resources survey at the Park on 2 May 2017. Other than reporting the date of the survey (2 May 2017) and its three objectives, WRA (2019) neglected to report the most basic information needed to assess the rigor of the biological survey. Decision-makers and the public ought to be informed about how many biologists performed the survey, names and qualifications of survey personnel, time of day the survey took place, how long the survey lasted, and which specific methods were used. Consumers of the IS/MND need to know these fundamentals because as I pointed out earlier, the number of wildlife species detected is largely a function of survey effort. WRA (2019) should have reported the level of effort committed to the Park and the methods used.

WRA reported their detections of 6 species of vertebrate wildlife. Given what I saw at the Park during my 3.5-hour visit, I am astounded that the WRA biologist(s) who surveyed the site on 2 May 2017 detected a mere 6 species of wildlife (WRA 2019). WRA detected 15% of the species I detected within a Park filled with the sights and sounds of wildlife. Walking into the patch of old Northern California black walnuts, I detected my first 6 species within 6 minutes of my arrival to the Park. Before I departed the patch of black walnuts for oak woodland, I had detected 19 species of wildlife within my first 26 minutes. Why was my survey outcome so different from WRA's? Without knowing how WRA performed their survey or who did it, I am at a loss for explanation. But I can conclude that the wildlife community of Roseland Creek Community Park is incompletely and inaccurately characterized in the IS/MND. I can also conclude that the biological resources survey provided an unacceptably poor basis for an analysis of potential project impacts to wildlife.

The literature and database reviews were also much too cursory to support an analysis of potential project impacts. WRA reported no interviews with local experts. WRA's sole source of documented sightings in the project area was California Natural Diversity Data Base (CNDDB). CNDDB can be a helpful resource, but it is not the only resource available, nor is it the best resource for certain taxa such as birds. Whereas WRA (2019:13) reported, "A total of 36 special-status wildlife species are known in the vicinity based upon review of the resources and databases…," my reviews of eBird and iNaturalist combined with my own surveys in the area reveal 62 special-status species of wildlife known to occur in the area (Table 2). I doubt that California red-legged frog, Foothill yellow-legged and Caspian tern occur at the site anymore, so I would reduce the number of potentially occurring special-status species to 59.

The cursory approach taken by WRA resulted in many odd contradictions between WRA's occurrence-likelihood determinations and what members of the public have reported seeing at and near the Park. Of the 14 species that WRA determined to have no chance of occurrence or unlikely to occur, Vaux's swift was reported in eBird within a mile or so of the Park, and 12 species were reported within several miles (Table 2). Of the 35 special-status species that appear in Table 2 but which were not addressed by

WRA, 6 have been detected in the Park, 4 have been detected within 1 mile of the Park, and another 17 have been reportedly detected within several miles of the Park. Again, the incomplete review of available information has left the characterization of the Park's wildlife community incomplete and inaccurate.

Earlier I mentioned that I would comment on additional problems I noticed with WRA's analysis of species' occurrence likelihoods. Here forth I add those comments.

WRA premised their conclusions of potential project impacts on overly narrow characterizations of species' habitats. For example, WRA describes California tiger salamander as the following: "…annual grassland habitat and mammal burrows. Seasonal ponds and vernal pools crucial to breeding." Based on this narrow characterization, WRA (2019) concluded, "Although the Project Area is within designated critical habitat (the "Santa Rosa Plain Unit"; USFWS 2016) for California tiger salamander (CTS; *Ambystoma californiense*), this species is unlikely to occur in the Project Area, due to the lack of suitable wetland breeding habitat, lack of suitable upland dispersal and aestivation habitat and significant barriers to dispersal between the Project Area and the nearest documented extant breeding occurrence of the species." The IS/MND (p. 37) adds, "At the time of the site visit, small mammal burrows, the typical subterranean refugia for CTS, were not observed." However, barriers to dispersal might not exist between the Project Area and the nearest *undocumented* extant breeding occurrence. After all, documented occurrences are not the only occurrences. Unless detection surveys were performed on all the properties south of the Park, one cannot determine absence of California tiger salamanders on those properties.

Contrary to the statement quoted above, California tiger salamanders do not aestivate solely in mammal burrows, nor do they breed solely in ponds and vernal pools that might be readily delineable by annual inundation. The premise that California tiger salamanders require regular inundation for breeding is in error. Ponds where I recorded California tiger salamanders, including at Concord Naval Weapons Station (Smallwood and Morrison 2007) and elsewhere, were not always regularly inundated. I found California tiger salamander larvae in ephemeral ponds such as rain pools (Photos 19 and 20) and water pooled at culverts. What's needed are for ponds to remain inundated long enough into the spring for larvae to reach maturity, but this need not happen every year.

Another erroneous premise is that California tiger salamanders aestivate solely in mammal burrows. Where the clay content of soils is too high for fossorial mammals, the soil tends to crack open in fall and winter as it becomes moist. These soil cracks are also used by California tiger salamander to exit and return to subterranean environments on either end of the breeding season. Photo 21, though unfocused on the subject, shows an adult California tiger salamander exiting a soil crack on its way to a breeding pool one rainy night. California tiger salamanders are known to travel as fa as 2.2 km between aestivation sites and breeding ponds (Orloff 2011).

Photos 19 and 20. *California tiger salamander larvae collected from a rain pond that was only about ankle-deep. The lower photo shows the pond from about 30 m away. Rain ponds such as this one are not wet every year*. Photos by K. Shawn Smallwood.

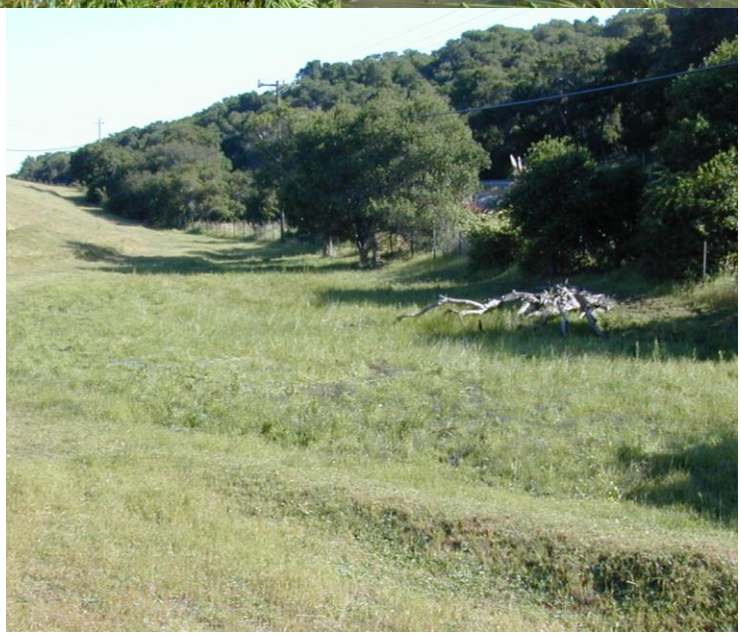


Photo 21, left. *California tiger salamander (sorry for the blur) exiting a soil crack (hard to see) in an area with clay soils. Photo by K. Shawn Smallwood.*

Another flawed WRA premise was that only impacts to breeding habitat qualify as significant impacts. For multiple species, such as for peregrine falcon, WRA (2019) contrives a distinction between nesting habitat and foraging habitat or other types of habitat. WRA then states that though peregrine falcon may occasionally forage at the site, they do not breed there and thus project impacts would be less than significant. In reality, all of a species' habitat is of critical importance to the species regardless of where breeding sites are located. After all, no matter where a species breeds, members of the species cannot breed successfully without also surviving migration and the non-breeding season. Animals cannot breed successfully with insufficient forage or opportunities for stopover refugia during migration or opportunities for staging areas or for mate-selection and all the other functions the animal must perform to successfully breed. Species for which WRA determined occurrence likelihood based on whether it would breed on site were inaccurately and incompletely characterized as part of the wildlife community at Roseland Creek Community Park.

Another habitat mischaracterization could be found in WRA's treatment of the Northern California black walnuts on site. I understand that the walnuts have survived from an earlier time when they were managed for agricultural use, and I understand that the surviving trees are relatively old, but it was misleading of WRA to characterize these trees as simply dead and dying and to omit them from maps of vegetation cover and discussions of wildlife use of the Park. The old age of the walnuts is an attribute that makes these trees all the more valuable to wildlife. Half of the species I detected in the Park were on and between these black walnuts, including fledglings of multiple bird species. The trees are full of cavities used as granaries and nest sites. A large colony of acorn woodpeckers is centered on these trees. The warblers I saw were among these trees. And so were the cedar waxwings, mourning doves, black phoebes, white-breasted nuthatches, oak titmouse, black-headed grosbeaks, house finches, lesser goldfinches, and northern mockingbirds. These trees need to be brought back into the analysis of potential project impacts to wildlife.

The habitat categories depicted in Figure 4.1-1 of the IS/MND are too crude and are therefore misleading. What is mapped as Developed Landscaped is mostly Oak savannah with a few ornamental trees and shrubs. Only portions of those parcels were once developed, and the remainder of each is covered by natural vegetation. Also, related to my comments in my preceding paragraph, much of what is categorized as non-native grassland is more like black walnut savannah. Those black walnuts are important to wildlife; they are an important component of the existing environmental setting.

My determinations of species occurrence likelihoods are much more optimistic, and I believe more accurate, than those of WRA. Of the special-status species in Table 2, I conclude 8 certainly occur in the Park, 35 probably occur, and 17 possibly occur. Of the 4 species WRA determined have no chance of occurring, I conclude 1 is possible and 3 are probable. Of the 10 species WRA determined unlikely, I agree 2 are unlikely but I conclude 5 are possible and 3 are probable. I conclude that California tiger salamander possibly occurs on site, depending on whether the species can find opportunities for subterranean aestivation and pools at least occasionally remaining inundated until May.

Table 2. *Occurrence likelihoods of special-status species of vertebrate wildlife at Roseland Creek Community Park, according to WRA and based on my own review of eBird and iNaturalist and my surveys at and near the Park*, where 'on site' means within *Roseland Creek Community Park, 'very close' means within a mile of the Park, 'nearby' means within several miles of the Park, and 'In region' means within 10 miles or so of Santa Rosa (it can mean within 50 miles in the cases of bat species).*

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

Species	Scientific name	Status[1]	Occurrence likelihood		
			WRA	eBird, iNaturalist, site visits	Smallwood
Short-eared owl	*Asio flammeus*	SSC3, BOP		In region	Possible
Barn owl	*Tyto alba*	BOP		Very close	Probable
Western screech-owl	*Megascops kennicotti*	BOP		Nearby	Probable
Costa's hummingbird	*Calypte costae*	BCC		Nearby	Possible
Allen's hummingbird	*Selasphorus sasin*	BCC	Mod-High	Nearby	Probable
Rufous hummingbird	*Selasphorus rufus*	BCC		Nearby	Probable
Nuttall's woodpecker	*Picoides nuttallii*	BCC	High	On site	Certain
Lewis's woodpecker	*Melanerpes lewis*	BCC		Nearby	Probable
Vaux's swift	*Chaetura vauxi*	SSC2	Unlikely	Very close	Probable
Willow flycatcher	*Epidomax trailii*	CE, BCC		Nearby	Probable
Olive-sided flycatcher	*Contopus cooperi*	BCC, SSC2	None	Nearby	Probable
Oak titmouse	*Baeolophus inornatus*	BCC		On site	Certain
Horned lark	*Eremophila alpestris*	WL		Nearby	Probable
Loggerhead shrike	*Lanius ludovicianus*	BCC, SSC2	Mod-High	On site	Certain
San Francisco common yellowthroat	*Geothlypis trichas sinuosa*	SSC3		Very close	Probable
Yellow warbler	*Setophaga petechia*	BCC, SSC2	None	Nearby	Probable
Yellow-breasted chat	*Icteria virens*	SSC3	Mod-High	Nearby	Probable
Oregon vesper sparrow	*Pooecetes gramineus affinis*	SSC2		In region	Possible
Grasshopper sparrow	*Ammodramus savannarum*	SSC2	Unlikely	Nearby	Possible
Summer tanager	*Piranga rubra*	SSC1		Nearby	Probable
Tricolored blackbird	*Agelaius tricolor*	CT, BCC	Unlikely[2]	Nearby	Probable
Yellow-headed blackbird	*X. xanthocephalus*	SSC3		In region	Possible
Lawrence's goldfinch	*Spinus lawrencei*	BCC	Unlikely	In region	Probable
Pallid bat	*Antrozous pallidus*	SSC, WBWG H	Moderate	Nearby	Probable
Townsend's big-eared bat	*Plecotus t. townsendii*	SSC, WBWG H	Moderate	Nearby	Probable
Silver-haired bat	*Lasionycteris noctivagans*	WBWG:M		In region	Probable
Western red bat	*Lasiurus blossevillii*	SSC, WBWG H	Moderate	Nearby	Probable
Little brown bat	*Myotis lucifugus*	WBWG:M		Very close	Probable
Canyon bat	*Parastrellus hesperus*	WBWG:M		In region	Probable
Small-footed myotis	*Myotis cililabrum*	WBWG M		In region	Probable

Species	Scientific name	Status[1]	Occurrence likelihood		
			WRA	eBird, iNaturalist, site visits	Smallwood
Miller's myotis	*Myotis evotis*	WBWG M		In region	Probable
Fringed myotis	*Myotis thysanodes*	WBWG H	Moderate	In region	Probable
Long-legged myotis	*Myotis volans*	WBWG H	Moderate	In range	Probable
Yuma myotis	*Myotis yumanensis*	WBWG LM	Moderate	In range	Probable
Hoary bat	*Lasiurus cinereus*	WBWG LM	Moderate	In region	Probable
American badger	*Taxidea taxus*	SSC	None	Nearby	Possible

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

[2] The IS/MND (page 37) assigns moderate to high likelihood of nesting in the Park by tricolored blackbird. This assignment of occurrence likelihood is at great odds with the unlikely occurrence determined by WRA (2019).

If California tiger salamanders occur in Roseland Creek Community Park, then the proposed project would have a significant adverse impact on the species. The only way to determine whether California tiger salamanders use the Park would be to perform protocol-level detection surveys for the species during the appropriate time of year both within the Park and on neighboring properties to the south. It would need to be determined whether rain pools remain inundated through May and whether cracks in the soil open up in fall and winter. Bet even if detection surveys support an absence determination, the project would impinge on the capacity of the Park to help recover the species.

HABITAT LOSS

Although the IS/MND proposes to mitigate for the loss of 1.37 acres of California tiger salamander upland habitat, on page 8 it says "Park improvements shall not result in impervious surfaces of more than 20 percent on this property." I assume this means City of Santa Rosa intends to replace 20% of the Park with impervious surfaces. If true, then the Project would eliminate 3.9 acres of wildlife habitat, not counting additional intrusive impacts. The impacts of this loss need to be analyzed.

Habitat loss not only results in the immediate numerical decline of wildlife, but also in permanent loss of productive capacity (Smallwood 2015). For example, two study sites in grassland/wetland/woodland complexes had total bird nesting densities of 32.8 and 35.8 nests per acre (Young 1948, Yahner 1982) for an average 34.3 nests per acre. Applying this density to the project site, 34.3 nests/acre multiplied against 3.9 acres would predict a loss of 134 bird nests. The average number of fledglings per nest in Young's (1948) study was 2.9. Assuming Young's (1948) study site typifies bird productivity, then the project would prevent the production of 389 fledglings per year. After 100 years and assuming an average generation time of 5 years, the lost capacity of both breeders and annual fledgling production can be estimated from the following formula: {(nests/year × chicks/nest × number of years) + ((2 adults/nest × nests/year) × (number of years ÷ years/generation))}. In the case of this project, this formula predicts **the project would deny California 44,260 birds over the next century due solely to loss of terrestrial habitat**. This predicted loss would be substantial, and would qualify as significant impacts that have yet to be addressed by the IS/MND. A fair argument can be made for the need to prepare an EIR to appropriately analyze potential project impacts to wildlife.

CUMULATIVE IMPACTS

The IS/MND does not provide an analysis of cumulative impacts to wildlife. A fair argument can be made for the need to prepare an EIR to analyze cumulative impacts.

MITIGATION

The IS/MND proposes preconstruction, take-avoidance surveys for bat roosts, western pond turtle, and if construction must commence during the breeding season, then also nesting birds (MM BIO-1.1, -2.1, -4.2). Whereas I agree that preconstruction surveys

would be appropriate, it must be understood by decision-makers and the public that such surveys typically detect small fractions of the animals targeted. Bats, pond turtles and nesting birds are highly adept at concealment to avoid predation. With so many trees on site and such high structural complexity, the notion that more than a few animals would be detected would be fantasy. Furthermore, preconstruction, take-avoidance surveys ultimately fail to prevent the impacts of habitat loss, resulting in the loss of productive capacity of the Park.

Preconstruction surveys should not be performed without first having performed detection surveys. Preconstruction surveys are no substitute for detection surveys. 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.

The IS/MND proposes to schedule construction, if feasible, to avoid biologically sensitive periods for California tiger salamander (October 15 through April 14), breeding birds (February 1 through August 15), and bat maternity (April 1 through August 15). These collective periods of avoidance leaves only August 16 through October 14. This two-month window should be explicitly defined as the only permissible time period for activities that would potentially disturb the subject species or the habitats upon which they depend.

Compensatory mitigation is proposed only for California tiger salamander, but it would be appropriate for western pond turtle, breeding birds, and other special-status species. However, the most appropriate mitigation would be a reduction of the scope of the project.

CONCLUDING COMMENTS

Although the IS/MND states that the Park is "designed to preserve and enhance the habitat values of the existing grassland, oak woodland, riparian and purple needlegrass habitat areas on the site," the proposed project destroys rather than preserves and does nothing to enhance habitat values. The project would destroy 20% of the Park's natural area through ground disturbance, damage to trees and tree removals, and imposition of impervious surfaces. It would induce greater levels of infiltration, such as by visitors with dogs. It would also add pollutants such as from rubber particulates spreading from the proposed turf and roundworms introduced by dog feces. Habitat degradation and habitat destruction are contrary processes to "preservation." As for habitat enhancements, I saw not a single project element that would enhance habitat of any species.

If the goal is to enhance habitat values of the Park, I offer the following suggestions:

- Plant a few Northern California black walnuts to replace the existing walnuts as they naturally senesce;

- Take steps to increase the extent of purple needlegrass;

- Enforce the prohibition against camping in the Park;

- Introduce and encourage Botta's pocket gophers (*Thomomys bottae*) and California ground squirrels (*Otospermophilus beecheyi*);

- Reduce occupancy by feral and free-ranging domestic house cats through public education and a program of trap, neuter and release.

If the goal is to preserve habitat values of the Park, then I suggest not covering natural soils and vegetation with asphalt, turf, and structures. I suggest adding no lights to the Park, and no picnic or BBQ facilities. Leaving the Park as undisturbed as possible would best preserve its habitat values.

From the points of view of non-volant wildlife species, Roseland Creek Community Park is in a state of near-total isolation from other natural areas. American badgers and other terrestrial mammals, reptiles and amphibians can reach the Park only via Roseland Creek or across rural properties to the south. The status of the Park represents the ultimate outcome of habitat fragmentation, which means there is little if any opportunity for effective compensatory mitigation to offset the project's interference with wildlife movement in the region. As one of the last patches of open space, Roseland Creek Community Park is undoubtedly of vital importance to wildlife in need of stop-over refugia during migration or dispersal and of staging for long-distance foraging.

Thank you for your attention,

_____

Shawn Smallwood, Ph.D.

REFERENCE CITED

City of Santa Rosa. 2019. Initial Study: Roseland Creek Community Park Project. Prepared by David J. Powers & Associates for City of Santa Rosa, California.

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.

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. 1994. Site invasibility by exotic birds and mammals. Biological Conservation 69:251-259.

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. 2007. 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.

WRA. 2019. Biological Resources Assessment: Roseland Creek Community Park, Santa Rosa, Sonoma County, California. Prepared for David J. Powers & Associates, San Jose, California.

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.

Kenneth Shawn Smallwood
Curriculum Vitae

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

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

Ecologist

Expertise

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

Education

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

Experience

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

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

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

the County on how to reduce wildlife fatalities.

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

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

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

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

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

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

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

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

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

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

to receive mitigation funds for habitat easements and restoration.

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

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

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

Projects

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Peer Reviewed Publications

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

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

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

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

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

71.

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

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

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

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

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

Smallwood, K. S. 2017. Monitoring birds. M. Perrow, Ed., Wildlife and Wind Farms - Conflicts and Solutions, Volume 2. Pelagic Publishing, Exeter, United Kingdom. www.bit.ly/2v3cR9Q

Smallwood, K. S., L. Neher, and D. A. Bell. 2017. 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. http://www.mdpi.com/1996-1073/2/4/915

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

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

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

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

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

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

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

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

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

Morrison, M. L., K. S. Smallwood, and L. S. Hall. 2002. Creating habitat through plant relocation: Lessons from Valley elderberry longhorn beetle mitigation. Ecological Restoration 21: 95-100.

Zhang, M., K. S. Smallwood, and E. Anderson. 2002. Relating indicators of ecological health and integrity to assess risks to sustainable agriculture and native biota. Pages 757-768 *in* D.J. Rapport, W.L. Lasley, D.E. Rolston, N.O. Nielsen, C.O. Qualset, and A.B. Damania (eds.), Managing for Healthy Ecosystems, Lewis Publishers, Boca Raton, Florida USA.

Wilcox, B. A., K. S. Smallwood, and J. A. Kahn. 2002. Toward a forest Capital Index. Pages 285-298 *in* D.J. Rapport, W.L. Lasley, D.E. Rolston, N.O. Nielsen, C.O. Qualset, and A.B. Damania (eds.), Managing for Healthy Ecosystems, Lewis Publishers, Boca Raton, Florida USA.

Smallwood, K.S. 2001. The allometry of density within the space used by populations of Mammalian Carnivores. Canadian Journal of Zoology 79:1634-1640.

Smallwood, K.S., and T.R. Smith. 2001. Study design and interpretation of Sorex density estimates. Annales 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 Agro-ecological Solution to Water Shortage in North China Plain (Huabei Plain). Environmental Planning and Management 44:345-355.

Smallwood, K. Shawn, Lourdes Rugge, Stacia Hoover, Michael L. Morrison, Carl Thelander. 2001. Intra- and inter-turbine string comparison of fatalities to animal burrow densities at Altamont Pass. Pages 23-37 in S. S. Schwartz, ed., Proceedings of the National Avian-Wind Power Planning Meeting IV. RESOLVE, Inc., Washington, D.C.

Smallwood, K.S., S. Geng, and M. Zhang. 2001. Comparing pocket gopher (*Thomomys bottae*) density in alfalfa stands to assess management and conservation goals in northern California. Agriculture, Ecosystems & Environment 87: 93-109.

Smallwood, K. S. 2001. Linking habitat restoration to meaningful units of animal demography. Restoration Ecology 9:253-261.

Smallwood, K. S. 2000. A crosswalk from the Endangered Species Act to the HCP Handbook and real HCPs. Environmental Management 26, Supplement 1:23-35.

Smallwood, K. S., J. Beyea and M. Morrison. 1999. Using the best scientific data for endangered species conservation. Environmental Management 24:421-435.

Smallwood, K. S. 1999. Scale domains of abundance among species of Mammalian Carnivora. Environmental Conservation 26:102-111.

Smallwood, K.S. 1999. Suggested study attributes for making useful population density estimates. Transactions of the Western Section of the Wildlife Society 35: 76-82.

Smallwood, K. S. and M. L. Morrison. 1999. Estimating burrow volume and excavation rate of pocket gophers (Geomyidae). Southwestern Naturalist 44:173-183.

Smallwood, K. S. and M. L. Morrison. 1999. Spatial scaling of pocket gopher (*Geomyidae*) density. Southwestern Naturalist 44:73-82.

Smallwood, K. S. 1999. Abating pocket gophers (*Thomomys* spp.) to regenerate forests in clearcuts. Environmental Conservation 26:59-65.

Smallwood, K. S. 1998. Patterns of black bear abundance. Transactions of the Western Section of the Wildlife Society 34:32-38.

Smallwood, K. S. 1998. On the evidence needed for listing northern goshawks (*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. White-tailed Kite movement and nesting patterns in an agricultural landscape. Pages 166-176 in D. M. Bird, D. E. Varland, and J. J. Negro, eds., Raptors in human landscapes. Academic Press, London.

Smallwood, K. S. 1995. Scaling Swainson's hawk population density for assessing habitat-use across an agricultural landscape. J. Raptor Research 29:172-178.

Smallwood, K. S. and W. A. Erickson. 1995. Estimating gopher populations and their abatement in forest plantations. Forest Science 41:284-296.

Smallwood, K. S. and E. L. Fitzhugh. 1995. A track count for estimating mountain lion *Felis concolor californica* population trend. Biological Conservation 71:251-259

Smallwood, K. S. 1994. Site invasibility by exotic birds and mammals. Biological Conservation 69:251-259.

Smallwood, K. S. 1994. Trends in California mountain lion populations. Southwestern Naturalist 39:67-72.

Smallwood, K. S. 1993. Understanding ecological pattern and process by association and order. Acta Oecologica 14(3):443-462.

Smallwood, K. S. and E. L. Fitzhugh. 1993. A rigorous technique for identifying individual mountain lions *Felis concolor* by their tracks. Biological Conservation 65:51-59.

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

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

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

Peer-reviewed Reports

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

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

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

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

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

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

Smallwood, K. S., L. Neher, D. Bell, J. DiDonato, B. Karas, S. Snyder, and S. Lopez. 2009. Range Management Practices to Reduce Wind Turbine Impacts on Burrowing Owls and Other Raptors in the Altamont Pass Wind Resource Area, California. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. CEC-500-2008-080. Sacramento, California. 183 pp. http://www.energy.ca.gov/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. http://www.energy.ca.gov/publications/displayOneReport.php?pubNum=CEC-500-2009-065

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

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

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

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

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

Non-Peer Reviewed Publications

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

Smallwood, K. S. 2009. Mitigation in U.S. Wind Farms. Pages 68-76 in H. 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-Instiut im NABU, Goosstroot 1, 24861 Bergenhusen, Germany. http://bergenhusen.nabu.de/forschung/greifvoegel/

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

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

Neher, L. and S. Smallwood. 2005. Forecasting and minimizing avian mortality in siting wind turbines. Energy Currents. Fall Issue. ESRI, Inc., Redlands, California.

Jennifer Davidson and Shawn Smallwood. 2004. Laying plans for a hydrogen highway. Comstock's Business, August 2004:18-20, 22, 24-26.

Jennifer Davidson and Shawn Smallwood. 2004. Refined conundrum: California consumers demand more oil while opposing refinery development. Comstock's Business, November 2004:26-27, 29-30.

Smallwood, K.S. 2002. Review of "The Atlas of Endangered Species." By Richard Mackay. Environmental Conservation 30:210-211.

Smallwood, K.S. 2002. Review of "The Endangered Species Act. History, Conservation, and Public Policy." By Brian Czech and Paul B. Krausman. Environmental Conservation 29: 269-270.

Smallwood, K.S. 1997. Spatial scaling of pocket gopher (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 in Smith, R.H., ed. Proc. Third Mountain Lion Workshop. Arizona Game and Fish Department, Phoenix.

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

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

Smallwood, K. S. 2013. Long-Term Trends in Fatality Rates of Birds and Bats in the Altamont Pass Wind Resource Area, California. SRC document R68, County of Alameda, Hayward, California.

Smallwood, K. S. 2013. Inter-annual Fatality rates of Target Raptor Species from 1999 through 2012 in the Altamont Pass Wind Resources Area. SRC document P268, County of Alameda, Hayward, California.

Smallwood, K. S. 2012. General Protocol for Performing Detection Trials in the FloDesign Study of the Safety of a Closed-bladed Wind Turbine. SRC document P246, County of Alameda, Hayward, California.

Smallwood, K. S., l. Neher, and J. Mount. 2012. Burrowing owl distribution and abundance study through two breeding seasons and intervening non-breeding period in the Altamont Pass Wind Resource Area, California. SRC document P245, County of Alameda, Hayward, California.

Smallwood, K. S 2012. Draft study design for testing collision risk of Flodesign wind turbine in

former AES Seawest wind projects in the Altamont Pass Wind Resource Area (APWRA). SRC document P238, County of Alameda, Hayward, California.

Smallwood, L. Neher, and J. Mount. 2012. Winter 2012 update on burrowing owl distribution and abundance study in the Altamont Pass Wind Resource Area, California. SRC document P232, County of Alameda, Hayward, California.

Smallwood, S. 2012. Status of avian utilization data collected in the Altamont Pass Wind Resource Area, 2005-2011. SRC document P231, County of Alameda, Hayward, California.

Smallwood, K. S., L. Neher, and J. Mount. 2011. Monitoring Burrow Use of Wintering Burrowing Owls. SRC document P229, County of Alameda, Hayward, California.

Smallwood, K. S., L. Neher, and J. Mount. 2011. Nesting Burrowing Owl Distribution and Abundance in the Altamont Pass Wind Resource Area, California. SRC document P228, County of Alameda, Hayward, California.

Smallwood, K. S. 2011. Draft Study Design for Testing Collision Risk of Flodesign Wind Turbine in Patterson Pass Wind Farm in the Altamont Pass Wind Resource Area (APWRA). http://www.altamontsrc.org/alt_doc/p100_src_document_list_with_reference_numbers.pdf

Smallwood, K. S. 2011. Sampling Burrowing Owls Across the Altamont Pass Wind Resource Area. SRC document P205, County of Alameda, Hayward, California.

Smallwood, K. S. 2011. Proposal to Sample Burrowing Owls Across the Altamont Pass Wind Resource Area. SRC document P155, County of Alameda, Hayward, California. SRC document P198, County of Alameda, Hayward, California.

Smallwood, K. S. 2010. Comments on APWRA Monitoring Program Update**.** SRC document P191, County of Alameda, Hayward, California.

Smallwood, K. S. 2010. Inter-turbine Comparisons of Fatality Rates in the Altamont Pass Wind Resource Area. SRC document P189, County of Alameda, Hayward, California.

Smallwood, K. S. 2010. Review of the December 2010 Draft of M-21: Altamont Pass Wind Resource Area Bird Collision Study. SRC document P190, County of Alameda, Hayward, California.

Alameda County SRC (Shawn Smallwood, Jim Estep, Sue Orloff, Joanna Burger, and Julie Yee). Comments on the Notice of Preparation for a Programmatic Environmental Impact Report on Revised CUPs for Wind Turbines in the Alameda County portion of the Altamont Pass. SRC document P183, County of Alameda, Hayward, California.

Smallwood, K. S. 2010. Review of Monitoring Implementation Plan. SRC document P180, County of Alameda, Hayward, California.

Burger, J., J. Estep, S. Orloff, S. Smallwood, and J. Yee. 2010. SRC Comments on CalWEA Research Plan. SRC document P174, County of Alameda, Hayward, California.

Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). SRC Comments on Monitoring Team's Draft Study Plan for Future Monitoring. SRC document P168, County of Alameda, Hayward, California.

Smallwood, K. S. 2010. Second Review of American Kestrel-Burrowing owl (KB) Scavenger Removal Adjustments Reported in Alameda County Avian Monitoring Team's M21 for the Altamont Pass Wind Resource Area. SRC document P171, County of Alameda, Hayward, California.

Smallwood, K. S. 2010. Assessment of Three Proposed Adaptive Management Plans for Reducing Raptor Fatalities in the Altamont Pass Wind Resource Area. SRC document P161, County of Alameda, Hayward, California.

Smallwood, K. S. and J. Estep. 2010. Report of additional wind turbine hazard ratings in the Altamont Pass Wind Resource Area by Two Members of the Alameda County Scientific Review Committee. SRC document P153, County of Alameda, Hayward, California.

Smallwood, K. S. 2010. Alternatives to Improve the Efficiency of the Monitoring Program. SRC document P158, County of Alameda, Hayward, California.

Smallwood, S. 2010. Summary of Alameda County SRC Recommendations and Concerns and Subsequent Actions. SRC document P147, County of Alameda, Hayward, California.

Smallwood, S. 2010. Progress of Avian Wildlife Protection Program & Schedule. SRC document P148, County of Alameda, Hayward, California. SRC document P148, County of Alameda, Hayward, California.

Smallwood, S. 2010. Old-generation wind turbines rated for raptor collision hazard by Alameda County Scientific Review Committee in 2010, an Update on those Rated in 2007, and an Update on Tier Rankings. SRC document P155, County of Alameda, Hayward, California.

Smallwood, K. S. 2010. Review of American Kestrel-Burrowing owl (KB) Scavenger Removal Adjustments Reported in Alameda County Avian Monitoring Team's M21 for the Altamont Pass Wind Resource Area. SRC document P154, County of Alameda, Hayward, California.

Smallwood, K. S. 2010. Fatality Rates in the Altamont Pass Wind Resource Area 1998-2009. Alameda County SRC document P-145.

Smallwood, K. S. 2010. Comments on Revised M-21: Report on Fatality Monitoring in the Altamont Pass Wind Resource Area. SRC document P144, County of Alameda, Hayward, California.

Smallwood, K. S. 2009. SRC document P129, County of Alameda, Hayward, California.

Smallwood, K. S. 2009. Smallwood's review of M32. SRC document P111, County of Alameda, Hayward, California.

Smallwood, K. S. 2009. 3rd Year Review of 16 Conditional Use Permits for Windworks, Inc. and Altamont Infrastructure Company, LLC. Comment letter to East County Board of Zoning Adjustments. 10 pp + 2 attachments.

Smallwood, K. S. 2008. Weighing Remaining Workload of Alameda County SRC against Proposed Budget Cap. Alameda County SRC document not assigned. 3 pp.

Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). 2008. SRC comments on August 2008 Fatality Monitoring Report, M21. SRC document P107, County of Alameda, Hayward, California.

Smallwood, K. S. 2008. Burrowing owl carcass distribution around wind turbines. SRC document P106, County of Alameda, Hayward, California.

Smallwood, K. S. 2008. Assessment of relocation/removal of Altamont Pass wind turbines rated as hazardous by the Alameda County SRC. SRC document P103, County of Alameda, Hayward, California.

Smallwood, K. S. and L. Neher. 2008. Summary of wind turbine-free ridgelines within and around the APWRA. SRC document P102, County of Alameda, Hayward, California.

Smallwood, K. S. and B. Karas. 2008. Comparison of mortality estimates in the Altamont Pass Wind Resource Area when restricted to recent fatalities. SRC document P101, County of Alameda, Hayward, California.

Smallwood, K. S. 2008. On the misapplication of mortality adjustment terms to fatalities missed during one search and found later. SRC document P97, County of Alameda, Hayward, California.

Smallwood, K. S. 2008. Relative abundance of raptors outside the APWRA. SRC document P88, County of Alameda, Hayward, California.

Smallwood, K. S. 2008. Comparison of mortality estimates in the Altamont Pass Wind Resource Area. SRC document P76, County of Alameda, Hayward, California.

Alameda County SRC (Smallwood, K. S., S. Orloff, J. Estep, J. Burger, and J. Yee). 2010. Guidelines for siting wind turbines recommended for relocation to minimize potential collision-related mortality of four focal raptor species in the Altamont Pass Wind Resource Area. SRC document P70, County of Alameda, Hayward, California.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Reports to Clients

Smallwood, K. S. 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 Yellow-billed Magpie and American Crow in the Sacramento Valley, California. 22 pp.

Smallwood, K. S. and M. L. Morrison. 2008. Former Naval Security Group Activity (NSGA), Skaggs Island, Waste and Contaminated Soil Removal Project (IR Site #2), San Pablo Bay, Sonoma County, California: Re-Vegetation Monitoring. Report to U.S. Navy, Letter Agreement – N68711-04LT-A0045. Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 10 pp.

Smallwood, K. S. and M. L. Morrison. 2008. Burrowing owls at Dixon Naval Radio Transmitter Facility. Report to U.S. Navy. Naval Facilities Engineering Command, Southwest, Desert Integrated Products Team, San Diego, California. 28 pp.

Smallwood, K. S. and M. L. Morrison. 2008. San Joaquin kangaroo rat (*Dipodomys n. 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, puma@yolo.com . 34 pp.

Smallwood, K. S. 2006. Impact of 2005 West Nile Virus on yellow-billed magpie and american crow in the Sacramento Valley, California. Report to Sacramento-Yolo Mosquito and Vector Control District, Elk Grove, CA. 38 pp.

Smallwood, K. S. and M. L. Morrison. 2006. San Joaquin kangaroo rat (*Dipodomys n. 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 4th through 6th, 2001. Report to Berger & Montaque, P.C. 16 pp. with 61 color plates.

Smallwood, K.S. 2001. Affidavit of K. Shawn Smallwood, Ph.D. in the matter of the U.S. Fish and Wildlife Service's rejection of Seatuck Environmental Association's proposal to operate an education center on Seatuck National Wildlife Refuge. Submitted to Seatuck Environmental Association in two parts, totaling 7 pp.

Magney, D., and K.S. Smallwood. 2001. Maranatha High School CEQA critique. Comment letter submitted to Tamara & Efren Compeán, 16 pp.

Smallwood, K. S. and D. Mangey. 2001. Comments on the Newhall Ranch November 2000 Administrative Draft EIR. Prepared for Ventura County Counsel regarding the Newhall Ranch Specific Plan EIR. 68 pp.

Magney, D. and K. S. Smallwood. 2000. Newhall Ranch Notice of Preparation Submittal. Prepared for Ventura County Counsel regarding our recommended scope of work for the Newhall Ranch Specific Plan EIR. 17 pp.

Smallwood, K. S. 2000. Comments on the Preliminary Staff Assessment of the Contra Costa Power Plant Unit 8 Project. Submitted to California Energy Commission on November 30 on behalf of Californians for Renewable Energy (CaRE). 4 pp.

Smallwood, K. S. 2000. Comments on the California Energy Commission's Final Staff Assessment

of the MEC. Submitted to California Energy Commission on October 29 on behalf of Californians for Renewable Energy (CaRE). 8 pp.

Smallwood, K. S. 2000. Comments on the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). Submitted to California Energy Commission on October 29 on behalf of Californians for Renewable Energy (CaRE). 9 pp.

Smallwood, K. S. 2000. Comments on the Preliminary Staff Assessment of the Metcalf Energy Center. Submitted to California Energy Commission on behalf of Californians for Renewable Energy (CaRE). 11 pp.

Smallwood, K. S. 2000. Preliminary report of reconnaissance surveys near the TRW plant south of Phoenix, Arizona, March 27-29. Report prepared for Hagens, Berman & Mitchell, Attorneys at Law, Phoenix, AZ. 6 pp.

Morrison, M. L., K. S. Smallwood, and M. Robison. 2001. Draft Natural Environment Study for Highway 46 compliance with CEQA/NEPA. Report to the California Department of Transportation. 75 pp.

Morrison, M.L., and K.S. Smallwood. 1999. NTI plan evaluation and comments. Exhibit C in W.D. Carrier, M.L. Morrison, K.S. Smallwood, and Vail Engineering. Recommendations for NBHCP land acquisition and enhancement strategies. Northern Territories, Inc., Sacramento.

Smallwood, K. S. 1999. Estimation of impacts due to dredging of a shipping channel through Humboldt Bay, California. Court Declaration prepared on behalf of EPIC.

Smallwood, K. S. 1998. 1998 California mountain lion track count. Report to the Defenders of Wildlife, Washington, D.C. 5 pages.

Smallwood, K.S. 1998. Draft report of a visit to a paint sludge dump site near Ridgewood, New Jersey, February 26th, 1998. Unpublished report to Consulting in the Public Interest.

Smallwood, K.S. 1997. Science missing in the “no surprises” policy. Commissioned by National Endangered Species Network and Spirit of the Sage Council, Pasadena, California.

Smallwood, K.S. and M.L. Morrison. 1997. Alternate mitigation strategy for incidental take of giant garter snake and Swainson’s hawk as part of the Natomas Basin Habitat Conservation Plan. Pages 6-9 and *iii* illustrations in W.D. Carrier, K.S. Smallwood and M.L. Morrison, Natomas Basin Habitat Conservation Plan: Narrow channel marsh alternative wetland mitigation. Northern Territories, Inc., Sacramento.

Smallwood, K.S. 1996. Assessment of the BIOPORT model's parameter values for pocket gopher burrowing characteristics. Report to Berger & Montague, P.C. and Roy S. Haber, P.C., Philadelphia. (peer reviewed).

Smallwood, K.S. 1997. Assessment of plutonium releases from Hanford buried waste sites. Report Number 9, Consulting in the Public Interest, 53 Clinton Street, Lambertville, New Jersey, 08530.

Smallwood, K.S. 1996. Soil Bioturbation and Wind Affect Fate of Hazardous Materials that were Released at the Rocky Flats Plant, Colorado. Report to Berger & Montague, P.C., Philadelphia.

Smallwood, K.S. 1996. Second assessment of the BIOPORT model's parameter values for pocket gopher burrowing characteristics and other relevant wildlife observations. Report to Berger & Montague, P.C. and Roy S. Haber, P.C., Philadelphia.

Smallwood, K.S., and R. Leidy. 1996. Wildlife and their management under the Martell SYP. Report to Georgia Pacific, Corporation, Martel, CA. 30 pp.

EIP Associates. 1995. Yolo County Habitat Conservation Plan Biological Resources Report. Yolo County Planning and Development Department, Woodland, California.

Smallwood, K.S. and S. Geng. 1995. Analysis of the 1987 California Farm Cost Survey and recommendations for future survey. Program on Workable Energy Regulation, University-wide Energy Research Group, University of California.

Smallwood, K.S., S. Geng, and W. Idzerda. 1992. Final report to PG&E: Analysis of the 1987 California Farm Cost Survey and recommendations for future survey. Pacific Gas & Electric Company, San Ramon, California. 24 pp.

Fitzhugh, E.L. and K.S. Smallwood. 1987. Methods Manual – A statewide mountain lion population index technique. California Department of Fish and Game, Sacramento.

Salmon, T.P. and K.S. Smallwood. 1989. Final Report – Evaluating exotic vertebrates as pests to California agriculture. California Department of Food and Agriculture, Sacramento.

Smallwood, K.S. and W. A. Erickson (written under supervision of W.E. Howard, R.E. Marsh, and R.J. Laacke). 1990. Environmental exposure and fate of multi-kill strychnine gopher baits. Final Report to USDA Forest Service –NAPIAP, Cooperative Agreement PSW-89-0010CA.

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

Comments on Environmental Documents (Year; pages)

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

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

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

- Beale WAPA Interconnection Project EA & CEQA checklist (2020; 30);
- Levine-Fricke Softball Field Improvement Addendum, UC Berkeley (2020; 16);
- Greenlaw Partners Warehouse and Distribution Center Staff Report, Palmdale (2020; 14);
- Humboldt Wind Energy Project DEIR (2019; 25);
- Sand Hill Supplemental EIR, Altamont Pass (2019; 17);
- 1700 Dell Avenue Office Project, Campbell (2019, 28);
- 1180 Main Street Office Project MND, Redwood City (2019; 19:
- Summit Ridge Wind Farm Request for Amendment 4, Oregon (2019; 46);
- Shafter Warehouse Staff Report (2019; 4);
- Park & Broadway Design Review, San Diego (2019; 19);
- Pinnacle Pacific Heights Design Review, San Diego (2019; 19);
- Pinnacle Park & C Design Review, San Diego (2019; 19);
- Preserve at Torrey Highlands EIR, San Diego (2019; 24);
- Santana West Project EIR Addendum, San Jose (2019; 18);
- The Ranch at Eastvale EIR Addendum, Riverside County (2020; 19);
- Hageman Warehouse IS/MND, Bakersfield (2019; 13);
- Oakley Logistics Center EIR, Antioch (2019; 22);
- 27 South First Street IS, San Jose (2019; 23);
- 2nd replies on Times Mirror Square Project EIR, Los Angeles (2020; 11);
- Replies on Times Mirror Square Project EIR, Los Angeles (2020; 13);
- Times Mirror Square Project EIR, Los Angeles (2019; 18);
- East Monte Vista & Aviator General Plan Amend EIR Addendum, Vacaville (2019; 22);
- Hillcrest LRDP EIR, La Jolla (2019; 36);
- 555 Portola Road CUP, Portola Valley (2019; 11);
- Johnson Drive Economic Development Zone SEIR, Pleasanton (2019; 27);
- 1750 Broadway Project CEQA Exemption, Oakland (2019; 19);
- Mor Furniture Project MND, Murietta Hot Springs (2019; 27);
- Harbor View Project EIR, Redwood City (2019; 26);
- Visalia Logistics Center (2019; 13);
- Cordelia Industrial Buildings MND (2019; 14);
- Scheu Distribution Center IS/ND, Rancho Cucamonga (2019; 13);
- Mills Park Center Staff Report, San Bruno (2019; 22);
- Site visit to Desert Highway Farms IS/MND, Imperial County (2019; 9);
- Desert Highway Farms IS/MND, Imperial County (2019; 12);
- ExxonMobil Interim Trucking for Santa Ynez Unit Restart SEIR, Santa Barbara (2019; 9);
- Olympic Holdings Inland Center Warehouse Project MND, Rancho Cucamonga (2019; 14);
- Replies to responses on Lawrence Equipment Industrial Warehouse, Banning (2019; 19);
- PARS Global Storage MND, Murietta (2019; 13);
- Slover Warehouse EIR Addendum, Fontana (2019; 16);
- Seefried Warehouse Project IS/MND, Lathrop (2019; 19)
- World Logistics Center Site Visit, Moreno Valley (2019; 19);
- Merced Landfill Gas-To-Energy Project IS/MND (2019; 12);
- West Village Expansion FEIR, UC Davis (2019; 11);
- Site visit, Doheny Ocean Desalination EIR, Dana Point (2019; 11);

- Replies to responses on Avalon West Valley Expansion EIR, San Jose (2019; 10);
- Avalon West Valley Expansion EIR, San Jose (2019; 22);
- Sunroad – Otay 50 EIR Addendum, San Diego (2019; 26);
- Del Rey Pointe Residential Project IS/MND, Los Angeles (2019; 34);
- 1 AMD Redevelopment EIR, Sunnyvale (2019; 22);
- Lawrence Equipment Industrial Warehouse IS/MND, Banning (2019; 14);
- SDG Commerce 330 Warehouse IS, American Canyon (2019; 21);
- PAMA Business Center IS/MND, Moreno Valley (2019; 23);
- Cupertino Village Hotel IS (2019; 24);
- Lake House IS/ND, Lodi (2019; 33);
- Campo Wind Project DEIS, San Diego County (DEIS, (2019; 14);
- Stirling Warehouse MND site visit, Victorville (2019; 7);
- Green Valley II Mixed-Use Project EIR, Fairfield (2019; 36);
- We Be Jammin rezone MND, Fresno (2019; 14);
- Gray Whale Cove Pedestrian Crossing IS/ND, Pacifica (2019; 7);
- Visalia Logistics Center & DDG 697V Staff Report (2019; 9);
- Mather South Community Masterplan Project EIR (2019; 35);
- Del Hombre Apartments EIR, Walnut Creek (2019; 23);
- Otay Ranch Planning Area 12 EIR Addendum, Chula Vista (2019; 21);
- The Retreat at Sacramento IS/MND (2019; 26);
- Site visit to Sunroad – Centrum 6 EIR Addendum, San Diego (2019; 9);
- Sunroad – Centrum 6 EIR Addendum, San Diego (2018; 22);
- North First and Brokaw Corporate Campus Buildings EIR Addendum, San Jose (2018; 30);
- South Lake Solar IS, Fresno County (2018; 18);
- Galloo Island Wind Project Application, New York (not submitted) (2018; 44);
- Doheny Ocean Desalination EIR, Dana Point (2018; 15);
- Stirling Warehouse MND, Victorville (2018; 18);
- LDK Warehouse MND, Vacaville (2018; 30);
- Gateway Crossings FEIR, Santa Clara (2018; 23);
- South Hayward Development IS/MND (2018; 9);
- CBU Specific Plan Amendment, Riverside (2018; 27);
- 2nd replies to responses on Dove Hill Road Assisted Living Project MND (2018; 11);
- Replies to responses on Dove Hill Road Assisted Living Project MND (2018; 7);
- Dove Hill Road Assisted Living Project MND (2018; 12);
- Deer Ridge/Shadow Lakes Golf Course EIR, Brentwood (2018; 21);
- Pyramid Asphalt BLM Finding of No Significance, Imperial County (2018; 22);
- Amáre Apartments IS/MND, Martinez (2018; 15);
- Petaluma Hill Road Cannabis MND, Santa Rosa (2018; 21);
- 2nd comments on Zeiss Innovation Center IS/MND, Dublin (2018: 12);
- 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) 13th Annual Conference, UC Santa Barbara, 27 October 2006.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Other forms of Participation at Professional Meetings

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

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

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

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

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

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

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

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

Printed Mass Media

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

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

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

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

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

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

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

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

Radio/Television

PBS News Hour,

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Committees

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

Other Professional Activities or Products

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

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

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

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

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

Memberships in Professional Societies

The Wildlife Society
Raptor Research Foundation

Honors and Awards

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

Community Activities

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

Representative Clients/Funders

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

Representative special-status species experience

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

Will Burns

From: Mary Goe <marygoe@yahoo.com>
Sent: Wednesday, August 17, 2022 12:24 PM
To: Rawson, Alisa; Jen Santos; Alvarez, Eddie
Cc: Trish Tatarian; Duane Dewitt; Frederick Krueger; Gary Balcerak
Subject: [EXTERNAL] Comments for Roseland Creek Community Park NOP for EIR

Dear Ms. Arawson,

We are writing to comment on the NOP for Roseland Creek Park. First, the plans for a 6 acre active recreation park at Dutton and Hearn Avenue negates the purpose for extra parking at the southern portion of the Roseland Creek Community Park, as well as the need for robust sporting pursuits.

Over 20 years the neighbors have worked tirelessly to promote this leafy urban oasis for nature preservation and education. This neighborhood truly needs a haven for the local residents and students to decompress from the traffic and noise. Stepping into this bit of nature rewards the urban hiker with an immediate sense of calm and relaxation. The visitor may hear the pleasant chatter of songbirds and be able to watch the energetic activity of the acorn woodpeckers collecting and storing their acorns for the winter ahead inside the nooks of the slowly decaying walnut trees in the northern meadow of the park. The southern portion of the woodland is bisected by the Roseland Creek which is bordered by large, spreading Valley Oaks lending shade to the stream. Secondly, we believe it is imperative to restore this portion of the creek by removing the old concrete bed that was constructed in the 1970's. Returning the waterway to a more natural state will lessen flooding, allow for groundwater recharge, and benefit the wildlife who seek refuge in this natural city park.

In summation, we ask for less parking, creek restoration, and the encouragement of passive recreational and educational uses for this natural gem located in the urban setting of Roseland.

Thank you,

Mary and Gary Balcerak
1025 Burbank Avenue
Santa Rosa, CA 95407
707-579-8340

Sent from my iPad

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

PARLIAMENTARIAN
Russell Attebery
Karuk

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

August 24, 2022

Jen Santos
City of Santa Rosa
55 Stony Point Road
Santa Rosa, CA 95401

Re: 2022080148, Roseland Creek Community Park Master Plan Project, Sonoma County

Dear Ms. Santos:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Cameron.Vela@nahc.ca.gov.

Sincerely,

Cameron Vela

Cameron Vela
Cultural Resources Analyst

cc: State Clearinghouse

August 17, 2022

Eddie Alvarez, Vice Mayor – elavarez@srcity.org
Jen Santos, Deputy Director, Parks and Recreation Department - JSantos@srcity.org

RE: Environmental Impact Report for Roseland Creek Community Park – An Urban Wilderness in Roseland

Dear Mr. Alvarez and Ms. Santos,

For the last 20 years many members in west Roseland have envisioned and worked towards the creation of a nature-centered park for the Roseland Creek Community Park. Tens of thousands of volunteer hours have been contributed to yearly park cleanups, ongoing trash removal, regular oversight to report crime and homeless encampment, attendance at endless public agency meetings to speak in favor of this project, and relentless advocacy work with staff and officials in the Santa Rosa Parks Department and City Council, County board of supervisors, Sonoma County Ag & Open Space District, and state and federal legislators. Volunteers from the California Native Plant Society lead invasive plant removal projects and are committed to restoration of the parcel north of the creek. Lastly, Land Paths and the Laguna Foundation have also expressed their intentions to sponsor outdoor education programs utilizing this Open Space preserve. Students from two schools are currently learning science and collecting data in the park.

The City is now preparing in EIR that will address potential environmental impacts from development of the park. Of the 21 categories that have to be addressed under the California Environmental Quality Act (CEQA), we have comments on three of those issues, Hydrology and Water Quality, Transportation and Utilities and Service Systems.

The vision for this park by the neighborhood always has been and still is to preserve and enhance the natural features of this land as a place easily accessible to the residents of Roseland where people of all ages can experience the joy and renewal of being in nature and provide a setting for environmental education for the children of Roseland.

The following comments are based on the July 8, 2021, Master Plan.

Hydrology: Roseland Creek contains approximately 170 linear feet of concrete that lines the bed, but not the bank, of Roseland Creek in the eastern portion of the site. Although the City has a Citywide Creek Masterplan that envisions restoration of Roseland Creek, whose headwaters are located at the Railroad tracks near West Barham Avenue where the creek passes through private parcels in Roseland for three blocks before passing under McMinn Avenue and entering the park property, there is no proposed restoration for this portion of Roseland Creek. In the City's 2006 Citywide Creek Master Plan Hydrologic/Hydraulic Assessment (srcity.org/DocumentCenter/View/13817/AppendixF---Hydrologic Assessment), it states, "The Roseland Creek flood control channel downstream of Hearn Avenue was constructed by the Sonoma County Water Agency in the 1970s. The channel was designed to convey a 25-year storm with no overflows. The 100-year storm causes overflow into the Naval Creek watershed (EIP Associates, 1984)." This does not address the climate change forces that are now causing flash floods.

Restoration of this portion of Roseland Creek is an important precursor to the downstream health of Roseland Creek and her environs in that it will mitigate the sediment source within the project area and restore the historical channel and creek bank morphology. Although there is a proposed Draft Roseland Creek Restoration Plan (srcity.org/DocumentCenter/View/13806/Appendix I---Roseland Creek Restoration Concept Plan), no mention of the cement lining was made and no provisions for restoring the creek in this portion are identified and the plan was created in 2004.

The plan continues to state, "Returning the creek to its historic alignment is not possible due to development after the creek was relocated and channelized. The planned channel alignment would reduce the overall channel length and create a cross sectional area capable of moving sediment downstream." However, if the channel length is shortened to allow

moving sediment downstream, then there will be a problem when the Roseland area has a large storm. The culverts under Burbank Avenue are undersized for large storms now, which are only gauged for 25-year storms events, which was based on data established in 2004.

We envision a different concept for Roseland Creek in the park. There should be more meanderings, with potential off channels, placed within the creek channel instead straightening the creek. This will allow for the water to slowly percolate back into the ground instead of being pushed down into the channelized portion of Roseland Creek which occurs west of Stony Point Road. It will also mitigate the potential for flash flooding along Roseland Creek in our now modified Mediterranean climate, where drought and flash flooding will be the new normal.

We would like to see a revised hydrology (flow rate) and hydraulics (flow stage and velocity) for this portion of Roseland Creek. The analysis must be conducted for today's climate and conditions. All potential flooding from atmospheric river conditions and the effects of atmospheric river conditions exacerbated from droughts must be analyzed by today's standards.

Recreation: A new 6-acre public park is proposed on Dutton Avenue on the south side of Hearn Avenue. The City has stated that playing fields, possibly a swim center, and a library along with a new fire station will be located on this new City parcel. It is inappropriate to have basketball courts in a nature education park such as Roseland Creek Park. These should be removed from the south side of Roseland Creek and placed in the new park off Dutton Avenue.

Transportation: A total of 36 parking spaces are proposed in the Master Plan. The Roseland Creek Elementary School is located across the street and can provide parking on the weekends. During the week, adults can walk to the park to enjoy the nature. The Nature Center and Outdoor Classroom in this environmentally sensitive location is appropriate. This park is close to three elementary schools, a middle school and a high school; it provides an excellent opportunity accessible by walking for outdoor classroom activities during the school day. We recommend that the parking spaces on the southern half of the park be removed, and only emergency vehicle access be allowed for this area for health and safety reasons.

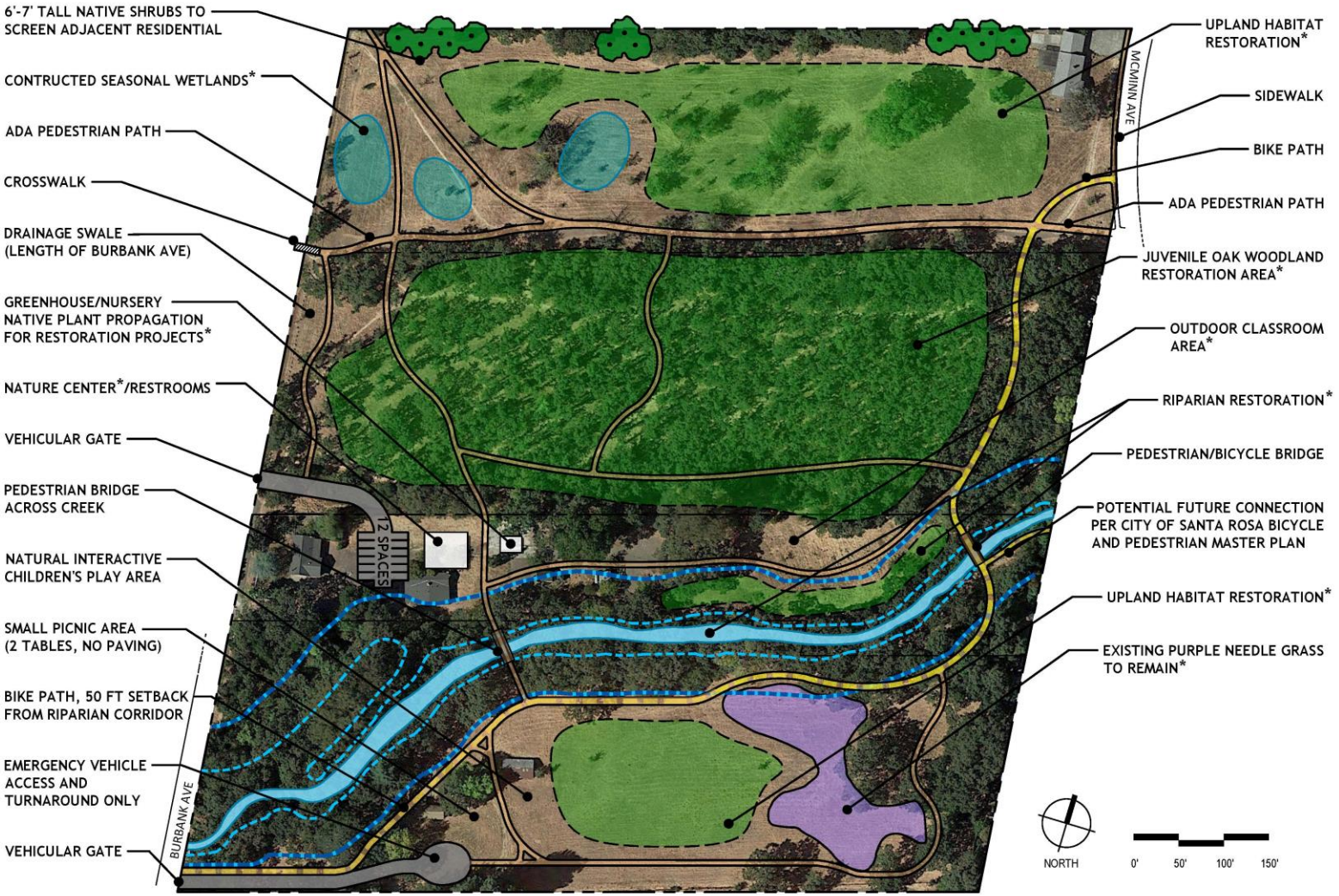
Utilities and Service Systems: There is no water or sewer hook-up on Burbank Avenue. Bathrooms in other parks have not been open so it is pointless putting in restrooms that cannot be used and have no hook-up to the sewer.

We know that our vision for this park does not fit a typical, city park model, but it will fill other needs for the people of Roseland which are just as important and can only happen in an area where the plant and animal communities are intact. The neighbors have created a *Roseland Creek "Neighborwood" Preserve, Master Plan Proposal, July 2019* that we have attached.

This is not the last area for development of a park in Roseland, but it is one of the last areas for saving a bit of nature in our urban area.

Sincerely,

Trish Tatarian
1119 Burbank Avenue
Santa Rosa, CA 95407



ROSELAND CREEK NEIGHBORWOOD PRESERVE
MASTER PLAN PROPOSAL

JULY 2019

*TO ENHANCE ECOLOGICAL SERVICES AND EDUCATIONAL OPPORTUNITIES