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Via E-Mail and U.S. Mail

Brian Oh
Comprehensive Planning Manager
Permit Sonoma
County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403
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Re: Notice of Preparation for the Sonoma Developmental Center Specific Plan

Dear Mr. Oh:

Thank you for the opportunity to provide comments on the Notice of Preparation ("NOP") for the Environmental Impact Report ("EIR") for the Sonoma Developmental Center Specific Plan Project ("Project"). We submit these comments on behalf of the Sonoma Land Trust, a local, non-governmental, nonprofit organization with the mission to protect the scenic, natural, agricultural and open landscapes of Sonoma County for the benefit of the community and future generations.

Sonoma County is one of the most beautiful and biologically diverse areas in the United States. In recent years, however, the County has been hard-hit by a rapidly changing climate, particularly in the form of catastrophic wildfire and flooding events. The Sonoma Land Trust firmly believes that with intelligent planning, the Sonoma Developmental Center ("SDC") property can play a pivotal role in protecting our County's ecological and recreational values for future generations. Additionally, because SDC is state owned, the Project presents a rare opportunity for California to take a leading role in demonstrating how redevelopment projects can deliver climate resilience, biodiversity, and housing that meets the needs of the community. As currently proposed, however, the Sonoma Land Trust is concerned that the Project will have significant and as-yet unidentified impacts to the local environment—most notably to wildlife connectivity and wildfire—and will not meet affordable housing goals.

As an initial matter, the Project described in the NOP is too abstract and too uncertain to facilitate informed environmental review or allow for meaningful comments on the NOP or the Project. It omits needed information about the Project and its probable environmental impacts.

Next, any EIR prepared for this Project must fully identify, avoid, and mitigate impacts to wildlife and the surrounding community. The Legislature has given the County clear mandates to preserve the biological and ecological value of the SDC property and to provide affordable housing for County residents. Gov. Code 14670.10.5. Meeting these mandates is imperative given the ecological significance of the Sonoma Valley Wildlife Corridor ("Wildlife Corridor")—which depends on the SDC property to connect critical habitat throughout the region—and the dearth of affordable housing in the area.

It is therefore crucial that the EIR use the best available science to ensure this Project will truly minimize its impact upon natural resources and wildlife while prioritizing affordable housing over market-rate alternatives. Without such diligence, this Project cannot meet the shared goal of the state and the County to re-invigorate the historic SDC as a "…vibrant and sustainable community," which includes the ability of wildlife to use and disperse through SDC.[1]

Finally, the Sonoma Land Trust is concerned that the NOP proposes levels of development that are inappropriate for the Project site. The SDC site simply cannot support the maximum 1000 units and large-scale non-residential development proposed in the NOP. Only a more reasonable and targeted approach to residential and commercial development—450 or fewer units with a majority allocation for affordable housing and a substantial reduction in commercial square footage—will enable the County to meet its legislative mandate to provide for both the permanent protection of natural resources and the creation of affordable housing.

[1] NOP at 3 (quoting Draft Vision and Guiding Principles, January 2021); *see also* Draft Vision and Guiding Principles at 5 (Integrating development with open space conservation requires the Project to "maintain[] and enhance[] the permeability of the Sonoma Valley Wildlife Corridor for safe wildlife movement throughout the site"), available at https://static1.squarespace.com/static/5e44526401cadd5712640ee4/t/6008742c55e7d85373c25017/1612459730137/Sonoma-Developemental-Center-Vision-Guiding-Principles.pdf.

I. The NOP Lacks Necessary Information Regarding the Project and Its Probable Environmental Impacts.

A valid NOP must provide the public and reviewing agencies "with sufficient information describing the project and the potential environmental effects to enable the responsible agencies to make a meaningful response." CEQA Guidelines § 15082(a)(1).[2] At minimum, this information includes a description of the project, a description of the project location, a description of the project's probable environmental effects. *Id.* The NOP here, however, fails to provide this information and therefore fails to facilitate meaningful comments on the Project and the scope of the EIR.

A. The NOP Fails to Identify a Concrete Project.

A clear, stable, and comprehensive project description is the sine qua non for meaningful environmental review. *See County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185; *see also* CEQA Guidelines § 15124. Without it, the public cannot be assured that the environmental impacts of the entire Project will be considered in the EIR. Additionally, CEQA requires that a project be defined to include "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." CEQA Guidelines § 15378(a). Improperly delaying review of certain project details or breaking a project into smaller sub-projects leads to inadequate environmental review. *See, e.g., Bozung v. Local Agency Formation Comm'n* (1975) 13 Cal.3d 263, 283-84 (CEQA mandates that "environmental considerations do not become submerged by chopping a large project into many little ones").

The Project described in the NOP is neither clear nor stable. Most significant, the NOP states that the Project could include a vast range of housing—anywhere from 450 to 1000 units. Further, while the NOP indicates that the Project will include affordable and market rate housing and that such housing will comprise "small-lot single-family and attached housing, multifamily housing, and 'missing middle' housing that reflects the needs of Sonoma County community and workforce," the NOP gives no indication of how these various housing types might be apportioned. A 450-unit Project would be fundamentally different than a 1000-unit Project. Likewise, a Project that prioritizes affordable, multifamily housing could have substantially different impacts than a Project that prioritizes market-rate, single-family homes.

[2] The CEQA Guidelines are located in Title 14 of the California Code of Regulations.

Similarly, the NOP asserts that the Project will include a "non-housing development program" consisting of small commercial uses, visitor- and community-serving uses, and public and community uses. But the NOP provides no information about the size, scope, or proposed mix of these uses, except that they will be located within the core campus. A Project that prioritizes a small amount of resident-serving commercial and community services could have significantly different impacts than a Project that prioritizes large-scale, visitor-serving commercial enterprises.

Even if the County could justify its decision to proceed with environmental review before selecting a preferred development proposal, that decision has significant implications for the design of the EIR. Specifically, because the EIR must identify a specific project and analyze its specific impacts, the EIR cannot treat housing or other Project features as a plug-and-play set of alternatives. *Washoe Meadows Community v. Department of Parks & Recreation* (2017) 17 Cal.App.5th 277, 288. Instead, all possible variations of the Project must be fully described and separately evaluated so that the public may understand fully what each variation of the Project would ultimately entail. *South of Market Community Action Network v. City and County of San Francisco* (2019) 33 Cal.App.5th 321, 333-36. Based on the current NOP, the County needs to analyze complete and concrete Project variations at appropriate intervals of residential development between 450 and 1000 units (e.g., 450 units, 600 units, 800 units, and 1000 units). This analysis must be separate and distinct from the alternatives analysis required by CEQA.

The NOP also lacks other information necessary to describe the Project. For example, the NOP neither describes the location of proposed land uses within the Core Campus Development nor provides a map to show locations of uses or square footage. The NOP does not provide any information about the scope or location of residential, commercial or industrial uses proposed for the site. And while the NOP proposes "[p]otential creation of a new vehicular route to connect Arnold Dr and Hwy 12," it provides no information about where said route might be located and fails to establish the intensity of use of that route.[3] Finally, the NOP states that the Project will "include policies to govern the retention and preservation of the open space surrounding the 180-acre core campus," but provides no information about those policies or their objectives.[4] As a result of this lack of detail, the Sonoma Land Trust, commenting agencies, and the

[3] NOP at 5 (suggesting the road might be used only for emergency vehicle access (lower intensity of use) or might be used for "full time multi-modal access" (high intensity of use)).
[4] *Id.*

public are left with very little understanding of what the Project will look like at build-out or how it will work.

The NOP's lack of detail also obscures whether and how the Project might meet (or fail to meet) its stated objectives. For example, the sustainability goals for this Project include a focus on non-motorized modes of transportation within and between the Project area and local communities. However, the preliminary site maps do not demonstrate any such connections. Creating walkable and bikeable connections to Glen Ellen (including Eldridge) will be critical to encouraging non-motorized forms of transportation. These connections will therefore be key to meeting the Project's stated goals with respect to sustainability and community character.

Similarly, the NOP fails to describe where proposed roads and other infrastructure could be located or what level of service that infrastructure would need to support. These omissions compound the NOP's failure to select a concrete Project, since a high-density Project could have substantially different infrastructure requirements than a low-density Project.

The NOP's failure to describe a concrete Project demonstrates that the County has not done the preliminary analysis required to determine what the Project should be. Identifying this information with specificity is critical before the County can move forward with the Project, because the uses and features included in the Project will necessarily determine the type, scale, and scope of the Project's environmental impacts and will inform decisions about mitigation. For example, the County must determine what residential, commercial, and other development will be included in the Project and where that development will be located before it can analyze the Project's impacts to existing residential neighborhoods that abut the southern edge of the SDC site.[5] Similarly, the County needs to understand the Project's development boundaries before it can analyze the impacts to and necessary buffers from the Wildlife Corridor and riparian habitat. The County thus cannot proceed with environmental review until it defines a concrete and stable Project.

B. The NOP Does Not Describe the Project's Probable Environmental Impacts

The CEQA Guidelines specify that an NOP shall include a description of the probable environmental effects of the project. CEQA Guidelines § 15082; *see also* Practice Under the California Environmental Quality Act (2d ed Cal CEB), § 8.16 (The

[5] *See, e.g.,* NOP at Fig. 2.

NOP should describe these effects "in some detail."). Here too, the NOP fails to meet CEQA's mandate. The NOP does not provide a description of the Project's probable environmental effects. Instead, it only provides a list of "issue areas" that would be analyzed in the EIR—essentially a checklist of the topics required for any CEQA analysis.[6]

The NOP's list suggests that the Project may have environmental effects related to air quality, biological resources, geology and soils, greenhouse gas emissions, hydrology and water quality, land use planning, noise and vibration, recreation, Tribal cultural resources, transportation and traffic, and wildfire hazards, among others. *Id.* But the NOP makes no effort to identify what those probable effects might be, or even to identify what resources, conditions, or people might be affected, or identify how they will be addressed in the EIR. *Id.* For example, a variety of biological communities and habitat types occur in the Project area—most notably the Sonoma Valley Wildlife Corridor. The NOP provides no indication as to the extent of impacts to these communities and habitats. The NOP also does not identify proposed study areas (which will differ by species), thresholds of significance, or potential mitigation measures. Similarly, the NOP does not disclose the Project's likely impacts to traffic and transportation. Full identification of how the EIR will address these impacts is especially critical here, given the enormous range of housing development, large-scale commercial development, and the potential new road that could be included with the Project. Without more information, the reviewing agencies and interested parties cannot provide a "meaningful response" to the NOP, the Project's likely impacts, or the scope of the EIR. CEQA Guidelines § 15082(a)(1).

II. The County Cannot Rely on a Programmatic EIR to Avoid Analyzing Project Components or Impacts.

The "programmatic" nature of the proposed EIR is no excuse for a lack of detailed analysis. CEQA requires that a program EIR provide an in-depth analysis of a large project, looking at effects "as specifically and comprehensively as possible." CEQA Guidelines § 15168(a), (c)(5). Because it looks at the big picture, a program level EIR must provide "*more* exhaustive consideration" of effects and alternatives than an EIR for an individual action, and must consider "cumulative impacts that might be slighted by a case-by-case analysis." CEQA Guidelines § 15168(b)(1)-(2) (emphasis added).

Further, it is only at this early stage of the redevelopment of SDC that the County can design wide-ranging measures to mitigate County-wide environmental impacts. *See*

[6] NOP at 5-6.

CEQA Guidelines § 15168(b)(4) (programmatic EIR "[a]llows the lead agency to consider broad policy alternatives and program wide mitigation measures at an early time when the agency has greater flexibility."). A "program" or "first tier" EIR is expressly *not* a device to be used for deferring the analysis of significant environmental impacts. *Stanislaus Natural Heritage Project v. County of Stanislaus* (1996) 48 Cal.App.4th 182, 199. It is instead an opportunity to analyze impacts common to a series of smaller projects, in order to avoid repetitious analyses. Thus, it is particularly important that the EIR for the Project provide detailed and comprehensive analysis of the existing conditions and the full range of development proposed by the Specific Plan, rather than deferring such analysis to when specific development is proposed at a later time.

III. The EIR Must Define Clear Project Objectives That Include Consistency With Applicable Legislation, Policies, and Guiding Principles.

The Project defined in the EIR and the Project ultimately adopted by the County must be consistent with the Project's Guiding Principles, the 2019 legislation governing SDC redevelopment, and all applicable state environmental mandates. The Guiding Principles require, in relevant part, balancing redevelopment with existing land uses, promoting sustainability and resiliency, balancing development with resource conservation, and promoting multi-modal mobility.[7] These principles align with the 2019 legislation governing SDC redevelopment, which provides that "[t]he disposition of the property or property interests shall provide for the permanent protection of the open space and natural resources as a public resource *to the greatest extent feasible*." Gov. Code § 14670.10.5 (emphasis added).

Additionally, myriad state laws and policies impose environmental performance standards on the Project. These include, but are not limited to:

- The AB 32 Climate Change Scoping Plan to reduce greenhouse gas (GHG) emissions by 40 percent below 1990 levels by 2030 and to achieve carbon neutrality by mid-century;
- State water conservation and energy conservation/efficiency mandates for new communities and construction;
- Executive Order N-82-20, which establishes the state's goal to conserve at least 30 percent of California's land and coastal waters by 2030; and

[7] NOP at 3-4.

- Executive Order N-06-19, which prioritizes affordable housing development on excess state lands.

The EIR must establish clear Project objectives that include (1) compliance with the Guiding Principles, (2) compliance with Government Code section 14670.10.5, and (3) consistency with state law and executive orders to ensure the Project does not include uses that run counter to state priorities.

IV. The EIR Must Analyze the Project Against an Appropriate Baseline

Before it can analyze the Project's environmental impacts, the County must select an appropriate Project baseline. CEQA requires an EIR to "include a description of the physical environmental conditions in the vicinity of the project," which "will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant." CEQA Guidelines § 15125(a). Specifically, the EIR should identify the baseline conditions as the "physical environmental conditions as they exist *at the time the notice of preparation is published*." CEQA Guidelines § 15125(a)(1) (emphasis added).

Selection of an appropriate baseline is particularly important in this case because the SDC property has been gradually vacated since the 1960s, as facility operations wound down and the facility ultimately closed.[8] In the meantime, development of the surrounding area has proceeded with reduced assumptions about the level of human activity at SDC—for example, evacuation capacity of roadways, levels of sewer service, water use, and recreation. Further, SDC's historic operations are not a reliable benchmark for the intensity of the proposed Project, as the former institutional use did not have the same level of impacts as proposed residential and commercial development. SDC residents did not drive cars and the employees operated in shifts, reducing traffic and other impacts. Estimates of this Project's impacts should therefore be made based on comparisons to recent, rather than historic, site occupation and use. *See* CEQA Guidelines § 15125(a)(1) ("The purpose of this requirement is to give the public and decision makers the most accurate and understandable picture practically possible of the project's likely near-term and long-term impacts.").

[8] Sonoma Developmental Center Existing Conditions Assessment, Chapter 6 at 200 (noting that growth "reversed in the 1960s owing to a national trend towards deinstitutionalization"), available at https://transformsdc.files.wordpress.com/2020/01/1-chapter6.pdf; Plan for Closure of the Sonoma Developmental Center, California Health and Human Services Agency, October 1, 2015, at 16 (by May of 2015, SDC served only 405 residents); Gov. Code § 14670.10.5(a)(4) (SDC ceased all residential operations in 2018).

V. The EIR Must Thoroughly Analyze the Project's Probable Environmental Impacts and Adopt Appropriate Mitigation.

With respect to Project impacts, the EIR must not repeat the NOP's mistakes; instead, the EIR must scrutinize in detail and with particularity the Project's significant environmental effects, develop meaningful thresholds, and adopt appropriate mitigation.

A. Biological Resources and Wildlife Corridor

SDC lies in the heart of the Sonoma Valley Wildlife Corridor. The Wildlife Corridor encompasses over 10,000 acres of land stretching from Sonoma Mountain east across Sonoma Valley to the Mayacamas Mountains. It is a key linkage in a larger corridor from coastal Marin County to eastern Napa County. SDC lies at the heart of the Corridor. Since the 1990s, the Sonoma Valley Wildlife Corridor has been recognized as an area of significant wildlife presence and movement. The critical linkages and wildlife use have been well established by the scientific community.[9] Maintaining the integrity of the Corridor and the ability of wildlife to use and disperse through SDC is therefore critical to meeting the Project's sustainability goals.

Various studies have documented wildlife use patterns within SDC and the larger Wildlife Corridor, including data collected on local mountain lion populations by True Wild,[10] wildlife crossing patterns under Highway 12,[11] and evaluations of the existing recreation impacts on SDC.[12] A review and summary of wildlife and movement conditions was also prepared as part of the Department of General Services' existing conditions analysis.[13] From these and other data,[14] it is evident that the north section of

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[9] Bay Area Open Space Council. 2011. The Conservation Lands Network: San Francisco Bay Area Upland Habitat Goals Project Report. Berkeley, CA; Penrod et al. 2013. Critical Linkages: Bay Area & Beyond. Produced by Science & Collaboration for Connected Wildlands, Fair Oaks, CA in colloboration with the Bay Area Open Space Council's Conservation Lands Network.
Merenlender et al. 2010. Mayacamas Connectivity Report.

[10] *Tracking Your Local Lions*, True Wild, available at https://www.truewild.org/blog/tracking-your-local-lions.

[11] Sonoma Land Trust. (2014). Sonoma Valley Widlife Corridor Project: Monitoring and Management Implementation Strategy. Santa Rosa, CA.

[12] Dertien, J. et al. 2018. Adaptive Management Strategy for Science-Based Stewardship of Recreation to Maintain Wildlife Habitat Connectivity. A report to the Sonoma Land Trust.

[13] WRT. 2018. Sonoma Developmental Center Existing Conditions Assessment: Natural and Recreational Resources Assessment; section prepared by PCI. Prepared for California Department of General Services. https://transformsdc.files.wordpress.com/2020/01/2-cnaturallandrecreationalresourcesv3.pdf.

[14] *E.g., id.* at Exh. 6 (Fig. 6, Map of SDC Sensitive Natural Resources). For convenience, a copy of this map is attached hereto as Attachment A.

SDC is likely the most permeable and viable part of the linkage for wildlife to traverse. That section contains fewer human structures, it contains a confluence of creeks (which often serve as "animal highways"), and it connects the wetlands on the western and eastern sides of SDC. Preserving this northern linkage and removing existing buildings that encroach on the linkage will be key to reducing the Project's impacts to wildlife. The Project should also include protective buffers along Hill Creek, as well as measures to protect the southeast portion of the site where the connector to Highway 12 is proposed (including Butler Canyon Creek and the north-south extent of the large wetland).[15]

Nevertheless, there are significant information gaps regarding wildlife use at SDC that must be resolved to understand the scope of impacts from the proposed redevelopment. Obtaining this information will be critical to informing protection areas, buffer sizes, levels and location of development, and appropriate best management practices or improvements to avoid or minimize Project impacts.

The County should first identify the information gaps that need to be filled in order to determine the impacts of the Project. For example, a detailed study is needed to establish a baseline of wildlife use on SDC prior to redevelopment. An appropriate study would provide site specific information on wildlife presence, diversity, abundance, and distribution on the property (both within the core campus and open space areas). The study should include maps showing usage patterns and key locations, particularly as related to established buffers, protected areas, and recommend best management practices or adaptation measures that maintain habitat quality and Wildlife Corridor function, in relation to changes in current use. The Sonoma Land Trust has plans and a scope for one such study, which would install wildlife cameras on and around SDC. The Sonoma Land Trust would welcome the opportunity to partner with the County and Department of General Services to conduct wildlife studies as part of the EIR process so that the resulting data can inform the EIR and inform how best to minimize or avoid biological impacts, including through limitations on the footprint and intensity of development at SDC.[16] The County should also compile and formalize existing data (e.g., mountain lion tracking data, citizen science monitoring through iNaturalist and Sonoma Ecology Center) to guide SDC redevelopment.

The CEQA analysis should focus on multiple selected target species (e.g., mountain lions) and/or guilds (e.g., migrant songbirds) that will serve as effective

[15] A map of existing development overlayed with potential buffers prepared for Sonoma Land Trust is provided in Attachment B to this letter.
[16] Sonoma Land Trust has prepared a scope of work for proposed research, which is attached hereto as Attachment C.

indicators for evaluating impacts on all native wildlife. In particular, analysis should focus on disturbance-sensitive species.[17] Wildlife impacts will need to be evaluated for a variety of disturbance mechanisms, including:

- Habitat loss
- Roads and road effects
- Noise
- Artificial light
- Trails
- Human and domestic animal presence, and
- Effects of increased wildfire risk and fuel management/vegetation clearing

The EIR must also analyze Project impacts against relevant and meaningful significance thresholds. The EIR should use quantitative ecological performance standards to guide planning, and should analyze the proposed development relative to those standards. For example:

- Redevelopment of SDC should not increase interference with wildlife movement and use within the property or across the larger corridor;
- SDC redevelopment should not result in the reduction of wildlife species diversity and abundance; reduce the quantity and quality of native habitat or other wildlife use areas; or fragment, eliminate or otherwise disrupt wildlife use;
- The Project should not produce new sources of light or noise that would impair wildlife's use of the Corridor;
- The EIR should incorporate creek setbacks at widths that protect wildlife and maintain or improve water quality, riparian habitat, and connectivity; and

[17] Brodie et al. 2014. Evaluating multispecies landscape connectivity in a threatened tropical mammal community. https://conbio.onlinelibrary.wiley.com/doi/abs/10.1111/cobi.12337?campaign=wolearlyview.

- The EIR should ensure that levels of human activity and intensity of use related to the Project do not harm key wildlife species in and around the Corridor or impair wildlife's use of the Corridor.

To the extent the EIR identifies significant impacts, it must analyze and adopt appropriate mitigation. For example, the landscape matrix within the Corridor should be improved to mitigate for any proposed redevelopment and human encroachment, buffer widths along existing corridors should be improved and expanded to shield wildlife from nearby development, and crossings through SDC and beyond the property should be enhanced to facilitate safe movement.

Finally, the EIR should consider and address design measures to protect or improve wildlife movement within SDC and the Wildlife Corridor. Such measures include:

- Minimizing the development footprint, consolidating it toward the center of the current developed area and providing adequate buffers along the Corridor, Sonoma Creek, and other important riparian and wildlife movement areas;

- Planning for human presence on the site that is similar in intensity to that of SDC in recent decades,[18] in terms of residential uses as well as office/commercial and agricultural uses;

- Preventing conversion of native land cover to developed or agricultural uses;

- Limiting fencing within SDC and requiring the use of wildlife-friendly fence designs where needed.[19] Prohibiting fencing that crosses or bisects streams, or otherwise discourages use of safe passages;

- For wildfire protection, requiring that all new structures meet the highest standards for ignition resistance. Meeting but not exceeding fire safe

[18] Prior to facility closure, the site supported approximately 415 clients living there, 470,000 sf of client housing, 49,000 sf staff housing, and 643,400 sf offices, shops, etc. California Department of Developmental Services. (2012). Sonoma Developmental Center Building Use Survey. Department of Developmental Services. October 2012.

[19] *See* Sonoma Land Trust. 2014a. *Sonoma Valley Wildlife Corridor Project: Monitoring and Management Implementation Strategy, June 2014 draft;* Hanophy, W. 2009. *Fencing with Wildlife in Mind*. Colorado Division of Wildlife, Denver, CO. http://www.ext.colostate.edu/sam/dow-fencing.pdf.

vegetation maintenance guidelines. Leaving wildlife habitat beyond the defensible space zone intact;

- Prohibiting the use of pesticides and rodenticides;
- Engaging in ongoing monitoring and/or collaborating with partners to evaluate changes to natural resources and wildlife use with changing land use;
- Minimizing human presence at night;
- Limiting outdoor night lighting; see above. Keeping lighting to the minimum needed for safety, only within 25' of buildings, as low as possible, pointed toward the structure or immediate ground, and using the lowest wattage possible. Using narrow spectrum bulbs to reduce the range of species affected by lighting. Using fixtures that are Dark Sky Friendly, meeting the International Dark-Sky Association standards;
- Requiring bird-friendly building design[20] (e.g., require bird-safe glass on buildings and other materials to reduce bird strikes; require a "lights out" policy to reduce light pollution from indoors); see above outdoor lighting measures;
- Reducing noise pollution by designing buildings with appropriate acoustic parameters to avoid interfering with wildlife;
- Not allowing pets to be outside unrestrained;
- Educating residents about living within the Wildlife Corridor;
- Planning for no or only low-intensity agricultural uses in key wildlife areas including the large wetland on the east side of the property;
- Engaging with livestock operators to address any concerns of predation by native wildlife, and seek solutions compatible with resource protection;

[20] *Bird Friendly Building Design*, American Bird Conservancy, available at https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide_LINKS.pdf.

- Avoiding nighttime agricultural work (often done in vineyards and not compatible with the Corridor);
- Decommissioning unneeded or duplicative roads, driveways, buildings, and trails;
- Improving undercrossing conditions; see Wildlife Crossings section of PCI (2018);[21]
- Improving wildlife permeability along the site's south-central border with increased setbacks, improved native cover, and non-native cover removal;
- Removing instream barriers to wildlife movement;
- Removing relic fencing on the property;
- Incorporating native plants into new landscaping and when replacing declining ornamentals;
- In bridge/undercrossing design, including some upland above the scour zone of streams for winter crossing; and
- Creating native plant hedgerows in or along cultivated fields to provide cover for small and medium size wildlife.

B. Traffic and Transportation

Roads can have a significant impact on wildlife and their habitat. They are one of the greatest threats to wildlife connectivity and biodiversity, resulting in habitat loss, degradation, fragmentation, direct mortality, and road avoidance behaviors. Any proposed redevelopment plan for SDC will require some new road development—even if only for emergency access—as well as significant changes in traffic volumes. Increased traffic through the property on Arnold Drive will put tremendous pressure on wildlife. Additionally, development of new roadways (e.g., on the east side of SDC) will impair existing ecological connections across the Sonoma Valley Wildlife Corridor.

Wildlife movement within SDC and across the Corridor is already constrained. Currently, there are only two options for wildlife to move east-west across the core

[21] PCI. 2018. Sonoma Developmental Center – Natural and Recreational Resources. Prepared for Department of Developmental Services and Wallace Roberts and Todd.

campus without having to cross the Arnold Drive roadway: along Sonoma Creek or along Hill Creek. Along the eastern edge of SDC, safe wildlife crossing of Highway 12 is limited to three culverts on Butler Creek and its tributaries. These small crossings under Highway 12 are the most critical locations for wildlife moving east-west across Highway 12 both within SDC and on nearby lands.[22] High levels of wildlife movement have been documented at all three of the culverted crossings. Increasing wildlife usage constraints to any of these east-west movement opportunities will have significant impacts on wildlife.

Without data about traffic increase, new road construction, or road improvements as a part of this Project, there is no basis for understanding how SDC redevelopment will impact wildlife use and habitat. Determining expected traffic volume and timing patterns compared to *recent* usage and roadway locations will help define the level of impact associated with redevelopment. Any studies related to wildlife should be informed by proposed alternatives for changes in road or traffic conditions. Additionally, information on wildlife road mortalities is needed to assess changes associated with increased traffic volumes and new roadways.

Through Project design or mitigation, the EIR should ensure that new road construction, increased traffic volumes, and traffic speeds on SDC do not increase interference with wildlife movement and use within the property or across the larger corridor or result in increased road mortality. Development and human activities should be limited near the crossing structures. In particular, the EIR should:

- Limit new road, driveway, and trail construction, especially outside the core campus area;
- If new roads are constructed or old roads upgraded, incorporate crossing structures to accommodate wildlife. Install speed bumps and wildlife crossing signage at critical junctures;
- Prohibit street lighting near crossings to facilitate wildlife use;
- Keep speed limits and traffic speeds low (25 miles per hour maximum); and

[22] Otherwise, wildlife need to move a mile or more to access other crossings—1 mile to south to the next sizable crossing on Wilson Creek and 1.5 miles to north the next sizeable crossing on Stuart Creek.

- Require ongoing maintenance of crossing structures. Culverts should be checked periodically for debris, vegetation overgrowth, and other blockages.

Finally, the EIR must separately address impacts from the proposed new road, which will traverse open space and historic agricultural land. The EIR must specifically address how the road conflicts with the General Plan designation and policies applicable to the SDC site, as well as how the County proposes to remedy these conflicts.

C. Riparian Corridors and Wetlands

The riparian corridors along Sonoma Creek, Asbury Creek, and Hill Creek and extensive wetlands on the SDC property represent environmentally significant areas that should be preserved to the maximum extent possible. These areas are important to the migration of aquatic and terrestrial species, the movement of flood flows, the recharge of groundwater, the quality of water in streams and groundwater, carbon sequestration, and the aesthetic quality of the property. Some of the proposed development plans for the Project include development to within 50 feet of Sonoma Creek and a much narrower corridor along Hill Creek.[23] Asbury Creek is better protected as it flows through open space areas of the property. However, expanded setbacks along Sonoma and Hill Creeks would support more functional east-west wildlife movement, better water quality protection, absorption of high flows, and groundwater recharge, as well as enhancing aesthetic and recreational values. The proposed riparian corridors should also be re-evaluated in light of changing flood magnitudes and frequencies under climate change and the potential for debris blockage at bridge crossings to exacerbate flood hazards, which could be worse than the FEMA model indicates.[24]

Further, Sonoma Creek and several of its tributaries have historically supported large steelhead runs and continue to be highly ranked among Sonoma County streams for remaining steelhead habitat. The creek also supports federally and state endangered California freshwater shrimp and other special-status wildlife. Maintaining the volume, timing, and water quality of stream flows, especially during the summer and fall low-flow season, is critical to the health of these federally listed salmonids and other special-status species. There is the potential to restore habitat that would support steelhead and

[23] SDC Alternatives Report, Figure 2.2-1.
[24] Sherwood Design Engineers. January 2018. Sonoma Developmental Center Existing Conditions Report Hydrology and Site Infrastructure Draft, at 63.

other aquatic species in Hill Creek and Asbury Creek if existing barriers to migration were removed.

Wetlands on the SDC property similarly provide a number of valuable functions, including habitat for numerous aquatic species, wildlife migration and refuge, groundwater recharge, water quality improvement, and open space aesthetic value. Like streams, the values and functions of wetlands are strongly influenced by the nature of the transition from upland to aquatic habitat along their boundaries and are enhanced by buffering that protects these sensitive landscapes from encroachment. Healthy, functioning wetlands depend on limited impacts in the wetlands area and buffer zone, including hydrologic impacts (e.g., reduced infiltration and increased rapid runoff in storm events from impervious surfaces, water diversions from wells or springs) and direct wildlife impacts (e.g., habitat fragmentation, light, noise).

SDC redevelopment has the potential to significantly alter the function and quality of riparian zones, streams, and wetlands. CEQA analysis should include assessments of current impacts and future opportunities, including impacts from existing stormwater management and raw water sourcing on streams, wetlands, and riparian corridors as a basis for future design considerations; restoration of aquatic habitats, such as removal of fish migration barriers; assessment of stream flows under changing land use and climate (magnitude and frequency of drought and floods), and improved wildlife and fisheries habitat and movement corridors with expanded setbacks.

To minimize Project impacts on key resources, the EIR should ensure that riparian and wetland buffers are established and maintained around all springs, streams, and wetlands at a width that protects ecological functions, such as wildlife habitat and species diversity, movement of stream flows, ground water recharge, and water quality protection. Buffers should be managed so that they support continuous stands of healthy native plant communities, including understory, along the maximum length feasible. Additionally, all major sources of disturbance (e.g., impervious surfaces, public access, increased noise or light, human or domestic animal intrusion, concentrated runoff) should be limited within riparian and wetland buffers such that no significant impacts to environmental functions and values result. Finally, the EIR should ensure there is no net loss of wetland area or wetland functional and habitat value, either through direct or indirect impacts to wetland vegetation, degradation of water quality or hydro period (quantity, quality, and timing of surface and groundwater flows through wetland systems), impacts to wetland-dependent animal or plant species, or encroachment within the wetland buffer.

Additional mitigation should enhance the riparian and wetland values of SDC. Such measures should include:

- Further expanding buffers from developed areas, restoring native riparian vegetation;
- Eliminating or reducing the Roulette Springs diversion to enhance wetland habitat (see Hydrology and Water Quality below);
- Setting minimum bypass flow rates and limitations on the period of diversion for all diversion points, similar in nature to the Asbury Creek diversion, based on ecological instream flow needs;
- Investigating opportunities to reduce fish passage barriers;[25]
- On lower Hill Creek, widening riparian corridor; considering laying back banks to provide floodplain access. Removing buildings adjacent to creek;
- On upper Hill Creek, managing ropes course to prevent compaction and erosion;
- Managing invasive plants, restoring native vegetation, and improving structural habitat diversity on lower portions of Asbury and Hill Creeks, and removing arundo and other invasive plants on Sonoma Creek;
- Removing concrete rubble from culverts on east side. Ensuring no dumping of materials occurs near riparian areas;
- Prohibiting dog use of reservoirs and enforcing County ordinance requiring owners to pick up dog waste;
- Completing focused surveys for foothill yellow-legged frog on Hill and Asbury Creeks; further evaluating habitat conditions and enhancement needs; and
- Coordinating with other organizations to identify sites with promise for restoring hydrologic function and providing benefits such as reduced

[25] *See* PCI 2018, *supra* n. 21.

flooding, increased groundwater recharge and retention, water quality improvement, and habitat improvement.

D. Wildfire Hazards

The Project is located in a high-risk fire zone.[26] Thus the SDC Project and EIR should include a meaningful plan to address fire risk without impairing the ecological value of the Wildlife Corridor. Vegetation management is the only strategy currently identified by the County for wildfire risk reduction for the proposed redevelopment.[27] Relying on vegetation clearance alone, however, could have significant negative impacts on natural habitat, riparian areas, wildlife, and watershed health. Additionally, vegetation clearance alone is likely not sufficient to protect buildings and habitat in the event of a wildfire.

Research has shown that the envelope from zero to five feet from a structure is the most important factor in structure survival during wildfire events, as compared to the typical one hundred feet of defensible space. As such, the use of specific construction materials and practices, utility design, emergency access, and egress should all be included as components of a design plan that protects human and natural communities. The EIR must analyze compliance with all state, federal, and local requirements for fire resistant construction, and should implement fire-resistance construction even where not required.

Additionally, the EIR should analyze in detail fire behavior and evacuation scenarios at the Project site and how the Project would contribute to and exacerbate such fire-related impacts. The analysis should describe the data used to predict fire behavior at SDC and present at least two different fire behavior scenarios. In addition, the analysis of each scenario should incorporate results from at least two different fire prediction systems (e.g., FARSITE and FlamMap). Based on this preliminary analysis, the EIR should incorporate and analyze a fire risk management plan designed to reduce the risk and harm from fire. The fire behavior scenarios should then be re-analyzed to determine the impacts if the management plan is implemented.

The fire behavior studies should also inform the EIR's analysis of community evacuations. The EIR must analyze where residents would go in the event of the different

[26] *See* CalFire FHSZ Viewer, available at https://egis.fire.ca.gov/FHSZ/.
[27] *See* Sonoma Developmental Center Vision Plan Frameworks, Potential Development Types and Outcomes, January 25, 2022, at PDF p. 41-42, available at https://static1.squarespace.com/static/5e44526401cadd5712640ee4/t/61e74c9d2280c36d5538b988/1642548391838/Board+of+Supervisors+Meeting+Materials.pdf.

likely fire scenarios and must consider the traffic impacts of any such evacuation, including the capacity of roads to handle evacuation traffic and the time delay of evacuation relative to the progression of modeled fires. Additionally, the EIR must consider evacuation of the SDC property with the cumulative evacuation of others in the County.

Finally, fire management must inform any cost/benefit and feasibility analysis performed for the Project. Wildfire at the SDC site carries a substantial risk of damaging biological resources and impairing the ecosystem services provided by the SDC site and the Wildlife Corridor. The Project's impact on the loss of ecosystem services from fire and other impacts must be captured fully in the EIR's analysis.[28]

E. Hydrology and Water

Redevelopment of the SDC site has the potential to impact the hydrology of interconnected groundwater, spring, and stream systems through changes in land cover, storm water management, and water use. Impacts may include changes to the quantity, quality, and timing of storm water runoff, infiltrated water available for vegetation and groundwater recharge, and the magnitude, frequency, and extent of critical low flows in steams and low water conditions in wetlands.

Reducing rainfall-runoff and enhancing infiltration, groundwater recharge and contribution to the base flow of tributaries and Sonoma Creek are key aspects of mitigating environmental impacts of SDC redevelopment. If the impacts of impervious surfaces are not sufficiently addressed through multiple measures, special-status aquatic and riparian zone species are susceptible to impacts due to any degradation in the volume, timing, and quality of runoff, or changes in the contribution of groundwater to summer and fall base flows.

The changes in impervious surfaces over the life of the Project, as well as temporary impacts from construction and demolition must be described sufficiently to inform the design and capacity for a stormwater drainage system or best management practices to reduce stormwater impacts. At minimum, the EIR must disclose and analyze:

- The extent of change in impervious surface footprint under this Project;

[28] *See* The Full Community Costs of Wildfire, Headwaters Economics, May 2018, available at https://headwaterseconomics.org/wp-content/uploads/full-wildfire-costs-report.pdf.

- How the change in impervious surfaces will impact the quantity and quality of discharge into Sonoma Creek or its tributaries;
- How proposed stormwater facilities will change those processes; and
- The quantitative impacts on the recharge of groundwater aquifers that will result from the Project.

The EIR must analyze these impacts in detail and should mitigate for any temporary or permanent changes from impervious surfaces by requiring the use of stormwater facilities that slow, clean, and capture water.

Extraction of raw water from streams, springs, and aquifers also has key impacts on environmental quality, including species of concern at the SDC site and beyond. Projected future water demand may fall within the limits of existing water rights, but nonetheless represents a potentially significant increase from recent demand at SDC.

Treated water demand and consumptive use estimates must be developed and presented in sufficient detail to gauge the environmental impacts of sourcing that water. The County must generate data on the volume and timing of raw water needs to serve the projected residents, visitors, recreationists, etc. at a redeveloped SDC as well as untreated, recycled, and/or treated water demand to support landscape irrigation, fire suppression, and other uses. Those projected water withdrawals should be assessed with regard to potential environmental impacts compared to the recent past—especially for sensitive and valuable aquatic resources, such as springs and streams—and to potential impacts on groundwater trends in the area. In addition, the existing redevelopment plans do not sufficiently address available water management options, such as potential for using recycled water or captured storm water to support needs such as landscape irrigation. Innovative designs, such as residential grey water systems, rooftop runoff capture, etc., could reduce the need to divert raw water from natural sources.

Next, future impacts of changes to site storm water management and water supply should be assessed in the context of ongoing and projected changes to patterns of temperature and precipitation that will affect needs and impacts of proposed development at SDC. Prolonged periods of drought combined with more intense precipitation events could disrupt hydrology (e.g., low flows or floods) and water supply. The EIR should account for supply and demand for water, impacts of intense rain events on stormwater discharge, and drought severity and duration in order to account for Project impacts.

Finally, the EIR should address impacts related to the sanitary sewer infrastructure, including: environmental impacts of necessary water treatment capacity during dry and wet weather, potential for and impacts of sanitary sewer overflow, needs for system upgrades (e.g., additional pumping plants), and comparative costs and benefits of greywater and stormwater systems relative to additional sewer capacity.

To address hydrology and water impacts, the EIR should adopt Project design features or mitigation to ensure that the Project results in:

- No substantial increase in the magnitude, frequency, duration, or extent of low-flow events or flood events on springs, streams, and wetlands located at or downstream of the SDC property that may result from changes in land cover, storm water management, and/or the volume, rate, or duration of surface run-off from the site;

- No substantial degradation of water quality (as per state and local water quality standards), including pollutant load transported by storm water runoff from the site (e.g., sediment load, nutrients, metals, and hydrocarbons) that may impact the extent and quality of aquatic habitats;

- No substantial reduction of infiltration and ground-water recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table;

- No substantial increase in water temperatures in receiving streams resulting from runoff of warm storm water from the site;

- No net increase in withdrawals or diversions from area springs and streams, including Roulette Springs, Hill Creek, Asbury Creek, and Sonoma Creek, within critical low-flow periods (summer, fall, drought conditions) or as annual averages; and

- Maximum possible on-site reuse of treated wastewater as water supply for landscape irrigation, groundwater recharge, or other water supply needs, to minimize environmental impacts of raw water sourcing.

F. Air Quality and Greenhouse Gas Emissions

The EIR should include an evaluation of the Project's contribution to toxic and other air contaminants, how the Project might exacerbate existing problems, and potential

impacts to at-risk populations. At minimum, the EIR should consider the Project's consistency with air quality plans and regulations, the Project's contribution to criteria and other air pollutants, the potential of the Project to expose sensitive receptors to substantial pollutant concentrations, and the Project's potential to create objectionable odors. CEQA Guidelines, Appendix G.

Further, the EIR must accurately identify the Project's contribution to GHG emissions and adequately analyze how the increase in emissions would contribute to climate change. In addition to analyzing the Project's direct emissions, the EIR must consider the loss of both soil-based and above ground carbon sequestration from any increase in the existing hardscape at the SDC site, including but not limited to vegetation clearance and new cover for roads, parking lots and structures. The EIR must also consider emissions from construction of the Project and demolition activities that will be necessary to facilitate new construction. It will be critical that the mitigation measures for the Project ensure that GHG emissions are reduced to less than significant levels.

G. Land Use and Planning

As discussed above, the EIR must identify and analyze the Project's inconsistencies with the County's General Plan, zoning, and other applicable land use plans. For example, the EIR must analyze how locating new development—particularly the high-density development proposed as the upper end of the Project description—is consistent with the County's general plan, especially if it requires a new road through the community separator that Sonoma County residents put into place through Measure K to prevent the intensification of development and ensure land within community separators remains open and retains its rural character. Additionally, Sonoma County General Plan Policy LU-20ff instructs the County to "[c]onsider future *public uses* of the Sonoma Developmental Center … as a priority if they are declared surplus and offered for sale to local agencies, *particularly park, recreation, and open space uses and affordable housing*." (emphasis added). To the extent the County proposes uses that conflict with or come at the expense of public uses, the EIR must discuss whether and how such proposals are inconsistent with Policy LU-20ff.

The EIR should also consider the Project's inconsistency with land use planning policies affecting the surrounding community. For example, Sonoma County General Plan Policy LU-4l directs the County to "[c]onsider construction of pedestrian access, pathways, and streetlights in some Community Opportunity Areas which may be deficient in such infrastructure, particularly … Glen Ellen." Similarly, Policy LU-20i instructs that commercial lands in Glen Ellen should support uses of a "size, scale, and intensity" that "is consistent and compatible with the character of the local community."

Development in Glen Ellen must also comply with the Glen Ellen Development and Design Guidelines. General Plan Policy LU-20hh. The EIR should analyze any inconsistency with these and other applicable land use planning directives.

Finally, where the EIR identifies inconsistencies, it must also propose mitigation measures or Project alternatives to remedy these inconsistencies.

H. Recreation

The EIR must evaluate the Project's impacts on recreational resources, including visual impacts and impacts related to increased demand for recreational resources. This analysis should specifically consider whether the Project would "increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated," and whether the Project would "include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment." CEQA Guidelines, Appendix G. And the EIR must consider the impacts of the Project on biological resources within such parks. All such impacts are particularly likely here given intensity of proposed development and SDC's proximity to major regional parks, including Sonoma Valley Regional Park to the northeast and Jack London State Historic Park to the west.[29]

I. Utilities and Services

The EIR must identify the increased demand for all essential public services and utilities (e.g., police, fire, schools, parks, wastewater treatment, and solid waste) resulting from the proposed Project and compare this increase in demand with available capacity. The EIR must determine whether capacity exists to serve allowable development without reducing existing services. In addition, the EIR must analyze the cumulative demand for these services, utilities and facilities. Where expansion of services would have environmental impacts, the EIR must analyze those impacts as well.

J. Cumulative Impacts

An EIR must discuss the cumulative impacts of a project if the incremental effects of a project are considerable when viewed in connection with the effects of other past, current, and probable future projects. CEQA Guidelines §§ 15130(a), 15065(c). The analysis of cumulative impacts is particularly important in the context of long-range planning documents because the growth allowed under such plans is often substantial and

[29] *See* NOP at Fig. 2.

because they set forth the policies that will guide the development of future, individual projects for many years. As noted in the CEQA Guidelines, one requirement of an EIR for planning documents is that they provide a more thorough analysis of cumulative impacts than is required for individual projects. *See* CEQA Guidelines § 15168. A legally adequate cumulative impacts analysis must consider the impacts of the Project combined with other past, present, and probable future projects. CEQA Guidelines § 15130(b)(1). Projects currently under environmental review by the County clearly qualify as reasonably probable future projects to be considered in a cumulative impacts analysis. *See San Franciscans for Reasonable Growth v. City & County of San Francisco* (1984) 151 Cal.App.3d 61, 74 n.13. In addition, projects anticipated beyond the near future should be analyzed for their cumulative effect if they are reasonably foreseeable. *See Bozung*, 13 Cal.3d at 284.

The EIR's discussion of cumulative impacts should address any other pending proposals for development within the Project vicinity that would together with the SDC Project negatively impact the environment. Selecting a sufficiently wide cumulative impacts boundary will be critical to this analysis, particularly given the geographic spread and regional significance of the Sonoma Valley Wildlife Corridor.

Analysis of cumulative impacts on the Wildlife Corridor should encompass an area extending from the Russian River in the north to the San Pablo Bay to the south, and from the Petaluma River to the west to Napa Valley to the east. This impact boundary is necessary to capture the movements of local populations of the widest-ranging species present (i.e., mountain lions), as well as movement and dispersal among regional populations, allowing for genetic exchange, and range shifts in response to climate change over time. This boundary would include a portion of the Marin Coast-Blue Ridge Critical Wildlife Linkage identified by Penrod et al. (2013),[30] but analysis should include all land development in the region, not only within the mapped critical corridors.

Finally, the Sonoma Land Trust emphasizes that many of the impact categories identified in the NOP are significantly related. For example, changes in the amount and layout of impervious surfaces will significantly influence the quantity and quality of stormwater runoff (as well as groundwater recharge influencing summer base flows), which will influence the ability of Sonoma Creek to support local and anadromous salmonid populations. The EIR should address the combined effects of specific impacts in order to accurately capture the cumulative impact of Project activities.

[30] Penrod et al. 2013, *supra* n. 11.

VI. The EIR Must Analyze Specific Project Alternatives

CEQA emphasizes that an EIR must analyze a range of reasonable alternatives to the project. The alternatives must feasibly attain most of the basic project objectives while avoiding or substantially lessening the project's environmental impacts. Public Resources Code § 21100(b)(4); *see also* CEQA Guidelines § 15126.6(a). The CEQA Guidelines state that the selection and discussion of alternatives should foster informed decisionmaking and informed public participation. CEQA Guidelines § 15126(d)(5). Unfortunately, the NOP does not identify any alternatives to the proposed Project or disclose how alternatives will be developed or selected for inclusion in the EIR.[31]

Given the size and scale of the Project, the potential exists for significant environmental impacts. Consequently, the EIR should identify and evaluate several alternatives to the Project capable of avoiding or substantially reducing those impacts. In addition to the legally required no-project alternative, the EIR should consider a reuse alternative that repurposes existing buildings that are not within needed wildlife buffers to reduce demotion and new construction, a reduced density alternative that has substantially less commercial development and fewer homes than the proposed 450-1000 unit project, a reduced footprint alternative that has a smaller footprint than the proposed project, and a combination reduced density, reduced footprint alternative. It will also be important for the EIR to fully flesh out the details of each alternative so that the public and decisionmakers are adequately informed of each alternative's benefits and environmental impacts.

VII. Conclusion

Thank you for the opportunity to provide these comments. The Sonoma Land Trust remains concerned about the potential far-reaching impacts of this Project and about the lack of detailed information provided about this proposed development. Please provide this office with notification of the release of the draft EIR for the proposed Project. We also request that the County keep us informed of all contracts, notices, hearings, staff reports, briefings, meetings, and any other events related to the Project.

[31] *See* NOP at 6 (stating only that "[a]lternatives that would avoid or lessen significant environmental effects related to the proposed Project will be discussed").

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Tamara S. Galanter

Andrew Miller

Attachments: Attachment A: WRT. 2018. Sonoma Developmental Center Existing Conditions Assessment: Natural and Recreational Resources Assessment, Exh. 6., Fig. 6.
Attachment B: Map of Existing Development Relative to Potential Riparian Buffers, Sonoma Developmental Center - Central Campus
Attachment C: Proposed Scope of Work for Sonoma Land Trust Wildlife Study

CC: California Department of General Services
Senator Mike McGuire
Senator Bill Dodd
Assemblywoman Cecilia Aguiar-Curry

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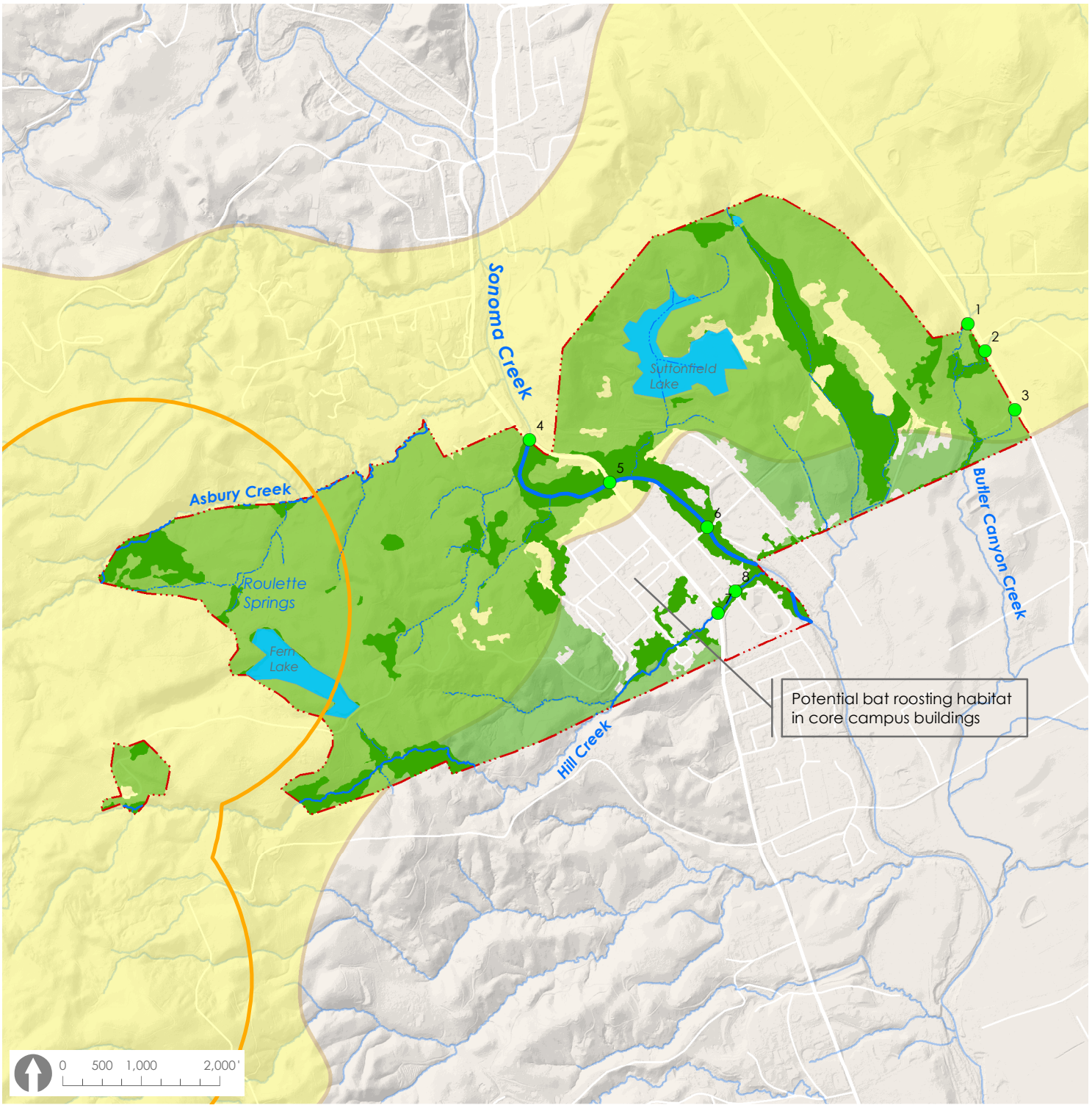
ATTACHMENT A

Figure 6

SDC SENSITIVE NATURAL RESOURCES



SDC Property

Vegetation

- Sensitive vegetation types: riparian, wetland, redwood, valley oak, Oregon oak, madrone
- Other natural vegetation

Water Resources

- Sonoma Creek
- Hill and Asbury Creeks
- Seasonal streams
- Lakes and ponds

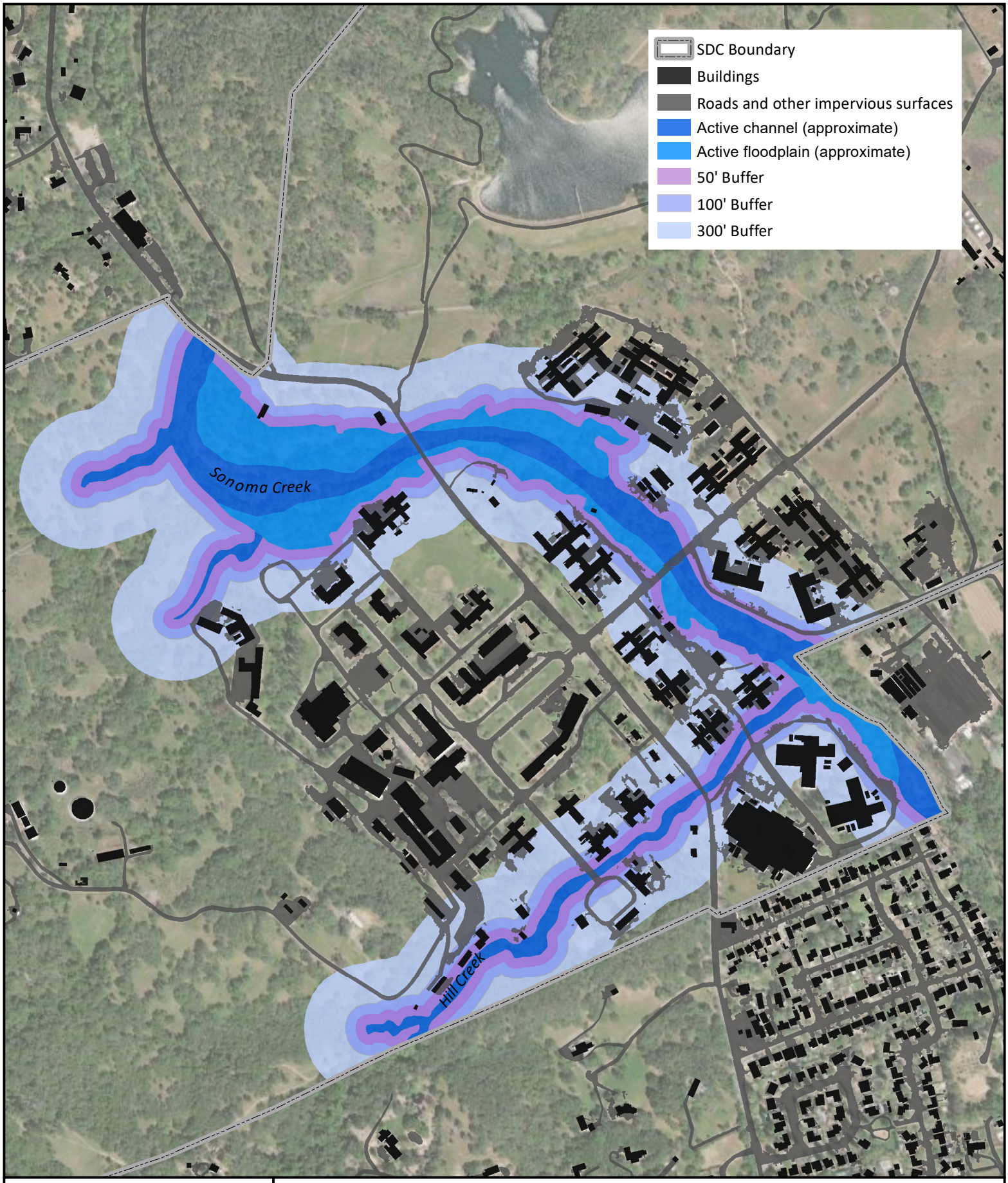
Wildlife Movement and Habitat

- Critical wildlife corridor
- Undercrossings (See text, Table 4.1)
- Northern spotted owl - 800 m buffer from known occurrences

Creeks, lakes, Roulette Springs, and redwood/fir forest provide habitat for multiple additional special-status wildlife species; see text.

Sources
CDFW (CNDDB), Sonoma Veg Map, Conservation Lands Network

ATTACHMENT B



PRUNUSKE CHATHAM, INC.

Existing Development Relative to Potential Riparian Buffers
Sonoma Developmental Center - Central Campus

March 2022
Aerial: ESRI; Buildings/Impervious Surfaces - Sonoma Veg Map 2013

N

0 250 500 1,000 Feet

ATTACHMENT C

Sonoma Development Center

Wildlife Connectivity Study Proposal

By Pathways for Wildlife

1.0 Introduction: Purpose and Need

To evaluate and implement science-based management, the development of a DEIR for the Sonoma Development Center needs to understand and document where species occur within the property and how wildlife are traveling throughout the property to be able to evaluate the impacts of the proposed development within this critical wildlife linkage. Additional data necessary for evaluating the proposed impacts include the habitat characteristics that are facilitating wildlife movement throughout the property and information about the existing populations of each species. The information obtained through this study can then inform how best to minimize the biological impacts of development at SDC.

The Sonoma Land Trust would like to hire consulting experts in this field, Pathways for Wildlife and Prunuske Chatham, Inc. (PCI) to construct a Habitat Suitability and Wildlife Linkage (Corridor) model for several focal species to create maps depicting levels of habitat suitability for each species. These models will then be used to run fine scale linkage analysis to create a multiple species linkage design for the property. Field-based surveys for each species would then be conducted in areas with high probability of occurrence and control areas (low probability of occurrence) to ground-truth the linkage design.

Pathways for Wildlife developed the following project approach based on our team's understanding of the project area and twelve years of wildlife connectivity experience which includes identifying wildlife linkages and the development of wildlife connectivity enhancement recommendations throughout the Bay Area. The proposed wildlife connectivity study includes robust monitoring and analyses methods that are well-vetted in previous research and publications.

2.0 Connectivity Modeling

2.1 Introduction

Connectivity models are used for identifying important habitat linkages and areas for highway mitigation. Recent attention has focused on the use of habitat suitability and linkage models to guide highway mitigation efforts (Landguth et al. 2012). These types of connectivity models are particularly well-suited for identifying important landscape linkages as they model large, landscape scale processes (i.e., wildlife movement and dispersal patterns).

We propose to create several GIS habitat suitability and cost surface models for the Sonoma Development Center (SDC) property. The models will produce a habitat linkage analyses for a set of four

focal species. These models will then be ground-truthed using field survey methods such as wildlife camera monitoring and wildlife tracking transects.

2.2 Model Comparisons

In 2013, the Bay Area Critical Linkages (BACL) created several species habitat suitability maps, however these maps resulted in coarse-scale, low-resolution maps that do not reflect the current level of available wildlife presence, habitat use, and land use layers (Penrod, K et al. 2013). The proposed study will use a much more detailed and current land use layer to produce fine scale species suitability maps that includes rankings for various types of human land use. This analysis will use a map resolution of 10m versus the BACL maps that used 30m resolution GIS layers.

Other improvements will include using a much finer scale habitat types GIS layer, which will include ranking habitat suitability for wildlife movement in agricultural lands based on documented wildlife movement through agricultural lands from previous studies (Nogeire et al. 2013). The BACL ranked agricultural lands as poor habitat for wildlife movement. Pathways for Wildlife has found through several different wildlife connectivity studies in Coyote Valley and the Pajaro Valley that landscapes featuring agricultural uses provide suitable habitat for certain wildlife to both reside in and travel through (Pathways for Wildlife, Coyote Valley Linkage Assessment Study 2016).

This study will also highlight sensitive species and bottleneck areas that could be negatively affected by an increase in human recreational effects (Larson, C. L. et al. 2016).

3.0 Methods

3.1 Habitat suitability and Cost Surface Development

Habitat suitability and cost surface models will be developed for four focal species and include an analysis of habitat variables. These habitat variables include; vegetation, habitat types, hydrology, land use, and roads. Each habitat variable will be reclassified to reflect the suitability of a habitat feature for focal species presence and movement using ArcMap 10.2. The resulting models will reflect a range of habitats from highly suitable (low cost for movement) to poor habitat (high movement costs).
A cost surface layer is a raster grid in which the value in each cell is the cost of movement through the landscape for a given species. The cost for each cell is developed by the cell's characteristics, such as land cover or housing density, combined with species-specific landscape resistance models. For example, a cell that has high use roads or high-density housing will have a higher cost for movement for the animal to travel through that cell within the grid. A cell that contains highly suitable habitat and open space for a particular focal species will have a lower cost of movement for traveling through that cell.

As animals move away from specific core areas, a cost-weighted distance analyses produces a map of total movement cost accumulated. Core areas are defined as habitat that is most preferred by a species and consists of habitat that provides resources such as food and water, breeding and dispersal habitat for that particular species (Corridor Ecology 2019). This analysis will result in a model which reflects a range of highly suitable habitat with low cost for movement for focal species to poor habitat with high movement costs within the study area. The process for developing a habitat suitability and cost surface model in outlined in Figure 1.

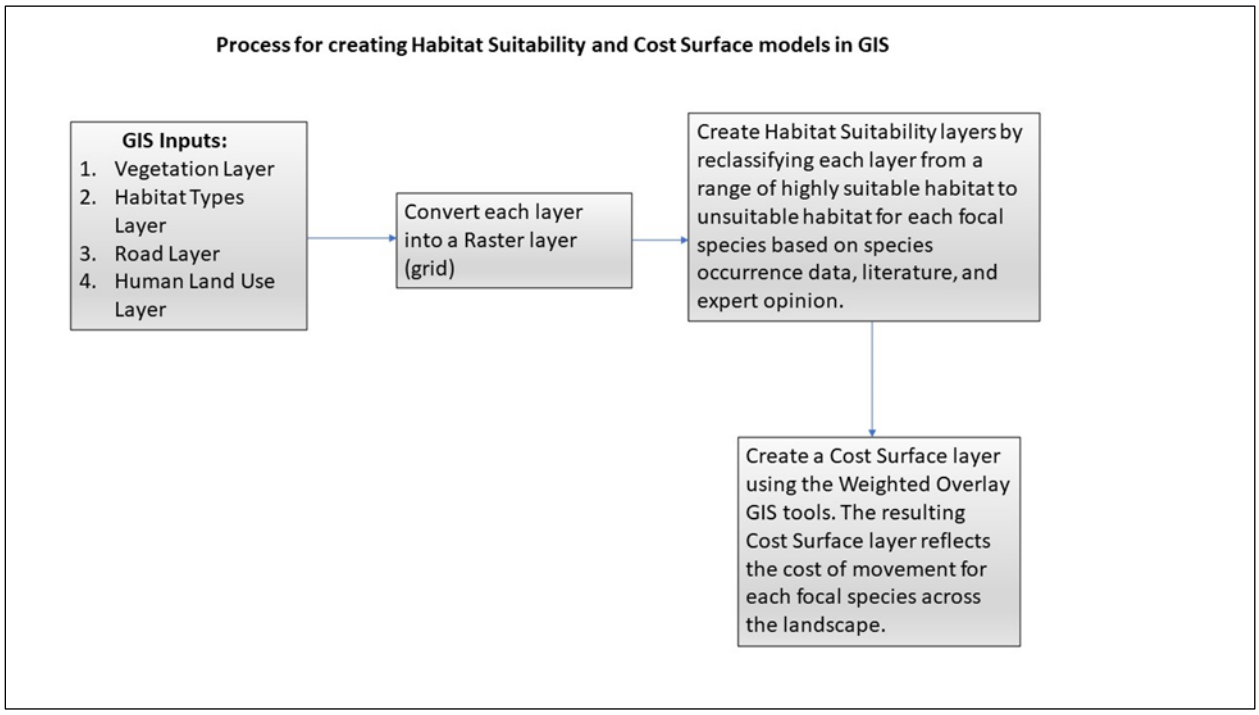


Figure 1. Habitat suitability and cost surface model development.

3.2 Linkage Model Development

The study will then run the Linkage Pathways program, for each focal species cost surface layers to identify and map least-cost linkages between core areas (Washington Connected Landscape Project 2010). Each cell in a resistance map (cost-surface layer) is attributed with a value reflecting the energetic cost, difficulty, or mortality risk of moving across that cell. An example of the steps involved in the Linkage Pathways analysis is illustrated in Figure 2 below. The Linkage Pathways program is an advanced version of least-cost path analysis and uses Circuitscape programming, which runs a fine scale linkage analysis between a network on core areas.

The resulting focal species linkage designs will then be overlaid together to identify linkages that may be facilitating multiple species movement through the landscape.

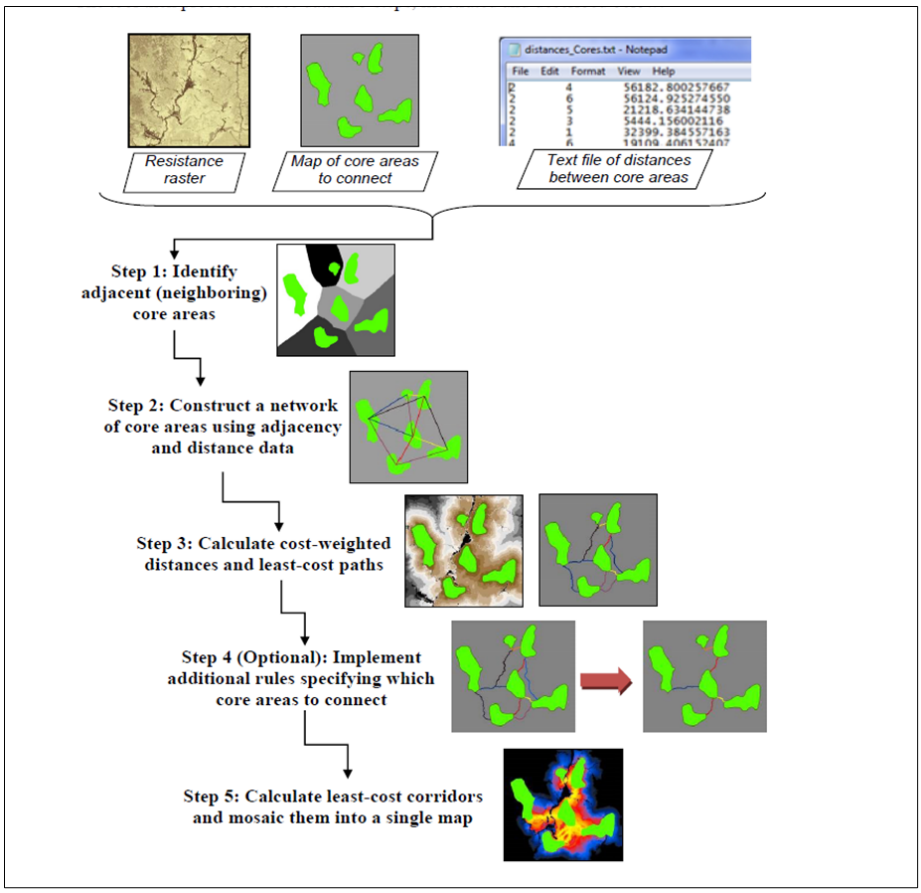


Figure 2. Linkage Pathways analysis steps.

3.3 Focal Species Selection

Landscape permeability analysis is a GIS method that models the relative cost for a species to move between core areas based on how each species is affected by habitat characteristics, such as slope, elevation, vegetation composition, land use, and road density. This type of analysis identifies the best potential movement corridors for each species between core areas and across highways in our study area (Craighead et al. 2001, Singleton et al. 2002). The purpose of the analysis is to identify critical habitat linkages within the SDC property.

Focal species will be selected based on the following: 1. habitat preference for both residing in and traveling through the study area; 2. sensitivity regarding human presence and land use; and 3. keystone and/or umbrella species.

Our goal will be to include a large range of habitat preferences and habitats wildlife travel through to identify important core locations and linkages that connect these sites. The focal species approach recognizes that species move through and utilize habitat in a wide variety of ways (Beier and Loe 1992). Species used in landscape permeability analysis must be carefully chosen, and will be included in this analysis only if:

- Sufficient data is available about the movement of the species to reasonably estimate the cost-weighted distance using the data layers available for our analysis.

- Data layers in the analysis reflect the species' ability to move.
- The focal species could potentially move between cores, at least over multiple generations.

i. Selected Focal Species Selection Criteria

We define focal species as a set of terrestrial mammal, amphibian, and bird species that collectively serve as an umbrella for all native species and ecological processes of interest in our study area. Our use and selection of focal species intended to capture the ecological attributes we list below.

Area-Sensitive: Species that need connectivity for dispersal, seasonal migration and or home range connectivity, which include many carnivore species.
Barrier-Sensitive: Species most reluctant to traverse roads, canals, urban areas or other barriers, such as tule elk.
Corridor-Dwellers: Species with limited dispersal, may take days or generations to move between target areas, such as California tiger salamander.
Habitat Specialists: Species strongly associated with specific habitat types or topographical elements, such as some songbirds, raptor species, and American badgers.
Ecological Indicator: Species tied to important ecological process whose presence indicates the health of the system, such as mountain lions.

3.3 Modeling Summary

A habitat suitability and cost surface model are created as inputs for the Linkage Mapper analysis. The steps of the overall process are illustrated below in Figure 3. Our models will also include land use and hydrology layers.

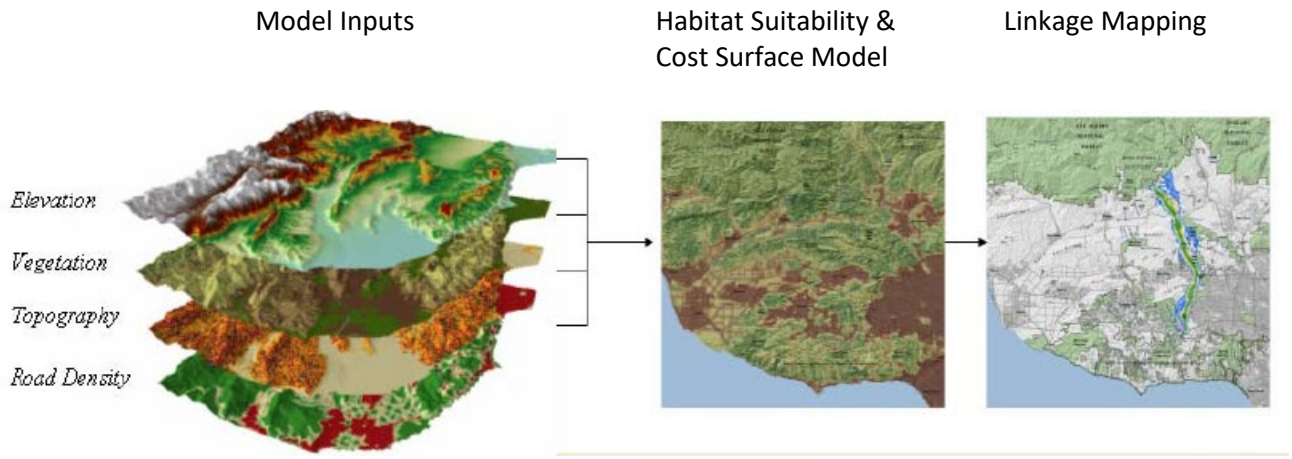


Figure 3: Cost surface modeling Summary

4.0 Model Validation: Ground-truthing with Data Collection

Linkages will then be ground-truthed by overlaying data collected from field surveys. To validate the focal species habitat suitability models and linkage design, we will employ two types of surveys—wildlife tracking transect surveys and camera trapping.

i. Transect Surveys

Systematic searches along established transects have been used in other studies to establish species presence in an area (Lay 2008, Quinn 2008). Surveys will be conducted by having at least two qualified wildlife trackers to walk the transects to record, GPS and photograph wildlife track and sign. The transects will be set up in a range of highly suitable habitat to poor habitat for each focal species to test the habitat suitability models along with the linkage design.

ii. Camera Trapping

Camera monitoring stations will be set up within both the habitat suitability models and linkage design to test the models. Camera arrays will be set by qualified biologists and with permission and permits pending approval of the project. Camera data will be entered into a master database. Data results will then be mapped out in GIS, as a data layer to overlay with the habitat suitability models and linkage design for model validation. This study will build on the data collection from the Sonoma Valley Wildlife Corridor Road Underpass study conducted by Pathways for Wildlife and the Sonoma Land Trust from 2013-2014 (Figure 4). This study proposes to expand this wildlife connectivity study beyond Hwy 12 to incorporate a critical part of the linkage to understand and document wildlife movement within it.

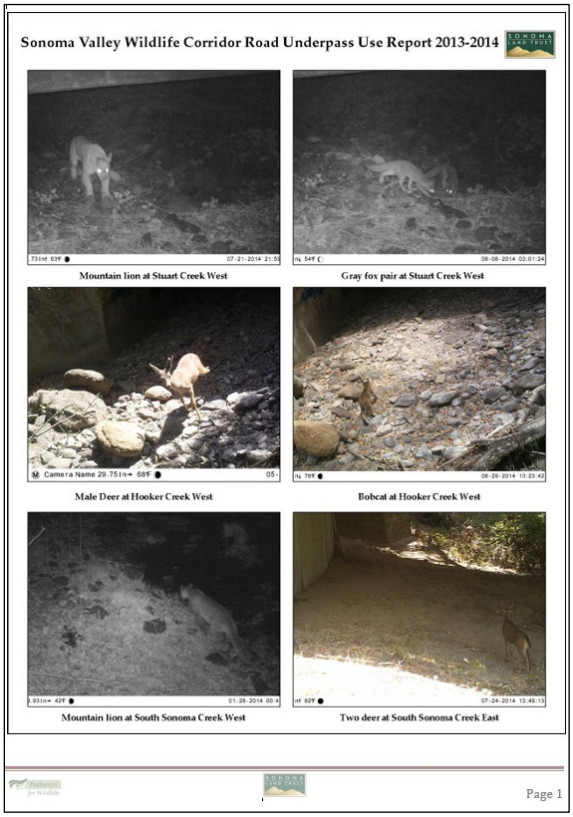


Figure 4. Sonoma Valley Wildlife Corridor Road Underpass Use report cover.

5.0 Analysis and Interpretation

The model will provide gradients of habitat suitability for a species for the entire property from the types of habitats a species prefers to habitat they typically do not use and travel through. The linkage analysis will then analyze how the highly suitable (preferred) habitats are connected.

The field component of the project will then document sites where the species are traveling through to validate if the model accurately depicts suitable habitats and if species are in fact traveling through the linkage design.

Linkages that have documented wildlife use will then be assigned appropriate buffers to ensure the linkage will not be negatively impacted by human development that would impede wildlife movement through the linkages. **Validated linkages and highly suitable habitat will inform the proposed development plan to identify important locations that should not be impacted by development and be designated as open space.**

The ground-truthed data will also result in developing wildlife connectivity enhancement recommendations such as fencing improvements that would be beneficial as wildlife friendly fencing designs, directional fencing to culverts and bridges we record wildlife using to travel underneath roads, culvert retrofits to facilitate wildlife passage, or new locations for wildlife crossings structures, along with removal of buildings that create bottlenecks and pinch-points within the linkage design, and modifications of proposed developments and roads to include safe passage for wildlife movement through the linkage design.

Figures 5 and 6 includes examples of models developed and then ground-truthed by Pathways for Wildlife.

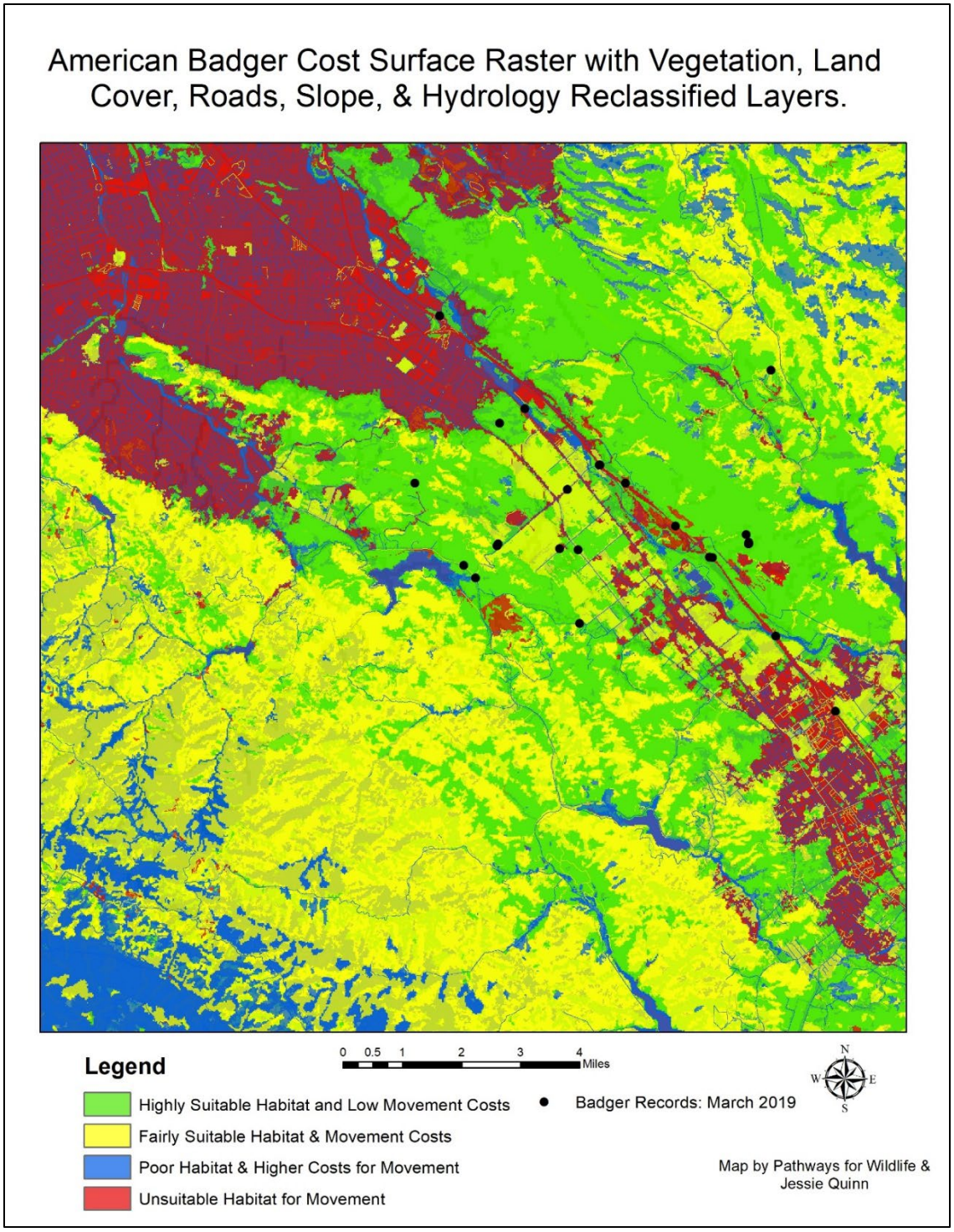


Figure 5. American badger habitat suitability & cost surface model for Coyote Valley. Collected badger records were then overlaid to ground-truth the model. Data records include badgers that were hit by cars on US-101. Developed by Pathways for Wildlife.

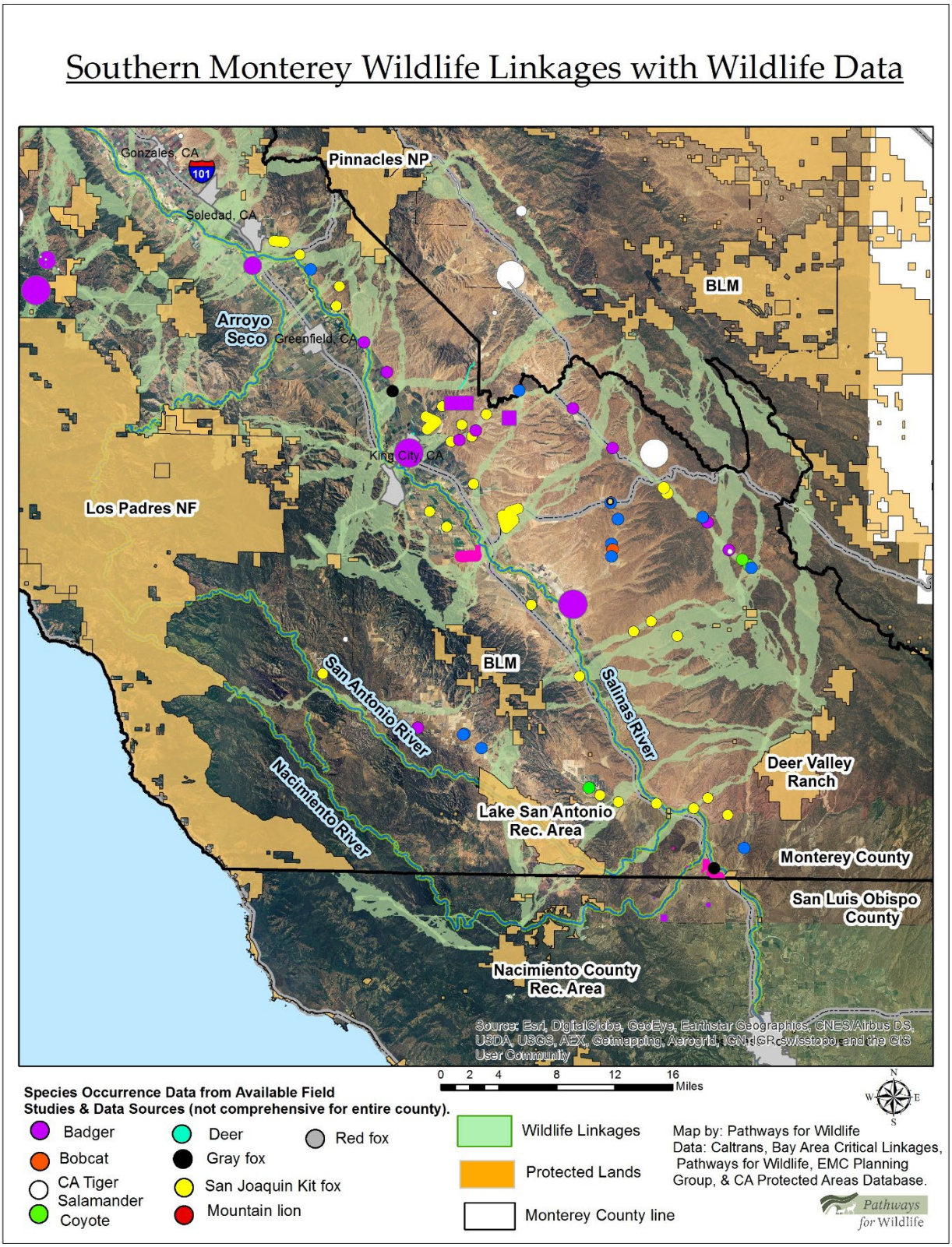


Figure 6. Multiple species linkage model for Monterey County developed by Pathways for Wildlife for the Monterey County Planning Department. Collected wildlife records were then overlaid to ground-truth the model.

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