



Planning Commission Staff Report – Hearing of January 31, 2019

County of Ventura · Resource Management Agency · Planning Division

800 S. Victoria Avenue, Ventura, CA 93009-1740 · (805) 654-2478

Subject: Public Hearing to Consider County-Initiated Amendments to the Ventura County General Plan and Articles 2, 3, 4, 5, 9 and 18 of the Ventura County Non-Coastal Zoning Ordinance, including Zoning Map Revisions to Establish a Habitat Connectivity and Wildlife Corridors Overlay Zone and a Critical Wildlife Passage Areas Overlay Zone and to Adopt Regulations therein; and to Consider a Finding that the Project is Categorically Exempt from the California Environmental Quality Act (PL16-0127).

A. PROJECT INFORMATION

1. Applicant:

County of Ventura, 800 S. Victoria Avenue, Ventura, California, 93009.

2. Location:

The proposed amendments to the Ventura County General Plan and Non-Coastal Zoning Ordinance (NCZO) would be applicable to all parcels located within the mapped Habitat Connectivity and Wildlife Corridors (Exhibits 3 and 4) and Critical Wildlife Passage Areas within Ventura County. (Exhibits 5, 6 and 7)

3. Request:

Planning Division staff requests that your Commission review this staff report and its attachments and adopt a resolution (Exhibit 12) recommending that the Board of Supervisors (Board) adopt the recommended actions for proposed amendments to the General Plan and the NCZO (Articles 2, 3, 4, 5, 9 and 18) related to the establishment of a Habitat Connectivity and Wildlife Corridors Overlay Zone and a Critical Wildlife Passage Areas Overlay Zone, and the regulation of development therein as stated in Section 8 of this report. These amendments are included in Exhibit 13 (General Plan amendments) and Exhibits 14 and 15, (NCZO amendments) of the staff report.

4. Review/Decision-Making Authority:

Pursuant to the Government Code section 65853, General Plan amendments, including the addition of a map and zoning ordinance amendments, require review and recommendation by the local jurisdiction's Planning Commission and the approval of the local legislative body, which for the County is the Board. Under the NCZO and state law, your Commission is required to review, conduct a public hearing on, consider, and make recommendations to the Board regarding the proposed GP amendment and NCZO revisions. The Board, at a subsequent public hearing, will consider your Commission's recommendations

and decide whether to adopt, not adopt, or adopt with modifications the proposed GP amendment and NCZO amendments.

5. History and Background:

a. Purpose and Need

Ventura County hosts an abundance of wildlife, including deer, mountain lions, coyotes, bobcats, various reptiles, amphibians, bird and fish species, as well as threatened and endangered species including California condors, coastal California gnatcatcher, least bell's vireos, and red-legged frogs, among others. Ventura County also contains portions of two large areas of permanently protected natural open space, containing a large number of plant and wildlife populations and their habitats, some of which are endemic to these areas. These include the 572,000-acre Los Padres National Forest, which occupies most of the northern half of the unincorporated area. To the south, the Santa Monica Mountains National Recreational Area forms a matrix of national, state, and locally-protected areas, as well as private holdings that extend eastward into Los Angeles County.

Smaller in area, but equally important, are the county's coastal habitat areas. While these are scattered along the coastline, they are connected to habitats located at the mouths of the three major river systems, the Ventura River, the Santa Clara River, and Calleguas Creek, which are of special importance as wildlife movement corridors. These protected open space areas, and to a lesser extent the rural areas between cities, contain a variety of different habitats including oak woodlands, grasslands, coastal sage scrub, chaparral, wetlands, and coastal dunes.

Preserving the geographic connections among protected areas enables wildlife and plant populations access to necessary resources throughout the county and beyond. These connections are a crucial component of protecting Ventura County's biological diversity.

Movement through habitats is often essential for wildlife survival. Animals must find food and shelter and offspring must establish new home ranges. Isolated populations may survive for a limited time, but will be vulnerable to die-off due to diseases, periodic loss of food resources, and inbreeding. For all these reasons, preservation of biological resources requires that plant and animal species be able to successfully move through the areas of the county that contain the habitats they depend on.

Certain land use activities and development patterns are more likely than others to imperil wildlife populations and create direct impediments to wildlife movement, such as impermeable fencing that blocks animals from moving through the landscape. Other land use activities can result in indirect impediments, such as vegetation removal, which can impact the availability of food and protective cover for animals, and excessive artificial lighting, which can change migration patterns

and interfere with pollination. Such indirect impediments can make linkages among core habitats less effective.

In the broadest sense, the objectives of this project are to: (1) regulate the siting of structures, uses and activities within individual lots so as to avoid key habitat areas used by wildlife; (2) consolidate development to provide open areas as a means to facilitate wildlife passage within and between individual lots; and (3) provide access to, and movement between, surrounding protected habitat areas on a regional geographic scale. The proposed regulations also incorporate an array of options and exemptions to ensure the continued ability of property owners to develop their properties.

It is important to clarify the following key terms used throughout this staff report:

Habitat Connectivity and Wildlife Corridors: These are natural habitat areas or largely undeveloped lands of sufficient width to facilitate the movement, migration, foraging, breeding, and dispersal of multiple animal or plant species. These areas facilitate important ecological functions such as seed and wildlife dispersal or pollination and can vary significantly in size, shape and composition at a variety of scales, from tens of feet to hundreds of miles. They contain riparian habitats, streams, canyons, and wooded ridgelines. In some cases, vegetated areas within developed areas may function as habitat linkages for certain species. Several such corridors and linkages have been identified in Ventura County. They include the Sierra Madre – Castaic Connection, the Santa Monica – Sierra Madre Connection, which incorporates the Santa Clara River, and the Ventura River Corridor (Exhibit 2). See Section 5.b, below, for a more detailed discussion of the linkages. Throughout this staff report, these mapped areas are referred to as the “mapped linkages.”

Habitat Connectivity: This term describes the degree to which a landscape facilitates movement of organisms among habitat areas, providing for wildlife movement and migration, foraging, finding mates, dispersal of offspring, and the ability to react to environmental changes. As stated above, the goals of the proposed General Plan and NCZO amendments are to enhance and maintain habitat connectivity within the mapped linkages and corridors.

Functional Connectivity: This term describes the degree to which a physical setting (landscape) facilitates or impedes the movement of organisms. Functional connectivity is a product of both the features of the physical setting (e.g., vegetation, physical development) and the behavioral response of plants and animals to these physical features.

b. Regional Efforts to Map Wildlife Corridors

In 2001, a group of scientists, researchers, and academics released a report on habitat connectivity throughout California. The report, titled *Missing Linkages: Restoring Connectivity to the California Landscape* (Missing Linkages report), included input and collaboration with approximately 160 scientists, conservationists, non-governmental and governmental land management staff,

and planners with the objective of identifying the location of and threats to, the most important movement corridors for California's wildlife.

All the linkage areas referenced in this staff report were identified in the *Missing Linkages* report as important areas for wildlife movement (i.e., the Santa Monica – Sierra Madre Connection, the Sierra Madre-Castaic Connection and the lower reach of the Ventura River) (Penrod, et. al., 2001). A complete bibliography of the sources cited herein is attached as Exhibit 23.

Additional work on identifying critical linkages continued after the *Missing Linkages* report was published, and Southern California was selected to be the location of the first comprehensive regional corridor planning project. The goal of the project, known as the *South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion (SCML)*, was to develop a comprehensive plan for a regional habitat network that would maintain and restore critical habitat linkages among existing open space throughout southern California.¹ The resulting report, which was issued in 2008, identified two critical habitat linkages in Ventura County: 1) the Santa Monica – Sierra Madre Connection, which incorporates the Santa Clara River; and 2) the Sierra Madre – Castaic Connection. The Santa Monica-Sierra Madre Connection links several important wildlife habitat networks including the Santa Monica Mountains, the Santa Susana Mountains, the Simi Hills, and Santa Clara River Corridor, and the Los Padres National Forest. The Sierra Madre-Castaic Connection incorporates several key habitat areas including the Dick Smith, Chumash, and Matilija Designated Wilderness Areas (South Coast Wildlands, 2008).

In 2010, the mapped linkages identified in the SCML report were incorporated into a report titled *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (CEHCP report), by the California Department of Transportation (Caltrans) and the California Department of Fish and Game. (Spencer, et. al., 2010) This project involved the mapping of habitat connectivity throughout the entire state and the report demonstrates how Ventura County's wildlife corridors are a portion of a larger statewide network of wildlife corridors and linkages. In addition, other jurisdictions and public agencies have incorporated the SCML into their planning efforts, including the following:

- The County of Los Angeles has included the Simi Hills/Santa Susana area

¹ The South Coast Missing Linkages project was conducted, and report published, in partnership between the Wildlands Conservancy, the Resources Agency, the United States Forest Service, California State Parks, California State Parks Foundation, the National Park Service, San Diego State University Filed Stations Program, Environment Now, the Nature Conservancy, the Conservation Biology Institute, Santa Monica Mountains Conservancy, Wetlands Recovery Project, Mountain Lion Foundation, Rivers and Mountains Conservancy, California Wilderness Coalition, Wildlands Project, Zoological Society of San Diego Center for Reproduction of Endangered Species, Pronatura Conabio, and Universidad Autonoma de Baja California.

(as well as other areas mapped by the SCML) as a linkage as part of its Significant Ecological Areas (SEAs) program. SEAs are officially designated areas within LA County with important biological resources and its objective is to conserve genetic and physical diversity within LA County by designating biological resource areas that are capable of sustaining themselves into the future.” The SEA Ordinance establishes the permitting, design standards, and review process for development within SEAs, balancing preservation of the County’s natural biodiversity with private property rights.

- Southern California Association of Governments has incorporated the SCML into its open space planning for the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy.
- The four Southern California National Forests (Los Padres, Angeles, San Bernardino, and Cleveland) have incorporated the SCML into their Resource Management Plans.

In addition to the areas identified by the SCML project, the lower reach of the Ventura River has long been recognized as a significant biological resource and critical linkage area by the County of Ventura. The lower reach of the Ventura River runs from the southern edge of the Sierra Madre – Castaic Connection, (located near the intersection of Santa Ana Road and the Nye Ranch Fire Road, east of Lake Casitas) to the Pacific Ocean. This portion of the Ventura River connects coastal and estuarine habitats with riparian habitats along the Ventura River corridor leading into the Los Padres National Forest and the Transverse Range.

The proposed Habitat Connectivity and Wildlife Corridors (HCWC) overlay zone coincides with the unincorporated portions of Ventura County as mapped in the SCML (Exhibits 3 and 4). Within the HCWC overlay zone, staff identified three critically important subareas identified herein as Critical Wildlife Passage Areas (Exhibits 5, 6, and 7), which are fully described in Section 8.f below.

Although the lower reach of the Ventura River corridor is not included in the SCML or CEHCP reports, biologists and other scientists familiar with the Ventura River have expressed support for including it on the County’s proposed HCWC overlay zone. Moreover, the lead author of the SCML report (K. Penrod) has provided comments expressing support for inclusion of the Ventura River (Exhibit 16).

The Ventura County General Plan recognizes the Ventura River’s value as a resource that provides, “both essential habitat and migration corridors for wildlife in Ventura County” (General Plan, Goals, Policies and Programs, p. 18), and pursuant to the Ventura County Initial Study Assessment Guidelines (ISAGs), which were most recently approved by the Board in 2011, potential impacts to

the Ventura River, including its value as a wildlife corridor, have been evaluated for discretionary projects.

Recent studies have also confirmed the importance of the Ventura River as essential habitat for plants, animals and wildlife movement. The Ventura River Watershed Management Plan (Management Plan), approved by the Watershed Council² in 2015, provides a comprehensive discussion of the ecological resources associated with the Ventura River watershed. There are several references in the Management Plan that speak to the river's role in wildlife movement; two relevant passages are excerpted below:

The Ventura River and its associated drainages provide important connections between wilderness areas of the Santa Ynez foothills, the Los Padres National Forest, Sulphur Mountain, and the Pacific Ocean. The broad diversity of vegetation and physical topography in this area provides a mechanism for dispersal, supports wildlife travel routes, and allows habitat connectivity for a range of species from steelhead to neo-tropical song birds. Carnivores and ungulates (i.e., coyote, bobcat, bear, and deer), in addition to small, less mobile species, also utilize the river and adjacent uplands for movement and dispersal. (Management Plan, p. 537)

One of the only unconstrained habitat linkages is the Ventura River floodplain, which provides the critical feature of wildlife corridors in the region. Therefore, the Ventura River and floodplain provide both passage and dispersal corridors for a variety of both common and sensitive species. (Management Plan, p. 539)

The federal government has also acknowledged the value of the Ventura River for wildlife and wildlife movement. The draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Matilija Dam Ecosystem Restoration Project (USACE 2004),³ contains a thorough discussion of the biological resources that exist within the Ventura River watershed:

The diversity of aquatic and upland community types that occur within and adjacent to the project provide habitat for a wide

² The Ventura River Watershed Council included a broad range of participants including representatives from oil and gas companies, Ventura County Coalition of Labor, Agriculture and Business (CoLAB), the Ventura County Cattlemen's Association, environmental and conservation organizations, the Farm Bureau of Ventura County, academic institutions and local and state government.

³ The final EIS/EIR for the project includes public comments/responses and includes only the text that was modified from the draft EIS/EIR. The text included herein does not appear in the final EIS/EIR, therefore, it means no changes were made to the excerpted passages included above.

variety of resident and migratory wildlife species, including several special status species. Of particular importance are the habitat types associated with the Ventura River and its estuary that are known to provide habitat for several special status species including critical habitat for the federally endangered steelhead (*Oncorhynchus mykiss*) and tidewater goby (*Eucyclogobius newberryi*). (EIS/EIR, p. 146)

A total of 35 special-status species are known or expected to occur within the project area. Of these species, three are fish, two are amphibians, four are reptiles, 24 are birds, and two are mammals. Table 4.3-5 is a list of known and potentially occurring sensitive species that has been compiled from literature and recent field studies in the project area including the California Natural Diversity Database (CDFG, 2004), the USFWS Revised Planning Aid Memorandum (USFWS, 2000a), the USFWS Supplemental Planning Aid Report for the Matilija Dam Removal Project-Ventura County, California (USFWS, 2000b), and recent field studies conducted by Aspen Environmental Group. (EIS/EIR, p. 149)

The U.S. Fish and Wildlife Service has also studied the habitat connectivity value associated with the Ventura River when it issued the *Endangered and Threatened Wildlife and Plants: Revised Designation of Critical Habitat for California Red-Legged Frog; Final Rule* (2010). The analysis contained within the Final Rule indicated a strong role for the Ventura River corridor in maintaining connectivity between isolated populations of this threatened species.

In addition to the sources cited herein, and the Planning Division's lengthy history of classifying the Ventura River as a wildlife corridor for purposes of discretionary permit review, staff also notified the Board in January 2017 that the Ventura River would be included as a wildlife corridor for purposes of developing regulatory options for this project. (See Section 5.d below for more information about project history.) For these reasons, staff has included it as part of the proposed HCWC overlay zone as shown in Exhibit 2.

c. General Description of Features within the Habitat Connectivity and Wildlife Corridors

Within the proposed HCWC overlay zone, there are approximately 7,395 parcels totaling approximately 520,000 acres. Approximately 20 percent of the parcels (approximately 1,500) are owned by a public agency. Table 1 below summarizes zoning and acreage data for parcels within the proposed HCWC overlay zone.

Table 1 - Number of Parcels and Acreage by Zone Within HCWC

Parcel Zoning	Number of Parcels	Percentage of Total Parcels	Number of Acres	Percentage of Total Acres
Total	7,395	100	520,000 (approx.)	100
Rural and Residential Zones				
Single-Family Residential	347	5%	156	0.03%
Rural Agricultural	286	4%	2,808	0.54%
Rural Exclusive/ Single Family Estate	2,362	32%	3,952	0.76%
Residential Planned Development/ Residential High Density	163	2%	131	0.03%
Agriculture, Open Space, and Special Purpose Zones				
Agricultural Exclusive	1,005	14%	88,400	17%
Open Space	3,154	43%	421,200	81%
Timber Preserve	2	0.03%	2,956	0.57%
Specific Plan	8	0.11%		
Commercial and Industrial Zones				
Commercial Planned Development/ Neighborhood Commercial	22	0.30%	104	0.02%
Industrial Zones	46	0.62%	312	0.06%

Close to 100,000 acres (23 percent) of land within the proposed HCWC overlay zone are within the burn area of the Thomas, Hill, and Woolsey fires. The 2017

Thomas Fire burned approximately 76,500 acres and impacted areas in the hills around Santa Paula, Ventura, Ojai, and into the Los Padres National Forest. The Hill Fire (2018) burned approximately 4,500 acres, mostly in the area around Mountclef Ridge, and the Woolsey Fire (2018) burned approximately 97,000 acres from the Simi Hills south of Simi Valley extending to the cities of Thousand Oaks, Westlake Village, Agoura Hills, Calabasas, Malibu, and West Hills.

d. Project History

In April 2011, the Board adopted revisions to the ISAGs that recognized habitat connectivity and wildlife corridors as important considerations when evaluating potential impacts of discretionary development.⁴ However, a limited range of development projects require a discretionary permit, which would be subject to the use of the ISAGs and environmental review pursuant to the California Environmental Quality Act (CEQA). Development that is exempt (no permit required) or allowed through a ministerial review process (e.g., over the-counter zoning clearance) under the NCZO requires no assessment for potential impacts to habitat connectivity or wildlife corridors pursuant to CEQA.⁵

In 2015, the Board approved a consultant contract for the comprehensive General Plan Update (GPU) that included consultant work on a “Wildlife Corridors Program,” but elected to complete this project ahead of the GPU. Therefore, Planning Division staff began examining the existing regulations governing wildlife corridors, developing project objectives, and regulatory options to achieve those objectives.⁶ This work resulted in the articulation of a single goal and four supporting objectives, which were then used to guide the preparation of options for the scope of work for this project. These recommendations and regulatory options were presented to the Board on January 24, 2017 (See Exhibit 17, Planning Division’s January 24, 2017 Board letter). The Board directed staff to pursue the most comprehensive set of project elements and objectives.⁷

⁴<http://bosagenda.countyofventura.org/sirepub/cache/2/apdvnh0a1nqtanen2j45izdx/29284110032018045138974.PDF>

⁵ Some examples of exempt development under the NCZO include habitat removal (e.g., removal of native vegetation, including numerous species of native trees), and fencing that is six feet or less in height. Examples of ministerial development include single-family dwellings, greenhouses (up to 20,000 square feet) in the Open Space (OS) and Agricultural Exclusive (AE) zones, and accessory structures (up to 20,000 square feet) in the Open Space (OS) and Agricultural Exclusive (AE) zones.

⁶ <http://bosagenda.countyofventura.org/sirepub/agdocs.aspx?doctype=agenda&itemid=71595>

⁷ <http://bosagenda.countyofventura.org/sirepub/agdocs.aspx?doctype=agenda&itemid=79815>

6. Current Project Scope and Timeline

Based on direction by the Board in January 2017, the goal of the project is to improve and preserve habitat connectivity throughout the County's mapped habitat corridors. This goal is to be achieved through the implementation of four primary objectives within the proposed HCWC overlay zone:

- (1) Minimize habitat fragmentation;
- (2) Maintain corridor widths or enhance corridor "chokepoints" to facilitate species movement between natural areas. (A chokepoint is defined in the ISAGs as a narrow, impacted, or otherwise tenuous wildlife movement corridor or linkage);
- (3) Minimize physical barriers to wildlife movement (e.g., roads, fences, etc.); and
- (4) Minimize indirect barriers to wildlife movement (e.g., lighting, domestic animals, human presence, etc.).

The project proposes the following legislative actions to achieve these objectives:

- (1) Amend the General Plan, Resources Appendix, to add background information related to habitat connectivity and wildlife corridors that are identified in four maps consisting of the HCWC map and three Critical Wildlife Passage Area maps. (Figures 1.5.5 – 1.5.8 of the General Plan Resources Appendix) (Exhibit 8 – 11);
- (2) Update the background information on biological resources (Section 1.5 of the General Plan – Goals, Policies, and Programs [GPP]) as it relates to habitat connectivity and wildlife corridors (Exhibit 13);
- (3) Update the goals and policies in Section 1.5 of the General Plan (GPP - Biological Resources) (Exhibit 13);
- (4) Update the General Plan's GPP Glossary to include terms necessary to improve clarity and consistency, (Exhibit 13);
- (5) Amend the NCZO (Articles 2, 3, 4, 5, and 9) to add regulatory standards and new permitting requirements to address a range of potential development within the HCWC overlay zone (Exhibit 14); and
- (6) Amend the NCZO (Article 18) to rezone lots for inclusion in the proposed HCWC overlay zone and, for some of these parcels, inclusion in the

proposed Critical Wildlife Passage Areas overlay zone (Exhibit 15). See Exhibit 15A for the full list of parcels subject to the overlay zone(s).

7. Summary of Proposed General Plan Amendment

The proposed General Plan amendments (Exhibit 13) add background information and the aforementioned maps to the Resources Appendix, update the General Plan Glossary, and make minor revisions to the goals and policies related to biological resources. The existing General Plan provides the necessary framework for these amendments, as it already explicitly recognizes the importance of biological resources and the need to facilitate habitat connectivity. Minor updates to the background information and GPP Glossary are also needed to clarify and standardize terms.

The General Plan currently defines "Wildlife Migration Corridors" as, "*Linear spaces that connect the various areas of an animal's habitat, and serve as links between feeding, watering, resting and breeding places. These corridors are especially important to larger, wider-ranging animal species.*" This definition addresses animals and their habitats and recognizes that connections among habitats are important for the survival and reproduction of some plant species as well.

The County's current General Plan includes the following GPP Goal 1.5.1 to preserve and protect wildlife migration corridors:

"Preserve and protect significant biological resources in Ventura County from incompatible land uses and development. Significant biological resources include *endangered, threatened or rare species* and their habitats, *wetland habitats, coastal habitats, wildlife migration corridors* and *locally important species/communities.*" (Emphasis added.)

Moreover, GPP Policies 1.5.2-1 and 1.5.2-2 state:

- (1) *Discretionary development* which could potentially impact *biological resources* shall be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures.
- (2) *Discretionary development* shall be sited and designed to incorporate all feasible measures to mitigate any significant impacts to *biological resources*. If the impacts cannot be reduced to a less than significant level, findings of overriding considerations must be made by the decision-making body.

Amending the Resources Appendix of the General Plan to add information related to habitat connectivity and wildlife movement and the four maps, is necessary to link both the existing goals and policies to the appropriate maps and to provide clarity regarding the areas within which the proposed ordinance amendments will apply. As noted above, the mapped linkages are currently reviewed when conducting environmental review for discretionary development projects subject to CEQA.

Adding the four maps (Exhibits 8 - 11) will also provide the basis for establishing the HCWC overlay zone and Critical Wildlife Passage Areas (CWPA) overlay zone in the NCZO, and provide the groundwork for potential policy development within the General Plan as part of ongoing General Plan updates. For example, as noted above, the existing General Plan provides only one broad biological resource protection goal that mentions protection for wildlife corridors, but it currently provides no supporting policies that specifically address development in these areas.

8. Summary of Non-Coastal Zoning Ordinance Amendments.

The proposed NCZO amendments (see Exhibits 14, and 15) amend the following NCZO articles:

Article 2: Definitions

Article 3: Establishment of Zones, Boundaries, and Maps

Article 4: Purposes of Zone

Article 5: Permitted Uses (Zoning Matrix)

Article 9: Standards for Specific Zones and Zone Types

Article 18: Official Zoning Data of the NCZO

The proposed NCZO amendments add the following sections to Article 9:

Sec. 8109 - 4.8 - Habitat Connectivity and Wildlife Corridors Overlay Zone

4.8.1 - Applicability

4.8.2 - Outdoor Lighting

4.8.3 - Surface Water Features, Wildlife Crossing Structures, and Wildlife Impermeable Fencing

Sec. 8109 – 4.9 – Critical Wildlife Passage Areas Overlay Zone

4.9.1 – Applicability

4.9.2 – Exemptions

4.9.3 – Permitting Requirements

4.9.4 – Compact Development Siting Standard

4.9.5 – Discretionary Permit Application and Approval Standards

The proposed additions to Article 9 are summarized below. Two new overlay zones will facilitate the implementation of the proposed regulations. The HCWC overlay zone comprises the entirety of the habitat connectivity and wildlife corridors. The CWPA overlay zone consists of critical wildlife passage areas located within the larger HCWC overlay zone that merit enhanced protection for the reasons stated in Section 8.f below.

a. Outdoor Lighting (Applicable throughout the HCWC Overlay Zone)

Outdoor lighting is a prevalent indirect barrier to wildlife movement that the proposed ordinance seeks to address. Scientific research has shown that many types of outdoor lighting have the potential to negatively impact the behavior and

movement of animals. The indirect impacts created by lighting can include the disorientation of nocturnal species and the disruption of mating, feeding, migrating, and predator-prey interactions. Some of the adverse impacts of lighting on wildlife behavior were described in the materials presented to your Commission and the Board regarding NCZO amendments creating a Dark Sky overlay zone and accompanying regulations applicable to portions of the Ojai Valley, which were adopted by the Board on September 25, 2018 (hereafter referred to as the Dark Sky Ordinance).⁸

Even very low levels of light can have an impact on wildlife behavior. For example, research shows an observed change in prey detection of barn owls at a fraction of a foot-candle (a measure of the amount of light present at a given distance equal to the light emanating from a candle at a distance of one foot) (Gaston et. al., 2013). However, the intensity of light attenuates very quickly with increased distance. As a result, if lighting can be shielded, its timing and duration be set efficiently, and its location sited such that it does not spill over into important habitat areas, wildlife behavior, including movement and migration, would benefit.

Ecological light pollution includes chronic or periodically increased illumination, unexpected changes in illumination, and direct glare. Animals can experience increased orientation or disorientation from additional illumination and are attracted to or repulsed by glare. Artificial lighting and glare can affect foraging, reproduction, communication, and other critical behaviors. Artificial light disrupts interactions between species that have evolved behaviors based on natural light and dark conditions, with serious implications for species persistence (Longcore and Rich 2004). Lighting can have a large impact on wildlife in Ventura County's unincorporated areas because so much of the land is adjacent to or within areas commonly used by wildlife.

Summary of Outdoor Lighting Standards (NCZO Sec. 8109 – 4.8.2)

The proposed outdoor lighting standards are intended to minimize potential impacts of light on wildlife behavior. They were developed in consultation with the County's Building and Safety staff, and in large part incorporate applicable definitions and provisions from the Dark Sky Ordinance. A list of defined terms from the Dark Sky Ordinance that apply to these proposed ordinance amendments is attached as Exhibit 18.

The general regulatory approach is to limit light output and fixture heights, require "warmer" color lights, and require fixtures to be shielded and directed downward. There are also provisions allowing for brighter security lighting, lighting for

⁸ <http://bosagenda.countyofventura.org/sirepub/agdocs.aspx?doctype=agenda&itemid=93784>

specific areas such as driveways and walkways, and brighter lighting for specific uses such as outdoor sports areas. In addition, the proposed regulations require night-lighting installed in translucent or transparent agricultural structures such as greenhouses to be controlled so the lighting is not visible outside the structure. Such controls include shielding, directional lighting, and blackout screening. Table 2 below summarizes the compliance timing requirements for the proposed lighting regulations.

Numerous exemptions from these standards are proposed, including but not limited to lighting required by state and federal regulations, lighting in the road right-of-way installed by a public agency, temporary emergency lighting, intermittent lighting needed for nighttime agricultural activities, and seasonal or festive lighting. Certain types of lighting are proposed for prohibition including permanently installed lights that blink or flash, lighting located along the perimeter of a lot except for security lighting, and uplighting of landscapes or for aesthetic purposes between 10:00 p.m. and sunrise.

Table 2 – Proposed Lighting Regulations Compliance Timing Requirements

Type of Lighting	Compliance Timing	Notes
Newly-installed or replacement lighting	Ordinance effective date	
Existing lighting (not otherwise prohibited or permitted as part of a discretionary permit)	May remain in place; but must comply with certain standards as noted one year after effective date.	Non-conforming lighting (not considered “essential”) must be turned off between 10 p.m. and sunrise. All lighting should still be directed downward, if possible.
Existing lighting approved and installed as part of active discretionary permit	At least three years after ordinance effective date	Non-conforming lighting must be modified or replaced on approval of a minor or major permit modification to underlying permit. Replacement lighting may be phased in within a reasonable time after the three-year period.
Existing Prohibited Lighting (blinking, flashing, strobe, perimeter lighting, uplighting for aesthetic purposes)	One year after ordinance effective date	Existing aesthetic uplighting can still be used but must be turned off between 10 p.m. and sunrise.

b. Surface Water Features (Applicable throughout the HCWC Overlay Zone)

Surface Waters and Biological Resources

Ventura County's riparian areas, from its major river systems to its small ephemeral drainages, can provide plants and wildlife with a path to move through a landscape. The importance of these water features to wildlife and plants is well documented in the scientific literature, with more recent research showing that even ephemeral drainages are utilized by numerous species (Goodrich, et. al., 2018; Sánchez-Montoya, et. al., 2016; Abouelezz, et. al, 2018). Native species, such as mountain lion, deer, badger, and bear depend on riparian habitats for water and forage. Numerous native birds utilize riparian areas for breeding, foraging, and resting in stopover migrations. Small mammals and birds use riparian dispersal routes to scatter from their original habitats as a result of population pressures or food or water shortages.

Use and Degradation of Riparian Movement Corridors

Many riparian and alluvial habitats in Ventura County are degraded and threatened by numerous factors that diminish their functional value for wildlife movement. Invasive plant proliferation, vegetation removal, soil disturbance, and development directly adjacent to riparian corridors have caused substantial degradation in many small unnamed ephemeral drainages and larger river systems such as the Ventura River and Arroyo Simi. The degradation of local surface waters is reflected in the listing of numerous surface water features in Ventura County currently on the Federal Clean Water Act Section 303(d) List of Impaired Waters. Surface waters are listed for trash, pollutants, and pesticides, in part as a result of development within these upland areas. These impairments reflect the diminishing functional value of aquatic and riparian habitats.

Limitations of Existing Regulatory Structure for Surface Water Features

Although various existing local, state, and federal laws and regulations currently exist for the purpose of protecting water resources, these regulations are not typically focused on the protection of water resource for the purposes of ensuring wildlife movement. For example, standards and regulations implemented by the Ventura County Watershed Protection District target flood control and water quality standards and do not specifically address the objective of preserving the functional connectivity of a surface water feature. Moreover, in cases where a proposed project is either exempt from land use permit requirements (i.e., native vegetation removal) or requires a ministerial permit (i.e., construction of a single-family dwelling), potential impacts to surface water features are not typically evaluated. When these activities occur near drainages, erosion and sedimentation can occur, resulting in a loss of habitat value and potential

adverse effects to wildlife movement corridors, if the development is sited within these areas.

Proposed Buffer and Permitting Requirements for Surface Water Features
(NCZO Sec. 8109-4.8.3)

Based on the biological importance of riparian habitats and the potentially adverse impacts that can result from development near these areas, the proposed amendments establish a 200-foot wide buffer (or setback) which is measured from the farthest extent of the surface water feature (SWF) and its associated riparian area. The primary purpose of the setback is to minimize impacts to habitat and direct disturbances to wildlife in riparian areas adjacent to SWFs. There is extensive scientific research regarding appropriate buffer distances from SWFs. In general, wide, densely-vegetated buffers are better than narrow and sparsely-vegetated buffers. The Environmental Law Institute found that effective buffer sizes for wildlife protection may range from 33 feet to more than 5,000 feet, depending on the species (McElfish et. al., 2008). Further, this research has shown that a buffer width of 100 to 300 feet would accomplish the objective of sustaining wildlife habitat in most cases (McElfish et. al., 2008).

The identification of SWFs in the HCWC overlay zone is based on the National Wetlands Inventory (NWI), which provides detailed information on the abundance, characteristics, and distribution wetlands throughout the United States. Produced, maintained, and supported by the United States Fish & Wildlife Service and the Federal Geographic Data Committee, the NWI incorporates data from the U.S. Department of the Interior Geological Survey (USGS) National Hydrography Dataset, historic hard copy maps, aerial imagery, and deep water and wetland spatial data that are updated over time. In addition, the NWI identifies vegetation communities that support wetland habitats.

In developing the 200-foot surface water feature buffer, County staff considered various sources of hydrological data other than the NWI, including red line channels and blue line streams.⁹ However, the NWI data was selected for the following reasons: (1) It is generally more comprehensive than red line channels, which are primarily considered in a flood control context; (2) It is based on more current data than blue line streams; and (3) Resource Management Agency,

⁹ A red line channel is defined as a channel or stream within the Ventura County Watershed Protection District's jurisdiction that carries a minimum of 500 cubic feet per second in a 100-year storm event and that is regulated by Ventura County Watershed Protection District Ordinance. A blue line stream is defined as any stream shown as a solid or broken blue line on quadrangle maps prepared by the USGS. Streams identified on USGS maps are primarily used in a federal regulatory context.

Planning Division staff have been using NWI data to determine potential impacts for discretionary projects for many years. In addition, for purposes of the proposed regulations, SWFs will not include lakes, reservoirs, and agricultural water impoundments since the primary focus of the surface water feature buffer is riparian habitats along drainage corridors.

Subject to exemptions noted below, the following activities and uses, including vegetation modification, proposed to be located within the 200-foot surface water feature buffer (or setback) require a Planning Director-approved Planned Development permit (PD permit):

- Initiation of any new land use, or construction of any new structure or addition to an existing structure, that is subject to a permitting requirement under Article 5 (i.e., a Zoning Clearance or other permit is required under Article 5) and that will result in any new fuel modification required by the Ventura County Fire Protection District.
- Wildlife impermeable fencing enclosures. (Additional details regarding wildlife impermeable fencing are discussed in Section 8.e of this report.)
- Vegetation modification (defined as the alteration of both native and non-native vegetation) exceeding ten percent of the area of the lot that is located within a SWF within a 12-month period. (For example, on a lot where a total of 1,000 square feet of the lot area is within a SWF, vegetation modification that exceeds 100 square feet would require a Planning Director-approved PD permit. Conversely, vegetation modification would be exempt if it is limited to a maximum of 100 square feet within a 12-month period.)

Several types of vegetation modification are exempt. Exemptions include planting/harvesting of crops or orchards that will be commercially sold; livestock grazing; vegetation modification conducted to comply with a condition of an existing County-approved land use entitlement, for existing legally-established structures; vegetation modification required to comply with any federal, state or local law or regulation, or performed by a public agency on publicly owned- or maintained-property; vegetation modification on land owned or maintained by a conservation organization for the purpose of maintaining or enhancing functional connectivity; development within a public road right-of-way; and development that is dependent on being located within a surface water feature setback (e.g., in-stream mining); or modification of intentionally planted landscaping.

Also exempt are the restoration or replacement of land, fences or improvements, and the reconstruction of structures (if less than 50 percent is destroyed), within six years if involuntary damaged or destroyed by fire, flood, landslide or natural disaster. In addition, the regulations will not prevent property owners from clearing fuel breaks around structures in accordance with Ventura County Fire

Protection District regulations and will not prevent the Fire District from conducting controlled burns. A comment letter from Fire Chief Lorenzen regarding these proposed regulations is attached as Exhibit 19.

The removal of invasive plants is eligible for a zoning clearance. Currently existing, legally-authorized structures (including existing fencing) are not subject to the regulations.

Applications for discretionary permits required pursuant to the SWF buffer regulations must include specific information prepared by a qualified biologist that demonstrates the project is consistent with specified development guidelines. These guidelines state that the specified development and wildlife impermeable fencing should be outside of applicable setback areas, minimize removal and disturbance of biological resources that have the potential to support functional connectivity and wildlife movement, and be designed to retain the largest possible contiguous undeveloped portion of land, if feasible.

The regulations also allow for the "reconsideration" of a designated SWF by the Planning Director, if requested by an applicant. When reconsideration is requested, the sole issue to be determined is whether the area qualifies as a SWF. Documentation required will include a field survey prepared by a qualified biologist in accordance with the ISAGs.

c. Wildlife Crossing Structures (Applicable throughout the HCWC Overlay Zone)

Roads can be harmful to wildlife for several reasons: they are a source of animal mortality; they can disrupt normal animal movements; and limit the dispersal of wildlife populations. However, in some cases, wildlife can cross roads and highways more safely by using passages such as drainage culverts, bridges, underpasses, or small below-grade access roads beneath or above roads and highways.

Several local studies of wildlife using crossing structures, as well as studies of roadkill counts, have occurred throughout Ventura County (Anderson, 2012; LSA, 2004). A study of crossing use by various types of wildlife at various locations in Ventura County (e.g., Highway 101, State Routes 23, 126 and 118), indicated that passages beneath highways can provide important safe avenues for animals to cross roads. (Sikich and Riley, 2012; Brown and Riley, 2013; Moriarty and Riley, 2016). Studies that monitored wildlife use of crossing structures along the SR-23 and SR-118 noted the wide variety of animals using the crossings, including deer, raccoon, coyote, bobcat, opossum, and striped skunk (Ng et. al., 2004). In addition, despite the SR-118 being a major barrier to movement, as evidenced by mapping of home ranges, gene flow still occurs in populations on either side of the highway because of the connectivity these crossing structures provide (Brown and Riley, 2013). Studies have further shown that small wildlife

such as reptiles, amphibians, and small mammals may use crossings under small-scale roads, such as those maintained by the County's Public Works Agency. Clearly, roadway crossing structures facilitate wildlife movement through and across roads in Ventura County.

The environmental context surrounding roadway crossing structures can influence the willingness of animals to cross, and proper management of some of these environmental attributes can increase the degree to which animals use these structures. For example, one study found that larger passages with vegetation close to the passage entrances, favorable habitat in the surrounding area, and low disturbance by humans were important features that influenced use of these structures by small and medium carnivores (Grilo et. al., 2008).

Proposed Buffer and Permitting Requirements for Wildlife Crossing Structures (NCZO Sec. 8019-4.8.3)

Staff evaluated over 400 state and local road crossings that are within the boundaries of the proposed HCWC overlay zone. Of these, approximately 25 percent were identified as having a high connectivity value for wildlife passage and were thus selected to be subject to the proposed wildlife crossing buffer regulations. A list of these crossings is attached as Exhibit 20. Additional information regarding the process used to select the crossings that are subject to the proposed regulations is attached as Exhibit 21.

The proposed regulations establish a 200-foot setback from the entry or exit point of specified wildlife crossing structures.¹⁰ Subject to exemptions outlined below, the following activities and uses, including any required vegetation modification, proposed to be located within 200 feet of a wildlife crossing structure require a Planning Director-approved PD permit:

- Initiation of any new land use, or construction of any new structure or addition to an existing structure, that is subject to a permitting requirement under Article 5 (i.e., a Zoning Clearance or other permit is required under Article 5) and that will result in any new fuel modification required by the Ventura County Fire Protection District.
- Wildlife impermeable fencing enclosures.

¹⁰ For a pipe or box culvert, the setback from the entry or exit point of a culvert is to be measured from the center of the inlet or outlet side. For a bridge structure, the setback is to be measured from the perimeter of the bridge structure. An illustration of the measuring points is provided in the ordinance (Exhibit 14).

Applications for discretionary permits under the wildlife crossing buffer regulations must include the same information and must be consistent with the same development guidelines as summarized in the SWF buffer section above.

Exemptions to the wildlife crossing structure regulations include vegetation modification required to comply with any federal, state or local law or regulation; vegetation modification performed by a public agency on publicly owned- or maintained-property; vegetation modification on land owned or maintained by a conservation organization for the purpose of maintaining or enhancing functional connectivity; livestock grazing; and development within a public road right-of-way.

Also exempt are the restoration or replacement of land, fences or improvements, and the reconstruction of structures (if less than 50 percent is destroyed), within six years if involuntary damaged or destroyed by fire, flood, landslide or natural disaster.

d. Invasive Plant Prohibition (Applicable throughout the HCWC Overlay Zone)

There has been extensive research on the negative ecological effects of invasive species on native plant habitats. In Ventura County and throughout southern California, giant reed (*Arundo donax*) clogs creek and river systems and outcompetes native riparian vegetation. Species such as common ivy (*Hedera helix*), pampas grass (*Cortaderia selloana*), and iceplant (*Carpobrotus edulis*) are some of the most aggressive invasive species in California and can be found commonly in landscaped areas.

Invasive grasses and shrubs have been shown to increase fire frequency when they replace stands of fire-adapted native vegetation (Brooks, et. al., 2004; Keeley, J. 2002). The spread of invasive plants can result in the conversion of natural areas with native vegetation and high-quality habitat, to stands of invasive weeds with minimal habitat value. Invasive weeds planted as ornamental landscaping or used in erosion control seed mixes can spread into adjacent areas causing habitat fragmentation and an overall reduction in habitat quality within protected areas. This is especially true for invasive species planted in rural areas, which can more easily spread into habitat areas simply because these areas often border protected lands. Invasive plants also colonize areas of disturbance more easily, such as construction and earth movement, which can spread seed. The cumulative effect of fires, soil disturbance, and native vegetation removal can result in further spread of invasive plants, diminishing habitat value and functional connectivity on a landscape scale.

Invasive Plant Standard (NCZO Sec. 8109-4.8.3.3)

The proposed ordinance prohibits the intentional planting of invasive plants unless planted as a commercial agricultural crop or grown as commercial nursery

stock. The purpose of this standard is to protect areas within the HCWC overlay zone from further degradation caused by invasive plants. For purposes of this ordinance, invasive plants are those listed on the California Invasive Plant Council Invasive Plant Checklist for California Landscaping. Standards associated with the selection of erosion control seed mixes and non-invasive plants will be applied to proposed projects and described in required landscape plans.

e. Wildlife Impermeable Fences (Applicable throughout the HCWC Overlay Zone in Open Space and Agricultural Exclusive Zones)

Wildlife movement can be compromised by direct barriers including certain types of fencing that animals can't penetrate. Fences that are too high or that have tightly spaced wires or mesh can entangle animals, prevent passage entirely, or trap and kill animals. Fencing that is impermeable to wildlife passage can also create significant barriers to critical resources such as food and water, habitat, and areas with access to other breeding animals needed to maintain genetic diversity.

Fencing standards related to the quantity, configuration and height of wildlife impermeable fencing were developed in consultation with several different stakeholders, including property owners, the Coalition of Labor Agriculture and Business, The Nature Conservancy, various wildlife movement experts from state and federal regulatory agencies, discussions with members of the Agricultural Policy Advisory Committee, and consultations with the Livestock and Range Advisor from UC Cooperative Extension. Project staff also participated in a site visit and tour of Rancho Temescal, a large property within the mapped linkage, to understand the different types of fencing used on a large agricultural property.

In addition to the input received from the stakeholders listed above, Planning Division staff consulted with researchers at University of California, Berkeley who are currently conducting studies related to the effects of fencing on wildlife movement and behavior. Their preliminary findings suggest that electric fencing (single and multiple strands), woven wire fencing, and fencing that is 60 inches or higher create barriers for wildlife and can result in altered predator-prey interactions (Personal communication. J. Brashares, A. McInturff 2018).

Wildlife Impermeable Fencing Standards and Permitting Requirements (NCZO Sec. 8109-4.8.3.6)

The purpose of the fencing standards is to limit the direct barriers created by fencing by limiting the amount of new wildlife impermeable fencing that may be installed to enclose an area. One goal of the regulations is to allow fencing types most commonly used on residential lots and for livestock ranching in Ventura County, while limiting those features that may have the greatest impact on

wildlife movement, (such as fence height). Wildlife impermeable fencing is defined in the ordinance as having one or more of the following design features:

- Any fence that is higher than 60 inches above grade, including any wire strands that are placed above a top rail of a fence.
- Electric fences comprised of any material or number of electrified strands.
- Wrought iron, plastic mesh, woven wire, razor wire, chain link, or that consists entirely of a solid surface, such as cinderblock.

The regulations prohibit both the installation of new wildlife impermeable fencing around the perimeter of any lot, and on any lot that has no existing lawfully-established principal use, to form an enclosed area. In addition, new fence posts, corner posts, or gate upright with open, vertical pipes on lots zoned Agricultural Exclusive (AE) and Open Space (OS) that could trap small birds or other animals must be entirely filled with concrete, sand, gravel, or other material, or covered with commercial caps.

Subject to exemptions outlined below, the installation of new or replacement fencing comprised entirely of wildlife impermeable fencing that forms one or more enclosures on lots zoned Agricultural Exclusive (AE) and Open Space (OS) are subject to the new permitting requirements based on the extent of lot area that is enclosed.

Specifically, wildlife impermeable fencing that encloses a cumulative area of up to ten percent of the gross area of a lot requires a ministerial permit. For example, the owner of a 10-acre lot could install wildlife impermeable fencing that encloses up to an acre of land with a (ministerial) zoning clearance. The installation of wildlife impermeable fencing enclosures that exceed ten percent of the gross lot area requires a Planning Director-approved PD permit. For lots with existing wildlife impermeable fencing, the proposed regulations exclude the cumulative area of the existing fencing from the calculation of gross lot area.

Applications for discretionary permits under the wildlife impermeable fencing regulations must include the same information and must be consistent with the same development guidelines as summarized in the SWF buffer section above.

Several exemptions are proposed. These include:

- Repair or maintenance of existing, legally-established fences;
- Restoration or replacement of fences to their prior condition following a fire, flood, landslide, or natural disaster;

- Fencing that forms an enclosed area within 50 feet of an exterior wall of a legally-established dwelling or *structure* related to an agricultural use;
- Fencing used to enclose commercially grown agricultural products intended for commercial sale;
- Fencing installed for or by a public agency for the purpose of directing wildlife toward a road crossing structure;
- Fencing used for habitat protection or a restoration project; and
- Fencing installed on a lot with an area of 10,000 square feet or less.

f. Critical Wildlife Passage Areas Overlay Zone (Applicable in the Oak View, Simi Hills and Tierra Rejada subzones)

One of the four key project objectives is to maintain corridor widths or enhance corridor “chokepoints” to facilitate species movement among natural areas. A chokepoint is defined in the ISAGs as a narrow, impacted, or otherwise tenuous wildlife movement corridor or linkage (like the narrow neck of an hourglass). They have also been described as narrow, physically constrained passages that constrict species movement between larger core habitat areas.

As part of project development, Planning Division staff initially intended to determine an appropriate minimum width that would be used to identify chokepoints within the mapped linkages. In researching an appropriate standard, however, it became clear that the minimum width of a linkage often depends on other factors and can vary substantially. Lands throughout Ventura County are seldom either pristine preserves or developed urban areas without any habitat value; rather they provide resources for wildlife in a matrix of protected, rural, and developed lands. Factors such as the likelihood of future urbanized development, (which can include gradual vegetation clearing, fragmentation of open space, and increased edge effects),¹¹ or the presence of landscape features commonly used by wildlife, are often more salient factors when considering linkage vulnerability.

Accordingly, these factors required staff to consider issues other than geographic width to identify those areas that are at highest risk of functional connectivity loss. To reflect this shift, staff developed the concept of Critical Wildlife Passage

¹¹ Edge effects can include adverse changes to species abundance, presence and behavior. They can occur when habitats are fragmented, and the proportion of edge habitat increases relative to interior habitat. Edge effects can be caused by irrigation, artificial night-lighting, habitat degradation and removal, and introduction of invasive species.

Areas (CWPAAs) to replace the emphasis solely on chokepoints. Some of the factors used to identify these areas include proximity to protected open space that serves as core habitat, the presence of geographic features that facilitate wildlife movement such as riparian corridors or ridgelines, and whether the area contains lands or is located adjacent to land permanently protected as open space. Table 3 summarizes the factors used to identify CWPAAs.

Approximately 15 areas within the proposed HCWC overlay zone were initially identified as potential CWPAAs based on a review of geographically narrow or critically important regions. Three areas were ultimately selected as the most critical CWPAAs, while 12 potential CWPAAs were excluded for a variety of reasons. Two of these 12 areas consist of the Santa Paula Creek and Sespe Creek corridors adjacent to the cities of Santa Paula and Fillmore, respectively. By virtue of being within the HCWC overlay zone and being relatively narrow in geographic scale, these creek corridors will be subject to the surface water feature regulations. Staff believes that the SWF setback regulation is sufficient to provide space for wildlife movement along the Santa Paula and Sespe Creeks.

Two of the other excluded areas are existing mineral extraction operations (the Pacific Rock Quarry Mine near Camarillo, and the P. W. Gillibrand Sand Quarry near Simi Valley), that operate under conditional use permits. Any future modifications to these operations would be subject to a discretionary permit, including CEQA review. Staff generally believes that areas dominated by the presence of existing uses subject to existing discretionary permitting requirements are sufficiently evaluated for their potential impacts to wildlife movement.

The area along the Conejo Grade was not selected as a CWPA, in part because the southern portion of this area lies within the City of Camarillo. In addition, there was a recently approved application for an Open Space and Wildlife Habitat Land Conservation Act contract that applies to a large portion of the land north of the Conejo Grade that will provide sufficient space for wildlife movement.

Other potential CWPA locations were not included because of the diminished likelihood of future development potential due to the proximity of relatively large areas of protected lands. This was the case for Mountclef Ridge, where much of the regional corridor is located within the City of Thousand Oaks and contains open space areas managed by the Conejo Open Space Conservation Agency.

As indicated above, three areas critical for wildlife movement were identified as being the most vulnerable to a loss of functional connectivity. These areas are: the Tierra Rejada Valley, portions of Oak View, and portions of the Simi Hills (Exhibits 5 - 7). A description of each of these CWPAAs follows Table 3, below. The parcels subject to the CWPA overlay zone are listed in Exhibit 15.

Table 3 – Critical Wildlife Passage Area Selection Factors

Critical Wildlife Passage Factor	Description
Governmental jurisdiction	<ul style="list-style-type: none"> The County has no land use authority within cities and thus these areas were excluded from the analysis.
Locations and configuration of protected lands as mapped by the California Protected Areas Database and the California Conservation Easement Database	<ul style="list-style-type: none"> Protected lands consist of preserved open space that typically provides high quality habitat for wildlife. The ability of wildlife to safely traverse the lands in between these protected areas can significantly affect functional connectivity within the larger regional linkage. For this reason, parcels near and adjacent to protected lands were considered higher priorities.
Proximity to, or extent of, urban development, particularly within a city or unincorporated community. This includes cities and areas within other counties.	<ul style="list-style-type: none"> Geographically narrow areas of unincorporated land connecting major north-south portions of the mapped linkages were considered the highest priority. Development in Ventura County is primarily concentrated in cities near services and commercial centers. Unincorporated areas near or adjacent to the boundary of a city (but not within a sphere of influence) or an existing community were generally considered higher priorities, particularly unincorporated areas near cities largely surrounded by mapped linkages. Remote areas with few or no roads or existing development were considered lower priorities.
Existing habitat value	<ul style="list-style-type: none"> Areas with more intact, native habitat and/or higher habitat values were considered higher value area for habitat connectivity than those with more fragmented or lower habitat values.
Proximity of major water bodies/courses	<ul style="list-style-type: none"> Areas between major water bodies/courses were considered higher priorities.
Proximity to a Roadway Crossing	<ul style="list-style-type: none"> Roadway crossings can provide wildlife a means to overcome a direct barrier, such as a freeway. Corridors near highways containing functioning crossings were considered higher priorities.

CWPA Summaries

- Oak View

The Oak View CWPA (Exhibit 5) was selected because it consists of a narrow north-south linkage that is constrained by Lake Casitas to the west and the urbanized areas of Oak View to the east. Much of this area contains oak woodland, grassland, and other patches of native vegetation that can serve as potential habitat for wildlife. Lake Casitas and the Ventura River serve as important regional habitat areas that can also provide water for numerous wildlife species that are attracted to the area. The proposed Oak View CWPA is located adjacent to the Lake Casitas Recreation Area, managed by the Bureau of Reclamation in cooperation with Casitas Municipal Water District. Approximately 3,500 acres of land were protected as Open Space by the federal government in 1974 (URS, 2005). These lands include the lake itself and areas mostly north of the lake.

However, the lands east of the lake and adjacent to the proposed CWPA are not protected. This portion of the mapped corridor is approximately 1,500 feet wide at its narrowest point and is heavily constrained by Lake Casitas and a portion of Oak View. This area may be more at risk because of the edge effects associated with the adjacent residential development. Land ownership in the CWPA is primarily private and contains existing low-density rural or agricultural development. However, even low-density development can create barriers to movement, and land use intensification in this area, including the development of new structures and uses, could substantially diminish functional connectivity in an already constrained area.

Finally, this area contains Santa Ana Road which fragments habitat, yet contains roadway crossings that may be conducive to wildlife movement. The proposed CWPA connects 69,000 acres of protected U.S. Forest Service Lands to the north and undeveloped open space in the south. Because this area is narrow, contains few protected lands, and is adjacent to urbanized development, yet still provides undeveloped open space and high-quality habitat capable of facilitating wildlife movement, it was selected as a CWPA.

- Simi Hills

The Simi Hills CWPA encompasses the community of Bell Canyon, the eastern portion of the Santa Susana Field Lab, Sage Ranch Park, Box Canyon, and a portion of the Santa Susana Knolls (Exhibit 6). A significant portion of the mapped habitat linkages that move north-south through this area is in Los Angeles County, leaving a relatively narrow portion within the jurisdiction of Ventura County. This portion of the Simi Hills is critical in connecting preserved open space lands throughout the linkage that serve as core habitat for wildlife. These preserved open space areas include the Upper Las Virgenes Canyon Open Space Preserve, the Chesebro and Palo Comado Canyon Parks, and the Santa Monica Mountains to the south.

To the north, the Simi Hills CWPA connects various largely undeveloped and protected areas such as Rocky Peak Park and the Los Padres National Forest. The Simi Hills CWPA is flanked by urbanized areas to the west by the City of Simi Valley and to the east by the communities of West Hills, Canoga Park, and Chatsworth in Los Angeles County. Portions of the Simi Hills CWPA contain areas that serve as parks or have lands that been encumbered by conservation easements, such as Sage Ranch Park and portions of the Santa Susana Field Lab. In recent years, the National Park Service and other wildlife researchers have tracked mountain lions and other wildlife in this area. In June 2018, four mountain lion cubs were found in the Simi Hills by researchers. Although these areas are not at high risk of further development in the near term, they were included to ensure that the CWPA remains as a contiguous area that continues to provide functional connectivity through the area in the future.

- Tierra Rejada Valley

The Santa Monica Mountains to the Sierra Madre Connection serves as the primary north-south regional linkage in Ventura County, connecting two large core habitat areas, those being the Santa Monica Mountains and the Los Padres National Forest. This linkage becomes constrained both in the area near Santa Susana Pass, and in the Tierra Rejada Valley (Exhibit 7).

Although the Tierra Rejada Valley does not form a narrow corridor, it is constrained by three cities on virtually all sides: Simi Valley to the east and north east; Moorpark to the north and northwest; and Thousand Oaks to the south. As such, wildlife movement beyond this area is significantly constrained by urbanized development except for a patchwork of parks and open space preserves to the north and south, which includes Bard Reservoir, Wood Ranch and Wood Ridge Open Spaces, Oak Park in Simi Valley, and Happy Camp Canyon Regional Park.

Despite the urban densities of the surrounding cities, existing development densities within the Tierra Rejada Valley are relatively low. With minimum lot sizes typically between 10 to 40 acres, this area is particularly important to maintain functional connectivity. Moreover, the Arroyo Simi, which lies within and directly adjacent to the Tierra Rejada Valley CWPA, serves as important habitat for both resident and migrating wildlife. Studies of wildlife movement and use of roadway crossings have shown that wildlife utilize crossings associated with SR-23 and SR-118 in the Tierra Rejada Valley, and that large, far-ranging wildlife such as mountain lions are known to occur in this area. Additional studies referencing the connection between the Tierra Rejada Valley and wildlife movement are cited in the bibliography (Exhibit 22).

This area contains significant barriers including SR-23 and SR-118 to the north as well as Tierra Rejada Road to a lesser extent. However, wildlife movement studies completed to date indicate that wildlife are successfully traversing SR-23 and SR-118 at critical roadway crossings.

Table 4 below presents parcel summary information for each of the CWPAs.

Regulations Applicable within CWPAs - Compact Siting Standard (NCZO Sec. 8109-4.9)

Due to the importance of maintaining functional connectivity within these critical areas, the regulations developed for CWPAs encourage compact development to help maintain undeveloped areas that can serve as linkages for wildlife movement. The purpose of these standards is to address habitat fragmentation by encouraging the grouping of development on individual lots, thereby preserving both the land owner's ability to develop while also protecting more undeveloped, open areas for plants and animals to move. In addition, compact development generally results in less disturbance to vegetation and reduces nighttime lighting, noise, human presence, and other direct and indirect barriers to wildlife movement. The standards are designed to encourage the concentration of proposed development on a regulated lot. However, they do not change existing lot coverage standards, which are the primary determinants of how much development can occur within any lot.

The compact siting standards apply to new structures and other new uses on lots over two acres in size in all zones except lots zoned Commercial (CO, C1, CPD) and residentially-zoned lots within the Simi Hills CWPA. There are no industrially-zoned lots within the CWPAs. The installation of wildlife impermeable fencing forming an enclosed area on lots over two acres is also subject to the compact siting standards, but only on lots zoned Open Space (OS) or Agricultural Exclusive (AE).

The Simi Hills residential areas are exempt for several reasons. First, there are two parcels in the Santa Susana Knolls community zoned for residential high-density development. The development density required by this zoning designation would be difficult to achieve under the proposed CWPA compact siting regulations. Second, the residentially zoned parcels in the Box Canyon community generally run adjacent to Box Canyon Road and many of the parcels are irregularly shaped and constrained by steep slopes, which would make the compact siting standard difficult to implement. Finally, the Bell Canyon subdivision is governed by existing covenants, conditions and restrictions which require perimeter fencing that is permeable to wildlife. Bell Creek runs through the subdivision, and a trail system provides pathways for wildlife through the tract. For these reasons, staff believes that the compact siting regulations required within CWPAs would not significantly improve the habitat connectivity currently provided through the Simi Hills communities.

The proposed regulations allow for a ministerial permit, subject to specified exemptions, for most new structures, additions, uses, and installation of wildlife impermeable fence enclosures, provided they are sited exclusively in one of two contiguous areas created by a line bisecting the lot into two sections of equal

area, or if they are located entirely within 100 feet of a public road or street or an existing structure, use, driveway, or publicly accessible trail on the same lot. New development, uses, and wildlife impermeable fencing that does not meet the requirement for a ministerial permit requires a discretionary Planning Director-approved PD permit.

It is important to note that the proposed regulations do not impact existing building coverage limits. For example, building lot coverage for development in the both the Agriculture Exclusive (AE) and Open Space (OS) zones is limited to five percent of the lot for conforming lots; this limit would not be modified. Therefore, under the compact siting standard, a lot in either one of these zones could be developed up to the five percent building lot coverage limit on the portion of the lot that the landowner selects for development pursuant to a ministerial zoning clearance.

Additional exemptions to the CWPA regulations include the following:

- Agricultural shade/mist structures, animal shade structures, and above-ground fuel storage as an accessory use.
- Restoration or replacement of land, fences or improvements, and the reconstruction of structures (if less than 50 percent is destroyed), within six years if involuntary damaged or destroyed by fire, flood, landslide or natural disaster.
- Construction and maintenance of driveways or roads internal to a lot.
- Structures or improvements that are temporary or are located entirely or substantially underground (e.g., pipelines, cables, individual sewage disposal systems).
- Water production, storage, transmission, and distribution facilities.
- Aboveground pipelines/transmission lines.
- Repair or maintenance of an existing, legally-established structure or fence.
- Except for any associated wildlife impermeable fencing or associated structures, the following:
 - (1) Animal Keeping and Animal Husbandry (domestic animals, horses & other equines, including more than permitted by Art. 7)
 - (2) Apiculture
 - (3) Aquaculture/Aquiculture
 - (4) Vermiculture (open beds)
 - (5) Agricultural Promotional Uses
 - (6) Cemeteries
 - (7) Cultural/historic uses
 - (8) Filming Activities
 - (9) Firewood operations
 - (10) Drilling for temporary geologic testing
 - (11) Botanic Gardens and Arboreta

- (12) Athletic Fields
- (13) Golf Courses
- (14) Parks
- (15) Wholesale Nurseries for Propagation

Table 4 – Parcel Summary Information for CWPA's

CWPA Location	Total Acreage	Total Number of Parcels	Number of Parcels Subject to the Compact Siting Standard *
Oak View	1,228	30	30
Simi Hills	6,017	1,883	637
Tierra Rejada	3,108	110	109

* Lots smaller than 2 acres, not entirely within CWPA boundary, zoned as Residential in the Simi Hills CWPA, or zoned as Commercial are not subject to the CWPA permitting requirements or the compact siting standard (NCZO Secs. 8109-4.9.3 and 8109-4.9.4).

g. Discretionary Permit Standards

Applications for discretionary projects in a CWPA must include specific information prepared by a qualified biologist to demonstrate that the project is consistent with specified development guidelines. These guidelines state that the specified development and wildlife impermeable fencing should be outside of applicable setback areas, minimize removal and disturbance of biological resources that have the potential to support functional connectivity and wildlife movement, and be designed to retain the largest possible contiguous undeveloped portion of land, if feasible.

h. Summary of Proposed Ordinance Provisions

Table 5 summarizes the general applicability scheme for the proposed standards and how the proposed standards address the project objectives.

Table 5 - NCZO Standards, Project Objectives, and Applicability

Ordinance Regulations	Project Objectives	Applicability
Outdoor Lighting Sec. 8109-4.8.2	Minimize Indirect Barriers	Throughout the Habitat Connectivity and Wildlife Corridors Overlay Zone
Buffers around Surface Water Features Sec. 8109-4.8.3	Minimize Indirect Barriers Protect Corridor Widths Minimize Vegetation Loss and Habitat Fragmentation	Throughout the Habitat Connectivity and Wildlife Corridors Overlay Zone
Buffers around Wildlife Crossing Structures Sec. 8109-4.8.3	Minimize Direct barriers Protect Corridors Widths Minimize Vegetation Loss and Habitat Fragmentation	Throughout the Habitat Connectivity and Wildlife Corridors Overlay Zone
Prohibition on Intentional Planting of Invasive Plants Sec. 8109-4.8.6	Minimize Vegetation Loss and Habitat Fragmentation	Throughout the Habitat Connectivity and Wildlife Corridors Overlay Zone
Minimize Wildlife Impermeable Fencing Sec. 8109-4.8.4	Minimize Direct Barriers Minimize Habitat Fragmentation	In Open Space and Agricultural Exclusive Zones throughout the Habitat Connectivity and Wildlife Corridors Overlay Zone
Compact Development within Critical Wildlife Passage Areas Sec. 8109- 4.9	Minimize Direct Barriers Minimize Indirect Barriers Protect Corridors Widths Minimize Vegetation Loss and Habitat Fragmentation	Within three CWPAs – Open Space, Agricultural Exclusive, Timber Preserve, and Residential zones, except Residential zones those within the Simi Hills.

i. Amendments to the Zoning Map – Article 18

Adoption of a HCWC overlay zone and CWPA overlay zone would result in all parcels located within these zones receiving a suffix “/HCWC” or “/HCWC/CWPA” at the end of the base zoning classification — e.g., a parcel zoned OS-10 acres would now become “OS-10 ac/HCWC” or “OS-10ac/HCWC/CWPA” to indicate that additional requirements from the overlay zone will apply to the parcel.

The addition of the suffix constitutes an amendment to the Zoning Maps located within Article 18 of the NCZO. The proposed amendments to Article 18 and a list of all affected parcels are attached as Exhibit 15.

j. Enforcement of the Ordinance

The provisions included in the proposed ordinance will be enforced through the County's existing complaint-driven code compliance process.

B. CEQA COMPLIANCE AND EXEMPTION DETERMINATION

Pursuant to the requirements of the California Environmental Quality Act (Public Resources Code, Division 13 §21000-21178, "CEQA"), and State CEQA Guidelines (Title 14, California Code of Regulations, §15000-15387), the proposed project was evaluated for compliance with CEQA. The proposed project consists of the County's adoption and implementation of the above-described General Plan and NCZO amendments necessary to establish a HCWC overlay zone and a CWPA overlay zone, and to adopt standards to encourage development that is compatible with maintaining mapped habitat linkages throughout unincorporated Ventura County. Accordingly, the proposed GP and NCZO amendments are considered a CEQA "project". (14 Cal. Code Regs. Tit. 14, § 15378, subd. (a)(1).) As explained below, however, the proposed General Plan and NCZO amendments are CEQA exempt under Title 14, sections 15061(b)(3), 15307 and 15038 of the California Code of Regulations.

Currently, ministerial development proposals within known habitat linkages are not regulated for the purpose of facilitating wildlife movement. The proposed project involves the adoption of standards to ensure that certain uses, some of which are currently allowed with ministerial permits, are compatible with the movement and distribution of wildlife and plant species throughout their local and regional habitats.

Planning Division staff has determined that the adoption of the proposed project is exempt from CEQA pursuant to CEQA Guidelines section 15061(b)(3) because it can be seen with certainty that there is no possibility the project may cause a significant effect on the environment. Importantly, "significant effect on the environment" is expressly defined by the California Public Resources Code as that which effects "a substantial, potentially substantial, **adverse** change in the environment." (Cal. Pub. Resources Code, § 21068 [emphasis added].) Here, to the extent the project affects the environment, the effect is expected to be beneficial since the proposed project is intended to protect biological resources, by including limits on vegetation removal, buffers created for surface water features and wildlife crossing structures, limits on the intentional planting of invasive plants, and the requirement for compact development in critical areas within the habitat linkages. In addition, staff has determined that the project does

not result in the direct or indirect loss of agricultural soils or create any land use incompatibility issues with agricultural operations, as this project does not include any structures or uses, and agricultural operations are generally excluded from the proposed regulations.

Moreover, because the project consists of regulations intended to benefit the environment, it is also exempt pursuant to CEQA Guidelines Sections 15307 and 15308, *Actions by Regulatory Agencies for Protection of Natural Resources*, and *Actions by Regulatory Agencies for Protection of the Environment*, respectively. These two classes of exemptions consist of actions taken by regulatory agencies to assure the maintenance, restoration, or enhancement of a natural resource or the environment. As described above, this project is intended to fully meet these criteria.

Finally, staff has determined and recommends that this is not a project that is excepted from the above-described categorical CEQA exemptions on the basis of unusual circumstances. (Cal. Code Regs., tit. 14, § 15300.2.) In particular, staff has determined that: (1) there is no substantial evidence identified by staff or members of the public during the several meetings or in correspondence received as described in Section E below, to support a finding of unusual circumstances; and (2) there is no reasonable possibility that the project will cause a significant effect on the environment due to unusual circumstances. Staff's determination and recommendation in this regard is based on the findings above that the proposed project undertaken to protect and preserve the County's natural resources and environment, and to the extent there is a substantial change to the regulated areas, such change will be beneficial, rather than adverse, to the environment. (Cal. Pub. Resources Code, § 20168.)

C. GENERAL PLAN AMENDMENT FINDINGS AND SUPPORTING EVIDENCE

The following discussion summarizes why the proposed General Plan amendment is in the public interest, and has the potential to benefit the general welfare, and is consistent with good planning practice.

1. The legislative body must deem that the proposed General Plan Amendment is in the public interest [Gov. Code §65358]

Ventura County contains an abundance of wildlife and plant populations and their habitats, as well as areas that form a matrix of national, state, and locally-protected areas as well as private holdings. These protected open space areas, and to a lesser extent the rural areas between cities, contain a variety of different habitats including oak woodlands, grasslands, coastal sage scrub, chaparral, wetlands, and coastal dunes. Preserving the geographic connections among protected areas helps to provide wildlife and plant populations with access to necessary resources throughout the County and beyond. These connections are a crucial component of protecting Ventura County's biological diversity.

Movement through habitats is often essential for wildlife survival. Animals must find food and shelter and offspring must establish new home ranges. Moreover, climate change will require some species to shift their historic geographic ranges. Isolated populations may survive for a limited time, but will be vulnerable to die-off due to diseases, periodic loss of food resources, and inbreeding. For all these reasons, preservation of biological resources requires that plant and animal species be able to successfully move through the areas of the County that contain the habitats they depend on.

The proposed project includes several elements intended to encourage development that is compatible with maintaining mapped habitat linkages throughout unincorporated Ventura County, thereby helping to preserve and maintain the County's biological diversity. Such actions are clearly in the public interest and have the potential to benefit the County's general welfare.

1. Upon adoption of the General Plan Amendment, the General Plan must be internally consistent [Gov. Code §65302, §65359].

The proposed project adds several key features to the Ventura County General Plan, including: (a) the Habitat Connectivity and Wildlife Corridors Map showing the full extent of habitat linkages throughout Ventura County; (b) the three Critical Wildlife Passage Area Maps; (c) background information on habitat linkages and wildlife movement; (d) new definitions for the purpose of improving clarity related to habitat linkages and wildlife movement; and (e) a policy that links these features to the standards included in the NCZO.

Adding these features to the General Plan will provide the basis for establishing two overlay zones within the NCZO and allows for the addition of important policy revisions to the existing General Plan, which currently provides only one broad biological resource protection goal that mentions protection for wildlife corridors, but currently provides no supporting policies that specifically address development within the mapped corridors.

The proposed General Plan amendments will ensure both internal consistency as well as consistency with proposed revisions to the NCZO.

D. NCZO AMENDMENT FINDINGS AND SUPPORTING EVIDENCE

The NCZO authorizes the Board to amend the zoning ordinance by approving text amendments or zone changes "*whenever the public health, safety, or general welfare, good zoning practice, and consistency with the General Plan justify such action...*"

Pursuant to NCZO section 8115-0, the Board must make certain findings in order to amend the NCZO. The Board's ability to make these required findings is evaluated below for your Commission's consideration in making its recommendations to the Board.

1. The proposed amendment would not be detrimental to the public health, safety or general welfare:

Protecting the natural environment by enhancing the ability of native wildlife and plants to access the fullest possible extent of their habitats in an otherwise geographically fragmented, urbanizing landscape is an important factor in protecting the public health and general welfare. The proposed amendments provide standards to evaluate the impacts of certain exempt and ministerial forms of development on wildlife migration corridors, thus furthering the purposes of biological resources protection, while allowing for the reasonable development and enjoyment of property. Therefore, based on the evidence in the record, the proposed NCZO text amendments serve to protect the health, safety, and general welfare of the people of the unincorporated areas of Ventura County.

2. The proposed amendments constitute good zoning practice:

The proposed amendments involve the following general components: (1) establish a HCWC overlay zone and a CWPA overlay zone and associated standards; and (2) amend the permit threshold criteria for requiring certain ministerial and discretionary permits to encourage compact development patterns, prohibit intentional planting of invasive plant species, limit wildlife impermeable fencing, and discourage development and vegetation removal near surface water features and crossing structures used by wildlife to safely cross under road and highways. In addition, the amendments establish regulations to minimize the effects of outdoor lighting. The proposed revisions provide well-organized standards for regulating land use and development within the proposed overlay zones, but do not create an undue burden on development due to allowances for compliance periods, reconsideration requests, as well as the exemptions allowed. Therefore, the amendments constitute good zoning practice.

3. The proposed amendment is consistent with the Ventura County General Plan:

A review of the General Plan land use policies was conducted, and it was determined that the proposed amendment will not conflict with General Plan land use policies. To the contrary, the proposed amendment to the NCZO will support the implementation of General Plan goals and policies intended to promote the protection of biological resources and wildlife connectivity in particular.

The General Plan currently defines "Wildlife Migration Corridors" as "Linear spaces that connect the various areas of an animal's habitat, and serve as links between feeding, watering, resting and breeding places.

Goal 1.5.1 of the *Goals, Policies, and Programs* of the General Plan states:

"Preserve and protect significant biological resources in Ventura County from incompatible land uses and development. Significant biological resources include

endangered, threatened or rare species and their habitats, wetland habitats, coastal habitats, wildlife migration corridors and locally important species/communities.”

Moreover, policies 1.5.2-1 and 1.5.2-2 of the *Goals, Policies, and Programs* state:

1. *Discretionary development* which could potentially impact *biological resources* shall be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures.

2. *Discretionary development* shall be sited and designed to incorporate all feasible measures to mitigate any significant impacts to *biological resources*. If the impacts cannot be reduced to a less than significant level, findings of overriding considerations must be made by the decision-making body.

In addition to these existing General Plan goals and policies, the proposed General Plan Amendments described above are intended to be wholly consistent with, and supportive of the revisions proposed in the Non-Coastal Zoning Ordinance. Therefore, the proposed amendment is consistent with the General Plan.

E. STAKEHOLDER OUTREACH

The following list summarizes stakeholder outreach efforts. As demonstrated by the breadth of activities listed, input was sought from farmers, ranchers, large property owners, non-profit groups, the oil and gas industry, state and federal agencies, cities within the County, and County agencies. Staff also conferred with various experts on wildlife movement and corridors throughout the project, including academic researchers currently studying wildlife movement and fencing in California.

1. In the summer and fall of 2016 former Planning Division project manager Kari Finley held meetings with various cities within the County to discuss wildlife corridor issues as they affect both the County and respective cities.
2. Wildlife Corridor Team Meeting with Western States Petroleum and various oil and gas company representatives including CRC, Seneca, Aera Energy, etc. (August 2, 2017 and September 2018).
3. County and City Planning Director's Meeting (June 29, 2017). Planning Division staff presented wildlife corridor project objectives and preliminary data and issues assessment.
4. Planning Division hosted Stakeholder Outreach Meeting 1 (June 8, 2017). Over 30 stakeholders from various organizations attended a 3-hour meeting at the County Government Center. Stakeholders were identified in consultation with the Planning Director based on prior and current project interest, knowledge and expertise of issues, and land ownership within the mapped corridors. Staff presented general issues and concepts for wildlife corridor project ordinance and policy development seeking input and feedback from stakeholders. The meeting

focused mainly on lighting and fencing and touched on native vegetation removal, habitat fragmentation, and chokepoints, which were discussed in more detail at the August 2017 stakeholder meeting described below.

5. CoLAB and Supervisor Foy jointly hosted a Wildlife Corridor Meeting (July 26, 2017). Planning Division staff were not present.
6. Planning Division hosted Stakeholder Outreach Meeting 2 (August 8, 2017). Over 30 stakeholders attended a second stakeholder outreach meeting. Staff presented revised concepts and issues on fencing and lighting as well as invasive plants, noise, habitat fragmentation, and chokepoints. Staff presented each topic area followed by an open discussion.
7. Tour of Rancho Temescal (September 6, 2017). T. Cohen, B. Sloane, R. Atmore, and Planning Division staff toured portions of Mr. Cohen's ranch to look at various types of fencing and lighting used on his property. Goal of tour was to inform staff of constraints and requirements for various uses requiring fencing and lighting. Staff also visited a rural residential neighborhood in Santa Rosa Valley to tour additional fencing types and fencing and enclosure configurations typical for animal keeping.
8. Supervisor Long hosted a Constituent Outreach Meeting with CoLAB (October 25, 2017). Planning Director, Kim Prillhart attended and provided an update and outline of the project's goals and status.
9. Planning Division staff provided project update to the Linkage Implementation Alliance (LIA) (October 25, 2017). The LIA is a group of planners, regulators, and researchers that meets regularly to discuss issues related to habitat linkage issues.
10. Open Space Acquisition Roundtable hosted by Supervisor Parks (November 13, 2017). Planning Division staff provided the group with a project update and summary of wildlife corridor issues being considered.
11. Planning Division staff met with LAFCo Executive Officer Kai Luoma (October 2017). Wildlife Corridor Project staff discussed LAFCo's previous work on wildlife corridor issues and discussed the degree to which mapped corridors are considered during review of LAFCo decisions.
12. Project staff tour with Caltrans of roadway crossings on SR-23 (November 2, 2017). Staff met with Caltrans biologists, toured crossing structure areas along SR-23, and discussed fencing, one-way gates, maintenance activities, etc.
13. Planning Division staff provided project update to the LIA (June 21, 2018).

14. Planning Division staff met with the Livestock and Range Advisor from U.C. Cooperative Extension to discuss issues related to fencing, and livestock management. (June 27, 2018)
15. Planning Division staff presented project update to the Agriculture Policy Advisory Committee (July 12, 2018).
16. Planning Division staff discussed fencing design and impacts on wildlife movement with researchers from U.C. Berkeley, Division of Ecosystem Sciences, Dept. of Environmental Science, Policy, and Management (July 19, 2018)
17. Planning Division staff discussed wildlife crossing structure selection methodologies with National Park Service wildlife biologists and Caltrans biologists (August, 2018).
18. Planning Division staff held Stakeholder Outreach Meeting 3 - Project Staff presented the draft ordinance standards and sought input from stakeholders. Some of this feedback resulted in additional revisions to the proposed Ordinance. (August 14, 2018)
19. Planning Division staff met with Western State Petroleum Association to discuss issues related to oil and gas. Staff followed up with tours of both Aera Energy and Carbon California oil and gas holdings. (Sept. 2018)
20. Project Website Updates - Project staff created and maintained project website that included background information on the importance of maintaining habitat connectivity, notes and presentations from the stakeholder outreach meetings, links to the South Coast Missing Linkages Reports, a lookup feature to allow a property owner to determine if a lot is within a mapped corridor, and a summary of the direction provided by the Board of Supervisors in January 2017.

This outreach resulted in several modifications to the ordinance including, but not limited to changes to fencing regulations, the identification of certain exemptions, parcel size thresholds used for the compact siting standards, refinements to the crossing structure identification methodology, standards for essential lighting and security lighting, and allowances made for invasive plants that are grown for commercial agricultural purposes.

F. PLANNING COMMISSION HEARING NOTICE AND COMMENTS

The Planning Division provided a public notice regarding the Planning Commission hearing in accordance with Government Code section 65090 and NCZO section 8111-3.1. The Planning Division placed a legal advertisement providing notice of this public hearing in the *Ventura County Star*, *Ojai Valley News*, and the *Mountain Enterprise* in Frazier Park on January 18, 2019. Staff also sent postcards to all 4,400 property owners with at least one parcel within

the HCWC overlay zone, and emailed notices to approximately 140 interested parties.

As of the date this staff report was made available to the public, staff has received 130 comments regarding the project. (Exhibit 23)

G. RECOMMENDED ACTIONS

Based upon the analysis and information provided above, Planning Division staff recommends that the Planning Commission take the following actions:

1. **CERTIFY** that the Commission has reviewed and considered this staff report and all exhibits hereto, and has considered all other materials and public comments received during the public comment and hearing processes; and
2. **ADOPT** a resolution (Exhibit 12) recommending that the Board of Supervisors take the following actions regarding the amendments to the Ventura County General Plan and the Non-coastal Zoning Ordinance:
 - a. **CERTIFY** that the Board has reviewed and considered the Board letter and all exhibits hereto, the Planning Commission staff report and all exhibits thereto, and has considered all other materials and public comments received during the public comment and hearing processes;
 - b. **FIND** on the basis of the entire record and as set forth in Section B of this Planning Commission staff report that the adoption of the proposed amendment to the Ventura County General Plan (Exhibits 8 – 11, and 13), adoption of the proposed ordinance amending the Non-Coastal Zoning Ordinance (Exhibit 14), and adoption of the proposed ordinance amending the zoning maps contained in Article 18 of the Ventura County Non-Coastal Zoning Ordinance (Exhibit 15) to add a habitat connectivity wildlife corridor overlay zone and critical wildlife passage area overlay zone are exempt from CEQA pursuant to CEQA Guidelines section 15061(b)(3) because it can be seen with certainty that there is no possibility the project may cause a significant effect on the environment; **FIND** that because the project consists of regulations intended to benefit the environment, it is also exempt from CEQA pursuant to CEQA Guidelines sections 15307 and 15308; and **FIND** that there is no reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances pursuant to State CEQA Guidelines section 15300.2;
 - c. **FIND** based on the substantial evidence set forth in Sections A, B, C, D, E and F of the Planning Commission staff report, the public testimony received, and the entire record, that the General Plan amendment (Exhibits 8 – 11, and 13) is in the public interest, and has the potential to benefit the general welfare, and is consistent with good planning practice;

- d. **FIND** based on the substantial evidence set forth in Sections A, B, C, D, E and F of the Planning Commission staff report, the public testimony received, and the entire record, that the ordinances amending Articles 2, 3, 4, 5 and 9 of the Ventura County Non-Coastal Zoning Ordinance (Exhibit 14) and adoption of the zoning maps contained in Article 18 of the Ventura County Non-Coastal Zoning Ordinance (Exhibit 15), are in interest of public health, safety or general welfare and good zoning practice, and is consistent with the Ventura County General Plan;
- e. **ADOPT** a resolution (Exhibit 12) approving the proposed amendment to the Ventura County General Plan and the Resources Appendix, goal 1.5.1, policies 1.5.2-1 and 1.5.2-2 (Exhibit 13) and to add four maps. (Exhibits 8, 9, 10, and 11.)
- f. **ADOPT** the proposed ordinance amending Articles 2, 3, 4, 5, And 9 of the Ventura County Non-Coastal Zoning Ordinance to create the habitat connectivity and wildlife corridor overlay zone and critical wildlife passage areas overlay zones (Exhibit 14);
- g. **ADOPT** the proposed ordinance amending the zoning maps contained in Article 18 of the Ventura Non-Coastal Zoning Ordinance (Exhibit 15); and
- h. **SPECIFY** the Clerk of the Board of Supervisors at 800 S. Victoria Avenue, Ventura, CA 93009 as the location and custodian of the documents and materials that constitute the record of proceedings upon which these decisions are based.

This staff report has been reviewed by County Counsel. The Board of Supervisors hearing to consider the proposed amendments is tentatively scheduled for March 12, 2019, in the Board of Supervisor's Hearing Room.

If you have any questions concerning the information presented above, please contact Shelley Sussman at (805) 654-2493 or shelley.sussman@ventura.org.

Prepared by:



Shelley Sussman, Project Manager
RMA/Planning Division

Reviewed by:



Kim Prillhart, Planning Director
RMA/Planning Division

EXHIBITS

- Exhibit 2 Geographic Map of the Habitat Connectivity and Wildlife Corridors in the South Coast Ecoregion
- Exhibit 3 Habitat Connectivity and Wildlife Corridors in the North Half of the Ventura County Unincorporated Area
- Exhibit 4 Habitat Connectivity and Wildlife Corridors in the South Half of the Ventura County Unincorporated Area: Index Map and Subareas
- Exhibit 5 Oak View Critical Wildlife Passage Area Map
- Exhibit 6 Simi Hills Critical Wildlife Passage Area Map
- Exhibit 7 Tierra Rejada Critical Wildlife Passage Area Map
- Exhibit 8 Habitat Connectivity and Wildlife Corridors Map (Resources Appendix – Figure 1.5.5)
- Exhibit 9 Oak View Critical Wildlife Passage Area Map (Resources Appendix Figure 1.5.6)
- Exhibit 10 Simi Hills Critical Wildlife Passage Area Map (Resources Appendix Figure 1.5.7)
- Exhibit 11 Tierra Rejada Critical Wildlife Passage Area Map (Resources Appendix Figure 1.5.8)
- Exhibit 12 Planning Commission Resolution
- Exhibit 13 Amendments to the General Plan – Goals, Policies, and Programs and Resources Appendix
- Exhibit 14 NCZO Amendments (Articles 2, 3, 4, 5, and 9)
- Exhibit 15 Ordinance Amending the Zoning Classifications and Zoning Maps in the NCZO (Article 18)
 - Exhibit 15A Amendments to Zoning Classifications for the Habitat Connectivity and Wildlife Corridors Overlay Zone
 - Exhibit 15B Habitat Connectivity and Wildlife Corridors Overlay Zone Map
 - Exhibit 15C Amendments to Zoning Classifications for the Oak View Portion of the Critical Wildlife Passage Areas Overlay Zone
 - Exhibit 15D Oak View Portion of the Critical Wildlife Passage Areas Overlay Zone Map
 - Exhibit 15E Amendments to Zoning Classifications for the Simi Hills Portion of the Critical Wildlife Passage Areas Overlay Zone
 - Exhibit 15F Simi Hills Portion of the Critical Wildlife Passage Areas Overlay Zone Map
 - Exhibit 15G Amendments to Zoning Classifications for the Tierra Rejada Portion of the Critical Wildlife Passage Areas Overlay Zone
 - Exhibit 15H Tierra Rejada Portion of the Critical Wildlife Passage Areas Overlay Zone Map
- Exhibit 16 Letter dated October 17, 2018 from Kristeen Penrod
- Exhibit 17 January 2017 Board of Supervisors Staff Report

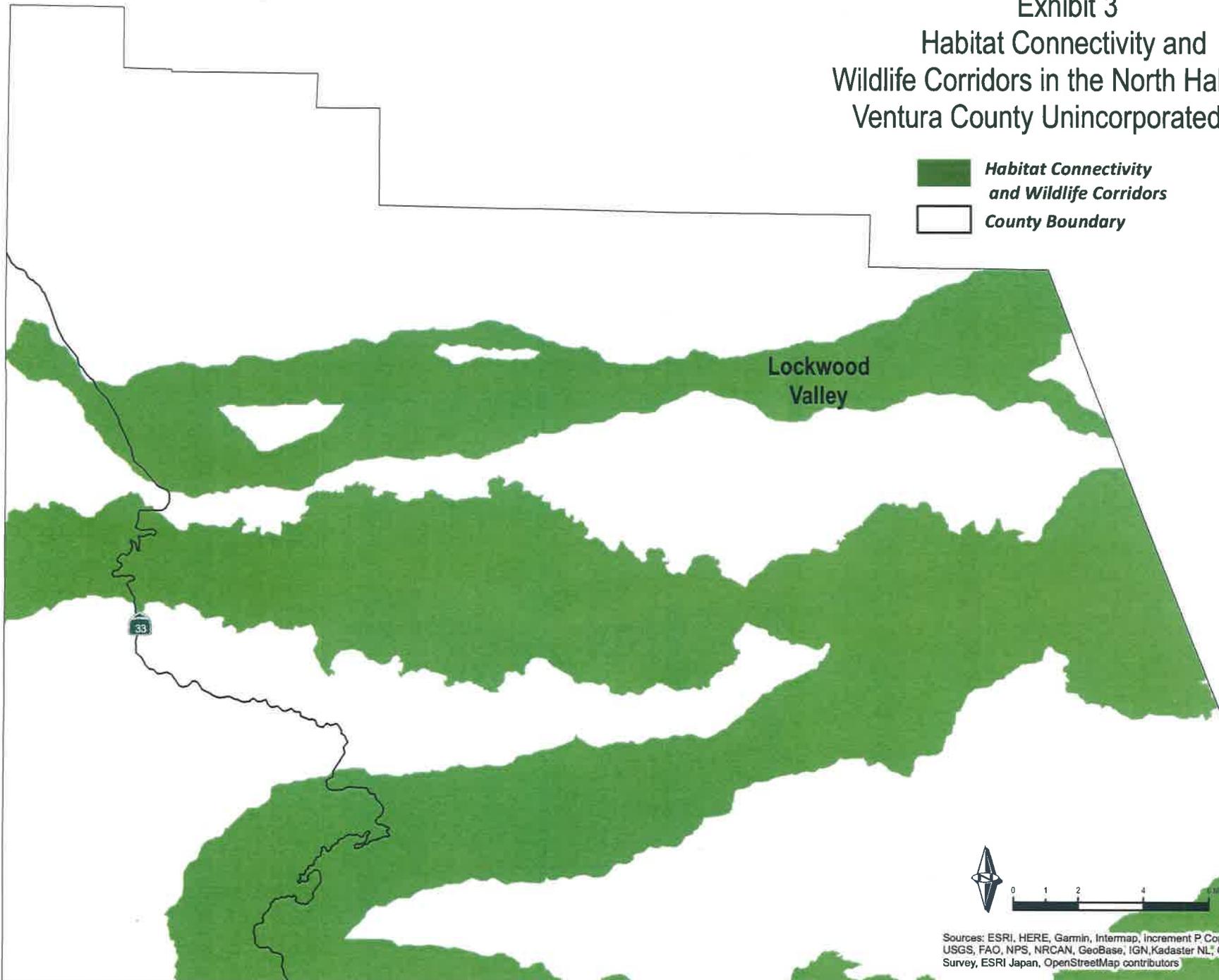
- Exhibit 18 Glossary of Applicable Terms from the Dark Sky Ordinance
- Exhibit 19 Letter dated January 8, 2019 from Ventura County Fire District Chief Mark Lorenzen
- Exhibit 20 List of Wildlife Crossing Structures Subject to Proposed NCZO Amendments
- Exhibit 21 Technical Appendix: Selection of Wildlife Crossing Structures Subject to Proposed NCZO Amendments
- Exhibit 22 Bibliography
- Exhibit 23 Public Comments



Exhibit 3

Habitat Connectivity and Wildlife Corridors in the North Half of the Ventura County Unincorporated Area

-  *Habitat Connectivity and Wildlife Corridors*
-  *County Boundary*



Sources: ESRI, HERE, Garmin, Intermap, Incentiv P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, OpenStreetMap contributors

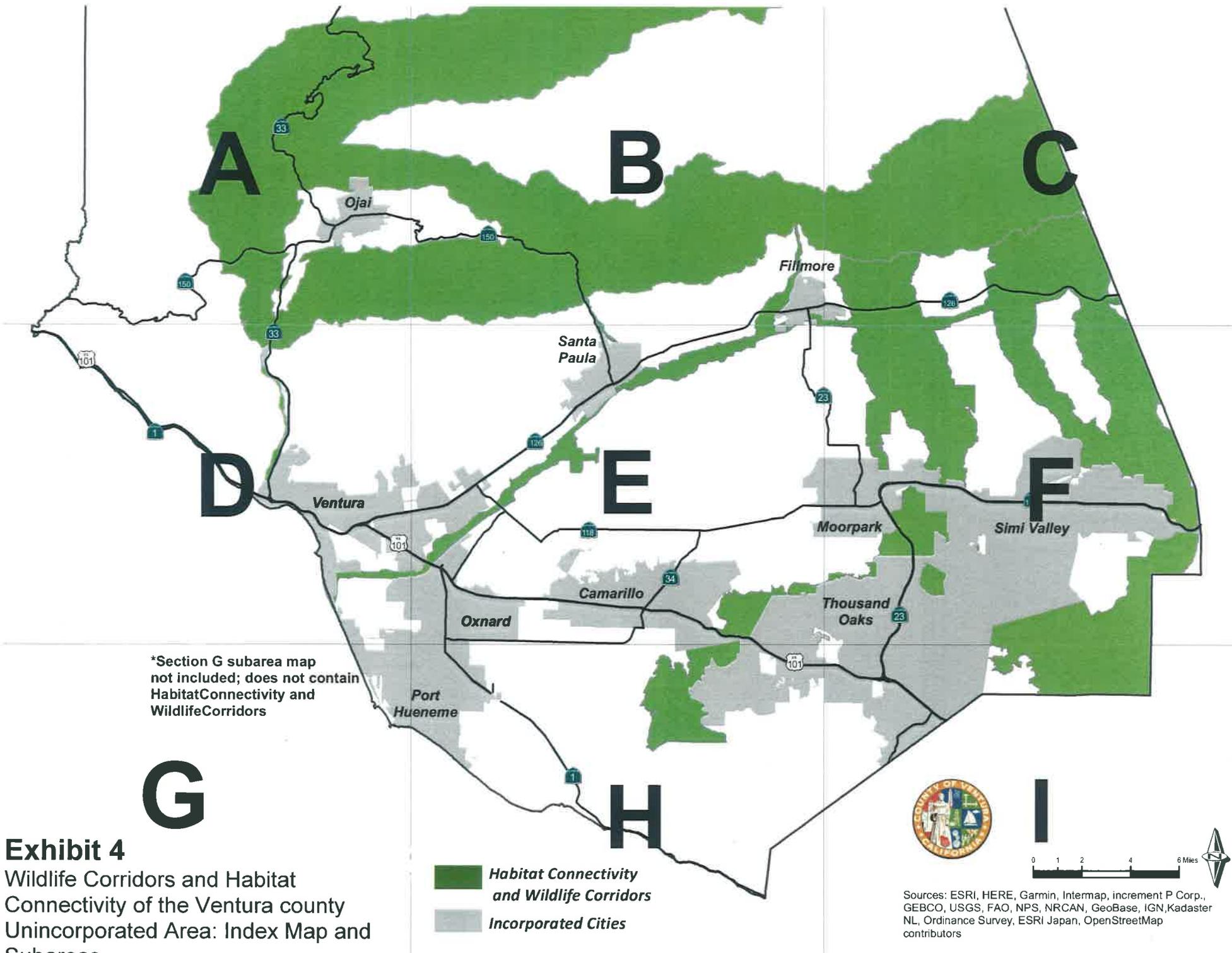


Exhibit 4
 Wildlife Corridors and Habitat
 Connectivity of the Ventura county
 Unincorporated Area: Index Map and
 Subareas

*Section G subarea map
 not included; does not contain
 HabitatConnectivity and
 WildlifeCorridors

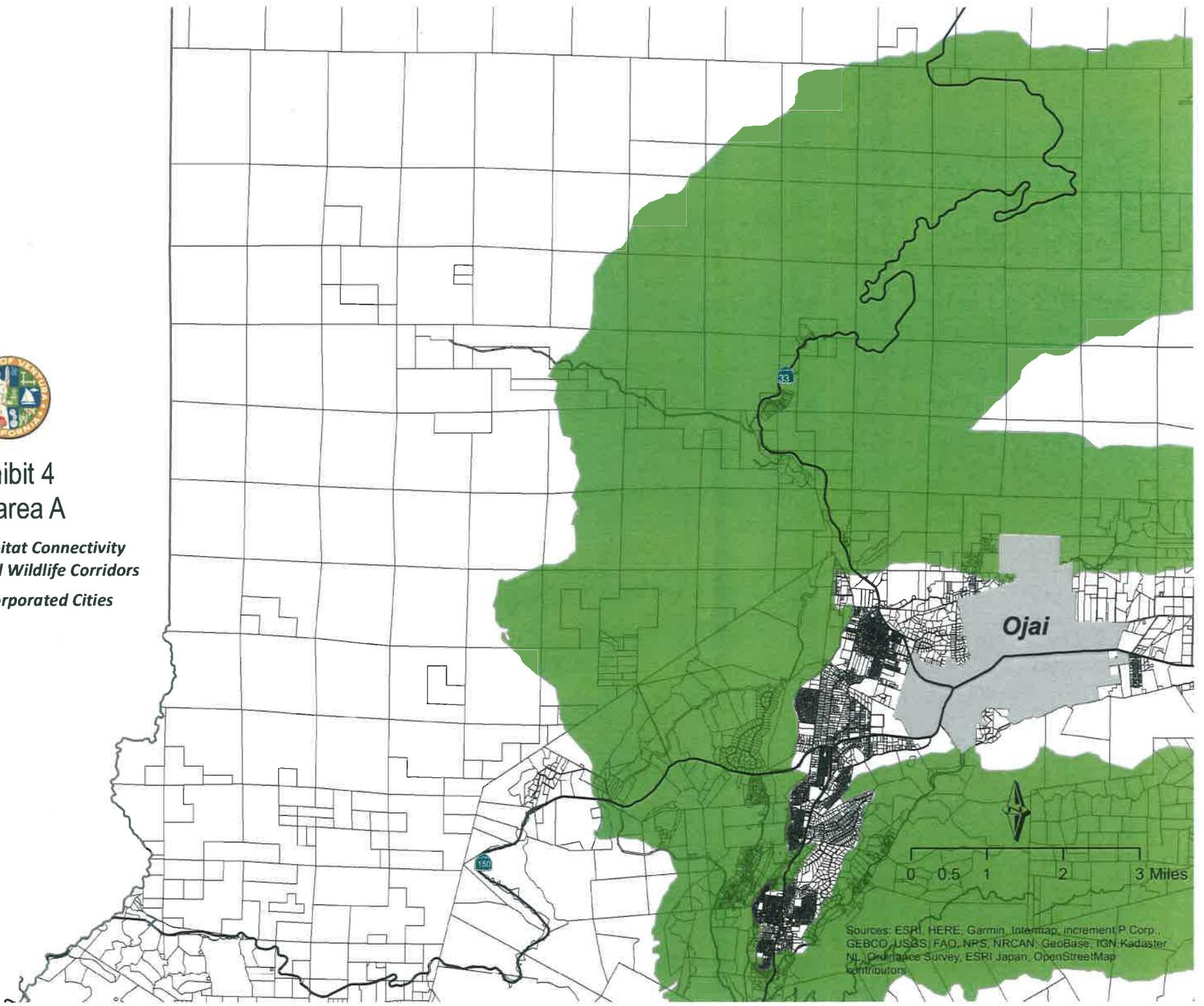


Sources: ESRI, HERE, Garmin, Intermap, increment P Corp.,
 GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster
 NL, Ordnance Survey, ESRI Japan, OpenStreetMap
 contributors



Exhibit 4 Subarea A

-  *Habitat Connectivity and Wildlife Corridors*
-  *Incorporated Cities*

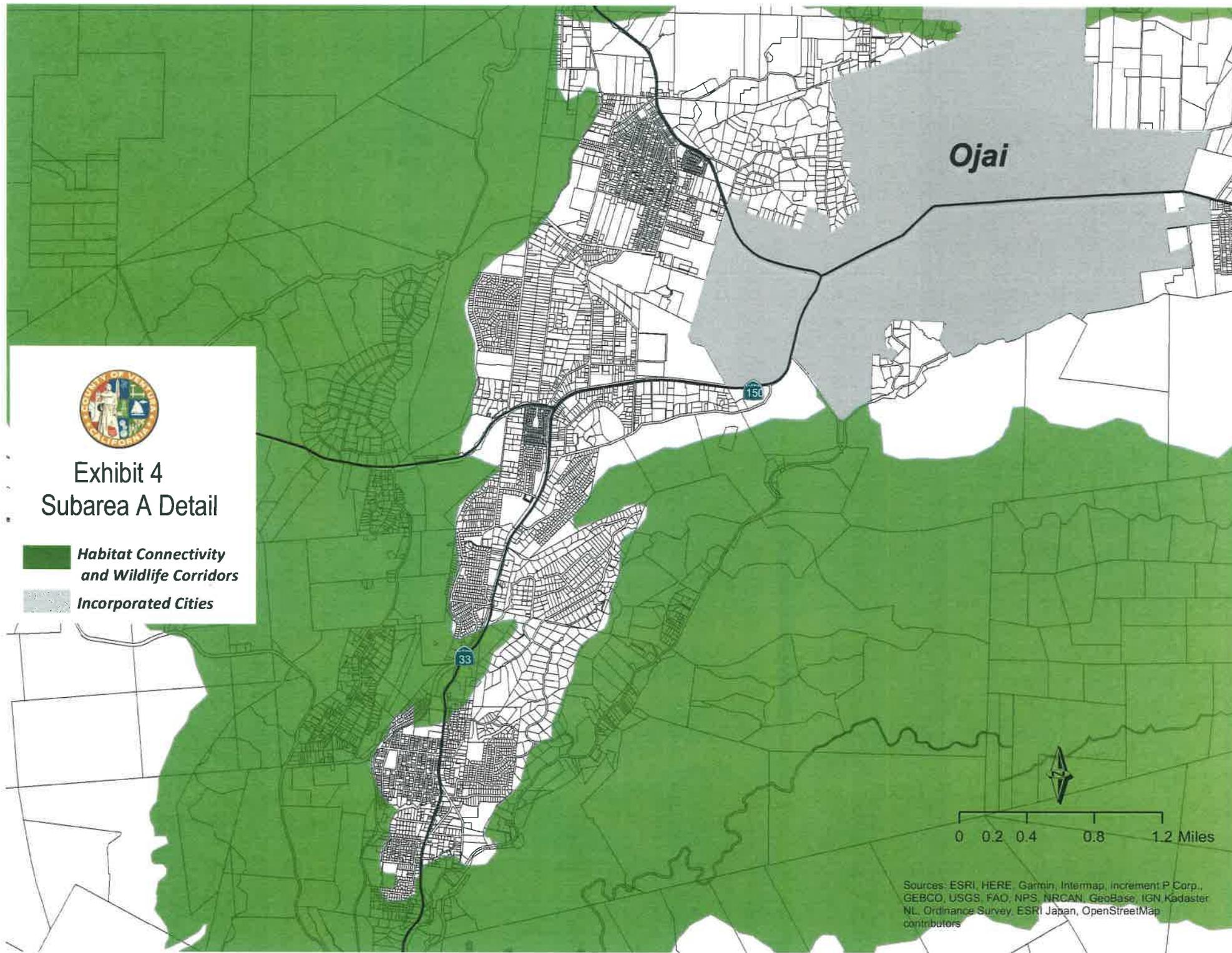


Sources: ESRI, HERE, Garmin, Intelmap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, OpenStreetMap contributors



Exhibit 4 Subarea A Detail

-  **Habitat Connectivity and Wildlife Corridors**
-  **Incorporated Cities**

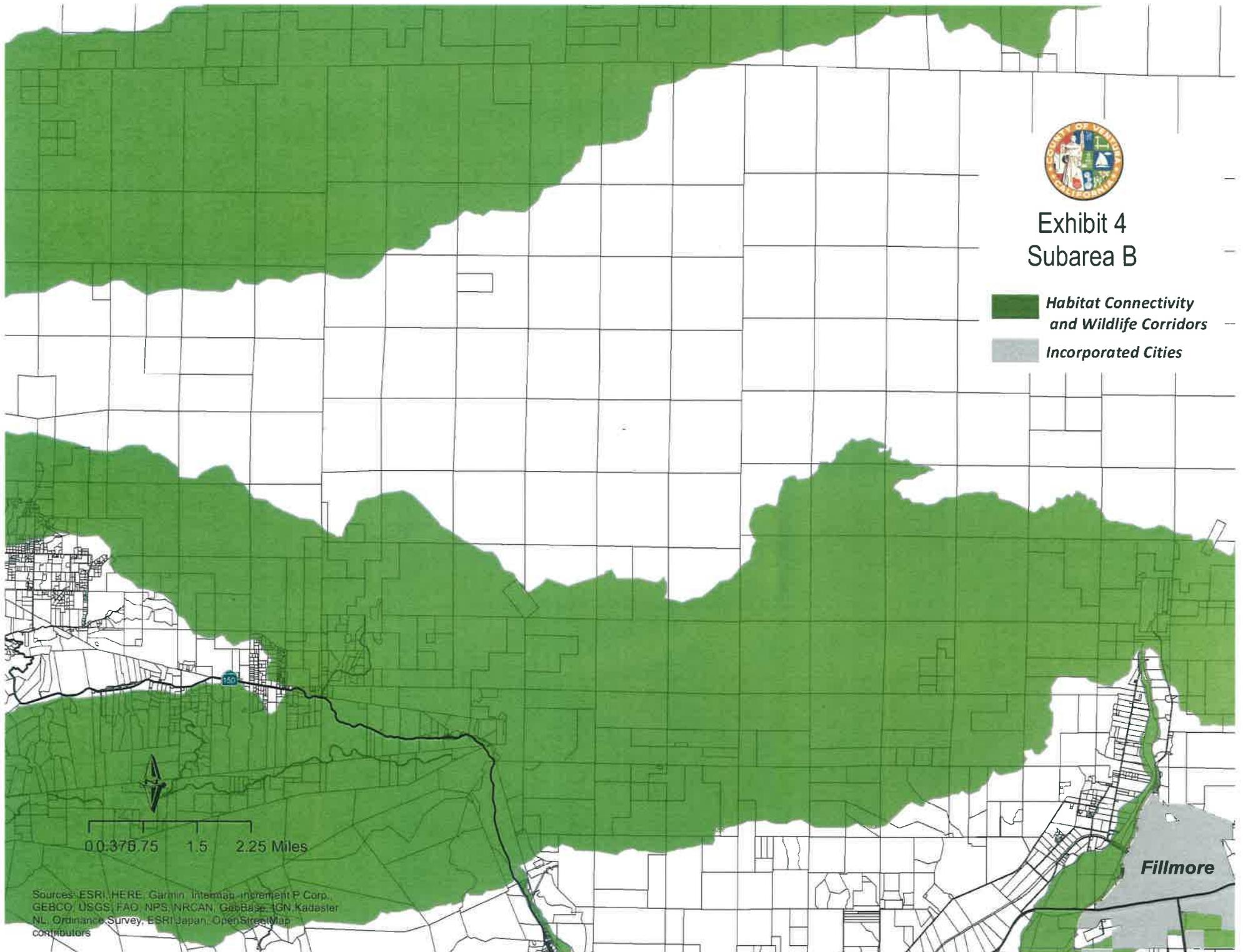


Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, OpenStreetMap contributors



Exhibit 4 Subarea B

-  *Habitat Connectivity and Wildlife Corridors*
-  *Incorporated Cities*



Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GapBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, OpenStreetMap contributors

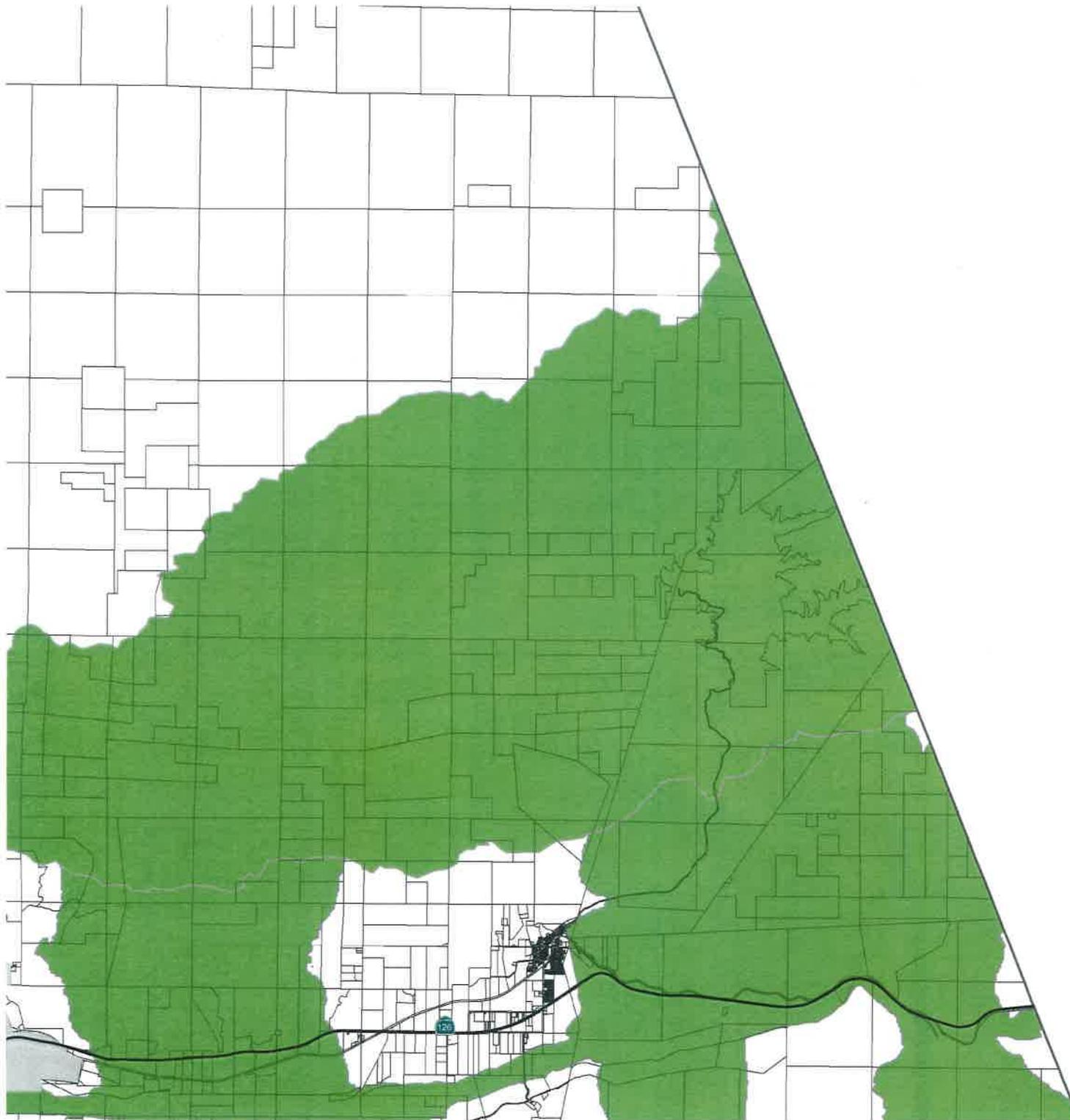


Exhibit 4 Subarea C

-  **Habitat Connectivity and Wildlife Corridors**
-  **Incorporated Cities**



0 0.375 0.75 1.5 2.25 Miles

Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, OpenStreetMap contributors



Exhibit 4 Subarea D

-  **Habitat Connectivity and Wildlife Corridors**
-  **Incorporated Cities**



0 0.375 0.75 1.5 2.25 Miles

Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, OpenStreetMap contributors





Exhibit 4 Subarea D Detail

-  **Habitat Connectivity and Wildlife Corridors**
-  **Incorporated Cities**



0 0.150.3 0.6 0.9 Miles

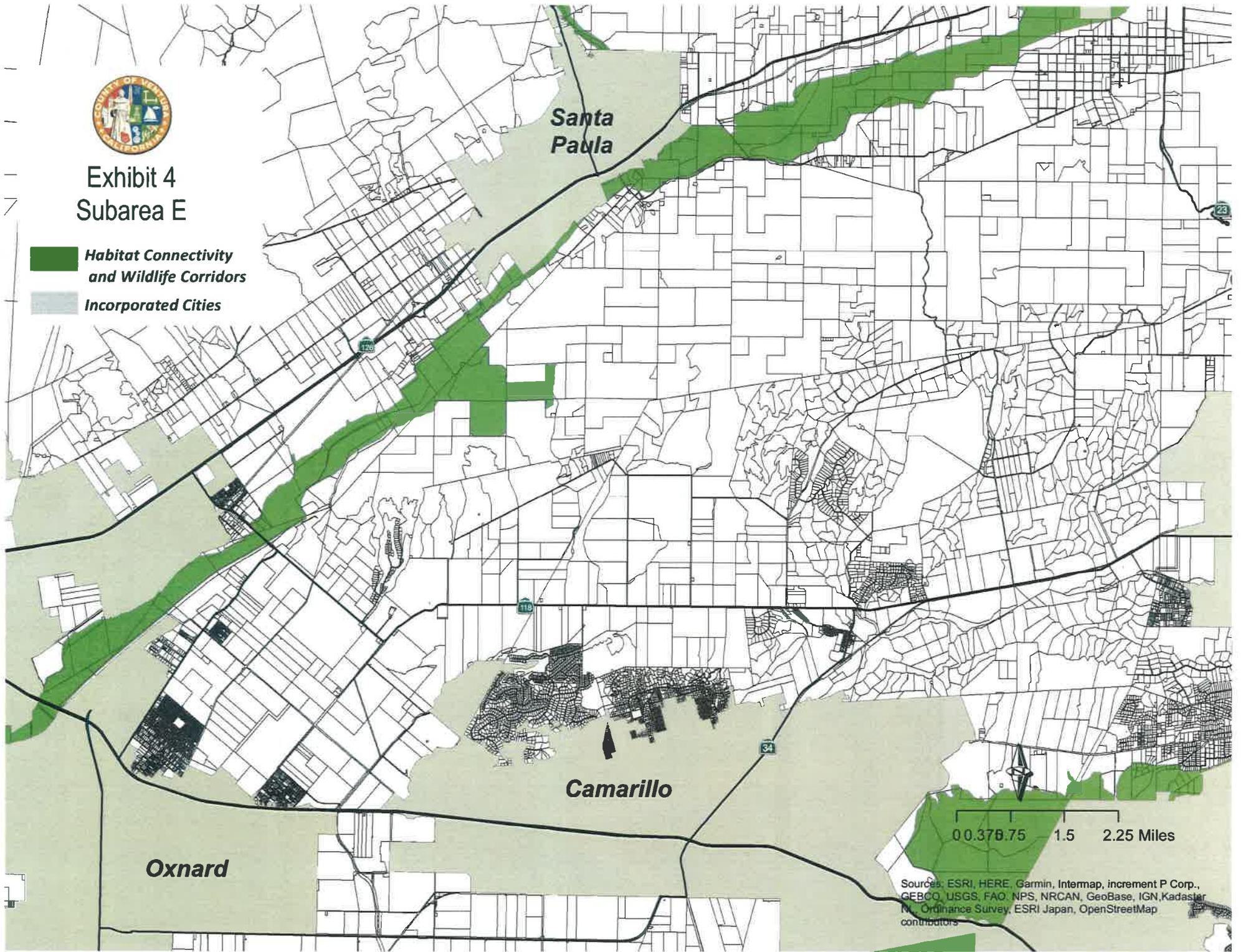
Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordinance Survey, ESRI Japan, OpenStreetMap contributors





Exhibit 4 Subarea E

-  **Habitat Connectivity and Wildlife Corridors**
-  **Incorporated Cities**

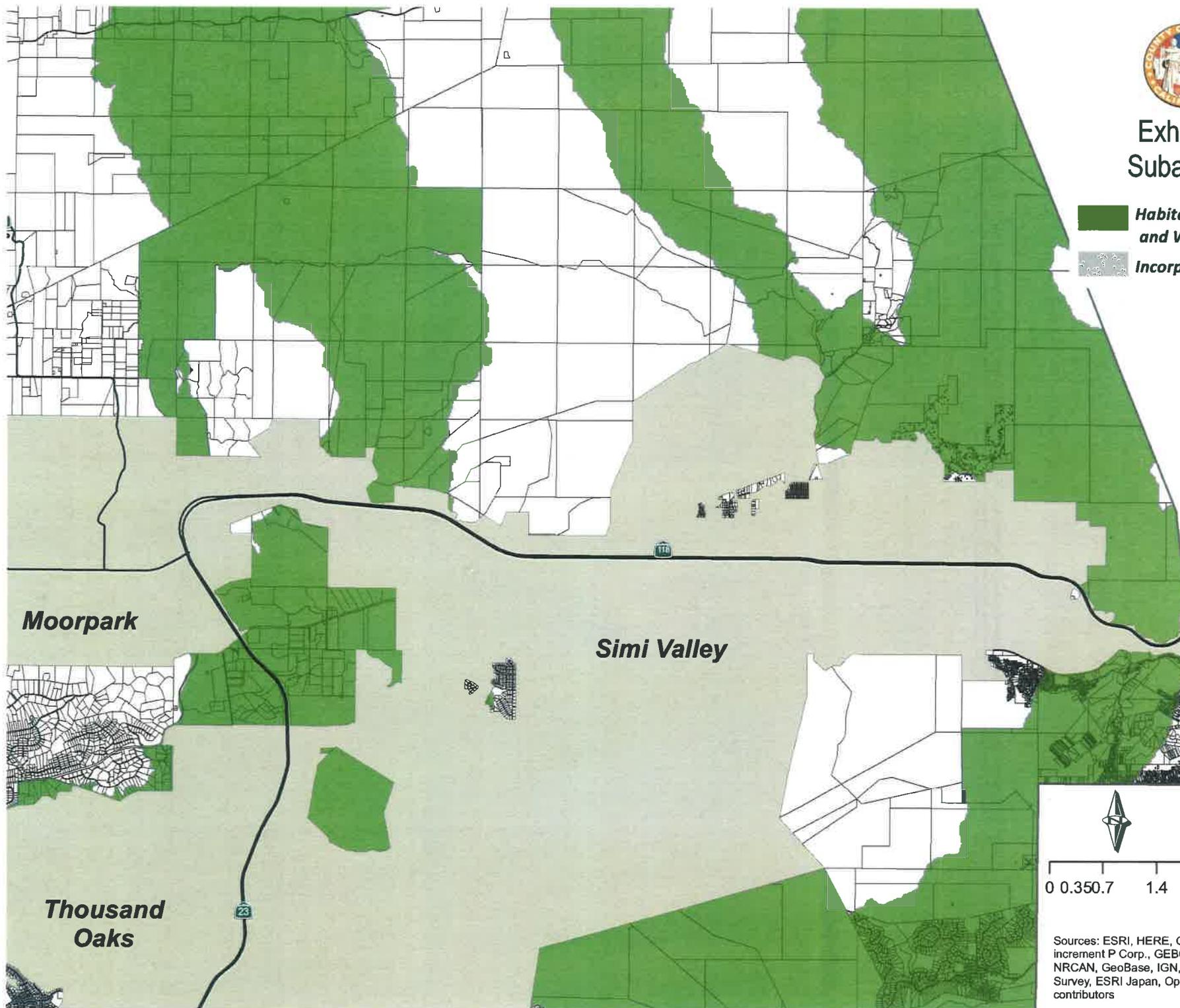


Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, OpenStreetMap contributors



Exhibit 4 Subarea F

-  **Habitat Connectivity and Wildlife Corridors**
-  **Incorporated Cities**



Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, OpenStreetMap contributors

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Hueneme**



**Exhibit 4
Subarea H**

-  **Habitat Connectivity and Wildlife Corridors**
-  **Incorporated Cities**

0 0.375 0.75 1.5 2.25 Miles

Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, OpenStreetMap contributors



Exhibit 4 Subarea I

-  *Habitat Connectivity and Wildlife Corridors*
-  *Incorporated Cities*



0 0.375 0.75 1.5 2.25 Miles

Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, OpenStreetMap contributors

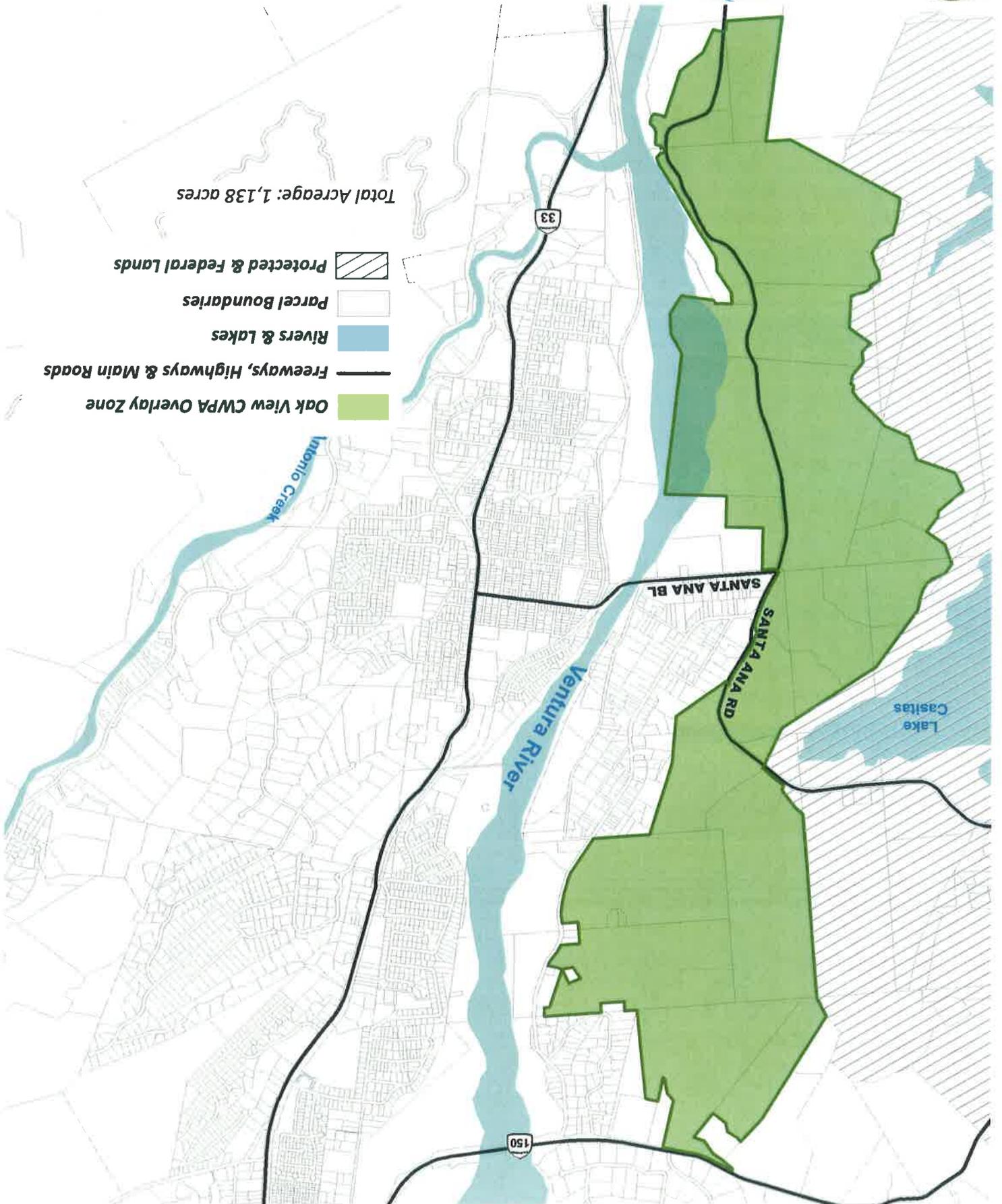


Ventura County
Resource Management Agency
Information Systems GIS Services
Map created on 1/14/2018
Source: Pictometry, January 2018



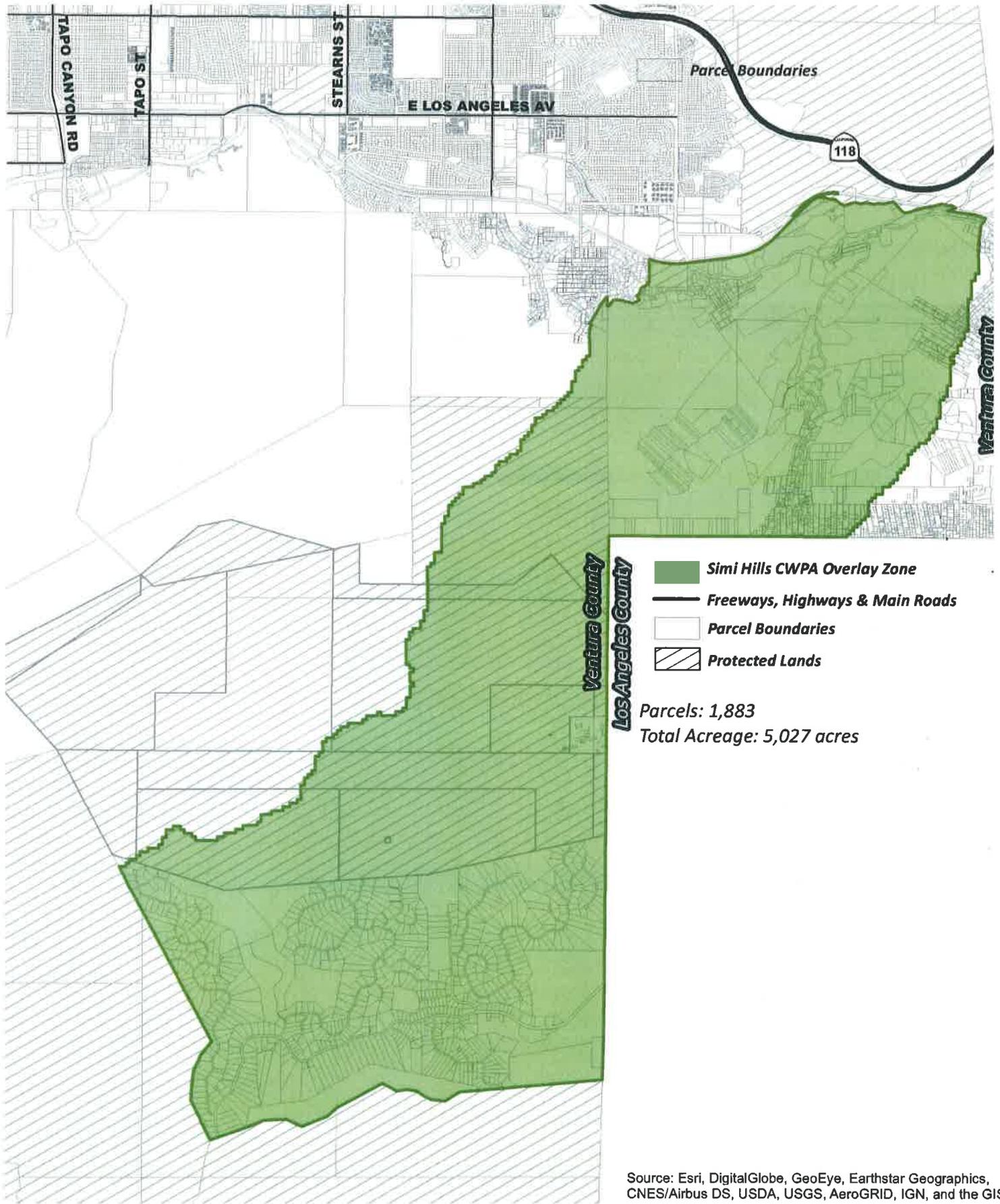
**Exhibit 5
Oak View Critical Wildlife
Passage Area Map**

Disclaimer: this map was created by the Ventura County Resource Management Agency Information Systems GIS, which is designed and operated solely for the convenience of the County and related public agencies. The County does not warrant the accuracy of the map and no decision involving a risk of economic loss or physical injury should be made in reliance thereon.



Total Acreage: 1,138 acres

-  Oak View CWPA Overlay Zone
-  Freeways, Highways & Main Roads
-  Rivers & Lakes
-  Parcel Boundaries
-  Protected & Federal Lands



- Simi Hills CWPA Overlay Zone**
- Freeways, Highways & Main Roads**
- Parcel Boundaries**
- Protected Lands**

Parcels: 1,883
Total Acreage: 5,027 acres

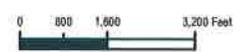
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS



Ventura County
 Resource Management Agency
 Information Systems GIS Services
 Map created on 1/11/2019
 Source: Pictometry®, January 2018

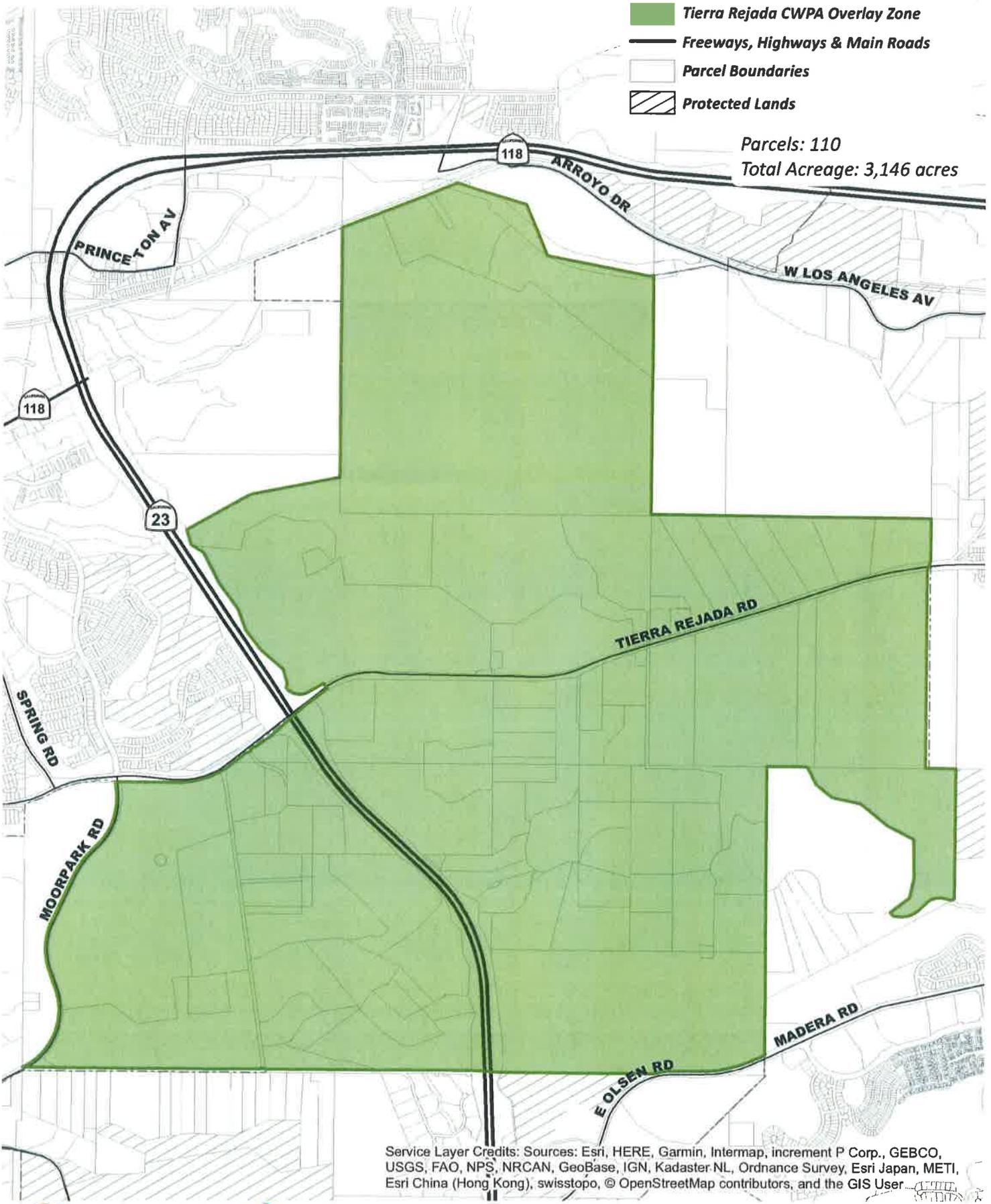


Exhibit 6
Simi Hills Critical Wildlife
Passage Area Map



Disclaimer: this map was created by the Ventura County Resource Management Agency Information Systems GIS, which is designed and operated solely for the convenience of the County and related public agencies. The County does not warrant the accuracy of this map and no decision involving a risk of economic loss or physical injury should be made in reliance therein.





Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User

Exhibit 7
Tierra Rejada Critical Wildlife
Passage Area Map



Disclaimer: This map was created by the Ventura County Resource Management Agency Information Systems GIS, which is designed and operated solely for the convenience of the County and related public agencies. The County does not warrant the accuracy of this map and no decision involving a risk of economic loss or physical injury should be made in reliance therein.



Ventura County
 Resource Management Agency
 Information Systems GIS Services
 Map created on 1/11/2019
 Source: Pictometry®, January 2018



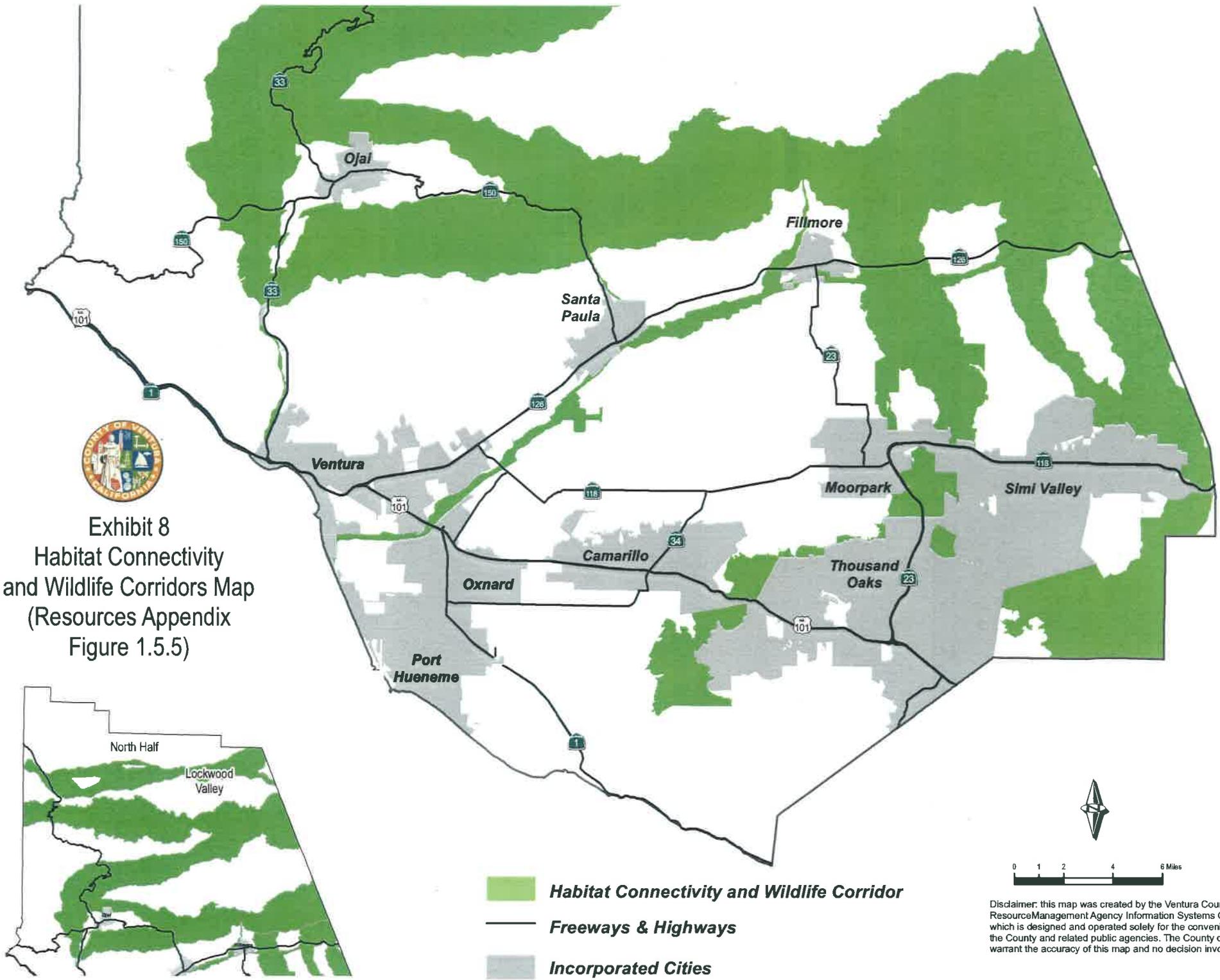
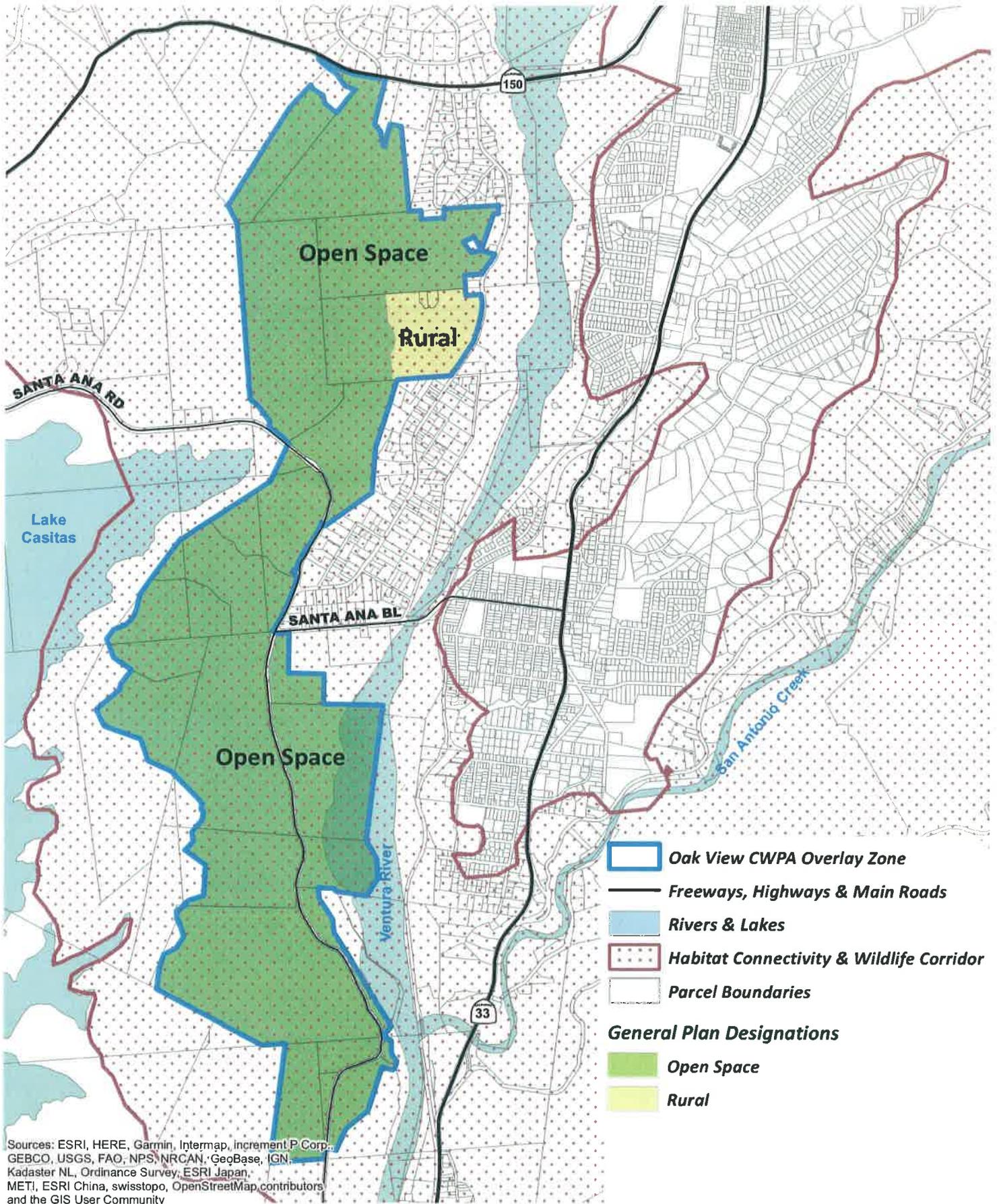


Exhibit 8
Habitat Connectivity
and Wildlife Corridors Map
 (Resources Appendix
 Figure 1.5.5)

- Habitat Connectivity and Wildlife Corridor**
- Freeways & Highways**
- Incorporated Cities**




Disclaimer: this map was created by the Ventura County Resource Management Agency Information Systems GIS, which is designed and operated solely for the convenience of the County and related public agencies. The County does not warrant the accuracy of this map and no decision involving a



Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, METI, ESRI China, swisstopo, OpenStreetMap contributors and the GIS User Community



Ventura County
Resource Management Agency
Information Systems GIS Services
Map created on 1/11/2019

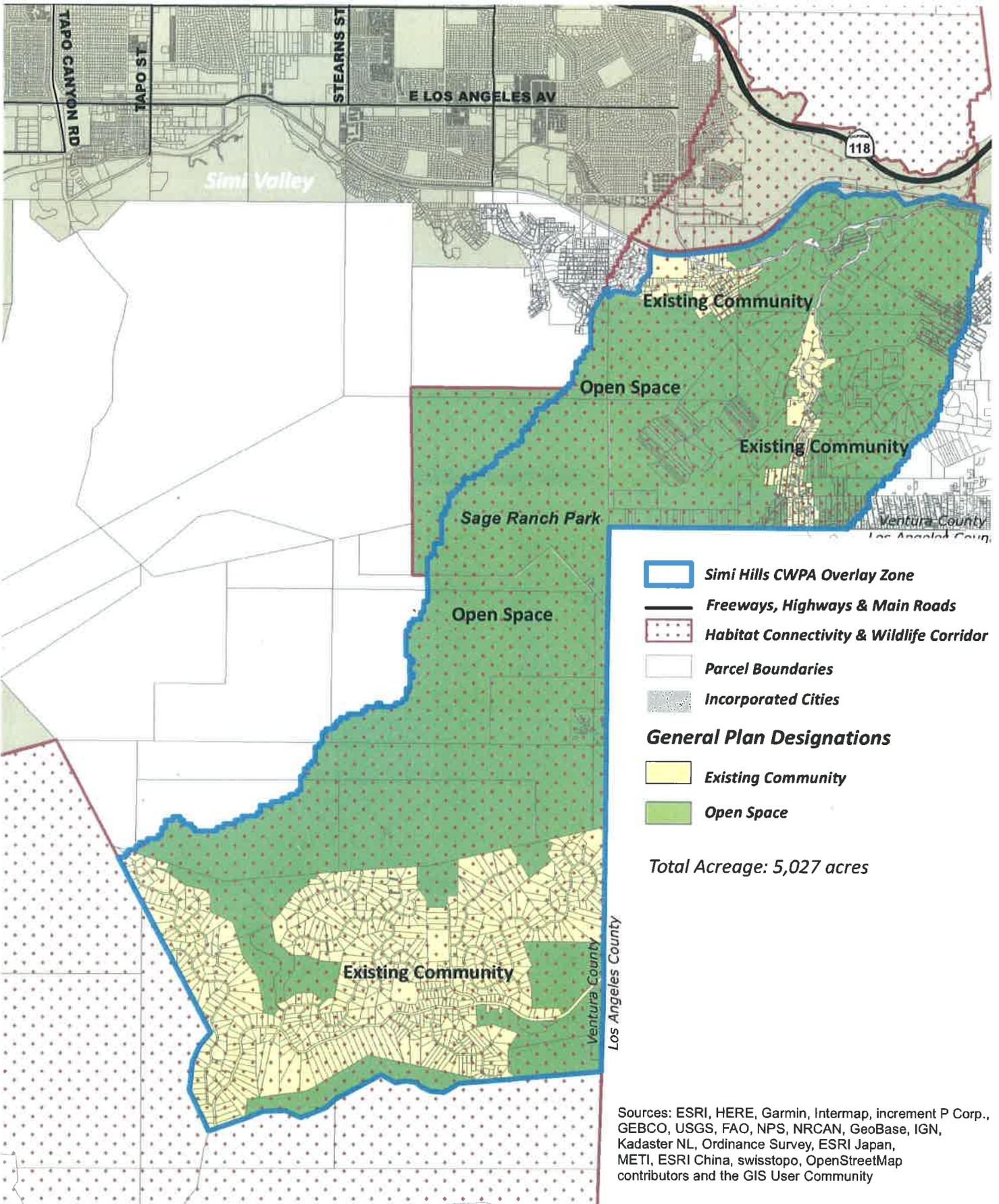


Exhibit 9
Oak View Critical Wildlife Passage Area Map
(Resources Appendix Figure 1.5.6)

0 800 1,600 3,200 Feet

Disclaimer: this map was created by the Ventura County Resource Management Agency Information Systems GIS, which is designed and operated solely for the convenience of the County and related public agencies. The County does not warrant the accuracy of this map and no decision involving a risk of economic loss or physical injury should be made in reliance therein





Sources: ESRI, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, METI, ESRI China, swisstopo, OpenStreetMap contributors and the GIS User Community



Ventura County
Resource Management Agency
Information Systems GIS Services
Map created on 1/11/2019

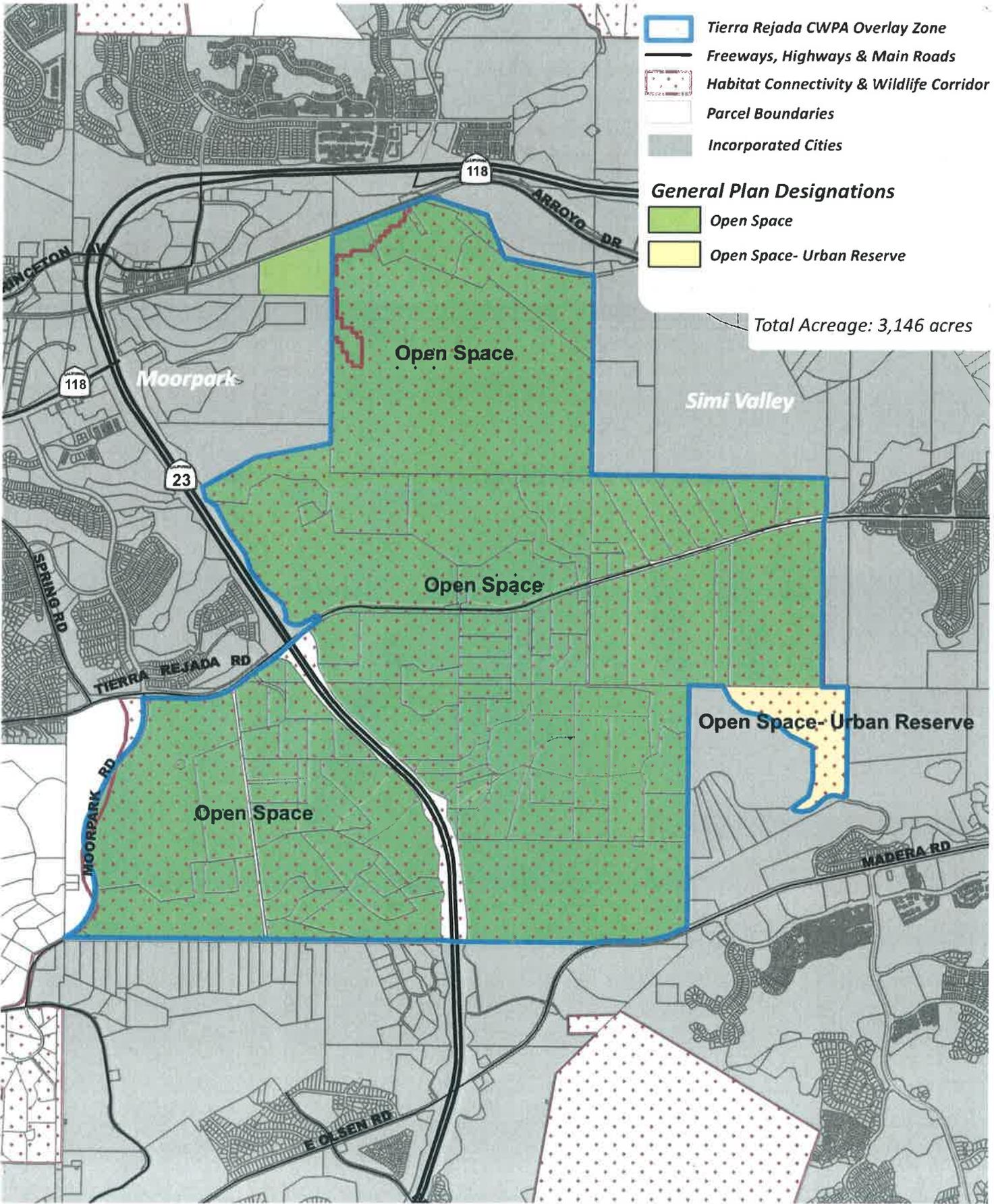


Exhibit 10
Simi Hills Critical Wildlife Passage Area Map
(Resources Appendix Figure 1.5.7)



Disclaimer: This map was created by the Ventura County Resource Management Agency Information Systems GIS, which is designed and operated solely for the convenience of the County and related public agencies. The County does not warrant the accuracy of this map and no decision involving a risk of economic loss or physical injury should be made in reliance therein.





Ventura County
Resource Management Agency
Information Systems GIS Services
Map created on 1/11/2019



Exhibit11
Tierra Rejada Critical Wildlife Passage Area Map
(Resources Appendix Figure 1.5.8)

0 800 1,600 3,200 Feet

Disclaimer: this map was created by the Ventura County Resource Management Agency Information Systems GIS, which is designed and operated solely for the convenience of the County and related public agencies. The County does not warrant the accuracy of this map and no decision involving a risk of economic loss or physical injury should be made in reliance therein.





Planning Commission Resolution

County of Ventura • Resource Management Agency • Planning Division

800 S. Victoria Avenue, Ventura, CA 93009-1740 • (805) 654-2478 • www.vcrma.org/divisions/planning

RESOLUTION 19-XX FOR PL16-0127 REGARDING PROPOSED COUNTY-INITIATED ORDINANCES AMENDING VENTURA COUNTY GENERAL PLAN AND VENTURA COUNTY NON-COASTAL ZONING ORDINANCE DIVISION 8, CHAPTER 1, ARTICLES 2, 3, 4, 5, 9 AND 18, PERTAINING TO REGULATION OF PARCELS LOCATED WITHIN THE HABITAT CONNECTIVITY AND WILDLIFE CORRIDORS OVERLAY ZONE AND CRITICAL WILDLIFE PASSAGE AREAS OVERLAY ZONE

WHEREAS, on January 31, 2019, the Ventura County Planning Commission held a legally noticed public hearing to consider ordinances amending the Ventura County General Plan and Non-Coastal Zoning Ordinance (NCZO) Division 8, Chapter 1, Sections 8102-0 (Definitions), 8103-0 (Purpose and Establishment of Zones), 8105-4 and 8105-5 (Permitted Uses); adding Sections 8104-7.7 (Purpose of Habitat Connectivity and Wildlife Corridors Overlay Zone), 8104-7.8 (Purpose of Critical Wildlife Passage Areas Overlay Zone), 8109-4.8 (Standards for Habitat Connectivity and Wildlife Corridors Overlay Zone) and 8109-4.9 (Standards for Critical Wildlife Passage Areas Overlay Zone); and amending the Zoning Map in Section 8118-2, pertaining to regulation of development for parcels located within the Habitat Connectivity and Wildlife Corridors Overlay Zone and the Critical Wildlife Passage Areas Overlay Zone; and

WHEREAS, the Commission considered all written and oral testimony from County staff and public testimony on this matter; and

WHEREAS, after the close of the public hearing, Planning Commissioner xxxxx, District xx, made a motion to ----- staff's recommended actions; and

WHEREAS, the motion carried X-X-X.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission recommends that the following actions be taken by the Board of Supervisors with respect to the proposed General Plan amendments and amendments to the NCZO:

- a. **CERTIFY** that the Board of Supervisors has reviewed and considered the Board letter, the Planning Commission staff report and all exhibits thereto, and has considered all other materials and public comments received during the public comment and hearing process;
- b. **FIND** on the basis of the entire record and as set forth in Sections A - F of this Planning Commission staff report that the adoption of the proposed

General Plan amendments (Exhibits 8 - 11 and 13)¹ and the proposed ordinance (Exhibit 14) amending Articles 2, 3, 4, 5 and 9, and adoption of the proposed ordinance amending the zoning maps contained in Article 18 (Exhibit 15) of the Ventura County NCZO to add a new Habitat Connectivity and Wildlife Corridors Overly Zone and a new Critical Wildlife Passage Areas Overly Zone is exempt from CEQA pursuant to CEQA Guidelines section 15061(b)(3) because it can be seen with certainty that there is no possibility the project may cause a significant effect on the environment; **FIND** that because the project consists of regulations intended to benefit the environment, it is also exempt from CEQA pursuant to CEQA Guidelines sections 15307 and 15308; and **FIND** that there is no reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances pursuant to State CEQA Guidelines section 15300.2;

- c. **FIND** based on the substantial evidence set forth in Sections A – F of the Planning Commission staff report, the public testimony received and entire record, that the General Plan Amendment (Exhibits 8 - 11 and 13) is in the public interest, and has the potential to benefit the general welfare, and is consistent with good planning practice;
- d. **FIND** based on the substantial evidence set forth in Sections A – F of the Planning Commission staff report, the public testimony received and entire record, that the proposed ordinances amending Articles 2, 3, 4, 5 and 9, and the zoning maps contained in Article 18 of the Ventura County NCZO (Exhibit 15) are consistent with the Goals, Policies and Programs of the Ventura County General Plan and good zoning practice and is in the interest of public health, safety or general welfare;
- e. **ADOPT** the proposed General Plan amendment (Exhibits 8 - 11 and 13);
- f. **ADOPT** the proposed ordinance amending Articles 2, 3, 4, 5 and 9 of the Ventura County NCZO (Exhibit 14);
- g. **ADOPT** the proposed ordinance amending the zoning maps contained in Article 18 of the Ventura County NCZO (Exhibit 15); and
- h. **SPECIFY** the Clerk of the Board of Supervisors at 800 S. Victoria Avenue, Ventura, CA 93009 as the location and custodian of the documents and materials that constitute the record of proceedings upon which these decisions are based.

¹ All exhibit references herein are to the exhibits to the Planning Division's staff report for the January 31, 2019 Planning Commission hearing regarding this matter.

This is to certify that the foregoing is a true and correct copy of the Resolution reflecting the actions taken by the Ventura County Planning Commission at a public hearing regarding the above-described matter on January 31, 2019.

Kim L. Prillhart, Secretary to the
Ventura County Planning Commission

EXHIBIT 13

**VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS**



**Last Amended by the Ventura County Board of Supervisors
on**

xxxx, 2019

**Ventura County General Plan
GOALS, POLICIES AND PROGRAMS**

2019 Decision-Makers and Contributors

Ventura County Board of Supervisors:

Steve Bennett	First District
Linda Parks	Second District
<u>Kelly Long</u>	Third District
<u>Bob Huber</u>	Fourth District
John Zaragoza	Fifth District

Ventura County Planning Commission:

<u>Phil White</u>	First District
Nora Aidukas	Second District
W. Stephen Onstot	Third District
<u>James King</u>	Fourth District
Richard Rodriguez	Fifth District

Ventura County Planning Division:

Kim L. Prillhart, Director
Susan Curtis, Manager, General Plan Update
Shelley Sussman, Project Manger
Kim Uhlich, Senior Planner
Whitney Wilkinson, Biologist

RMA GIS Mapping & Graphics Section:

Jose Moreno

RMA Information Services:

Alan Brown

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Resource Management Agency
Planning Division
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Ventura, CA 93009-1740
(805) 654-2494 FAX (805) 654-2509**

www.vcrma.org/divisions/planning

VENTURA COUNTY GENERAL PLAN
GOALS, POLICIES AND PROGRAMS

Adopted by the Ventura County Board of Supervisors – May 24, 1988 (GPA #88-1)

All amendments became effective 30 days after approval date, except as otherwise noted below:

- | | |
|--|--|
| Amended - September 13, 1988 (88-2) | Amended - December 10, 1996 (96-3) <i>[Effective - May 10, 1997]</i> |
| Amended - December 20, 1988 (88-3 & 88-4) | Amended - December 17, 1996 (96-2) |
| Amended - June 20, 1989 (89-1.1 through 1.5) | Amended - July 22, 1997 (97-2) |
| Amended - June 20, 1989 (89-1.6) <i>[Effective - November 11, 1989]</i> | Amended - September 16, 1997 (97-3 & 97-4) |
| Amended - December 19, 1989 (89-2) | Amended - October 28, 1997 (97-5) |
| Amended - April 10, 1990 (90-1) | Amended - November 3, 1998 (Voter Approved SOAR Ordinance) <i>[Adopted by Board of Supervisors, November 24, 1998 (98-1)/Effective - December 4, 1998]</i> |
| Amended - October 16, 1990 (90-2) | Amended - July 13, 1999 (99-1) |
| Amended - December 11, 1990 (90-4) <i>[Effective April 15, 1991]</i> | Amended - November 19, 1999 (99-2) <i>[SOAR Election - March 7, 2000/Effective - April 7, 2000]</i> |
| Amended - April 9, 1991 (91-1) | Amended - December 14, 1999 (99-3) |
| Amended - December 10, 1991 (91-3) | Amended - August 8, 2000 (00-1) |
| Amended - March 24, 1992 (91-2 & 92-1) | Amended - September 19, 2000 (00-2) |
| Amended - November 17, 1992 (92-4) | Amended - December 5, 2000 (00-3A) |
| Amended - December 1, 1992 (92-2) | Amended - December 5, 2000 & November 20, 2001 (00-3B) <i>[Effective - February 14, 2002]</i> |
| Amended - December 15, 1992 (92-3) <i>[Effective - September 23, 1998]</i> | Amended - June 19, 2001 (01-1) |
| Amended - March 2, 1993 (93-1) | Amended - October 23, 2001 (01-2) |
| Amended - October 19, 1993 (93-3) <i>[Effective - February 18, 1994]</i> | Amended - March 26, 2002 (02-1) |
| Addendum - January 13, 1994 | Amended - May 14, 2002 (02-2) |
| Amended - June 7, 1994 (94-1) | Amended - November 11, 2003 (03-1) |
| Amended - July 12, 1994 (94-2) | Amended - January 27, 2004 (04-1) |
| Amended - December 20, 1994 (94-3) | |
| Amended - July 18, 1995 (95-1) | |
| Amended - November 14, 1995 (95-2) | |
| Amended - December 10, 1996 (96-1) | |

- Amended - November 15, 2005
(05-3)
- Amended - December 6, 2005
(05-4)
- Amended - May 8, 2007 (07-1)
- Amended - December 4, 2007
(GP06-0003)
- Amended - July 22, 2008 (GP07-
0002)
- Amended September 9, 2008
(GP08-0006)
- Amended - December 16, 2008
(GP08-0001)
- Amended - April 6, 2010 (GP09-
0001)
- Amended June 28, 2011 (GP09-
0004)
- Amended - October 22, 2013
(PL12-0100)
- Amended - March 24, 2015
(PL13-0109)
- Amended - September 22, 2015
(PL14-0066)
- Amended - October 20, 2015
(PL15-0095)
- Amended - November 8, 2016 (PL
17-0058; Voter
Approved SOAR
Ordinance), *[Adopted
by Board of
Supervisors,
December 13, 2016/
Effective December
23, 2016]*
- Amended - XXXX 2019 (PL16-
0127) Habitat
Connectivity and
Wildlife Corridors

1.5 Biological Resources

Biological resources include plant and animal species and their habitats, plant communities and ecosystems.

Vegetation

The diverse topography and climate of Ventura County provide an environment where a range of vegetation communities (from Coastal sage-scrub to subalpine forest, from desert chaparral to riparian woodland) can maintain successful populations. Native vegetation in Ventura County can be categorized into seven general plant communities: grasslands, coastal sage-scrub, chaparral, oak woodland, riparian, pinyon-juniper, and timber-conifer (see Resources Appendix).

Most native vegetation in the north half of the County has been preserved as a result of the low level of development in this area (outside of Lockwood Valley). The exceptions are the large expanses of native grasslands that were eliminated by cattle ranching operations several decades ago. Development in the Lockwood Valley area has impacted the pinyon-juniper community; however, the higher elevations surrounding the valley contain nearly undisturbed stands of timber-conifer vegetation.

A large portion of the native vegetation in the south half of the County has been displaced as a result of urban and agricultural development. For the most part, this development is confined to the fertile valleys and plains, and along the coastline. Consequently, most of the mountainous areas in the south half still support significant native plant communities.

Chaparral is the most common plant community in the County. This community consists of woody shrubs and herbaceous plants, is generally located on steep slopes with rocky or heavy soils, and is characteristically dense and subject to fires. Large expanses of chaparral are found in the Santa Monica Mountains.

The Coastal sage-scrub community is located below the chaparral community, generally below 3000 feet, on dry, rocky slopes. It consists of woody shrubs, and is a more open community than the Chaparral. Substantial areas of this community remain on South Mountain and in the Simi Hills and Santa Susana Knolls areas; however, these populations are threatened by encroaching residential development.

Grassland vegetation is not common, and as groundcover, is usually associated with oak-woodland or open areas. The La Jolla Valley in Point Mugu State Park is the only area in the County that still contains native bunch grasses in pure stands, and is considered a locally unique habitat.

The oak woodland community in Ventura County contains the easily identifiable valley oaks, with trees 20 to 60 feet tall and grassland and soft shrubs as groundcover, as found in the Thousand Oaks, Lake Casitas, and Hidden Valley areas. A large area of foothill oak woodland is found on Sulphur Mountain.

Riparian vegetation is found in *wetlands* along most of the permanent and ephemeral streams within the County. Typical trees of this community include sycamores, willows, cottonwoods, and alders. Extensive riparian growth now lines Piru, Sespe, and Santa Paula Creeks, and the Santa Clara and Ventura Rivers. These riparian areas provide both essential habitat and migration corridors for wildlife in Ventura County.

Fish and Wildlife

The naturally vegetated areas of the County provide shelter, food, and nesting areas to create habitats for a wide variety of animal species. Each plant community has different characteristics which support different species of wildlife, although an animal species may use various habitats at different times of the year or at various stages in the animal's life cycle.

The low-elevation, drier plant communities, such as the grasslands, coastal sage-scrub, and chaparral, support a wildlife population which includes rodents, insectivores, hares, foxes, coyotes, raptors (such as hawks, falcon, owls, and eagles) and numerous perching birds, from hummingbirds to ravens. The upland plant communities, such as the oak woodlands, pinyon-juniper, and timber-conifer, provide habitats for larger animals, and include populations of bobcat and mountain lion, mule deer, and black bear, in addition to a game population of quail, rabbit, tree squirrel, band-tailed pigeon, dove, turkey, and chukar (partridge). Reptiles are commonly found throughout the County.

Several hundred species of vertebrates find permanent and transitory range in the varied habitats and topography of the Los Padres National Forest. These species are listed in the U.S. Forest Service Wildlife Survey of 1982. The number of individuals of many of these species is below optimum replacement levels, a result of the declining quality of habitats and deficient vegetation management.

Riparian areas support a great intensity and diversity of species. These species include the bank swallow, western yellow-billed cuckoo, southern rubber boa, and migratory waterfowl. Populations of these species have greatly diminished as a result of human intrusion and degradation of their habitats.

Locally Unique Habitats

Ventura County contains several unique habitats that support a variety of plants and animals found nowhere else in the country.

The coastal wetlands and lagoons found along the south coast of the County provide shelter, forage, and nesting areas for thousands of birds, fish, mollusks, crabs, seals, and many other marine organisms and plants. The wetland area with the richest diversity is the Mugu Lagoon, which shelters the remnants of many plant, bird, fish, and insect populations which once inhabited the coast from the Ventura River to the Santa Monica Mountains. Other wetlands include the McGrath Lake and Ormond Beach areas, and the mouths of the Ventura and Santa Clara Rivers. These areas are considered significant biological resources.

Ventura County also has two large areas set aside as sanctuaries for the California condor. Although there are (as of 1986) no longer any of these birds living in the wild, the U.S. Fish and Wildlife Service remains hopeful that its Condor Recovery program, involving captive breeding and eventual release, will again allow the condor to safely exist and repopulate in Southern California. As a result, both Matilija and Sespe Condor Sanctuaries remain as significant biological habitats, as shown on the Biological Resources Map in the Resources Appendix.

The Hopper Mountain National Wildlife Refuge is just outside of the Los Padres National Forest, east and south of, and adjacent to, the Sespe Condor Sanctuary. It is a traditional feeding site for the California condor, and is currently operated as a cattle ranch. In addition, a variety of raptors, including prairie falcons, and red-tailed and Cooper's hawks, populate this area.

The Sespe Creek is designated as a "Wild Trout Stream" by the State of California. The steelhead trout, an anadromous fish, uses this stream as its spawning area. The Pacific lamprey, an anadromous fish, also uses the Sespe Creek and the Santa Clara River for its spawning area. The creek also supports a significant population of rainbow trout, cousin to the steelhead. The "Wild Trout Stream" designation affords some protection of water flows and riparian vegetation, both threatened by water development projects. In addition, the Forest Service has proposed that a 28½ mile portion of Sespe Creek receive a "Wild and Scenic River" designation. The Sespe is also mapped as a significant biological resource.

Habitat Connectivity and Wildlife Corridors

Habitat connectivity is the degree to which the natural landscape facilitates or impedes movement of species among habitat areas. Movement is essential to the survival of animals and plants because it allows seasonal migrations, access to resources, dispersal of offspring, genetic diversity, and allows for long-term changes in species' range in response to climate change. A high degree of connectivity among habitat types is also important for maintaining biodiversity and ecosystem functions.

Habitat loss and fragmentation are the leading threats to biodiversity worldwide, including within Southern California. Loss of habitat connectivity or habitat fragmentation has occurred due to urban sprawl, roads, conversion of wildlands to intensive agricultural uses, installation of fencing that restricts or prevents wildlife movement, and other human and natural influences. Urbanization can result in the following effects on wildlife corridors:

- Decreased abundance and diversity of native species and replacement by non-native species.
- Removal and fragmentation of natural vegetation lowering habitat quality.
- Increased rates of roadkill and habitat fragmentation due to the development of a local road network.
- Spread of exotic plants through disturbance or introduction by humans that results in loss of biodiversity and habitat quality.
- Increase in perennial water which favors non-native aquatic organisms such as bullfrogs, and non-native terrestrial organism such as Argentinean ants which outcompete native species.
- Artificial night lighting which can impair the ability of nocturnal animals to navigate through a corridor.
- Increased noise, which disturbs or repels many animals and presents a barrier to movement.
- Disruption of the natural fire regime by either increasing the number of fires or suppressing fires that maintain natural ecosystem structure.

Biological diversity benefits both the natural and built environments in several ways. It benefits wildlife and plant species by fostering vigor and resiliency. For example, In the urban and agricultural environments, biological diversity supports a variety of pollinators necessary for crop health, and it helps to ensure healthy populations of predators that control vermin (e.g., rodents).

Within Ventura County, the following Habitat Connectivity and Wildlife Corridors have been identified:

- Santa Monica-Sierra Madre Connection - Connections between the Santa Monica Mountains to the Santa Susana and Sierra Madre mountain ranges. This Connection incorporates the Santa Clara River;
- Sierra Madre-Castaic Connection - Connections between the Sierra Madre to the Castaic ranges; and
- Ventura River Corridor.

These habitat linkages and wildlife corridors are shown in Figure 1.5.5 of the Resources Appendix and are referred to as Habitat Connectivity and Wildlife Corridors. Within the mapped Habitat Connectivity and Wildlife Corridors, there are three geographic areas referred to as Critical Wildlife Passage Areas (CWPAs). The three areas identified as CWPAs are portions of Oak View, the Simi Hills, and Tierra Rejada Valley, as depicted on Figures 1.5.6, 1.5.7, and 1.5.8 of the Resources Appendix.

Endangered, Threatened and Rare Species

Ventura County is host to numerous species of plants and animals that are *endangered*, *threatened*, *rare*, or considered to be a *candidate species* for one of those designations. A full listing of these species, with their State and Federal designations, and a general description of their locations is found in the Resources Appendix. The areas where these species are located are also designated on the Significant Biological Resources Map in the Resources Appendix.

Although fish and wildlife are generally renewable resources, the rates of renewal are usually very slow and are often impeded by the disruptive forces of urbanization, human harassment, predator control, and pollution. The species and ecosystems in this County are of aesthetic, ecological, educational, historic, recreational and scientific value to the people of Ventura County and the nation as a whole.

The goal, policies and programs which apply to biological resources are as follows:

1.5.1 Goal

Identify, preserve and protect significant biological resources in Ventura County from incompatible land uses and development. Significant biological resources include *endangered*, *threatened* or *rare species* and their habitats, *wetland habitats*, *coastal habitats*, *wildlife migration corridors that facilitate habitat connectivity and wildlife movement*, and *locally important species/communities*.

1.5.2 Policies

1. *Discretionary development* which could potentially impact *biological resources* shall be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures.
2. *Discretionary development* shall be sited and designed to incorporate all feasible measures to mitigate any significant impacts to *biological resources*. If the impacts cannot be reduced to a less than significant level, findings of overriding considerations must be made by the decision-making body.
3. *Discretionary development* that is proposed to be located within 300 feet of a marsh, small wash, intermittent lake, intermittent stream, spring, or perennial stream (as identified on the latest USGS 7½ minute quad map), shall be evaluated by a County approved biologist for potential impacts on *wetland habitats*. *Discretionary development* that would have a significant impact on significant *wetland habitats*

shall be prohibited, unless mitigation measures are adopted that would reduce the impact to a less than significant level; or for lands designated "Urban" or "Existing Community", a statement of overriding considerations is adopted by the decision-making body.

4. Discretionary *development* shall be sited a minimum of 100 feet from significant *wetland* habitats to mitigate the potential impacts on said habitats. Buffer areas may be increased or decreased upon evaluation and recommendation by a qualified biologist and approval by the decision-making body. Factors to be used in determining adjustment of the 100-foot buffer include soil type, slope stability, drainage patterns, presence or absence of endangered, threatened or rare plants or animals, and compatibility of the proposed development with the wildlife use of the wetland habitat area. The requirement of a buffer (setback) shall not preclude the use of replacement as a mitigation when there is no other feasible alternative to allowing a permitted use, and if the replacement results in no net loss of wetland habitat. Such replacement shall be "in kind" (i.e. same type and acreage), and provide wetland habitat of comparable biological value. On-site replacement shall be preferred wherever possible. The replacement plan shall be developed in consultation with California Department of Fish and Game.
5. The California Department of Fish and Game, the U.S. Fish and Wildlife Service, National Audubon Society and the California Native Plant Society shall be consulted when *discretionary development* may affect significant *biological resources*. The National Park Service shall also be consulted regarding *discretionary development* within the Santa Monica Mountains or Oak Park Area.
6. Based on the review and recommendation of a qualified biologist, the design and maintenance of road and floodplain improvements, including culverts and bridges shall incorporate all feasible measures to accommodate wildlife passage.
7. When considering proposed discretionary development, County decision-makers shall consider the development's potential project-specific and cumulative impacts on the movement of wildlife at a range of spatial scales including local scales (e.g., hundreds of feet) and regional scales (e.g., tens of miles).
8. Development within the Habitat Connectivity and Wildlife Corridors and the Critical Wildlife Passage Areas shown in Figures 1.5.5 – 1.5.8 of the Resources Appendix, shall be subject to the provisions and standards of the Habitat Connectivity and Wildlife Corridor overlay zone (HCWC overlay zone) and the Critical Wildlife Passage Areas overlay zone (CWPA overlay zone) as set forth in the Non-Coastal Zoning Ordinance.

1.5.3 Programs

1. The Planning Division, in conjunction with State and Federal agencies, will identify those areas of the County that are considered to be critical habitats of *endangered, threatened* or *rare species* as well as for other significant *biological resources*.
2. The Planning Division will retain a list of qualified biological consultants for the purpose of providing information to complete Initial Studies and Environmental Impact Reports.
3. The Fire Protection District, in conjunction with the California Department of Forestry (CDF), will, under the California Vegetation Management Program, continue the use of prescribed burning to mimic the effects of natural fires in order to reduce the fire hazard to human residents and to enhance the health of biotic communities.

4. The Planning Division shall prepare a program proposal, for Board of Supervisors' consideration, to map significant *wetland habitat* areas and amend the General Plan and Zoning Ordinance in order to establish a Biological Resource Protection Overlay designation/zone which would require all development in said overlay areas to be evaluated for impacts on significant *wetland habitat* areas.

DRAFT

Glossary

An attempt has been made to define all technical words contained in the text. If a technical word is not defined, often the word can be found in a standard dictionary. In using the glossary, the reader will note that many technical words appear within the definitions themselves. Definitions of these words can also be found in this glossary.

....

Core Habitat Areas – Extensive areas of habitat, usually containing more than one habitat type and supporting multiple wildlife species.

Critical Wildlife Passage Areas – Areas of land identified within a Habitat Connectivity and Wildlife Corridor that are especially valuable due to the existence of one or more of the following elements: 1) intact, native habitat or higher habitat values; 2) proximity to water bodies or ridgelines; 3) proximity of critical roadway crossings; 4) likelihood of encroachment by future development, and within which wildlife movement and plant dispersal could be easily disturbed by development; or 5) presence of non-urbanized or undeveloped lands within a geographic location that connects core habitats at a regional scale.

Functional Connectivity - Describes the degree to which a physical setting (i.e., natural landscape and built environment) facilitates or impedes the movement of organisms. Functional connectivity is a product of both the features of the physical setting (e.g., vegetation, physical development) and the behavioral response of plants and animals to these physical features.

Habitat Connectivity and Wildlife Corridors – Areas of contiguous natural habitats or undeveloped land of sufficient width to facilitate the movement, migration, foraging, breeding, and dispersal of multiple wildlife or plant species between two or more core habitat areas. The boundaries of the Habitat Connectivity and Wildlife Corridor areas and the Habitat Connectivity and Wildlife Corridors overlay zone are coterminous.

Wildlife Migration Corridor – Linear spaces that connect the various areas of an animal's habitat, and serve as links between feeding, watering, resting and breeding places. These corridors are especially important to larger, wider-ranging animal species.

VENTURA COUNTY GENERAL PLAN

RESOURCES APPENDIX



Last Amended by the Ventura
xxxx, 2019

VENTURA COUNTY GENERAL PLAN

RESOURCES APPENDIX

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VENTURA COUNTY GENERAL PLAN

RESOURCES APPENDIX

Adopted by the Ventura County Board of Supervisors – May 24, 1988

Amended - June 20, 1989

Amended – December 19, 1989

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Amended - July 12, 1994

Amended - September 19, 2000

Amended – September 9, 2008

Amended – April 6, 2010

Amended – June 28, 2011

Amended – XXXX, 2019

1.5.5 Locally Unique Habitats

Ventura County contains several areas that are of *unique* significance due to their ability to provide habitat for endangered, rare and threatened species or because they constitute an example of a unique plant community.

The coastal wetlands and lagoons found along the south coast of the County provide shelter, forage, and nesting areas for thousands of birds, fish, mollusks, crabs, seals, and many other marine organisms and plants. The wetland area with the richest diversity is the Mugu Lagoon, which shelters the remnants of many plant, bird, fish, and insect populations which once inhabited the coast from the Ventura River to the Santa Monica Mountains. Other wetlands include the McGrath Lake and Ormond Beach areas, and the mouths of the Ventura and Santa Clara Rivers. These areas are considered significant biological resources (see Significant Biological Resources Map, [Figure 1.5.2](#)).

The Pothole in the Devil's Potrero, on the Agua Blanca Creek, is an inland freshwater marsh that contains several small species of plants that are unique to freshwater marshes. It is located in the Los Padres National Forest, and is within the Sespe Condor Sanctuary.

The Sespe Creek is designated as a "Wild Trout Stream" by the State of California. The steelhead trout, an anadromous fish, uses this stream as its spawning area. The Pacific lamprey, an anadromous vertebrate, also uses the Sespe Creek (and the Santa Clara River) for its spawning area. The creek also supports a significant population of rainbow trout, cousin to the steelhead. The "Wild Trout Stream" designation affords some protection of water flows and riparian vegetation, both threatened by water development projects. In addition, the Forest Service has proposed that a 28½ mile portion of Sespe Creek receive a "Wild and Scenic River" designation. The Sespe is also mapped as a Significant Biological Resource.

The Santa Clara River east of Piru is the last remnant of relatively undisturbed riverine habitat in the county. Several endangered, threatened, and rare species of birds have been sighted in this area, and nowhere else in the County, over the past few years.

The Ventura River deserves mention as it currently supports a limited population of rainbow trout in the Foster Park area and a limited steelhead run in the River and San Antonio Creek. According to the State Department of Fish and Game, the River has the potential for the introduction of a steelhead and chinook salmon fishery in the future. Local populations of steelhead and rainbow trout along the Ventura River have nearly been eliminated, a result of dam construction and water pollution from agricultural operations and septic system leachate.

Ventura County has two large areas set aside as sanctuaries for the California Condor. Although there are (as of 1986) no longer any of these rare and majestic birds living in the wild, the U.S. Fish and Wildlife Service remains hopeful that its Condor Recovery program, involving captive breeding and eventual release, will again allow the condor to safely exist and repopulate in Southern California. As a result, both Matilija and Sespe Condor Sanctuaries remain as significant biological habitats, as shown on the Biological Resources Map.

The Sespe Condor Sanctuary was dedicated in 1947 and consists of 53,000 acres (see [Figure 1.5.3](#)). The majority of known sites historically used for nesting (25 of 33) are located within its boundaries. The sanctuary contains extensive rocky canyons, cliffs and areas of bare sandstone interspersed with dense chaparral. Big-cone Douglas fir and incense cedar found in scattered locations are used for roosting. The area is closed to public entry, although there are two north-south travel corridors--one along Sespe Creek and the other along Forest Service Trail 20W11 through Squaw Flats. There is no shooting allowed within the Sanctuary and in some surrounding critical condor habitat.

The Sanctuary is surrounded on the west, north and east by critical condor habitat and the Hopper Mountain National Wildlife Refuge is to the south of the Hopper Mountain area. "Critical" condor habitat was described for three areas in Ventura County: Mount Pinos, Matilija and Sespe-Piru (Federal Register, Vol. 41, No. 187, September 24, 1976). All Federal agencies must ensure that actions authorized, funded, or carried out by them do not result in the destruction or modification of these critical habitat areas.

"Essential" habitat are those areas intended to supplement the officially designated critical habitat. These areas have no legal status (a "Critical Habitat" is a legal status); however, the habitat

management recommendations are intended to be applied with equal emphasis in these areas. Both areas in Ventura County extend the Sespe-Piru critical habitat -- on the northeast to Liebre Mountain in Los Angeles County and the west to Madulce Peak in Santa Barbara County. The boundaries will be updated as needed.

Hopper Mountain National Wildlife Refuge (N.W.R.) lies adjacent to the Sespe Condor Sanctuary on the east and south just outside the Los Padres National Forest. The 1,871 acres is comprised of rugged mountains, rock out-croppings, chaparral, hardwood groves, stands of Douglas fir and open grasslands. The area is a traditional working cattle ranch. A variety of raptorial birds reside there year-round. Condor use was infrequent--probably due to the surrounding land uses, especially oil and gas exploration.

1.5.6 Habitat Connectivity and Wildlife Corridor

Habitat connectivity is the degree to which the natural landscape facilitates or impedes movement of species among habitat areas. Movement is essential to the survival of biota because it allows seasonal migrations, access to resources, dispersal of offspring, genetic diversity, and allows for long-term changes in species' range in response to climate change. A high degree of connectivity among habitat types is also important for maintaining biodiversity and ecosystem functions.

Habitat loss and fragmentation are the leading threats to biodiversity worldwide, including within Southern California. Loss of habitat connectivity or habitat fragmentation has occurred due to urban sprawl, roads, conversion of wildlands to other uses, installation of fencing that restricts or prevents wildlife movement, and other human and natural influences. Urbanization can result in the following effects on wildlife corridors:

- Decreased abundance and diversity of native species and replacement by non-native species.
- Removal and fragmentation of natural vegetation lowering habitat quality.
- Increased rates of roadkill and habitat fragmentation due to the development of a local road network.
- Spread of exotic plants through disturbance or introduction by humans that results in loss of biodiversity and habitat quality.
- Increase in perennial water which favors non-native aquatic organisms such as bullfrogs, and non-native terrestrial organism such as Argentinean ants which outcompete native species.
- Artificial night lighting which can impair the ability of nocturnal animals to navigate through a corridor.
- Increased noise, which disturbs or repels many animals and presents a barrier to movement.
- Disruption of the natural fire regime by either increasing the number of fires or suppressing fires that maintain natural ecosystem structure.

Biological diversity benefits both the natural and built environments in several ways. It benefits wildlife and plant species by fostering vigor and resiliency. For example, in the urban and agricultural environments, biological diversity supports a variety of pollinators necessary for crop health, and it helps to ensure healthy populations of predators that control vermin (e.g., rodents).

Within Ventura County, the following Habitat Connectivity and Wildlife Corridors have been identified:

- Santa Monica-Sierra Madre Connection - Connections between the Santa Monica Mountains to the Santa Susana and Sierra Madre mountain ranges. This Connection incorporates the Santa Clara River;
- Sierra Madre-Castaic Connection - Connections between the Sierra Madre to the Castaic ranges; and
- Ventura River Corridor.

These habitat linkages and wildlife corridors are shown in Figure 1.5.5 and are referred to as Habitat Connectivity and Wildlife Corridors. They enable the migration and dispersal of wildlife and plant species, which are critical to the long-term survival of these species in an urbanizing environment. The corridors provide: (1) buffers to mitigate for "edge effects" where dissimilar habitats meet; (2) viable habitat for species needing multiple generations to achieve gene flow through the linkage; (3) needed resources (e.g., food, water, specific habitat, breeding partners, etc.); and (4) needed habitat to allow natural processes to operate and allow for species and natural communities to respond to climate change.

Ventura County recognizes that individual development projects have the potential to impact habitat connectivity. The County encourages development that enables wildlife movement by integrating design features to assist wildlife movement, such as limiting wildlife impermeable fencing, use of nighttime lighting that is directed away from natural areas, clustering development to preserve larger intact areas, and maintaining buffers between developed uses and natural habitats used by wildlife to move safely through the landscape.

Within the mapped Habitat Connectivity and Wildlife Corridors, there are three geographic areas referred to as Critical Wildlife Passage Areas (CWPAs). The three geographic areas identified as CWPAs are portions of Oak View, the Simi Hills, and Tierra Rejada Valley, as depicted on Figures 1.5.6, 1.5.7, and 1.5.8.

These areas were identified as particularly vulnerable to loss of functional connectivity based on a variety of factors including, but not limited to:

- Width of the corridor;
- Existing habitat value;
- Extent of existing development and land use; and
- Proximity to important features such as water bodies and road crossing structures.

1.5.6 Conclusions

Various governmental agencies provide for the protection and preservation of the County's plant and animal communities. The State Department of Agriculture has the power to regulate and control the use of fertilizers, herbicides and pesticides. The County Agricultural Commissioner, governed by the State Agricultural Code, is responsible for the protection of the public from harmful plant diseases and pests.

Among the agencies which help protect and preserve the County's fish and wildlife are the U.S. Department of the Interior and the State Department of Fish and Game. The U.S. Navy controls all research activities within the Mugu Lagoon, and the U.S. Forest Service is responsible for the preservation of wildlife habitats within the Los Padres National Forest. The Forest Service has plans to reintroduce a number of wildlife species into the forest. Peregrine falcons will be introduced over time as animals and funds are available. Bighorn sheep from Cattle Canyon on the Angeles National Forest and Lytle Creek on the San Bernardino National Forest are to be transplanted in upper Piru Canyon. Turkeys, once common on Sulphur Mountain, are also to be reintroduced.

Both the Forest Service and Ventura County Fire Department (through the California Vegetation Management Program) are conducting prescribed burns, primarily in the chaparral. Mosaic blocks of perhaps 2,000 - 4,000 acres will be burned every 20-30 years. This burning will allow a rejuvenation of the vegetation beneficial to wildlife.

Among the issues raised in the "Biological Resources" discussion are management and land use practices which conflict with the protection and preservation of the County's plant and animal species. The use of poisons and traps has led to the indiscriminate killing of many animals. However, the greatest threats to the survival of the various biological communities are urbanization and other forms of human intrusion. Problems related to urbanizing pressures, such as increased fire danger, as well as water, air and noise pollution, have contributed to the degradation and/or destruction of many habitats. Introduction of predators and human harassment have affected wildlife and introduction of invasive nonnative species has disrupted plant communities.

Local agencies such as the County Planning Division and the Public Works Agency can aid tremendously in protecting sensitive areas and species. Protection can usually be accomplished through appropriate project design after a site survey and project review have been performed by a qualified biologist.

General Plan Goals, Policies and Programs should foster adequate project review and protection of biological resources. Controlled burning should be promoted by the Fire Protection District.

The interdependence of all life forms and the ecological needs for a stable and well-balanced environment must be recognized so that a healthy coexistence between human and natural biological communities can be assured.

References:

James, Susanne M., Biological Resource Law and the Compliance Process. Unpublished Manuscript, County of Ventura, Resource Management Agency, November 1985.

Ventura County Planning Division, Ventura County General Plan, Open Space and Conservation Elements, 1986.

California Department of Fish and Game, California Natural Diversity Data Base, 1987.

South Coast Wildlands, 2008. South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion. Produced in cooperation with partners in the South Coast Missing Linkages Initiative. Available online at <http://www.scwildlands.org>.

Figure 1.5.5
Habitat Connectivity and Wildlife Corridors

REF

Figure 1.5.6
Oak View Critical Wildlife Passage Area

DRAFT

Figure 1.5.7
Simi Hills Critical Wildlife Passage Area

DATA

Figure 1.5.8
Tierra Rejada Valley Critical Wildlife Passage Area

DRAFT

ORDINANCE NO. _____

**AN ORDINANCE OF THE COUNTY OF VENTURA, STATE OF CALIFORNIA,
AMENDING DIVISION 8, CHAPTER 1, ARTICLES 2, 3, 4, 5, AND 9
OF THE VENTURA COUNTY ORDINANCE CODE, NON-COASTAL ZONING
ORDINANCE TO REGULATE DEVELOPMENT WITHIN THE HABITAT
CONNECTIVITY AND WILDLIFE CORRIDORS AND THE CRITICAL WILDLIFE
PASSAGE AREAS OVERLAY ZONES**

The Board of Supervisors of the County of Ventura ("County") ordains as follows:

Section 1

**Article 2:
DEFINITIONS**

Article 2, Section 8102-0 – Application of Definitions, of the Ventura County Ordinance Code is hereby amended to add the following definitions in appropriate alphabetical order:

Agricultural Water Impoundment – A human-made surface water source used for livestock watering or other agricultural purposes (e.g., agricultural reservoir), also referred to as farm pond or livestock pond, in which water supply is primarily fed by sources other than natural processes such as groundwater seep or precipitation.

Conservation Organization – A public agency or a private, non-profit organization, whose primary purpose is the preservation and protection of land in its natural, scenic, historical, recreational, or open space condition.

Fuel Modification – A method of modifying fuel load by reducing the amount of non-fire resistive vegetation or altering the type of vegetation to reduce the fuel load. Fire resistive plants are those that do not readily ignite from a flame or other ignition source.

Functional Connectivity - Describes the degree to which a physical setting (i.e., natural landscape and built environment) facilitates or impedes the movement of organisms. *Functional connectivity* is a product of both the features of the physical setting (e.g., vegetation, physical development) and the behavioral response of plants and animals to these physical features.

Invasive Plant – Any species of plant included on the California Invasive Plant Council *Invasive Plant Checklist for California Landscaping*, as may be amended (<http://www.cal-ipc.org/plants/inventory/>).

Restoration Project - A project that involves the manipulation of the physical, chemical, or biological characteristics of a site to re-establish the site's natural or historic habitat,

species, or ecological functions. It may include the re-establishment of habitat at sites where ecological function was wholly or partially lost or degraded.

Riparian/Riparian Area/Riparian Habitat Area – Refers to the bank of a stream, creek or river. Riparian habitat is the aquatic and terrestrial habitats that occur along streams, creeks and rivers.

Surface Water Feature – An area containing a stream, river, wetland, seep, or pond, the *riparian* habitat area associated with the feature, as well as a development buffer area that is 200 feet as measured from the farthest extent of the surface water feature and its associated *riparian area*. The data used to designate the areas is obtained from the United States Fish and Wildlife Service National Wetlands Inventory Dataset. Areas designated as *surface water features* are shown on the 'Surface Water Feature Buffer' map within the Planning GIS Wildlife Corridor layer of the County of Ventura - County View Geographic Information System (GIS), as may be amended by the Planning Director. The term *surface water feature* does not include ponds, lakes, marshes, wetlands or *agricultural water impoundments* or associated *riparian habitat areas* that are human-made.

Vegetation – Native and nonnative trees and plant communities such as grassland, coastal scrub, *riparian* vegetation, chaparral, including *invasive plants*. The term *vegetation* does not include human-planted landscaping associated with legally-established development or commercial agricultural products.

Vegetation Modification – Human-caused alteration of *vegetation* through direct actions including, but not limited to, complete removal, mowing, thinning, or chaining.

Wildlife Crossing Structure – A *structure* such as a culvert, bridge or underpass containing certain features that enhance its suitability for use by wildlife to safely cross human-made barriers such as roadways and highways. Examples of these features include the presence of *vegetation* providing cover or habitat near the entrances and/or natural light visible at the opposite entrance. The locations of the wildlife crossing structures are shown on the 'Wildlife Crossing Structures' map within the Planning GIS Wildlife Corridor layer of the County of Ventura, County View Geographic Information System (GIS), as may be amended by the Planning Director. The term *wildlife crossing structures* does not include cattle guards.

Wildlife Impermeable Fencing – A *fence* or wall, other than a retaining wall, that prevents various species of wildlife including amphibians, reptiles, mammals, birds, from freely passing through with little or no interference. Except for gates and associated gate support components, all portions of a *fence* that include one or more of the following design features is considered *wildlife impermeable fencing*:

- (1) Any *fence* that is higher than 60 inches above grade, inclusive of any wire strands placed above a top rail of a *fence*.

- (2) Electric *fences* comprised of any material or number of electrified strands.
- (3) Any *fence* that is constructed of wrought iron, plastic mesh, woven wire, razor wire, chain link or that consists entirely of a solid surface, such as cinderblock.

Section 2

Article 3:

ESTABLISHMENT OF ZONES, BOUNDARIES AND MAPS

Article 3, Section 8103-0 - Purpose and Establishment of Zones and Minimum Lot Areas, of the Ventura County Ordinance Code, the portion of which sets forth overlay zones, is hereby amended to add the Habitat Connectivity and Wildlife Corridors (HCWC) overlay zone and the Critical Wildlife Passage Areas (CWPA) overlay zone to read as follows:

Overlay Zones	Abbreviation	Minimum Lot Area
Scenic Resource Protection	/SRP	Not Applicable
Mineral Resource Protection	/MRP	Not Applicable
Community Business District	/CBD	Not Applicable
Temporary Rental Unit Regulations	/TRU	Not Applicable
Dark Sky	/DKS	Not Applicable
Habitat Connectivity and Wildlife Corridors	/HCWC	Not Applicable
Critical Wildlife Passage Areas	/CWPA	Not Applicable

Section 3

Article 4:

PURPOSES OF ZONES

Article 4, Section 8104-7 – Overlay Zones, of the Ventura County Ordinance Code is hereby amended by adding a new Section 8104-7.7 – Habitat Connectivity and Wildlife Corridors Overlay Zone, and a new Section 8104-7.8 – Critical Wildlife Passage Areas Overlay Zone, to read as follows:

Section 8104-7.7 – Habitat Connectivity and Wildlife Corridors Overlay Zone

The general purposes of the Habitat Connectivity and Wildlife Corridors overlay zone are to preserve *functional connectivity* for wildlife and *vegetation* throughout the overlay zone by minimizing direct and indirect barriers, minimizing loss of *vegetation* and habitat fragmentation and minimizing impacts to those areas that are narrow,

impacted or otherwise tenuous with respect to wildlife movement. More specifically, the purposes of the Habitat Connectivity and Wildlife Corridors overlay zone include the following:

- a. Minimize the indirect impacts to wildlife created by *outdoor lighting*, such as disorientation of nocturnal species and the disruption of mating, feeding, migrating, and the predator-prey balance.
- a. Preserve the *functional connectivity* and habitat quality of *surface water features*, due to the vital role they play in providing refuge and resources for wildlife.
- b. Protect and enhance *wildlife crossing structures* to help facilitate safe wildlife passage.
- c. Minimize the introduction of *invasive plants*, which can increase fire risk, reduce water availability, accelerate erosion and flooding and diminish biodiversity within an ecosystem.
- d. Minimize *wildlife impermeable fencing*, which can create barriers to food and water, shelter, and breeding access to other individuals needed to maintain genetic diversity.

Section 8104-7.8 – Critical Wildlife Passage Areas Overlay Zone

There are three critical wildlife passage areas that are located entirely within the boundaries of the larger Habitat Connectivity and Wildlife Corridors overlay zone. These areas are particularly critical for facilitating wildlife movement due to any of the following: (1) the existence of intact native habitat or other habitat with important beneficial values for wildlife; 2) proximity to water bodies or ridgelines; 3) proximity of critical roadway crossings; 4) likelihood of encroachment by future development which could easily disturb wildlife movement and plant dispersal; or 5) presence of non-urbanized or undeveloped lands within a geographic location that connects core habitats at a regional scale.

Section 4

Article 5:

PERMITTED USES

Article 5, Sections 8105-4 and 8105-5 – Uses and Structures by Zone, are hereby amended regarding the following uses and structures to read as follows:

Section 8105-4 - Permitted Uses in Open Space, Agricultural, Residential and Special Purpose Zones

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
FENCES AND WALLS 6' HIGH OR LESS PER ART. 6 (42)	E	E	E	E	E	E	E	E	E	E
<u>Wildlife Impermeable Fencing In Overlay Zone*</u>	Pursuant to Article 9									
Over 6' High Per Art. 6 (18, 42)	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC	ZC

	OS	AE	RA	RE	RO	R1	R2	RPD	RHD	TP
TREES AND NATIVE VEGETATION: REMOVAL, RELOCATION, OR PRUNING OR VEGETATION MODIFICATION (7, 12)										
<u>Protected Trees, And Vegetation, And Vegetation Modification In Overlay Zone*</u>	Pursuant to Articles 7 and 9									
<u>Other Trees And Vegetation Outside Overlay Zone (42)</u>	E	E	E	E	E	E	E	E	E	E

Section 8105-5 - Permitted Uses in Commercial and Industrial Zones

	CO	C1	CPD	M1	M2	M3
FENCES AND WALLS 6' HIGH OR LESS PER ART. 6	E	E	E	E	E	E
<u>Wildlife Impermeable Fencing In Overlay Zone*</u>	Pursuant to Article 9					
Over 6' High Per Art. 6 (18)	ZC	ZC	ZC	ZC	ZC	ZC

	CO	C1	CPD	M1	M2	M3
TREES AND NATIVE VEGETATION: REMOVAL, RELOCATION, OR PRUNING OR VEGETATION MODIFICATION (7, 12)						
<u>Protected Trees, And Vegetation, And Vegetation Modification In Overlay Zone*</u>	Pursuant to Articles 7 and 9					
<u>Other Trees And Vegetation Outside Overlay Zone (42)</u>	E	E	E	E	E	E

E – Exempt; ZC – Zoning Clearance; * There are specific regulations for this use or structure.

Section 5
Article 9:
STANDARDS FOR SPECIFIC ZONES
AND ZONE TYPES

Article 9, Section 8109-4 - Standards for Overlay and Special Purpose Zones, is hereby amended by adding new **Section 8109-4.8 – Habitat Connectivity and Wildlife Corridors Overlay Zone**, and **Section 8109-4.9 – Critical Wildlife Passage Area**, to read as follows:

Section 8109-4.8 – Habitat Connectivity and Wildlife Corridors Overlay Zone

The abbreviated reference for the Habitat Connectivity and Wildlife Corridors overlay zone when applied to a base zone shall be “HCWC.” The suffix “HCWC” shall be added to the base zone covering land so identified (example: AE-40 ac/HCWC). Where applicable, the standards, requirements and procedures in this Sec. 8109-4.8 shall apply to parcels in the Habitat Connectivity and Wildlife Corridors overlay zone in addition to those of the base zone. In the case of conflicting zone standards, requirements or procedures, the more restrictive ones shall apply within the Habitat Connectivity and Wildlife Corridors overlay zone.

Section 8109-4.8.1 – Applicability

- a. Except as otherwise specifically stated in Sec. 8109-4.8.2.1 regarding *outdoor lighting* and Sec. 8109-4.8.3.3 regarding prohibitions, the standards, requirements and procedures of this Sec. 8109-4.8 shall only apply to land uses and *structures* requiring a discretionary permit or modification thereto, or a ministerial Zoning Clearance, the applications for which are decided by the County decision-making authority on or after [Ordinance effective date], or to uses or activities not requiring a discretionary permit or Zoning Clearance which occur after [Ordinance effective date].
- b. If a lot is located both inside and outside of the Habitat Connectivity and Wildlife Corridors overlay zone, the standards, requirements and procedures of this Sec. 8109 - 4.8 shall only apply to the portion of the lot that is located inside the Habitat Connectivity and Wildlife Corridors overlay zone.

- c. For purposes of calculating lot sizes to apply the provisions of this Sec. 8109-4.8, the Ventura County Resource Management Agency Geographic Information System (GIS) shall be used.
- d. If a proposed land use or *structure* requires a discretionary permit or modification thereto under a section of this Chapter other than this Sec. 8109-4.8, no additional discretionary permit or Zoning Clearance shall be required for the proposed land use or *structure* pursuant to this Sec. 8109-4.8. Instead, the applicable standards, requirements and procedures of this Sec. 8109-4.8 shall be incorporated into the processing of the application for, and the substantive terms and conditions of, the discretionary permit or modification that is otherwise required by this Chapter.
- e. If the same proposed land use, *structure* or project requires two or more discretionary permits or modifications or Zoning Clearances pursuant to Sec. 8109-4.8 and/or Sec. 8109-4.9, the permit applications shall be processed and acted upon concurrently as part of the same project.
- f. If a permit condition, subdivision condition, or other County-approved covenant, condition, easement, or instrument imposes standards or restrictions on development which is subject to this Sec. 8109-4.9, the more restrictive standards and restrictions shall apply.

Section 8109-4.8.2 – Outdoor Lighting

Section 8109-4.8.2.1 – Applicability

Outdoor lighting standards are intended to minimize potential impacts of light on wildlife movement. Except for *outdoor lighting* that is exempt pursuant to Sec. 8109-4.8.2.2, or authorized pursuant to Sec. 8109-4.8.2.5, the following standards and requirements apply to *outdoor lighting* and to *luminaires* within translucent or transparent enclosed structures for agricultural operations. The provisions of Article 13 shall not apply to any lighting subject to this Sec. 8109-4.8.2.

Section 8109-4.8.2.2 - Exemptions

The following *outdoor lighting* and related activities are not subject to Sec. 8109-4.8.2:

- a. *Temporary* lighting for construction.
- b. *Temporary* emergency lighting.
- c. Lighting for *wireless communication facilities* to the extent required by the Federal Aviation Administration. (See Section 8109-4.8.2.2(b)(9) for additional requirements related to *wireless communication facilities*.)

- d. *Temporary* or intermittent outdoor night lighting necessary to conduct agricultural activities including *outdoor lighting* used during weather events such as frosts, and *temporary* or *intermittent* outdoor night lighting used for *oil and gas exploration and production*. As used in this Sec. 8109-4.8.2.2 the term “intermittent” means a period of between 31 and 90 calendar days within any 12-month period.
- e. *Outdoor lighting* for signage permitted in accordance with Article 10.
- f. Seasonal or festive lighting.
- g. *Outdoor lighting* with a maximum output of 60 *lumens* or less, including solar lights.
- h. *Temporary outdoor lighting* associated with a use authorized by this Chapter or a permit granted pursuant to this Chapter.
- i. Lighting on public and private streets.
- j. Any facility, equipment, or activity that is subject to preemptive state or federal regulations regarding lighting or illumination.
- k. Lighting used in a swimming pool that is an accessory use to a dwelling.

Section 8109–4.8.2.3 – Prohibited Lighting

No *outdoor luminaire* prohibited by this Sec. 8109-4.8.2.3 shall be installed or replaced after [Ordinance effective date]. In addition, the use of any *outdoor luminaire* installed as of [Ordinance effective date] that is prohibited by this Sec. 8109-4.8.2.3 shall be discontinued as of [One year from Ordinance effective date]. The following *luminaires* are prohibited:

- a. Permanently installed *luminaires* that blink, flash, rotate, have intermittent fading, or have strobe light illumination.
- b. *Luminaires* located along the perimeter of a lot except for *security lighting* that complies with all other applicable standards and requirements of Sec. 8109 – 4.8.2.
- c. *Uplighting* of landscapes (e.g., trees, fountains), or for aesthetic purposes (e.g., outdoor statues, buildings) between 10:00 p.m. and sunrise.

Section 8109–4.8.2.4 – Existing Lighting; Standards and Requirements

- a. Existing Lighting:
 - (1) Any *outdoor luminaire* installed prior to [Ordinance effective date] that does not comply with any standard or requirement of Sec. 8109-4.8.2.4(b) and is not otherwise approved in conjunction with a land use and/or structure authorized by a discretionary permit granted pursuant

to this Chapter may remain in use until replaced by a luminaire that complies with the standards of Sec. 8109-4.8.2.4(b), but shall comply with the following requirements as of [One year from ordinance effective date]:

i. *Luminaires* that have adjustable mountings with the ability to be redirected shall be directed downward, to the extent feasible, to reduce *glare* and *light trespass* onto adjacent undeveloped areas; and

ii. Lighting shall be turned off at 10:00 p.m. or until people are no longer present in exterior areas being illuminated, whichever occurs latest, and shall remain turned off until sunrise, except for *essential luminaires* which may remain on if used to illuminate circulation areas such as walkways and driveways or building entrances, or if used for safety or *security lighting*, pursuant to the requirements of Sec. 8109-4.8.2.4(b)(5).

(2) Any *outdoor luminaire* installed prior to [Ordinance effective date] that does not comply with any standard or requirement of Sec. 8109-4.8.2 that is approved in conjunction with a land use and/or *structure* authorized by a discretionary permit granted pursuant to this Chapter may remain in use until at least [three years from ordinance effective date] subject to the applicable requirements of subsections (a)(1)(i) and (a)(1)(ii) above. Upon approval of a minor or major modification to the subject discretionary permit, all such lighting shall be required to be modified or replaced so that the lighting conforms to the standards and requirements of Sec. 8109-4.8.2, with the replacement lighting to be phased in within a reasonable time period after [three years from ordinance effective date]

b. Standards and Requirements

(1) Shielding and Direction of Luminaries - All *outdoor lighting* shall be *fully-shielded*, directed downward, and installed and maintained in such a manner to avoid *light trespass* beyond the property line. Lights at building entrances, such as porch lights and under-eave lights, may be *partially-shielded luminaires*.

(2) Maximum Height of Lighting

i. *Luminaires* affixed to structures for the purposes of lighting *outdoor recreational facility* shall not be mounted higher than 15 feet above ground level. In cases where a *luminaire* is affixed to a fence, the top of the *luminaire* shall be no higher than the height of the fence.

ii. Freestanding light fixtures used to light walkways and driveways shall use *luminaires* that are no higher than two feet above ground level.

iii. All other freestanding light fixtures shall not exceed 20 feet above ground level, unless specified by a discretionary permit granted under this Chapter.

(3) Lighting Color (Chromaticity) - The *correlated color temperature* of all *outdoor lighting* shall not exceed 3,000 Kelvin.

(4) Maximum Lumens - All *outdoor lighting*, except that used for *security lighting*, *outdoor recreational facility lighting*, and driveway and walkway lighting, shall have a maximum output of 850 *lumens* per *luminaire*.

i. Driveway and walkway lighting shall have a maximum output of 100 *lumens* per *luminaire*.

ii. See Section 8109-4.8.2.4(b)(5) for standards regarding *security lighting*.

iii. See Sec. 8109-4.8.2.4(b)(7) for standards regarding *outdoor recreational facility lighting*.

(5) Security Lighting

i. *Outdoor lighting* installed for *security lighting* shall have a maximum output of 2,600 *lumens* per *luminaire*. If required for proper functioning of a security camera used in conjunction with *security lighting*, the *correlated color temperature* may exceed 3,000 Kelvin. Where the light output exceeds 850 *lumens*, *security lighting* shall be operated by motion sensor or a timer switch and shall be programmed to turn off no more than 10 minutes after activation.

ii. Notwithstanding subsection (i) above, if *security lighting* is installed within 200 feet of a *surface water feature*, it shall be programmed to turn off no more than five minutes after activation.

iii. *Outdoor lighting* installed for *security lighting* that is used in connection with agricultural uses on lots zoned Agricultural Exclusive (AE), Open Space (OS), and Rural-Agricultural (RA) shall not be subject to the requirements for motion sensors and timers set forth in subsections (i) and (ii) above.

iv. *Essential luminaires* may remain on if used to illuminate circulation areas such as walkways, driveways or building entrances.

(6) Parking Area Lighting shall comply with the standards set forth in Sec. 8108-5.12 and is not subject to any other standard or requirement set forth in this Sec. 8109-4.8.2.

(7) Outdoor Recreational Facility Lighting

i. *Outdoor recreational facility* lighting may exceed an output of 850 lumens and 3,000 Kelvin per *luminaire*. Lighting levels for these facilities shall not exceed those levels recommended in the Lighting Handbook available online by the Illuminating Engineering Society of North America (IESNA) for the class of play (Sports Class I, II, III or IV).

ii. In cases where *fully-shielded luminaires* would impair the visibility required for the intended recreational activity, *partially-shielded luminaires* and *directional lighting* methods may be used to reduce *light pollution*, *glare* and *light trespass*.

iii. *Outdoor recreational facility lighting* shall not be illuminated between 10:00 p.m. and sunrise, except to complete a recreational event or activity that is in progress as of 10:00 p.m. Notwithstanding the foregoing, any *essential luminaire* and parking area lighting may be operated as part of the *outdoor recreational facility* in accordance with Sec. 8108-5.12.

iv. A lighting system design and installation plan (including lamps, lumens, Kelvin, etc.) shall be prepared by a qualified engineer, architect or landscape architect, in conformance with this Sec. 8109-4.8.2.2(b)(7).

v. The proposed lighting design shall be consistent with the purpose of this Sec. 8109-4.8.2 and minimize the effects of *light pollution* on adjacent undeveloped areas within the Habitat Connectivity and Wildlife Corridors overlay zone.

(8) Service Station Lighting: All *luminaires* mounted on or recessed into the lower surface of the service station canopy shall be *fully-shielded luminaires* and utilize flat lenses. No additional lighting is allowed on columns of the service station.

(9) Wireless Communication Facilities: In addition to all other applicable standards for *wireless communication facilities* specified in Sec. 8107-

45, *wireless communication facilities* (including radio and television towers) that are higher than 200 feet shall not use red-steady lights unless otherwise required by the Federal Aviation Administration (FAA). Only white strobe or red strobe lights, or red flashing LED lights shall be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (i.e., longest duration between flashes/dark phase) allowable by the FAA. To the extent feasible, light flashes emanating from a single tower shall be set (synchronized) to flash simultaneously.

- (10) Night lighting for Translucent or Transparent Enclosed Agriculture Structures: All night lighting within translucent or transparent enclosed structures used for ongoing agriculture or agricultural operations (e.g., greenhouses for crop production) shall use the following methods to reduce *light pollution* beginning at 10:00 p.m. until sunrise:
- i. Fully- or partially-shielded directional lighting; and
 - ii. Blackout screening for the walls and roof, preventing interior night lighting from being visible outside the *structure*.

Section 8109-4.8.2.5 – Deviations from Standards and Requirements

- a. Applicants may request deviations from any standard or requirement of this Sec. 8109-4.8.2 as part of an application for a discretionary permit or modification thereto. The decision to authorize each deviation must include written findings of fact supported by substantial evidence in the record establishing that the applicant's proposed lighting will be the functional equivalent, with regard to the strength and duration of illumination, *glare*, and *light trespass*, of the lighting that would otherwise be required by the applicable standard or requirement.
- b. The request shall state the facts and circumstances supporting each deviation, and shall be accompanied by the following information and documentation:
 - (1) Plans depicting the proposed *luminaires*, identifying the location of the *luminaire(s)* for which the deviation is being requested, the type of replacement *luminaires* to be used, the total light output (including *lumens*, *Kelvin*, etc.), and the character of the shielding, if any;
 - (2) Detailed description of the use of proposed *luminaires* and the facts and circumstances which justify the deviation;
 - (3) Supporting documentation such as a lighting plan, if requested; and
 - (4) Other data and information as may be required by the Planning Division.

Section 8109-4.8.3 – Surface Water Features, Wildlife Crossing Structures, and Wildlife Impermeable Fencing

Section 8109-4.8.3.1 – Applicability

- a. This Sec. 8109-4.8.3 applies to the land uses and *structures* (collectively referred to as “development” in this Sec. 8109-4.8.3) described below, except to the extent any such development is exempt pursuant to Sec. 8109-4.8.3.2:
- (1) Initiation of any new land use, or construction of any new *structure* or addition to an existing *structure*, that is subject to a permitting requirement under Article 5 (i.e., a Zoning Clearance or other permit is required under Article 5) and that will result in any new *fuel modification* required by the Ventura County Fire Protection District.
 - (2) Installation of new or replacement *wildlife impermeable fencing* that forms an enclosed area. For purposes of this Sec. 8109-4.8, the term “enclosed area” means an area that is enclosed by *wildlife impermeable fencing* regardless of whether the fence or wall contains one or more gates or doors that can be opened to allow access. *Wildlife impermeable fencing* that includes unobstructed gaps of at least 24 inches at intervals of 50 linear feet or less does not form an “enclosed area.”
 - (3) *Vegetation modification* unless otherwise exempt pursuant to Sec. 8109-4.8.3.2 below.
 - (4) *Fence posts, corner posts, and gate uprights* that are prohibited in Sec. 8109-4.8.3.3(d) below.

Section 8109-4.8.3.2 – General Exemptions

The following are not subject to Sec. 8109-4.8.3:

- a. *Vegetation modification* or the installation of *wildlife impermeable fencing* that is required to comply with any federal, state or local law or regulation.
- b. *Vegetation modification* performed on a maximum cumulative area, within a 12-month period, of 10 percent of the area of the lot that is located within a *surface water feature*. (For example, *vegetation modification* is exempt if performed on a maximum of 100 square feet on a lot within which 1,000 square feet of the total lot area is a surface water feature).
- c. Land, *fences*, or improvements other than *structures* involuntarily damaged or destroyed by fire, flood, landslide, or natural disaster may be restored or rebuilt to their original state and in their original location if a complete building permit application is submitted to the County within six

years of the date that the damage occurred, and the permit once approved is diligently pursued to completion prior to expiration, or if no permit is required, the rebuilding commences within the aforementioned six-year period and is diligently pursued to completion. Notwithstanding any other provision of this Chapter, the restoration or rebuilding of land, *fences* or improvements following fire, flood, landslide or natural disaster not meeting the above requirements shall comply with the permitting and all other applicable requirements of this Sec. 8109-4.8.

- d. *Structures* involuntarily damaged or destroyed by fire, flood, landslide, or natural disaster may be rebuilt to their original state and in their original location if (i) less than 50 percent of the *structure* is damaged or destroyed and (ii) a complete building permit application is submitted to the County within six years of the date that the damage occurred, and the permit once approved is diligently pursued to completion prior to expiration. Notwithstanding any other provision of this Chapter, the rebuilding of *structures* following fire, flood, landslide or natural disaster not meeting the above requirements shall comply with the permitting and all other applicable requirements of this Sec. 8109-4.8.
- e. Planting or harvesting of crops or orchards that will be commercially sold, including *vegetation modification* necessary to construct or maintain a driveway or road internal to a lot that is utilized for such a commercial agricultural activity.
- f. *Vegetation modification* on previously cultivated agricultural land left uncultivated for up to 10 years, or on land classified as "Prime," or "Statewide Importance", "Unique," or "Local Importance," or "Grazing" by the California Department of Conservation Important Farmlands Inventory, that is associated with the cultivation of agricultural crops.
- g. *Vegetation modification* performed by a public agency on publicly-owned or -maintained property.
- h. *Vegetation modification* on land owned or maintained by a conservation organization for the purpose of maintaining or enhancing functional connectivity.
- i. *Vegetation modification* associated exclusively with vegetation that has been intentionally planted as a landscape.
- j. *Vegetation modification* for the purpose of *fuel modification* as required by the Ventura County Fire Protection District or a condition to a County-approved land use entitlement adjacent to a legally-established structure existing as of [Ordinance effective date].

- k. Livestock grazing, except that the installation of *wildlife impermeable fencing* which forms an enclosed area to facilitate livestock grazing is not exempt.
- l. Development, or a portion thereof, to the extent dependent upon being located within a *surface water feature* or a *wildlife crossing structure* setback area as described in Sec. 8109-4.8.3.4. Examples include in-stream mining, flood control improvements, and bridges.
- m. Repair or maintenance of an existing, legally-established structure or fence.
- n. Development within a public road right-of-way.

Section 8109-4.8.3.3 – Prohibitions

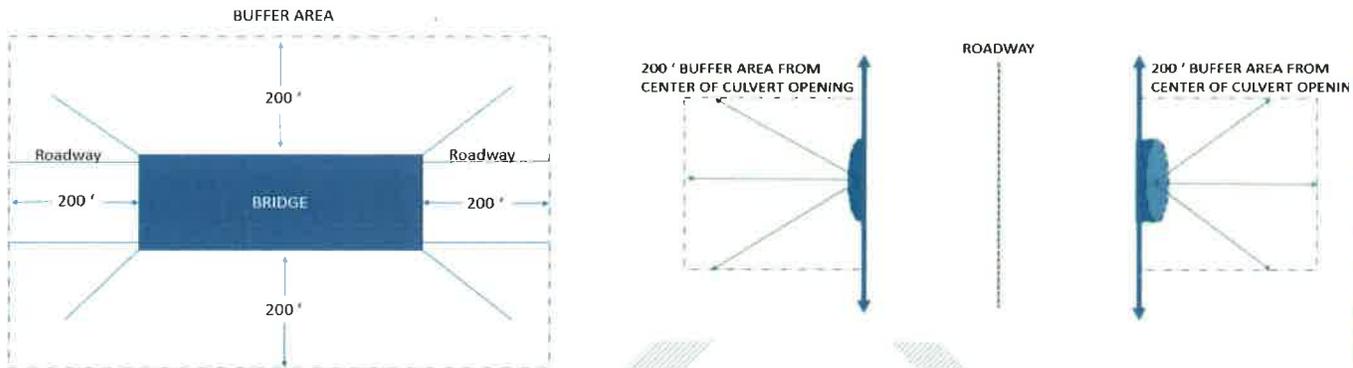
Unless otherwise exempt pursuant to Sec. 8109-4.8.3.2 above, the following are prohibited in the Habitat Connectivity and Wildlife Corridors overlay zone:

- a. The intentional planting of *invasive plants*, unless planted as a commercial agricultural crop or grown as commercial nursery stock.
- b. The installation of new *wildlife impermeable fencing* that forms an enclosed area on a lot that has no existing, lawfully-established *principal use*.
- c. The installation of new *wildlife impermeable fencing* around the perimeter of a lot that forms an enclosed area, unless exempt pursuant to Sec. 8109-4.8.3.7 below.
- d. Any new *fence* post, corner post, or gate upright with open, vertical pipes on lots zoned as Open Space (OS) or Agricultural Exclusive (AE) that could trap small birds or other animals. All such *fence* posts and gate uprights shall be entirely filled with concrete, sand, gravel, or other material, or covered with commercial caps.

Section 8109 – 4.8.3.4 – Wildlife Crossing Structures – Setbacks and Permitting

Development subject to and not prohibited by this Sec. 8109-4.8.3 requires a Planning Director-approved Planned Development Permit pursuant to Sec. 8111-1.2 if any portion thereof, including any resulting *fuel modification* required by the Ventura County Fire Protection District, is proposed to be sited or conducted within 200 feet from the entry or exit point of a *wildlife crossing structure* as measured from: 1) the center of the inlet or outlet side of a pipe or box culvert; or 2) the perimeter of a bridge structure.

Example Illustrations of Setbacks from Bridge Structures and Culverts Section 8109-4.8.3.4



Section 8109 – 4.8.3.5 – Surface Water Features – Setbacks and Permitting

- a. Development subject to and not prohibited by this Sec. 8109-4.8.3, other than the removal of *invasive plants* addressed in subsection (b) below, requires a Planning Director-approved Planned Development Permit pursuant to Sec. 8111-1.2 if any portion thereof, including any resulting *fuel modification* required by the Ventura County Fire Protection District, is proposed to be sited or conducted within a *surface water feature*.
- b. A Zoning Clearance issued pursuant to Sec. 8111-1.1 is required to authorize any *vegetation modification* limited exclusively to *invasive plants* within a *surface water feature*. An application for such a Zoning Clearance shall include, in addition to all other information required by the Planning Division pursuant to Sections 8111-2.1 and 8111-2.3, the following: (i) photographs of all vegetation proposed to be removed; (ii) identification of all *invasive plants* to be removed; (iii) method by which the removal will occur; and (iv) measures that will be taken to ensure that no native vegetation is damaged or removed. The Zoning Clearance shall prohibit the damaging or removal of native vegetation and shall require implementation of the identified measures to ensure that no native vegetation is damaged or removed.
- c. The designation of any area, or portion thereof, as a *surface water feature* may be reconsidered by the Planning Division upon request by an applicant proposing a development subject to this Sec. 8109-4.8.3.5. When reconsideration is requested, the sole issue is whether the area qualifies as a *surface water feature* as the term is defined in Article 2. The reconsideration request shall be submitted on a form provided by the Planning Division and shall include a field survey of the designated *surface*

water area that is prepared by a qualified biologist in accordance with the Biological Resources section of the Ventura County Initial Study Assessment Guidelines, as may be amended. The applicant shall be responsible for paying all County fees and costs associated with processing the reconsideration request. The request shall be decided by the Planning Director or designee without a public hearing. The decision shall be final and not subject to administrative appeal pursuant to Sec. 8111-7.

Section 8109-4.8.3.6 – Wildlife Impermeable Fencing – Permitting Requirements

- a. Unless otherwise exempt pursuant to Sec. 8109-4.8.3.7 below, this Sec. 8109-4.8.3.6 applies to the installation of new or replacement *wildlife impermeable fencing* that forms an enclosed area on lots zoned Open Space (OS) or Agricultural Exclusive (AE), including installation of *wildlife impermeable fencing* to facilitate livestock grazing. The standards and requirements of Sec. 8106-8.1 (Fences, Walls and Hedges), as may be amended, also apply to *wildlife impermeable fencing* subject to this Sec. 8109-4.8.3.6.
- b. Installation of *wildlife impermeable fencing* subject to this Sec. 8109-4.8.3.6 requires a Zoning Clearance issued pursuant to Sec. 8111-1.1 if the *wildlife impermeable fencing* forms an enclosed area that does not exceed the following limits:
 - (1) For lots with no *wildlife impermeable fencing* installed as of [ordinance effective date], the cumulative area enclosed by the proposed *wildlife impermeable fencing* does not exceed 10 percent of the gross lot area; or
 - (2) For lots with existing *wildlife impermeable fencing* installed as of [ordinance effective date], the cumulative area enclosed by the proposed *wildlife impermeable fencing* does not exceed 10 percent of the lot area net of the area enclosed by existing *wildlife impermeable fencing*. For example, if a 10-acre lot includes *wildlife impermeable fencing* that existed prior to the ordinance effective date and encloses a total area of one acre, the cumulative area enclosed by any new *wildlife impermeable fencing* proposed to be installed after the ordinance effective date may not exceed 0.9 acres, or 10 percent of nine acres.
- c. Installation of *wildlife impermeable fencing* subject to this Sec. 8109-4.8.3 requires a Planning Director-approved Planned Development Permit pursuant to Sec. 8111-1.2 if the *wildlife impermeable fencing* forms an enclosed area as follows:

(1) For lots with no *wildlife impermeable fencing* installed as of [ordinance effective date], the cumulative area enclosed by the proposed *wildlife impermeable fencing* is greater 10 ten percent of the gross lot area; or

(2) For lots with existing *wildlife impermeable fencing* installed as of [ordinance effective date], the cumulative area enclosed by the proposed *wildlife impermeable fencing* is greater than 10 percent of the lot area net of the area enclosed by existing *wildlife impermeable fencing*. For example, if a 10-acre lot includes *wildlife impermeable fencing* that existed prior to the ordinance effective date and encloses a total area of one acre, the cumulative area enclosed by any new *wildlife impermeable fencing* proposed to be installed after the ordinance effective date that exceeds 0.9 acres, or 10 percent of nine acres, would require a Planning Director-approved Planned Development Permit.

- d. All applications for a Zoning Clearance or discretionary permit or modification thereto pursuant to this Sec. 8109-4.8.3.6 shall include a fencing site plan depicting the type, design, and location of all existing and proposed *wildlife impermeable fencing* on the subject lot, including calculations for the enclosed area of each existing and proposed *wildlife impermeable fence*.
- e. When any portion of a lot is located outside the Habitat Connectivity and Wildlife Corridors overlay zone, the calculation of gross lot area pursuant to this Sec. 8109 – 4.8.3.6 shall only consist of the portion of the lot that is located within the Habitat Connectivity and Wildlife Corridors overlay zone.

Section 8109–4.8.3.7 – Wildlife Impermeable Fencing – Exemptions

Sec. 8109-4.8.3.6 does not apply to *wildlife impermeable fencing* that forms an enclosed area when:

- a. It forms an enclosed area all of which is located within 50 feet of an exterior wall of a legally-established dwelling or *structure* related to an agricultural use set forth in Article 5. Such portion of the enclosed area is not counted towards the enclosed area limitations of Sec. 8109-4.8.3.6(b) and (c) above.
- b. It is used to enclose commercially grown agricultural crops or products. For purposes of this Section 8109-4.8.3.6.1 the phrase “commercially grown agricultural crops or products” means any crop or plant product (including orchard, food, plant fiber, feed, ornamentals, or forest), that will be commercially sold.
- c. It is used to enclose a water well or pump house and does not enclose more than 500 square feet.

- d. It is installed on publicly-owned or -maintained property for the purpose of restricting wildlife from entering a road right-of-way or directing wildlife toward a *wildlife crossing structure*.
- e. It is used for habitat protection or a restoration project when specified by a habitat preservation plan, habitat restoration plan or similar plan, or a condition of approval or mitigation measure associated with a land use entitlement, that is approved by a public entity; or it is constructed with a grant of public funds or by a *conservation organization*.
- f. It is installed on a lot that has an area of 10,000 square feet or less in size, regardless of base zoning.
- g. It is installed to control access to outdoor shooting ranges.

Section 8109–4.8.3.8 – Discretionary Permit Applications, Development Guidelines, and Permit Approval Finding

The following shall apply whenever a discretionary permit or modification thereto is required to authorize development pursuant to Sec. 8109-4.8.

- a. Permit applications shall include, among all other information required by the Planning Division pursuant to Sections 8111-2.1 and 8111-2.3, documentation, prepared by a qualified biologist, identifying all *surface water features*, *wildlife crossing structures*, landscape features such as *riparian* corridors and *ridgelines*, undeveloped areas, and other areas and features on the lot that could support *functional connectivity* and wildlife movement, or that could block or hinder *functional connectivity* and wildlife movement such as roads, structures, and *fences*. The permit application and supporting documentation shall also address the proposed development's consistency with the development guidelines stated in subsection (b) below. Additional information and study may be required in order to review a proposed development under the California Environmental Quality Act or other applicable law.
- b. Development, including any resulting *fuel modification* required by the Ventura County Fire Protection District, should comply with the following applicable development guidelines to the extent feasible:
 - (1) Development should be sited and conducted outside the applicable setback areas set forth in Sections 8109-4.8.3.4 and 8109-4.8.3.5 to the extent feasible;
 - (2) Development should be sited and conducted to minimize the removal and disturbance of biological resources, landscape features and undeveloped areas that have the potential to support *functional connectivity* and wildlife movement;

- (3) Development should be sited and conducted to provide the largest possible contiguous undeveloped portion of land; and
 - (4) *Wildlife impermeable fencing* should be sited and designed to minimize potential impacts to wildlife movement.
- c. In addition to meeting all other applicable permit approval standards set forth in Sec. 8111-1.2, the following additional permit approval finding must be made or be capable of being made with reasonable conditions and limitations being placed on the proposed development: The development, including any resulting *fuel modification* required by the Ventura County Fire Protection District, is sited and conducted in a manner that is consistent with the development guidelines set forth in Sec. 8109-4.8.3.8(b) to the extent feasible.

Section 8109-4.9 – Critical Wildlife Passage Areas Overlay Zone

The abbreviated reference for the Critical Wildlife Passage Areas overlay zone when applied to a base zone shall be “CWPA.” The suffix “CWPA” shall be added to the base zone covering land so identified (example: RA-40 ac/HCWC/CWPA). Where applicable, standards, requirements and procedures in this Sec. 8109-4.9 shall apply to parcels in the Critical Wildlife Passage Areas overlay zone in addition to those of the base zone and other overlay zones, including but not limited to the Habitat Connectivity and Wildlife Corridors overlay zone. In the case of conflicting zone standards, requirements or procedures, the more restrictive ones shall apply within the Critical Wildlife Passage Areas overlay zone.

Section 8109-4.9.1 – Applicability

- a. For purposes of calculating lot sizes to apply the provisions of this Sec. 8109-4.9, the Ventura County Resource Management Agency Geographic Information System (GIS) shall be used.
- b. Except for land uses and *structures* that are exempt pursuant to Sec. 8109-4.9.2, this Sec. 8109-4.9 shall apply to each of the following land uses and *structures* on lots that are two acres or greater (collectively referred to as “development” in this Sec. 8109-4.9):
 - (1) Construction of a new *structure* or addition to an existing *structure* that is subject to a permitting requirement under Article 5 (i.e., a Zoning Clearance or other permit is required under Article 5).
 - (2) Initiation of a new land use that is subject to a permitting requirement under Article 5 (i.e., a Zoning Clearance or other permit is required under Article 5).

- (3) Installation of new or replacement *wildlife impermeable fencing* that forms an enclosed area on lots zoned Open Space (OS) or Agricultural Exclusive (AE), including when such a *fence* is used to facilitate livestock grazing. For purposes of this Sec. 8109-4.9, the term “enclosed area” means an area that is enclosed by *wildlife impermeable fencing* regardless of whether the *fence* or wall contains one or more gates or doors that can be opened to allow access. *Wildlife impermeable fencing* that includes unobstructed gaps of at least 24 inches at intervals of 50 linear feet or less does not form an “enclosed area.”
- c. In cases where any portion of a lot is outside the Critical Wildlife Passage Area overlay zone, this Sec. 8109-4.9 shall not apply to any portion of the lot.
 - d. The standards, requirements and procedures of this Sec. 8109-4.9 shall only apply to new development, the discretionary permit or Zoning Clearance application for which is decided by the County decision-making authority on or after [ordinance effective date].
 - e. If development requires a discretionary permit or modification thereto under a section of this Chapter other than this Sec. 8109-4.9, no additional discretionary permit or Zoning Clearance shall be required for the development pursuant to this Sec. 8109-4.9. Instead, the applicable standards, requirements and procedures of this Sec. 8109-4.9 shall be incorporated into the processing of the application for, and the substantive terms and conditions of, the discretionary permit or modification that is otherwise required by this Chapter.
 - f. If the same development or project requires two or more discretionary permits or modifications or Zoning Clearances pursuant to Sec. 8109-4.8 and/or Sec. 8109-4.9, the permit applications shall be processed and acted upon concurrently as part of the same project.
 - g. If a permit condition, subdivision condition, or other County-approved covenant, condition, easement, or instrument imposes standards or restrictions on development which is subject to this Sec. 8109-4.9, the more restrictive standards and restrictions shall apply.

Section 8109-4.9.2 – Exemptions

This Sec. 8109-4.9 does not apply to the following development:

- a. Any development on a lot zoned Commercial (CO, C1, CPD).
- b. Any development on a lot zoned Residential (RA, RE, RO, R1, R2, RPD or RHD) located in the Simi Hills Critical Wildlife Passages area as shown on the ‘Critical Wildlife Passage Areas’ map within the Planning GIS

Wildlife Corridor layer of the County of Ventura, County View Geographic Information System (GIS), as may be amended.

- c. Aboveground pipelines or transmission lines.
- d. Facilities for the production, generation, storage, transmission, or distribution of water, including *wildlife impermeable fencing* required to protect such facilities.
- e. *Agricultural shade/mist structures*, animal shade structures authorized by Sec. 8107-34, and above-ground fuel storage as an *accessory use*.
- f. Land, *fences*, or improvements other than *structures* involuntarily damaged or destroyed by fire, flood, landslide, or natural disaster may be restored or rebuilt to their original state and in their original location if a complete building permit application is submitted to the County within six years of the date that the damage occurred, and the permit once approved is diligently pursued to completion prior to expiration, or if no permit is required, the rebuilding commences within the aforementioned six-year period and is diligently pursued to completion. Notwithstanding any other provision of this Chapter, the restoration or rebuilding of land, *fences* or improvements following fire, flood, landslide or natural disaster not meeting the above requirements shall comply with the permitting and all other applicable requirements of this Sec. 8109-4.9.
- g. *Structures* involuntarily damaged or destroyed by fire, flood, landslide, or natural disaster may be rebuilt to their original state and in their original location if (i) less than 50 percent of the *structure* is damaged or destroyed and (ii) a complete building permit application is submitted to the County within six years of the date that the damage occurred, and the permit once approved is diligently pursued to completion prior to expiration. Notwithstanding any other provision of this Chapter, the rebuilding of *structures* following fire, flood, landslide or natural disaster not meeting the above requirements shall comply with the permitting and all other applicable requirements of this Sec. 8109-4.9.
- h. Construction and maintenance of driveways or roads internal to a lot.
- i. *Structures* or improvements that are *temporary* or are located entirely or substantially underground (e.g., pipelines, cables, individual sewage disposal systems).
- j. Repair or maintenance of an existing, legally-established structure or fence.

k. The following land uses set forth in Art. 5 are exempt except that (1) associated *structures* are not exempt regardless of whether a *structure* itself is subject to a permitting requirement under Art. 5, and (2) the installation of associated *wildlife impermeable fencing* is not exempt if such fencing otherwise qualifies as development pursuant to Sec. 8109-4.9.1(b)(3):

- (1) Animal Keeping and Animal Husbandry (domestic animals, horses & other equines, including more than permitted by Art. 7)
- (2) Apiculture
- (3) Aquaculture/Aquiculture
- (4) Vermiculture (open beds)
- (5) Agricultural Promotional Uses
- (6) Home Occupations
- (7) Cemeteries
- (8) Cultural/historic uses
- (9) Filming Activities
- (10) Firewood operations
- (11) Drilling for temporary geologic testing
- (12) Botanic Gardens and Arboreta
- (13) Athletic Fields
- (14) Golf Courses
- (15) Parks
- (16) Wholesale Nurseries for Propagation

Section 8109 – 4.9.3 – Permitting Requirements

a. Development subject to this Sec. 8109-4.9 requires a Zoning Clearance pursuant to Sec. 8111-1.1, which shall be issued if the development, including all proposed *structures*, uses and *open storage*, complies with one or more of the following applicable siting criteria and meets the general standards set forth in Sec. 8111-1.1.1(b):

- (1) The development meets the compact development siting standard set forth in Sec. 8109-4.9.4 below.
- (2) The development is located entirely within 100 feet of the centerline of a public road.
- (3) The development is located entirely within 100 feet of any portion of and on the same lot as (i) an existing, legally-established *structure*, (ii) the centerline of a *driveway* leading to an existing, legally-established *structure*, or (iii) the centerline of a publicly-accessible trail.
- (4) The development is located entirely within 100 feet of and on the same lot as the centerline of an agricultural access road that supports the production of commercially grown agricultural products. For purposes

of this Sec. 8109-4.9.3, the phrase “commercially grown agricultural products” means any plant or animal agricultural product (including food, feed, fiber, ornamentals, or forest), that will be commercially sold, including livestock raised for commercial production.

(5) For development consisting solely of the installation of *wildlife impermeable fencing*, the enclosed area formed by *wildlife impermeable fencing* is located entirely within an area described in subsection (2), (3) or (4) above, or both complies with the compact development siting standard set forth in Sec. 8109-4.9.4 and:

i. For lots with no *wildlife impermeable fencing* installed as of [ordinance effective date], the cumulative area enclosed by the proposed *wildlife impermeable fencing* is less than 10 percent of the gross lot area; or

ii. For lots with existing *wildlife impermeable fencing* installed as of [ordinance effective date], the cumulative area enclosed by the proposed *wildlife impermeable fencing* is more than 10 percent of the gross lot area excluding the cumulative area already enclosed by existing *wildlife impermeable fencing*.

- b. If development subject to this Sec. 8109-4.9 does not qualify for a Zoning Clearance pursuant to Sec. 8109-4.9.3(a) above, a Planning Director-approved Planned Development Permit is required to authorize the development.
- c. In addition to providing all information required by the Planning Division pursuant to Sec. 8111-2.3, an application for a Zoning Clearance or Planned Development Permit required by this Sec. 8109-4.9.3 shall include a site plan showing all existing and proposed *structures*, roads, driveways, and other improvements on the subject lot, and all public roads and publicly-accessible trails on or adjacent to the lot. Such applications for development consisting of the installation of *wildlife impermeable fencing* subject to Sec. 8109-4.9.3(a)(5) shall also include a fencing site plan depicting the type, design, and location of all existing and proposed *wildlife impermeable fencing* on the subject lot, including calculations for the enclosed area of each existing and proposed *wildlife impermeable fence*.

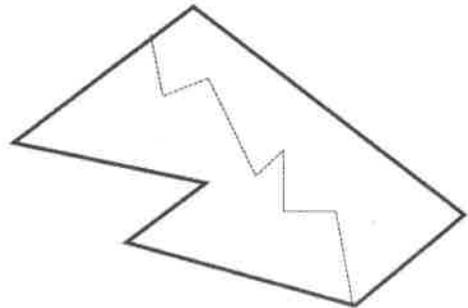
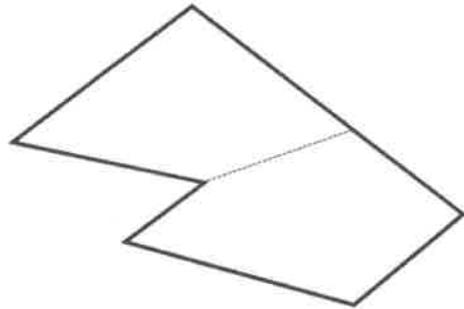
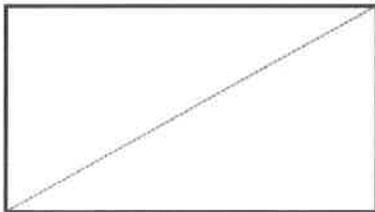
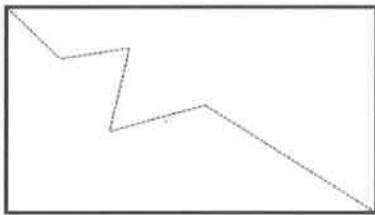
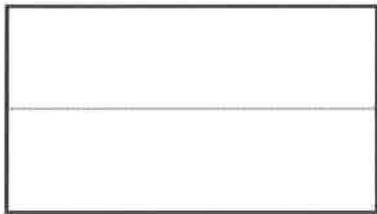
Section 8109-4.9.4 – Compact Development Siting Standard

- a. Development complies with the compact development siting standard if all proposed *structures*, uses and *open storage* are sited exclusively in one of the two contiguous areas created by a line bisecting the subject lot into two sections of equal areas (halves). The bisecting line may consist of a single, straight line segment or a series of connected, non-intersecting line segments

that do not form a straight line. Each of the two endpoints of a bisecting line shall coincide with any two lot boundary lines.

- b. In addition to all other application requirements, as part of a Zoning Clearance application for development subject to this Sec. 8109-4.9.4, the applicant shall be required to submit a site plan which shows the location, length, and orientation of each segment of the bisecting line. The site plan shall be drawn to scale and shall identify the area in square feet of each section of land on either side of the bisecting line. Once the location of the bisecting line for the subject lot is established upon approval of a Zoning Clearance, it shall be the basis of siting any future proposed development authorized with a Zoning Clearance pursuant to Sec. 8109-4.9.4's compact development siting standard, except that a lot line adjustment approved pursuant to the Ventura County Subdivision Ordinance shall nullify any bisecting line created previously under this section.

**Example Illustrations of Lines Bisecting Lots into Two Sections of Equal Area
Section 8109-4.9.4**



Section 8109–4.9.5 – Discretionary Permit Applications and Approval Standards

The following apply whenever a discretionary permit or modification thereto is required to authorize development pursuant to Sec. 8109-4.9.

- a. Permit applications shall include, among all other information required by the Planning Division pursuant to Sections 8111-2.1 and 8111-2.3, documentation, prepared by a qualified biologist, identifying all *surface water features*, *wildlife crossing structures*, landscape features such as *riparian corridors* and *ridgelines*, undeveloped areas, and other areas and features on the lot that could support *functional connectivity* and wildlife movement, or that could block or hinder *functional connectivity* and wildlife movement such as roads, structures, and *fences*. The permit application and supporting documentation shall also address the proposed development's consistency with the development guidelines stated in subsection (b) below. Additional information and study may be required in order to review a proposed development under the California Environmental Quality Act or other applicable law.
- b. Development, including any resulting *fuel modification* required by the Ventura County Fire Protection District, should comply with the following applicable development guidelines to the extent feasible:
 - (1) Development should be sited and conducted to minimize the removal and disturbance of biological resources, landscape features and undeveloped areas that have the potential to support *functional connectivity* and wildlife movement;
 - (2) Development should be sited and conducted to provide the largest possible contiguous undeveloped portion of land; and
 - (3) *Wildlife impermeable fencing* should be sited and designed to minimize potential impacts to wildlife movement.
- c. In addition to meeting all other applicable permit approval standards set forth in Sec. 8111-1.2, the following additional permit approval finding must be made or be capable of being made with reasonable conditions and limitations being placed on the proposed development: The development, including any resulting *fuel modification* required by the Ventura County Fire Protection District, should be sited and conducted in a manner that is consistent with the development guidelines set forth in Sec. 8109-4.9.5(b) to the extent feasible.

**Section 6
Severability**

If any section, subsection, sentence, clause, phrase or word of the Ordinance is for any reason held to be invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The Ventura County Board of Supervisors hereby declares that it would have passed and adopted this Ordinance, and each and all provisions hereof, irrespective of the fact that one or more provisions may be declared invalid.

**Section 7
Effective Date; Implementation**

This Ordinance shall become effective 60 days after adoption.

PASSED AND ADOPTED this xxth day of xxx, 2019 by the following vote:

AYES: Supervisors _____

NOES: _____

ABSENT: _____

CHAIR, BOARD OF SUPERVISORS

ATTEST:
MICHAEL POWERS
Clerk of the Board of Supervisors
County of Ventura, State of California
By _____
Deputy Clerk of the Board

ORDINANCE NO. _____

**AN ORDINANCE OF THE COUNTY OF VENTURA, STATE OF CALIFORNIA,
AMENDING DIVISION 8, CHAPTER 1, ARTICLE 18**

**OF THE VENTURA COUNTY ORDINANCE CODE, NON-COASTAL ZONING
ORDINANCE TO AMEND THE ZONING CLASSIFICATIONS OF LOTS TO
INDICATE THEIR INCLUSION WITHIN THE NEWLY-ESTABLISHED HABITAT
CONNECTIVITY AND WILDLIFE CORRIDORS OVERLAY ZONE AND/OR
CRITICAL WILDLIFE PASSAGE AREAS OVERLAY ZONE**

The Board of Supervisors of the County of Ventura ordains as follows:

Section 1

**ARTICLE 18:
OFFICIAL ZONING DATA**

Article 18, Section 8118-2.xxxx, is hereby added to the Ventura County Ordinance Code to amend the Official Zoning Data as follows:

The respective zoning classifications of lots as stated and shown on Exhibits A and B hereto are hereby amended to the new respective zoning classifications with a zoning suffix as follows:

“/HCWC” to indicate the inclusion of the lots within the newly-established Habitat Connectivity and Wildlife Corridors Overlay Zone (HCWC), as stated and shown on Exhibits A and B hereto, which are incorporated by this reference.

Section 2

ARTICLE 18 – OFFICIAL ZONING DATA

Article 18, Section 8118-2.xxxx, is hereby added to the Ventura County Ordinance Code to amend the Official Zoning Data as follows:

The respective zoning classifications of lots as stated and shown on Exhibits C through H hereto are hereby amended to the new respective zoning classifications with a zoning suffix as follows:

“/CWPA” to indicate the inclusion of the lots within the newly-established Critical Wildlife Passage Areas Overlay Zone (CWPA), as stated and shown on Exhibits C-H hereto, which are incorporated by this reference.

The CWPA overlay zone consists of the following geographic areas: the Oak View Critical Wildlife Passages area shown on Exhibits C and D hereto; the Simi Hills Critical Wildlife Passages area shown on Exhibits E and F hereto; and the Tierra Rejada Critical Wildlife Passages area shown on Exhibits G and H hereto.

Section 3

This Ordinance shall become effective 60 days after adoption.

PASSED AND ADOPTED this XX day of XXXXX, 2019 by the following vote:

Ayes: Supervisors

Noes:

Absent:

Chair, Board of Supervisors

ATTEST: Michael Powers,
Clerk of the Board of Supervisors,
County of Ventura, State of California

By _____

Deputy County Clerk



SC Wildlands

Science & Collaboration for Connected Wildlands

P.O. Box 1052, Fair Oaks, CA 95628

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October 17, 2018

Members of the Board

Laura Berglan
The Shanker Law Firm, P.L.C.

Paul Edelman
Santa Monica Mountains Conservancy

Amy Golden
Virginia Department of Transportation

Jun Onaka
Onaka Planning & Economics

E.J. Remson
The Nature Conservancy

Dr. Seth Riley
National Park Service

Dr. Esther Rubin
Cave Creek, Arizona

Cam Tredennick
Sacramento, California

Ventura County Resource Management Agency

Attention: Shelley Sussman

800 S. Victoria Ave., L #1740

Ventura, CA 93009-1740

Transmitted Via Email:

Shelley.Sussman@ventura.org

Subject: Habitat Connectivity Overlay Zone

We applaud the County for the development of the Habitat Connectivity Overlay Zone (HCOZ) and the associated ordinances. The HCOZ is based on two of the South Coast Missing Linkages, the Santa Monica-Sierra Madre Connection (Penrod et al. 2006) and the Sierra Madre-Castaic Connection (Penrod et al. 2005), which are part of a broader regional conservation strategy. The South Coast Missing Linkages effort was a highly collaborative effort among federal, state and local agencies and non-governmental organizations to identify and conserve landscape-level habitat linkages to protect essential biological and ecological processes in the South Coast Ecoregion. Partners included but were not limited to: South Coast Wildlands, The Wildlands Conservancy, The Resources Agency California Legacy Project, California State Parks, California State Parks Foundation, United States Forest Service, National Park Service, Santa Monica Mountains Conservancy, The Nature Conservancy, Rivers and Mountains Conservancy, Conservation Biology Institute, San Diego State University Field Stations Program, Southern California Wetlands Recovery Project, Environment Now, Mountain Lion Foundation, and the Zoological Society of San Diego's Center for Reproduction of Endangered Species (now called Conservation and Research for Endangered Species). Cross-border alliances were also formed with Pronatura, Universidad Autonoma de Baja California, and Conabio to further the South Coast Missing Linkages initiative in northern Baja. These regionally important habitat linkages are essential to accommodate wildlife movement and sustain large-scale ecosystem processes, especially in light of climate change.

As the lead author of the Missing Linkages reports, I believe that the minor amendments that the County has made to the Linkage Designs for the HCOZ are entirely consistent with the intent of the original model. The amendments include incorporating existing protected areas into the design, filling in the “holes” in the Linkage Design, and adding the Ventura River corridor. The following several paragraphs provide the rationale and justification for these amendments and include various references to the South Coast Missing Linkages reports (Penrod et al. 2005 and 2006).

The Linkage Designs were always intended to build upon existing conservation investments in the region. As such, amending the HCOZ to include existing protected areas into the Linkage Designs is completely in line with the original intent of the model. The Santa Monica-Sierra Madre Linkage was designed to connect two expansive core areas that are largely conserved within the Sierra Madre Range of the Los Padres National Forest and the Santa Monica Mountains National Recreation area, while the Sierra Madre-Castaic Linkage was designed to connect core habitats in the Sierra Madre Range of Los Padre National Forest with core habitats in the Castaic Ranges of the Angeles National Forest. The HCOZ passes through several existing protected areas, which were always considered an essential part of the original Linkage Designs. For example, when habitat was added to the Least-Cost Unions to ensure sufficient live-in and move-through habitat for the focal species for which we did not conduct landscape permeability analyses, we always added habitat to lands already set aside for conservation purposes (See Figure 15 in Penrod et al. 2005 and Figure 13 in Penrod et al. 2006). Thus, adding existing protected lands to the HCOZ is entirely consistent with the overarching goals of the South Coast Missing Linkages effort. Currently, the HCOZ includes protected areas that were conserved at the time the Linkage Design reports were completed (Penrod et al. 2005 and 2006). We believe that recent acquisitions and easements that intersect the HCOZ, such as the Santa Susana Field Laboratory Conservation Easement, should also be added to the HCOZ.

Filling in the “holes” in the Linkage Designs for the HCOZ will help to address edge effects, which is also consistent with the original intent of the model. Edge effects are adverse ecological changes that enter open space from nearby developed areas, such as weed invasion, artificial night lighting, predation by house pets, increases in human-associated or opportunistic species like house mice (*Mus musculus*), elevated soil moisture from irrigation, pesticides and pollutants, noise, and domesticated animals that attract native predators. Edge effects have been best-studied at the edge between forests and adjacent agricultural landscapes, where negative effects extend 300 m (980 ft) or more into the forest (Debinski and Holt 2000, Murcia 1995) depending on forest type, years since the edge was created, and other factors (Norton 2002). Data on edge effects for southern California habitats include reduction in leaf litter and declines in populations of some species of birds and mammals up to 250 m (800 ft) in coastal scrub (Kristan et al. 2003), collapse of native plant and animals communities due to the invasion of argentine ants up to 200 m (650 ft) from irrigated areas (Suarez et al. 1998), and predation by house cats which reduce small vertebrate populations 100 m (300 ft) from the edge (Crooks and Soule 1999). Domestic cats may affect wildlife up to 300 m (980 ft) from the edge based on home range sizes reported by Hall et al. (2000). The proximity of human activities near natural areas can also result in indirect impacts and habitat alteration from trail proliferation, higher fire frequencies, etc., and these changes in turn may impact native species (Buechner and Sauvajot 1996). These impacts can be partially mitigated by maintaining high quality habitat in conservation areas, particularly adjacent to human-developed areas (Sauvajot et al. 1998). Edge effects can reach well beyond the development footprint, impacting wildlife movement in several ways:

- Urbanization triggers further development of the road network, which increases the mortality and repellent effect of the road system (Van der Zee et. al 1992).
- Most terrestrial mammals that move at night will avoid areas with artificial night lighting (Rich and Longcore 2006). Artificial night lighting can impair the ability of nocturnal animals

to navigate through areas (Beier 2006) and has been implicated in decline of reptile populations (Perry and Fisher 2006).

- Noise may also disturb or repel some animals and present a barrier to movement (Minton 1968, Liddle 1997, Singer 1978). Some reptiles (which “hear” ground-transmitted vibrations through their jaw (Hetherington 2005) are repelled even from low-speed 2-lane roads, resulting in reduced species richness (Findlay and Houlihan 1997), reducing road kill but increasing fragmentation of habitat.
- Pet cats can significantly depress populations of small vertebrates near housing (Churcher and Lawton 1987, Crooks 1999, Hall et al. 2000) killing millions of wild animals each year (Courchamp and Sugihara 1999, May and Norton 1996).
- Subsidized “suburban native predators” such as raccoons, foxes, and crows that exploit garbage and other human artifacts can reach unnaturally high densities, outcompeting and preying on other native species (Crooks and Soule 1999).
- Development may also cause an increase in the removal of nuisance animals, including wild predators for killing pets or hobby animals (Woodroffe and Frank 2005) and native herbivores that feed on ornamental plants (Knickerbocker and Waithaka 2005).
- There is also an increased risk of mortality to native plants and animals via pesticides and rodenticides, which kill not only their target species (e.g., domestic rats), but also secondary victims (e.g., raccoons and coyotes that feed on poisoned rats) and tertiary victims (mountain lions that feed on raccoons and coyotes; Riley et. al 2006).
- Formerly ephemeral streams may become perennial, making them more hospitable to non-native plants and animals that displace natives and reduce species richness (Forman et al. 2003). For example, irrigation of landscapes surrounding homes encourages the spread of Argentine ant populations into natural areas, where they cause a halo of local extinctions of native ant populations extending 200 m (656 ft) into native vegetation (Suarez et al. 1998, Bolger et al. 2000). Similar affects have been documented for amphibians (Demaynadier and Hunter 1998).
- Spread of some exotic (non-native) plants, namely those that thrive on roadsides and other disturbed ground, or that are deliberately introduced by humans.
- Disruption of natural fire regime by (a) increasing the number of wildfire ignitions, especially those outside the natural burning season (Viegas et. al 2003), (b) increasing the need to suppress what might otherwise be beneficial fires that maintain natural ecosystem structure, and (c) requiring firebreaks and vegetation manipulation, sometimes at considerable distance from human-occupied sites (Oregon Department of Forestry 2006).

As for the lower Ventura River corridor, it was not initially included in the Linkage Designs because it was outside of the analysis extent for both linkage planning areas (Penrod et al. 2005 and 2006). Nevertheless, the lower Ventura River corridor merits inclusion in the HCOZ. The Santa Clara River, Sespe, Santa Paul and Piru creeks were added to the Santa Monica-Sierra Madre Connection (Penrod et al. 2006) primarily to support the needs of southern steelhead trout, though a number of other terrestrial and aquatic species also benefit from these additions. Had the analysis extent been larger, there is no doubt that the lower Ventura River would have been included in the Linkage Design, especially because it provides designated critical habitat for southern steelhead trout (NMFS 2005). Rivers and streams are known movement corridors for countless species (Holland 1985, Dickson et al.

2004, Leidy et al. 2005). In addition, The Ventura River Corridor was identified as a critical linkage at the statewide Missing Linkages conference in 2000 (Penrod et al. 2001).

Having the HCOZ ordinance in place is vital to conserving these regionally important areas and it is consistent with numerous other local, regional and statewide plans, programs and policies. Please let me know if you have any questions or need any additional information.

Respectfully Submitted,



Kristeen Penrod, Director

SC Wildlands

www.scwildlands.org

Direct 206-285-1916 | Cell 626-497-6492

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county of ventura

January 24, 2017

Board of Supervisors
County of Ventura
800 South Victoria Avenue
Ventura, CA 93009

SUBJECT: Direct Staff Regarding Preferred Regulatory Options for Addressing Habitat Connectivity and Wildlife Movement Corridors within the Non-Coastal, Unincorporated Areas of Ventura County; All Supervisorial Districts

RECOMMENDED ACTIONS:

1. Review options and staff's recommendation for addressing habitat connectivity and wildlife movement corridors within the non-coastal, unincorporated areas of Ventura County (see Section E).
2. Provide direction to staff on your Board's preferred regulatory option for protection of habitat connectivity and wildlife movement corridors (Exhibit 1).

FISCAL IMPACTS/MANDATES:

There is no immediate fiscal impact associated with this item.

Mandated:	No
Source of Funding:	General Plan Update Budget and General Fund
Funding Match Required:	Not required.

The total cost to complete the habitat connectivity and wildlife movement corridors task is estimated to be \$171,440, of which \$76,440 was included as part of the consultant contract for the Comprehensive General Plan Update (GPU). To date, \$37,720 has been expended to complete this work, with consultants and Planning Division staff having expended \$5,420 and \$32,300 respectively. Current appropriations are sufficient to offset FY 2016-17 expenditures. However, additional funding is necessary to complete the project during the FY2017-18. The amount of additional funding depends on the scope of work identified for the project. Three options are presented in section E of this report, and the additional funding needed to complete the work varies as follows: \$24,500 for Option 1, \$80,000 for Option 2, and \$95,000 for Option 3. The additional funding will be included in the preliminary FY 2017-18 RMA/Planning Division budget, and no new appropriations are needed at this juncture.



DISCUSSION:

A. Purpose of Hearing

The purpose of this hearing is to elicit Board direction regarding the specific components of the work program (scope of work) for protecting habitat connectivity and wildlife movement corridors in the County's General Plan (GP) and Non-Coastal Zoning Ordinance (NCZO). The adoption of future regulations will be determined through a process that includes technical reviews, preparation of text amendments, an extensive public outreach program involving a range of stakeholder groups, environmental review, and public hearings before the Ventura County Planning Commission and your Board.

The removal of native habitat or the construction of buildings, roads, and fences can either degrade or eliminate the functionality of a wildlife movement corridor. Currently, the County's regulatory structure does not incorporate review standards and General Plan policies that would fully protect the viability of these corridors. For example, the General Plan provides only one broad biological resource protection goal that mentions protections for wildlife corridors. The GP provides no supporting policies that specifically address development in these areas. In addition, the NCZO contains no standards that address proposed development in the wildlife corridors. Therefore, no guidance, or regulatory framework, is provided in the County's existing planning documents to protect these resources.

A thoroughly researched project (the South Coast Wildlands Project, 2006), which mapped wildlife corridors through Ventura County, was prepared and is used throughout Southern California (including Ventura County) as a standard resource for the evaluation of environmental impacts during the environmental review process for discretionary development. However, the discretionary review process only addresses a limited range of development projects, such as subdivisions or conditional use permits, which require discretionary permit approval (e.g., camps and campgrounds, large wineries, wholesale nurseries, bed and breakfast inns, mining and oil development). Within non-coastal areas of the County, development that is exempt (no permit required) or allowed through a ministerial review process (e.g., over-the-counter Zoning Clearance) requires no review with regard to the impact on habitat and wildlife movement corridors. Some examples of development and activities that are currently exempt from the permit review process include habitat removal (e.g. native vegetation, numerous species of native trees) and fencing that is six feet or less in height. Examples of development that is approved through the ministerial review process include single family dwellings, greenhouses (up to 20,000 sq. ft. in the Open Space and Agricultural Exclusive zones), and accessory structures (up to 2,000 sq. ft.).

During recent months, Planning Division staff worked closely with federal, state, and regional wildlife biology experts to establish key objectives for the management of development within a habitat connectivity and wildlife movement corridor (see Section C of the staff report). Staff also worked with the experts to review options for a regulatory

framework that would provide an effective management tool for maintaining existing habitat connectivity and wildlife movement corridors in Ventura County. The results of that work, which are summarized in this staff report (Exhibit 5), resulted in one goal and four supporting objectives, which were then used to guide the preparation of options for the scope-of-work for this project.

Section E of the staff report contains three work program options. Of the three options presented, staff recommends that Option 1 be pursued because it would result in a comprehensive set of land use management tools to achieve the project objectives. Generally, Option 1 comprises the following: a) the wildlife corridors as a Protected Resource map in the General Plan, b) an overlay zone map in the NCZO, and c) a packaged set of General Plan policies and NCZO standards that address a broad range of potential development within the mapped corridors. This set of regulatory measures would address specific types of development that currently are subject to ministerial and discretionary permit approvals as well as activities that are currently exempt from permit review. The work program would be refined based on additional research and analysis of the applicability and effectiveness of specific standards. Should a standard be found to have limited applicability or effectiveness, it would not be further pursued.

To focus the discussion and generate more specific direction to staff with regard to the options outlined in Section E, your Board's comment and direction on the following work program components would be especially valuable:

1. Amend the General Plan to include a wildlife corridor resource protection map and to provide updated goals and policies that specifically address protection of habitat connectivity and wildlife movement corridors (Options 1, 2 and 3).
2. Amend the NCZO to include an overlay zone map and development standards that specifically address protection of habitat connectivity and wildlife movement corridors for discretionary development (Options 1, 2 and 3).
3. Amend the General Plan and NCZO to include more specific policies and development standards to regulate ministerial development, if deemed effective (Options 1 and 2).
4. Amend the General Plan and NCZO to include more specific policies and development standards to regulate development and land use activities that are currently exempt from permit requirements, if deemed effective (Option 1).

B. Background

In 2015, your Board took two actions regarding the habitat connectivity and wildlife corridors project. First, your Board approved a consultant contract for the Comprehensive General Plan Update (GPU) that included \$76,440 for consultant work on the "wildlife corridors" program. On November 10, 2015, your Board elected to complete this project ahead of the GPU schedule, directed staff within the Long-Range Planning Section to

include this project on its priority list, and requested that work be completed by December 31, 2017. Since that time, the following work was completed:

- The GPU consultant summarized the previous work. Planning Division staff also reviewed the prior work and more recently prepared information on wildlife corridors in Ventura County.
- As your Board previously directed, staff prepared a series of regulatory options, reviewed those options with wildlife biology experts, and prepared recommendations regarding measures that will protect the wildlife corridors. These options have been brought forward for your Board's review today.

Based on your Board's direction today, the Planning Division will complete the draft regulatory text, conduct public outreach, and continue consultation with local wildlife biology specialists. After obtaining comments from all groups, including affected County agencies, staff will finalize the draft documents and conduct adoption hearings before the Planning Commission and your Board by the end of this year.

Issue Statement

The fragmentation of natural areas within our County due to development patterns limits the ability of plant and animal populations to disperse and move to areas they need for survival. Within natural resource management and conservation communities, this issue is considered among the most urgent of biological resource concerns. Wildlife biology specialists consider the maintenance (or enhancement) of existing habitat connectivity linkages, or connections between large, natural areas of protected habitat, as well as the native vegetation linkages within such corridors, as essential to ensure the future health of the County's natural resources.

Plant and animal populations shape the ecosystems (or environment) they live in. The relationships between the ecosystem and the species are complex and intricate. Research has shown that the loss of a species from an ecosystem disrupts a delicate balance that may have evolved over millions of years. For example, the loss of a top predator like a wolf causes the explosion in the numbers and the overall behavior of deer and elk, which in turn causes significant degradation to the vegetation communities from overgrazing. Overgrazing affects soil erosion and water quality, which effects aquatic communities, and so on. These effects cascade from one level of an ecosystem to another in this fashion. Changes to the composition of such communities can, in turn, result in a reduction of the "services" provided by an ecosystem, such as:

- Food production: Adverse impacts to pollinators affects food production;
- Disease transmission: Loss of diversity in plant and animal populations can result in reduced resistance to diseases and increased spread of disease; and
- Air and water purification: Loss of vegetation increases runoff, which increases siltation in water bodies and reduces the natural purification process provided by an intact ecosystem.

To maintain the health and resilience of animal and plant populations, essential plants and animals must be able to reach resources that are required for their survival (i.e., habitat, food, water, shelter) and that are required to maintain genetic diversity (available mates, health of offspring, etc.). When an environment cannot meet those needs, that animal or plant must move to an area with the necessary resources. If an animal or plant cannot disperse to an area with the needed resources, the overall population will eventually become extinct and our ecosystems will dramatically change.

The loss of habitat connectivity has become a growing concern across southern California, and numerous agencies and non-profit organizations within our region are moving to address this issue. Jurisdictions that now address habitat linkages at some level within their land use regulations include the following:

- Most affected cities in Ventura County (Thousand Oaks, Simi Valley, Moorpark and Camarillo);
- Los Angeles, Orange, San Bernardino, San Diego and Kern counties;
- State agencies such as Caltrans, California Department of Fish and Wildlife (CDFW), and California State Parks;
- Federal agencies such as US Fish and Wildlife Service, National Park Service, and U.S. Forest Service; and
- Non-profit organizations involved in the South Coast Missing Linkages group¹.

Numerous studies were completed to determine the geographic areas deemed essential for wildlife movement and habitat connectivity. For example, CDFW and Caltrans commissioned the California Essential Habitat Connectivity Project in 2010, which mapped essential wildlife linkages on a statewide basis. This study was used to support the development of efficient transportation and land-use patterns that reduce wildlife-vehicle collisions (Spencer, W.D. et al. 2010). In 2001, a diverse mix of resource experts from throughout the state formed the Missing Linkages project, which resulted in the establishment of defined areas regarded as the state's most important natural resource linkages. These areas are considered irreplaceable as well as threatened by future development. Within the South Coast Ecoregion², fifteen critical landscape linkages were identified, in a report titled *South Coast Missing Linkages: A Wildland Network for the South Coast* (South Coast Wildlands, 2008). The "Missing Linkages Report" was presented during a previous Board hearing and is available on the County Planning Division website: <http://www.scwildlands.org/reports/SCMLRegionalReport.pdf>.

¹ Non-profit participation includes the South Coast Wildlands, The Wildlands Conservancy, California Natural Resources Agency, California State Parks Foundation, The Nature Conservancy, Santa Monica Mountains Conservancy, Resources Legacy Foundation, Conservation Biology Institute, San Diego State University Field Stations Program, Environment Now, Mountain Lion Foundation, and the Zoological Society of San Diego's Conservation and Research for Endangered Species.

² The South Coast Ecoregion ranges from the US-Mexican Border to Los Padres National Forest.

Ventura County contains significant natural resource core areas that are primarily conserved within the Ventura and Santa Clara Rivers, Los Padres National Forest, and the Santa Monica Mountains. However, the concern is that natural resource values within these areas will be compromised by the loss of habitat linkages between them. In fact, Ventura County contains three of the South Coast Ecoregion's fifteen critical linkages, as shown in the linkages map in Exhibit 1, which illustrates the following:

- The Sierra Madre – Castaic Connection: These corridors generally run east/west and are in the central to northern part of Ventura County;
- The Santa Monica – Sierra Madre Connection: This connection includes two separate corridors, the Santa Monica Mountains - Santa Susana Mountains linkage and the Santa Susana Mountains-Sierra Madre Mountains linkage. These linkages generally run in a north/south direction and connect the natural resource core areas of the Santa Monica Mountains and Los Padres National Forest.

As shown in the protected resources and wildlife corridors map in Exhibit 1, the Santa Clara River and Ventura River corridors were also designated as significant corridors and included as a part of the County's habitat connectivity network that is used for biological resource assessments associated with discretionary development. The habitat connectivity and wildlife movement corridor under greatest threat from development is the Santa Monica to Sierra Madre Connection.

Existing Conditions and Constraints

Approximately 401,200 total acres of land (7,700 parcels) are located within the mapped wildlife corridors in unincorporated Ventura County³. In addition, the corridor also passes through many of the County's city boundaries, where the policies and regulations of those cities are an important component for protection of the corridors (see Exhibit 2). This section provides a summary of the existing conditions and constraints within both the incorporated cities and unincorporated areas of Ventura County.

City Jurisdictions:

Regulations that protect habitat connectivity and wildlife movement corridors are particularly important in areas considered to be chokepoints, which are narrow, physically constrained passages that constrict species movement between two larger habitat patches. Existing chokepoints are located between the cities of Camarillo and Thousand Oaks and between the cities of Simi Valley and Moorpark. Habitat fragmentation is a particular problem at chokepoint areas. As shown on Exhibit 2, there is little unincorporated land within the chokepoints, and maintaining movement through the chokepoints will primarily be the responsibility of city jurisdictions. Fortunately, the cities do recognize the importance of these wildlife movement corridors, and existing city regulations do address the corridors in some form. For example, the corridors may be illustrated on maps and

³ This figure includes areas within the cities spheres of influence which, if developed within a city, would be subject to the city's respective development regulations.

addressed through General Plan policies or environmental review. A summary of the current regulations for affected cities is included as Exhibit 4.

Existing Ventura County Regulations:

The County's current approach to protecting biological resources relies heavily on discretionary project review and environmental review in accordance with the California Environmental Quality Act (CEQA). Although this approach provides certain protections for wildlife habitat and corridors, the approach does not utilize many of the land use tools available to protect such corridors. Listed below is a summary of the County's land use regulations that apply to the existing wildlife movement corridors:

- **Ventura County General Plan:** Existing policies that protect habitat connectivity and wildlife corridors are limited to General Plan Goal 1.5.1 that covers all biological resources and reads as follows:

Preserve and protect significant biological resources in Ventura County from incompatible land uses and development. Significant biological resources include endangered, threatened or rare species and their habitats, wetland habitats, coastal habitats, wildlife migration corridors and locally important species.

The policies that support this goal provide direction only for evaluating biological resource impacts related to discretionary development. Only one policy directly addresses wildlife passage by requiring that the design of roads and floodway improvements incorporate all feasible measures to accommodate wildlife passage. However, infrastructure improvements would only be assessed against this policy during a discretionary permit review process.

- **Land Use Maps:** As previously mentioned, 401,200 acres of unincorporated land lies in the County's mapped wildlife movement corridor. However, approximately 229,144 acres of that land is located in the north half of the County within the Los Padres National Forest. Land use in the Los Padres National Forest is regulated by the Forest Service, and regulations adopted by your Board would not apply to those properties.

When the Los Padres acreage is subtracted out from the total acreage, 172,056 unincorporated acres remain within the Habitat Connectivity and Wildlife Movement Corridor. Of that acreage, 163,868 acres (95%) is designated Open Space, about 2.2% (3,555 acres) is designated Existing Community or Rural, and about 2.7% (4,633 acres) is designated Agricultural by the General Plan. (See Exhibits 2 and 3 for maps and a summary of General Plan land use information.) Land designated Agricultural by the General Plan is characterized by prime agricultural soils⁴, and it is situated near the river beds, fertile valleys and in the Oxnard Plain, where the County's most productive crops and orchards are located.

⁴ As used above, the term "prime agricultural soils" refers to soils classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance.

Land located within the unincorporated County contains both a General Plan land use designation and a zoning classification. Due to the large number of zoning classifications (65) within Habitat Connectivity and Wildlife Movement Corridor, further analysis of zoning and allowed uses will be key to determining applicability of regulations developed for this project. However, that analysis will be focused on two zoning classifications allowed within the General Plan Open Space designation: the Open Space (OS) and the Agricultural Exclusive (AE) zones. Of the 172,056 acres of land in the Habitat Connectivity and Wildlife Movement Corridor, about 115,000 acres is zoned Open Space (OS) and about 49,000 acres is zoned Agricultural Exclusive (AE). Much of the land that is designated Open Space and zoned Agricultural Exclusive (AE) is not characterized by prime agricultural soils and is often used as grazing land.

- **Non-Coastal Zoning Ordinance (NCZO)**: The NCZO contains no standards that describe required site development patterns, fencing, or lighting within a wildlife movement corridor. There are no specific permitting requirements for development within a wildlife movement corridor. Also, the NCZO exempts the removal of native vegetation and the construction of many types of fencing throughout most non-coastal areas, and the NCZO does not address public roadways.
- **Subdivision Ordinance**: The current ordinance provides a regulatory mechanism called a Conservation Subdivision, which allows an applicant (with a qualifying property) to subdivide an existing lot into two undersized lots (i.e. lots smaller than the minimum lot size). In exchange, the lot containing significant biological resources is donated to a conservation organization (or public agency) and maintained as permanent, natural open space through an easement or deed restriction. This land use tool, or a similar mechanism, could provide incentives for open space preservation within wildlife movement corridors.
- **Initial Study Assessment Guidelines (ISAGs)**: The County's ISAGs, adopted in 2011, include a specific reference to the South Coast Missing Linkages project, and the wildlife linkages in that report are therefore used when evaluating discretionary permits. The ISAGs also provide project impact thresholds for determining impacts on habitat connectivity. Therefore, potential impacts to habitat connectivity and wildlife movement corridors are reviewed, minimized and mitigated on a case-by-case basis under CEQA when processing a discretionary permit.

State and County Roads

In Ventura County, roadways that act as major barriers to wildlife movement are Highways 101, 126, 118 and 23, which are state roads under the jurisdiction of Caltrans. Caltrans has acknowledged that roads create barriers to wildlife in California. As an organization, Caltrans solidified its commitment to improving wildlife connectivity through various activities - such as partnering with the National Parks Service to monitor wildlife movement at critical chokepoints across its roads and highways (e.g. SR 23 and 126) and developing a guidance manual (Caltrans Wildlife Crossings Guidance Manual) for road building and maintenance throughout the state.

C. Key Project Objectives

In order to provide the basis for selecting appropriate land use tools for habitat connectivity and wildlife corridors, staff and wildlife biology experts established an overarching goal and four project objectives (see Exhibit 5 for more description) as follows:

Goal: Improve countywide habitat connectivity between protected resource areas such as the Santa Monica Mountains National Recreation Area and the Los Padres National Forest.

Implementing Objectives:

1. **Minimize habitat fragmentation** within designated habitat connectivity corridors.
2. **Maintain corridor widths** or enhance corridor "chokepoints" to facilitate species movement between natural areas.
3. **Minimize direct physical barriers** to wildlife movement. (Examples of direct barriers include building, non-wildlife permeable fencing, and major roadways.)
4. **Minimize indirect barriers to wildlife movement.** (Examples of indirect barriers include nighttime lighting, excessive noise, degraded vegetation, and the presence of predatory domestic animals.)

Potential land use tools or regulations were evaluated by staff and wildlife biology experts to determine their potential effectiveness in achieving these objectives. The evaluation and results are discussed below.

D. Evaluation of Planning Tools

A list of potential land use tools needed to address each of the four project objectives is provided in Exhibit 5. Taken together, this set of regulatory tools would provide a predictable, effective, and comprehensive approach to regulating development and protecting the wildlife movement corridors.

The regulatory tools discussed below could provide goals, policies, and development standards that provide "building blocks" for implementation of the wildlife corridors program. Working with local wildlife biology experts, Planning Division staff discussed the potential effectiveness of each tool against project objectives, ranking each as "critical", "important", or "supportive" (see Exhibit 5 for definitions and results). A summary of the results of that exercise is provided below:

1. **Overlay/Resource Protection Map.** A map could be adopted that formalizes the geographic extent of the habitat connectivity and wildlife movement corridors. This map could be placed in the General Plan as a "resource protection area" map and in the Non-Coastal Zoning Ordinance (NCZO) as a zoning overlay.

Recommendation: Adoption of this map (as presented in the South Coast Missing Linkages report, 2006) was deemed "critical" and is highly recommended by both staff and the wildlife biology experts.

2. General Plan Goals and Policies⁵. A set of goals and policies could be adopted that provide policy direction for managing development within the wildlife habitat connectivity corridor. Updated technical information could also be incorporated into the Technical Appendix. There could be both broad policies covering the entire corridor as well as more specific policies applicable to development and land use activities that are currently exempt from permit review.

Of particular importance will be stakeholder input and discussion regarding policies and regulations for native vegetation removal and fencing design. The work program would be refined based on additional research and analysis of applicability and effectiveness of specific policies and standards. Should a policy/standard be found to have limited applicability or effectiveness, it would not be further pursued.

Recommendation: Staff and the wildlife biology experts recommend that your Board authorize staff to work with stakeholders (e.g., property owners, the farming and ranching community, and environmental groups) and bring forward for adoption a set of updated General Plan goals and policies for the habitat connectivity and wildlife movement corridors.

3. Non-Coastal Zoning Ordinance (NCZO) Development Standards. NCZO⁶ development standards would clarify *how* to implement General Plan policies within wildlife corridors. It is anticipated that a set of basic NCZO development standards would address critical development issues within the entire overlay zone. Such standards could manage the location of development within a lot (e.g. whether structures are dispersed or clustered), or other barriers to wildlife movement. In addition, a specialized set of NCZO standards could be prepared that would be applicable to development and land use activities that are currently ministerial or exempt from permit review. These standards would address issues such as lighting, noise, setbacks from riparian and wildlife corridors, the removal of native vegetation, the design of fences, and the planting of invasive plants.

NCZO regulations apply to both ministerial and discretionary permits. However, standards for ministerial projects need to be crafted in a different manner than standards used solely for discretionary projects. The ministerial approach requires very specific, "check-the-box" standards, while the discretionary approach requires standards that can be implemented during a discretionary permit review process.

Finally, changes to the NCZO could include updated permit requirements for development and activities that are currently exempt from permit review. This would

⁵ Amendments to the Local Coastal Program (or LCP, which includes the Coastal Area Plan and Coastal Zoning Ordinance) are not included in this project. Wildlife connectivity and movement corridors are already being addressed by the ongoing update to the LCP (Phase 2C), which is focused on environmentally sensitive habitat areas, called ESHA.

⁶ Amendments are not needed to the Coastal Zoning Ordinance, as development in the coastal zone requires a discretionary permit and standards are being prepared for the ongoing update of the Local Coastal Program.

allow for the management of development by imposing regulations on activities, such as new fencing or the removal of native vegetation. Staff would conduct further review of existing regulations, and permitted uses, and on-the-ground conditions within the wildlife corridor. This work will require additional discussions with stakeholders and the public in order to provide effective protections for the wildlife movement corridors while respecting property owners' rights to use of their land.

Recommendation: Staff and the wildlife biology experts recommend that your Board authorize staff to work with stakeholders and bring forward for adoption a basic set of draft NCZO development standards, as such standards are necessary to implement the General Plan policies and provide a predictable and effective approach to managing development within the wildlife corridors. Staff also recommends that your Board authorize work on a set of specialized NCZO development standards that would be applied to all new development (potentially including currently exempt and ministerial activities).

The three land use tools listed above could together provide an effective approach to achieving the goals and objectives for the habitat connectivity and wildlife movement corridor program.

E. Summary of Board Options and Staff Recommendations

To achieve the objectives for this program, staff is seeking direction on the scope of work for this project. As discussed, there are several planning tools available that would be useful to implement this work program. However, protection can be provided on a sliding scale of regulations, ranging from a limited set of land use tools that only affect discretionary development to a comprehensive set of management tools that affect the primary types of development that impact the functionality of a habitat connectivity and wildlife movement corridor.

Three options for the scope-of-work for the project are provided below for your Board's consideration. Your Board's responses to the questions set forth in Section A, "Purpose of Hearing" will determine the preferred approach and provide staff with the direction needed to proceed with this work program. As previously mentioned, staff recommends that Option 1 be pursued to achieve the project goal and objectives.

Option 1 – Adoption of Resource Protection Map and Overlay Zone Map with Comprehensive Set of Policies and Standards

1. Habitat Connectivity and Wildlife Movement Corridors Map: Prepare the map shown in Exhibit 1 that delineates the habitat connectivity and wildlife movement corridors of Ventura County, for adoption as a resource protection map in the General Plan and as an overlay zone map in the NCZO.
2. General Plan (GP) goals and policies: Prepare updated goals and policies aimed at protection of the resources in these areas and that provide specific guidance for

retaining habitat and movement corridors in the mapped areas. The GP policies would be developed in the following manner:

- a) Broad policies would address all new development within locations delineated by the Habitat Connectivity and Wildlife Movement Corridors Map;
 - b) Specific, targeted policies would address new development and activities within the wildlife movement corridors that are currently ministerial or exempt. It is likely these policies would address issues such as noise, lighting, setbacks, planting invasive non-native plants, the management of native vegetation removal and the development of new fences.
3. **NCZO Development Standards:** Prepare standards within the NCZO that would implement the General Plan policies as follows:
- a) *Discretionary and Ministerial Development:* Provide basic development standards that would apply to new development within the Habitat Connectivity and Wildlife Movement Corridors mapped areas and that can be applied during all permitting processes.
 - b) *Exempt development:* Provide a more detailed set of development standards that would apply to specific development uses and activities that are currently exempt from permit review. These standards would address activities such as the management of native vegetation removal and fencing design. The work program would be refined based on additional research and analysis of applicability and effectiveness of specific standards. Should a standard be found to have limited applicability or effectiveness, it would not be further pursued.

Option 2 – Adoption of Resource Protection Map and Overlay Zone Map with Limited Set of Policies and Standards

Option 2 is the same as Option 1, except that it does not include the following:

- *Component 2b* – Option 2 does not include specific, targeted policies that address new development and activities within the wildlife movement corridors that are currently exempt. These policies would address activities such as the management of native vegetation removal and fencing design. Although currently exempt development would not be included, under this option policies would be developed that apply to ministerial development and activities.
- *Component 3b* – Option 2 does not provide a more detailed set of development standards that would apply to specific development uses and activities that are currently exempt from permit review. These standards would address activities such as the management of native vegetation removal and fencing design. Although currently exempt development would not be included, under this option standards would be developed that apply to ministerial development and activities.

Option 3 – Adoption of Resource Protection Map and Minimal Set of Policies and Standards

Option 3 would only include adoption of a Habitat Connectivity and Wildlife Movement Corridors Resource Protection map and updated goals and policies in the General Plan. It would also include a minimal set of standards that apply to discretionary development. This option would be similar in effect to current regulations, except that it would provide more specific policies and standards that guide conditions of approval and mitigation of impacts for discretionary development permits. This option does not provide the regulations or standards to manage development that is exempt from permits or that requires a ministerial permit approval.

The three options listed above include a public outreach program, environmental review, an updated biological resources Technical Appendix of the General Plan, and public hearings through the Planning Commission and your Board. In all cases, discretionary projects would continue to be implemented and evaluated through the environmental review (CEQA) process, on a case-by-case basis, using the County's adopted Initial Study Assessment Guidelines (ISAGs).

The County Executive Office, Auditor-Controller's Office, and County Counsel have reviewed this item. If you have any questions, please contact Kari Finley, Senior Planner at (805) 654-3327 or Rosemary Rowan, Planning Manager, Long-Range Planning Section at (805) 654-2461.

Sincerely,



Kim Prillhart, Director
Ventura County Planning Division

Attachments:

- Exhibit 1: Protected Resources and Wildlife Corridors Map (Ventura County)
- Exhibit 2: Maps of Ventura County General Plan Designations within the Wildlife Movement Corridors
- Exhibit 3: Summary of Ventura County General Plan Designations & City Land within the Wildlife Movement Corridors
- Exhibit 4: Summary of Regulations of Ventura County Cities within the Wildlife Corridor
- Exhibit 5: Summary of Planning Tools and Results of Biological Expert Consultations



Wildlife Corridors Agenda Item No. 34 - Errata

County of Ventura • Resource Management Agency • Planning Division

800 S. Victoria Avenue, Ventura, CA 93009-1740 • (805) 654-2478 • ventura.org/rma/planning

Date: January 24, 2017

To: Board of Supervisors

From: Kari Finley, Senior Planner
Resource Management Agency, Planning Division

Subject: Agenda item No. 34 – Revisions to Fiscal Impacts Section of Board Letter

There is an error in the Fiscal Impacts/Mandates section of the Board letter for the subject item. Unfortunately, the costs for options 1 and 3 were inadvertently transposed. The second to the last line on page 1 should read as follows:

“Three options are presented in section E of this report, and the additional funding needed to complete the work varies as follows: \$95,000 for Option 1, \$80,000 for Option 2, and \$24,500 for Option 3.”

A revised copy of the first page that reflects this correction is attached for the record.

Exhibit 18

[NOTE: The definitions and figures shown below are taken from the September 2018 revisions to the Non-Coastal Zoning Ordinance, made as part of the Dark Sky Overlay Zone project. They are reproduced here to aid in review of the proposed Habitat Connectivity and Wildlife Corridor Ordinance.]

Correlated Color Temperature (CCT) – A measure in degrees *Kelvin* (K) of the warmth or coolness of light. Lamps with a CCT of less than 3,000 K are yellowish and considered warm. Lamps with a CCT greater than 4,000 K are bluish–white and considered cool.

Glare – The sensation produced by a bright source within the visual field that is sufficiently brighter than the level to which the eyes are adapted causing annoyance, discomfort, or loss in visual performance and visibility.

Kelvin – A unit of measure used to describe the hue (or *correlated color temperature*) of a light source.

Light Fixture – See *definition of luminaire*.

Light Pollution – Adverse effects of artificial light including, but not limited to, *glare*, *light trespass*, *sky glow*, and impacts on the nocturnal environment, including light sources that are left on when they no longer serve a useful function.

Light Trespass or Light Spillover - Light emitted by a *luminaire* that shines beyond the boundaries of the property on which it is sited.

Lighting, Directional – Adjustments made to a *luminaire* to focus light where it is needed.

Lighting, Outdoor - Any *luminaire* that is installed outside the interior of a structure. The *luminaire* could be mounted to the exterior of a structure, mounted to poles, fences or other freestanding structures, or placed so as to provide direct illumination on any exterior area, object or activity. Outdoor lighting includes but is not limited to *luminaires* used for porches, *hardscapes*, landscapes, *security lighting*, driveways and walkways, parking areas, and *outdoor recreation areas*.

Lighting, Seasonal or Festive – Temporary lighting installed and operated in connection with holidays, traditions or festivities.

Lighting, Security – A *luminaire* that is primarily intended to deter or detect intrusions or other unwanted activity. It can also be used to allow safe passage.

Luminaire, Partially-Shielded - A *luminaire* constructed and installed such that most light emitted by the fixture is projected below the horizontal plane through the fixture's lowest light-emitting part. Light emitted above the horizontal plane arises only from decorative elements or diffusing materials such as frosted/colored glass or plastic. Examples of partially-shielded luminaires are included in Figure 2.

Figure 2. Examples of Partially-Shielded Luminaires



Outdoor Recreational Facility - An outdoor area designed for active recreation, whether publicly or privately-owned, including, but not limited to, baseball and softball diamonds, soccer and football fields, golf courses, equestrian arenas, and tennis courts.

VENTURA COUNTY FIRE PROTECTION DISTRICT

MARK LORENZEN
County Fire Chief



165 Durley Avenue
Camarillo, CA 93010-8586
(805) 389-9710
FAX (805) 388-4356

January 8, 2019

Ventura County Planning Division
Attn. Shelley Sussman #1740
County Government Center
800 S. Victoria Avenue
Ventura, CA 93009

Dear Ms. Sussman:

After review of the Draft Wildlife Connectivity Ordinance, we believe there are sufficient accommodations and exemptions in the ordinance to allow the Ventura County Fire Department the ability to maintain vegetation management and fuel treatments in the proposed wildlife corridors.

We appreciate the opportunity to comment on the draft. If you have any questions, please do not hesitate to contact me.

Sincerely,

Mark Lorenzen
Fire Chief

Committed to Excellence...Delivered with Pride

Providing protection and preservation of life, property and environment to: The Cities of Camarillo, Moorpark, Ojai, Port Hueneme, Santa Paula, Simi Valley, Thousand Oaks, and the unincorporated areas of Ventura County.

EXHIBIT 20
Wildlife Crossing Structures Subject to Habitat Connectivity and Wildlife Corridors Overlay Zone Regulations

A map of all wildlife crossing structures listed below can be viewed on the Ventura County Resource Management Webpage (<https://www.vcrma.org/habitat-connectivity-and-wildlife-movement-corridors>).

County Culverts

Culvert/Bridge ID	Road Name	Lat(N)	Long(W)	Log Mile	Log Mile 0 Reference
50825-3-14	LOCKWOOD VALLEY ROAD	34.740338	119.087179	18.60	S.R. 33, MARICOPA HWY.
50821-3-4	LOCKWOOD VALLEY ROAD	34.690638	119.343011	0.80	S.R. 33, MARICOPA HWY.
69112-1-1	GRIDLEY ROAD	34.468831	119.224146	1.06	GRAND AVE.
50822-5-7	LOCKWOOD VALLEY ROAD	34.71555	119.265543	6.10	S.R. 33, MARICOPA RD.
50825-4-14	LOCKWOOD VALLEY ROAD	34.740637	119.086688	18.67	S.R. 33, MARICOPA HWY.
51313-1-7	POTRERO ROAD WEST	34.158264	119.003164	3.80	HUENEME RD.
66041-14-14	CREEK ROAD	34.400272	119.287032	*	S.R. 34
66042-4-16	CREEK ROAD	34.407028	119.279962	2.20	S.R.33
66042-5-16	CREEK ROAD	34.408023	119.278737	2.30	S.R.33
75461-7-7	TIERRA REJADA ROAD	34.27181	118.824555	1.48	760' E/O SR 23, MOORPARK FWY.
75081-3-18	BOX CANYON ROAD	34.247528	118.650315	0.62	LA COUNTY LINE
75363-1-14	SUNSET VALLEY ROAD	34.250852	118.852682	0.06	READ RD.
75363-9-14	SUNSET VALLEY ROAD	34.261644	118.85448	0.82	READ RD.
66061-1-2	HERMOSA ROAD	34.427548	119.259024	0.05	CREEK RD.
77311-10-12	PIRU CANYON ROAD	34.424681	118.775137	0.92	970' N/O ORCHARD ST.
77311-12-12	PIRU CANYON ROAD	34.429608	118.763696	1.72	970' N/O ORCHARD ST.
77312-7-7	PIRU CANYON ROAD	34.441533	118.759279	2.67	970' N/O ORCHARD ST.
77313-4-23	PIRU CANYON ROAD	34.453802	118.760862	3.67	970' N/O ORCHARD ST.
64262-10-24	SANTA ANA ROAD	34.383492	119.311529	2.01	CASITAS VISTA RD.
64262-6-24	SANTA ANA ROAD	34.378518	119.311709	1.57	CASITAS VISTA RD.

* Not specified in County database

County Bridges

Bridge Number	Road Name	Channel Name	Location	CT Location
443	Mupu Rd	Santa Paula Creek	0.25 mi. E. of State Hwy. 150	0.2 mi. E. of SR 150
392	Old Creek Rd	San Antonio Creek	0.01 mi. E/O Rte 33	0.01 mi. E/O Rte 33
320	Camino Cielo	Matilija Creek	0.06 mi. S. of State Hwy. 33	0.1 mi. W of SR 33
435	Torrey Road	Santa Clara River	0.45 mi. S. of Howe Road	1.1 mi. S of SR 126
335	Boardman Rd	Thacher Creek	0.29 mi. S. of State Hwy. 150	0.3 mi. S of S.R. 150
322	Gridley Rd	Crooked Creek	1.27 mi. N. of Ojai Avenue	1.27 mi. N of Ojai Avenue
311	Santa Ana Rd	Santa Ana Creek	0.27 mi. N. of Baldwin Road	0.3 mi. N. of SR 150
315	Creek Rd	San Antonio Creek	4.60 mi. NE of State Rte. 33	W of Country Club Dr.
336	Koenigstein Rd	Bear Creek	0.49 mi. E. of State Hwy. 150	0.5 mi. NE of SR 150
326	Koenigstein Rd	Sisar Creek	0.01 mi. E. of State Hwy.150	0.01 mi. N. of State RT 150
426	Goodenough Rd	Drainage ditch	2.49 mi. N. of Fifth Street	2.39 mi. N. of Fifth Street
487	Old Telegraph Rd	Sespe W. Fork	1.76 mi. NE of State Rte. 126	1.1 mi. NW of "A" St.
485	Old Telegraph Rd	Sespe E. Fork	1.92 mi. E. of State Rte. 126	1.0 mi N/W of "A" St.
437	Center St	Piru Creek	0.33 mi. E. of Main Street	0.7 mi N. of RTE 126
413	Piru Canyon Rd	Creek	1.30 mi. N. of Orchard Street	1.3 mi. N of Orchard Street
307	Casitas Vista Rd	Ventura River	0.15 mi. W. of Ventura Avenue	0.1 mi. W of RTE 33
394	Santa Ana Blvd	Ventura River	0.65 mi. W. of State Hwy. 33	0.5 mi. W. of SR 33
398	Santa Ana Blvd	Live Oak Canyon Creek	0.88 mi. W. of State Hwy. 33	0.7 mi. W.of SR 33
367	Chaparral Rd	Live Oak Creek	0.03 mi. E. of Burnham Road	0.03 mi. E of Burnham Road
312	Burnham Rd	Live Oak Creek	0.40 mi. E&N of Santa Ana Road	*
314	Creek Rd	San Antonio Creek	4.17 mi. NE of State Rte. 33	0.1 mi. NE of Hermosa Road
417	Piru Canyon Rd	Piru Creek	3.00 mi. N. of State Rte. 126	2.4 mi. N. of Center Street
412 UPSTREAM	Guiberson Rd	Calumet Canyon	2.54 mi. E. of State Hwy. 23	2.54 mi. E. Of SH.23
469	Guiberson Rd	Frey Canyon Wash	3.36 mi. E. of State Hwy. 23	3.45 mi. E. of SH 23
448	South Mountain Rd	Santa Clara River	0.22 mi. S. of Harvard Blvd.	0.2 mi. S. of SR 126
235	Tapo Canyon Rd	Tapo Creek	3.27 mi. N. of Cochran Street	3.27 mi. N. of Cochran Street

Bridge Number	Road Name	Channel Name	Location	CT Location
270	Box Canyon Rd	Side canyon	1.78 mi. S. of Santa Susana Pass Road	1.78 mi. S of Sta. Susana Pass Rd.
550	Harbor Blvd	Santa Clara River	0.69 mi. s/o Olivas Park Dr.	0.5 mi. S. of Olivas Park Dr.
442	Bridge Rd	Santa Paula Creek	Santa Paula 0.02 mi. E of SR 150	East of SR 150
415	Piru Canyon Rd	Sisar Creek	2.89 mi. N. of Orchard Street	3.0 mi. N. of Orchard Street
421	Piru Canyon Rd	Piru Creek	3.70 mi. N. of State Rte. 126	3.0 mi. N. of Center Street
121	Victoria Ave	Santa Clara River	1.30 mi. S. of State Hwy. 101	1.3 mi. S. of Route 101
255	Moorpark Rd	Arroyo Santa Rosa	0.84 mi. S. of Tierra Rejada Rd	0.84 mi. S. of Tierra Rejada Rd

* Not specified in County database

Cal Trans Bridges

Bridge Number	Structure Name/Route	Location	Post Mile	Latitude	Longitude
52 0283	ROCKY PEAK ROAD OC	07-VEN-118-R32.43	R32.43	341606	1183806
52 0355L	ALAMOS CYN RD UC	07-VEN-118-R21.86	R21.86	341712	1184742
52 0355R	ALAMOS CYN RD UC	07-VEN-118-R21.86	R21.86	341712	1184742
52 0331L	ARROYO SIMI OH	07-VEN-118-T18.68	T18.68	341712	1185154
52 0037	PIRU CREEK	07-VEN-126-28.82	28.82	342436	1184712
52 0267L	SANTA PAULA CREEK	07-VEN-126-R12.71-SPA	R12.71	342118	1190248
52 0267R	SANTA PAULA CREEK	07-VEN-126-R12.70-SPA	R12.7	342118	1190248
52 0183	SESPE CREEK	07-VEN-126-19.26	19.26	342336	1185654
52 0182	SESPE CREEK OVERFLOWW	07-VEN-126-19.73	19.73	342336	1185624
*	NEWHALL RANCH ROAD	*	*	344066	1187383
*	FISH HATCHERY	*	*	343953	1188831
52 0345	HAPPY VAL DRN	07-VEN-150-R13.84	R13.84	342536	1191742
52 0099	LION CANYON CREEK	07-VEN-150-21.70	21.7	342600	1191200
52 0244	SANTA ANA CREEK	07-VEN-150-10.98	10.98	342512	1192024
52 0104	SANTA PAULA CREEK	07-VEN-150-28.53	28.53	342536	1190524
52 0105	SANTA PAULA CREEK	07-VEN-150-28.61	28.61	342536	1190518
52 0103	SISAR CREEK	07-VEN-150-28.48	28.48	342536	1190536

Bridge Number	Structure Name/Route	Location	Post Mile	Latitude	Longitude
52 0358	VENTURA RIVER	07-VEN-150-R13.42	R13.42	342530	1191806
52 0368	TIERRA REJADA CHANNEL	07-VEN-023-R9.84	R9.84	341548	1185048
*	DAY FARMS CULVERT	*	*	342520	1188408
52 0074	BEAR CREEK	07-VEN-033-19.36	19.36	343048	1191618
52 0076	CANON CREEK	07-VEN-033-20.76	20.76	343012	1191648
52 0170	CANON CREEK	07-VEN-033-20.48	20.48	343000	1191636
52 0092	CASTLE CREEK	07-VEN-033-50.70	50.7	344236	1192236
52 0088	CORRAL CANYON CREEK	07-VEN-033-51.78	51.78	344318	1192300
52 0086	CUYAMA RIVER	07-VEN-033-48.69	48.69	344118	1192130
52 0043	N FORK MATILIJA CREEK	07-VEN-033-15.52	15.52	342912	1191812
52 0044	N FORK MATILIJA CREEK	07-VEN-033-15.82	15.82	342918	1191818
52 0066	NORTH FORK MATILIJA CRK	07-VEN-033-17.41	17.41	343024	1191736
52 0067	NORTH FORK MATILIJA CRK	07-VEN-033-17.84	17.84	343036	1191712
52 0173	NORTH FORK MATILIJA CRK	07-VEN-033-16.13	16.13	342930	1191818
52 0120	OAK CREEK	07-VEN-033-52.09	52.09	344342	1192318
52 0087	ROUND SPRINGS CREEK	07-VEN-033-50.91	50.91	344248	1192248
52 0065	SAN ANTONIO CREEK	07-VEN-033-7.58	7.58	342248	1191812
52 0042	SHELDON CANYON	07-VEN-033-14.58	14.58	342806	1191706
52 0121	TIMBA CREEK	07-VEN-033-52.59	52.59	344406	1192348
52 0077	TULE CREEK	07-VEN-033-29.65	29.65	343336	1191600
*	CONEJO GRADE BOX CULVERT	*	*	34	1189775
52 0241L	VENTURA RIVER	07-VEN-101-30.94-VEN	30.94	341654	1191830
52 0241R	VENTURA RIVER	07-VEN-101-30.94-VEN	30.94	341654	1191830
*	CAMINO DEL REMEDIO	*	*	344032	1187038
52 0312L	OLSEN ROAD UC	07-VEN-023-R8.19-THOK	R8.19	341436	1185012
52 0312R	OLSEN ROAD UC	07-VEN-023-R8.21-THOK	R8.21	341436	1185012
52 0312S	OLSEN ROAD UC	07-VEN-023-R8.21-THOK	R8.21	341436	1185012
52 0319L	TIERRA REJADA ROAD UC	07-VEN-023-R10.16-MRPK	R10.16	341600	1185100
52 0319R	TIERRA REJADA ROAD UC	07-VEN-023-R10.16-MRPK	R10.16	341600	1185100
52 0319K	TIERRA REJADA ROAD UC	07-VEN-023-R10.16-MRPK	R10.16	341600	1185100

* Not specified in source database

EXHIBIT 21

Technical Appendix Methodology for the Selection of Wildlife Crossing Structures

Summary:

Wildlife Crossings (hereafter “crossings”) include culverts, bridges, underpasses etc. designed and built by Ventura County Public Works Agency Transportation Division and the California Department of Transportation (Caltrans) primarily to convey water off and through their respective roadways. In addition to their intended purposes, numerous wildlife movement studies have shown that crossings allow wildlife to bypass barriers and provide safe passage to other areas with needed resources that may otherwise discourage wildlife from traversing.

In conjunction with the preparation of the amendments to the Ventura County Non-Coastal Zoning Ordinance to establish a Habitat Connectivity and Wildlife Corridors overlay zone, Planning Division staff classified wildlife crossings in Ventura County based on their potential for wildlife use and habitat connectivity value. Approximately 400 crossings were evaluated with respect to features that would facilitate their use for wildlife passage. Of these crossings, a total of 100 were classified as being highly functional and, thereby, potentially important components of the Habitat Connectivity and Wildlife Corridors overlay zones.

Purpose and Need:

Roads can act both as a source of mortality and as a barrier to wildlife affecting small mammals, large mammals, birds, and herpetofauna (Coffin, 2006). The extent of the effect is determined by the characteristics and behaviors of the focal species, the physical qualities of the road and road-related infrastructure, the characteristics of the road traffic, and the spatial configuration of the road relative to the adjacent landscape (Coffin). The division and isolation of populations resulting from the presence of roads can result in less genetic exchange and, in turn, can weaken populations. Although the majority of roadkill observed in Ventura County are small species (Anderson pers communication with Whitney Wilkinson Ventura County RMA Planning Division), this loss can have repercussions for larger species, especially during times of stress such as drought or fire.

Multiple studies of wildlife movement through freeways and highways, including US 101, SR-23, SR-126, and SR-118 in Ventura County, conclude that culverts and underpasses are used by a variety of wildlife to bypass these barriers (LSA, 2004; Brown and Riley, 2003; Sikich and Riley, 2012; Moriarty and Riley 2016a and 2016b). Culverts under smaller roadways are also important for wildlife passage since roadways can create increased potential for mortality from vehicle collisions due to the increased willingness of animals to cross them (Riley 2006, Brown and Riley 2013, Riley et al. 2015).

Studies have shown that wildlife of all sizes utilize crossings and that different species have different preferences for crossings with different features which may increase or decrease their use of a given crossing (Clevenger et al. 2001, McDonald and St Clair 2004). These features can include position in the landscape, the crossing’s “openness” as defined by its height, width, and length, and proximity to high quality habitat. Wildlife most susceptible to landscape-scale connectivity issues are those that generally avoid roads, have multiple resource needs, require

large geographic areas, occur at low densities, and have low reproductive rates. Medium and larger animals tend to utilize crossings with a larger openness ratio (defined as the cross sectional area of a crossing divided by the length) which often means it has a larger diameter. However, many wildlife species that occur in Ventura County (e.g. bobcat, coyote) tend to be opportunistic users of crossings, making many existing crossings capable of facilitating wildlife movement (Kintsch et al, 2015). Crossings with vegetation located near the entrances were more likely to be used by wildlife because they provided visual cover (Clevenger and Waltho, 2004; WDOT, 2006). If vegetation is allowed to persist and regenerate in areas near crossing entrances, there is higher potential for wildlife use and habitat connectivity.

Data for this project includes County-maintained culverts managed by the County's Public Works Agency, Transportation Division. This includes an inventory of the County's culverts located within the County's right-of-way and maintained by the Public Works Agency. Approximately 385 culverts were assessed and classified for this project located within the County's mapped regional wildlife corridors. Thirty-five County-maintained bridges were also assessed for their functional value in much the same way. Both data sources can be viewed on the Public Works Transportation GIS portal, found here: www.gis.ventura.org/PWA-Transportation/. The third data source includes Caltrans crossings consisting of approximately 60 bridges and culverts within the Caltrans right of way. This data was obtained from Caltrans, National Park Service (NPS) wildlife biologists who study these crossings, and studies conducted by NPS on Caltrans crossings.

Methods:

Each crossing was evaluated with respect to a set of exclusionary features and functional features. Exclusionary features make a crossing uninviting or impractical for wildlife to utilize to overcome a roadway or other barrier. If a crossing had any one or more of the exclusionary features, it resulted in the removal of the crossing from the selection and no regulations are applied to this crossing.

Exclusionary Features:

1. A vertical pipe serves as an entrance or exit to a crossing.
2. A covering or grate over the entrance or exist may occur that would prevent all but the smallest wildlife species from accessing the entrances.
3. The crossing does not entirely traverse a barrier and instead leads from the road to adjacent areas, for instance, a road may contain culverts to divert drainage.
4. A crossing entrance with a diameter less than 24 inches, or with a cross sectional area less than 6 square feet.
5. A crossing entrance immediately adjacent to extremely steep slopes, defined as slopes with an angle of approximately 65 degrees or higher, or areas with extremely steep slopes that a majority of wildlife are likely incapable, or unwilling to scale to get to the surrounding landscape.
6. Crossings directly adjacent to Federal Lands as the Planning Division would have no land use authority in applying development setbacks on these lands.
7. Crossings on roads with extremely low traffic volumes were excluded with 200 vehicle trips per day or less.

The County culverts, County bridges, and Caltrans crossings were also evaluated based on approximately ten functional features that assessed their potential to provide connectivity for wildlife. The number of features for culverts and bridges are slightly different because some are not applicable to either based on its characteristics. For example, the exclusionary feature of a vertical pipe inlet was excluded from the bridge analysis. A list of these functional features along with a description of how they contribute to wildlife use is provided in Table 1. A table ranking each of the culverts and bridges according to the functional features is included in Appendix A.

Table 1 Functional Features and their Support of Functional Connectivity:

Feature	Feature Description	Feature's Contribution to Functional Connectivity
Vegetation	The presence of vegetation within approximately 130 feet (40 meters) of crossing entrances. Vegetation can be any plant material, native, non-native, ornamental landscaping, etc. It can include orchards and row crops. It should not include lawns, or grasses less than 12 inches high.	Scientific literature has shown that vegetation located near entrances to crossings leads to higher use by wildlife (Clevenger and Waltho 2004)
Light Visibility	Light or a view of the other side of a crossing is visible at the crossing entrance based on one of two factors being present. Either the inspection photos demonstrated light was visible from one entrance, or all of the three conditions must exist: the openness ratio of the crossing is greater than 0.20 feet, there is no bend in the crossing based on the culvert inventory specifications, and the slope of the crossing is not more than 10 percent.	Input from National Park Service wildlife biologists that study wildlife movement have stated that crossings in which light is visible at entrances appears to result in higher use by wildlife. The presence of light can indicate that a crossing will allow an individual to safely bypass a barrier.
Openness Ratio	The openness ratio is defined as the cross sectional area of a crossing (height*width) divided by the length or distance an individual must travel to get to the other end.	Larger, more open crossings tend to get more use, especially among medium to large mammals (Beier et al., 2008).. As a result, a crossing with an openness ratio of 0.20 feet or greater was counted as a functional feature.
Barrier Capacity	A road's capacity to be a barrier to wildlife was determined by a number of factors including traffic volumes, road width, and posted road speeds. Roads determined to be a barrier to wildlife movement includes Caltrans jurisdictional roads and wide County roads such as Tierra Rejada Road east of the SR-118 and west of Madera Road.	Roads can create a major barrier to wildlife movement. Road width and vehicle traffic levels and speed affect roadkill rates (Forman and Alexander, 1998). Even two lane roads with low to moderate traffic levels, and roads with high speeds have been shown to result in wildlife mortality (Forman and Alexander, 1998).

Feature	Feature Description	Feature's Contribution to Functional Connectivity
Suitable Habitat	The presence of suitable habitat within approximately 0.5 mile. Suitable habitat was defined broadly as areas that likely support native vegetation or provide habitat for a variety of fauna within Ventura County.	Nearby suitable habitat was shown to be a factor that strongly correlated with crossing use in a study conducted monitoring wildlife movement in Ventura and Los Angeles Counties (Ng et al. 2004).
Fencing	Fencing that is specifically designed to direct wildlife to a crossing, or fencing that excludes wildlife from roadways can increase the use of nearby crossings by wildlife.	Fencing or other barriers can lead to preferential use of the crossing structure instead of crossing over the road (Ng et al 2004).
Crossing Potential	Crossing is at grade with the surrounding terrain, while the barrier (road) is below or above grade.	This feature attempts to determine the likelihood that wildlife will find and utilize the crossing instead of attempt to traverse the barrier e.g. cross the road. More specifically, the feature is counted if the crossing entrance is at grade with the surrounding terrain along the barrier, while the barrier is above or below grade. This is supported by the findings of a study that found vertebrates were 93% less susceptible to road-kills on sections of road raised on embankments, compared to road segments at the natural grade of the surrounding terrain (Clevenger and Waltho 2004).
Landscape Context Crossing Potential	Landscape features near the entrances support the use of the crossing by wildlife e.g. absence of extremely steep terrain, absence of development within a corridor, drainage or wash lead wildlife to entrance, etc.	This feature attempts to determine whether wildlife will come across a crossing entrance, or would instead likely just cross the road to overcome the barrier. This feature determines whether the terrain surrounding, or leading up to, crossing entrances may lead wildlife along a favorable path through the landscape that may be otherwise be a less than desirable to pass. Drainages and riparian zones are commonly used as wildlife corridors.
Natural Substrate	The presence of natural substrate through a crossing e.g. soil, rock, vegetation.	Providing specific substrate leading up to a culvert can enhance the possibility of use (Meese et al. 2007). If the floor of a crossing contains soil, sediment, or vegetation, it can provide a seamless path for wildlife to continue to move

Feature	Feature Description	Feature's Contribution to Functional Connectivity
		through a barrier uninhibited by a change in surroundings. NPS biologists have evidence to suggest that this can be a substantial factor in crossing use. This feature was applied only if natural substrate was present during the maintained state of the crossing, e.g. if a crossing was silted in during the time culvert inventory photos were taken, contains a metal bottom, this feature was not counted.
Proximity to Other Suitable Crossings	Lack of nearby culverts that could also provide passage. This factor was assessed by determining if suitable crossings were located within 0.5 miles of the crossing.	This factor was determined to be relevant in studies performed by NPS biologists.

Vetting of the crossing classifications was conducted by convening and corresponding with a group of agency biologists from Caltrans and the National Park Service (Santa Monica Mountains). Vetting included discussion of the features that are relevant to evaluate a crossing's functionality and a review of the preliminary crossings selected as functional by the group of biologists to gain concurrence. In addition, a site visit was made to examine the conditions at crossing locations for a small subset of crossings in order to better understand on the ground conditions.

Method Assumptions:

- Crossings with an entrance perched above grade with more than a two foot drop to ground level were typically removed.
- The Ventura County Public Works Agency performs annual maintenance on its infrastructure, including wildlife crossings within the County's right of way. However, not all crossings are maintained every year. Crossing conditions were evaluated based on a well-maintained baseline crossing condition. Further, the condition of a crossing captured in photos taken at the time of inventory did not necessarily dictate how the crossing was classified. For example, if a crossing was largely obstructed due to siltation or excessive vegetation, the crossing was evaluated based on its maintained condition e.g. unsilted and cleared out, not on the condition at the time the photo was taken e.g. silted bottom. This established a consistent baseline to evaluate the crossings.
- Diameter values were obtained from the PWA's Culvert Inventory Sheets. These provided the best available data to determine culvert diameter dimensions; however, actual dimensions in the field may be different.

For the "natural substrate" feature, this was counted as a feature that contributed to crossing functionality if the bottom material of a crossing was not made of a constructed material and not if

it consisted of a silted-in CMP. The crossing condition was assessed as if the crossing has been maintained by PWA.

Attachment Appendix A: Ranking of Culverts and Bridges According to their Functional Features

FINAL COUNTY CULVERTS WITH CLASSIFICATIONS AND FACTORS EVALUATED										Exclusionary Factors					
OBJECTID	CulvertID	RoadName	Area	RoadNo	CulvertNo	CulvertCou	LogMile	LogMileORe	Sum of Functional Factors (Must be >=4)	Sum of Exclusionary Features	Vertical Pipe present at entrance? (Y=1, N=0)	Grate or covering at entrance? (Y=1, N=0)	Both entrances do not clearly connect to sides of road (Y=1, N=0)	Steep Slope: Either entrance must not be immediately adjacent or on a slope of 35% (20 deg) or higher (Y=1, N=0)	
10	50822-5-7	LOCKWOOD VALLEY ROAD	LWD	50822	5	7	6.10	S.R. 33, MARICOPA RD.	5	0	0	0	0	0	
60	50825-4-14	LOCKWOOD VALLEY ROAD	LWD	50825	4	14	18.67	S.R. 33, MARICOPA HWY.	6	0	0	0	0	0	
208	51313-1-7	POTRERO ROAD WEST	HVL	51313	1	7	3.80	HUENEME RD.	5	0	0	0	0	0	
667a	66041-14-14	CREEK ROAD	CRK	66041	14	14	unk	S.R. 34	8	0	0	0	0	0	
4	50821-3-4	LOCKWOOD VALLEY ROAD	LWD	50821	3	4	0.80	S.R. 33, MARICOPA HWY.	4	0	0	0	0	0	
59	50825-3-14	LOCKWOOD VALLEY ROAD	LWD	50825	3	14	18.60	S.R. 33, MARICOPA HWY.	4	0	0	0	0	0	
1403	64262-10-24	SANTA ANA ROAD	CAS	64262	10	24	2.01	CASITAS VISTA RD.	4	0	0	0	0	0	
1407	64262-6-24	SANTA ANA ROAD	CAS	64262	6	24	1.57	CASITAS VISTA RD.	4	0	0	0	0	0	
671	66042-4-16	CREEK ROAD	CRK	66042	4	16	2.20	S.R.33	4	0	0	0	0	0	
672	66042-5-16	CREEK ROAD	CRK	66042	5	16	2.30	S.R.33	4	0	0	0	0	0	
691	66061-1-2	HERMOSA ROAD	CRK	66061	1	2	0.05	CREEK RD.	4	0	0	0	0	0	
778	69112-1-1	GRIDLEY ROAD	EOJ	69112	1	1	1.06	GRAND AVE.	4	0	0	0	0	0	
1032	75081-3-18	BOX CANYON ROAD	SSA	75081	3	18	0.62	LA COUNTY LINE	4	0	0	0	0	0	
1072	75363-1-14	SUNSET VALLEY ROAD	MPK	75363	1	14	0.06	READ RD.	4	0	0	0	0	0	
1080	75363-9-14	SUNSET VALLEY ROAD	MPK	75363	9	14	0.82	READ RD.	4	0	0	0	0	0	
1115	75461-7-7	TIERRA REJADA ROAD	MPK	75461	7	7	1.48	760' E/O SR 23, MOORPARK FWY.	4	0	0	0	0	0	
1354	77311-10-12	PIRU CANYON ROAD	PIU	77311	10	12	0.92	970' N/O ORCHARD ST.	4	0	0	0	0	0	
1356	77311-12-12	PIRU CANYON ROAD	PIU	77311	12	12	1.72	970' N/O ORCHARD ST.	4	0	0	0	0	0	
1363	77312-7-7	PIRU CANYON ROAD	PIU	77312	7	7	2.67	970' N/O ORCHARD ST.	4	0	0	0	0	0	
1367	77313-4-23	PIRU CANYON ROAD	PIU	77313	4	23	3.67	970' N/O ORCHARD ST.	4	0	0	0	0	0	

Y CULVERTS WITH							
CulvertID	Suitable Habitat within 0.5 miles of each entrance? (Y=1, N=0)	Fencing or other barriers lead wildlife to crossing (Y=1, N=0)	Crossing is at grade with the surrounding terrain along the barrier, while barrier is above or below grade (Y=1, N=0)	Terrain, drainage, or wash leads wildlife to crossing entrances (Y=1, N=0)	Natural substrate through the crossing (Y=1, N=0)	Lack of Suitable Nearby Culverts that could provide passage (~0.5 miles) based on those included in this analysis	Notes: Please include any notes that clarify something that should be described or if you feel a selection needs to be justified). Also, include a description of a factor not considered in the previous columns but relevant in the classification
50822-5-7	1	0	0	1	0	0	Large opening subgrade along dry wash, unobstructed.
50825-4-14	1	0	0	1	1	0	wash leads to it, large, diameter measurement appropriate.
51313-1-7	1	0	0	1	0	0	large, drainage may funnel wildlife
66041-14-14	1	1	1	1	1	0	New culvert, square box culvert. Formerly numbered 13-13.
50821-3-4	1	0	0	0	0	0	inlet is subgrade, outlet contains concrete rip rap then native vegetation. Round culvert
50825-3-14	1	0	0	0	0	0	flat terrain nothing leads wildlife to entrances
64262-10-24	1	0	0	0	0	0	large, fencing assists use
64262-6-24	1	0	0	0	0	0	
66042-4-16	1	0	0	0	0	0	openness ratio calculated based on square opening, wxh/d
66042-5-16	1	0	0	0	0	0	openness ratio calculated based on square opening, wxh/d
66061-1-2	1	0	0	0	0	0	
69112-1-1	1	0	0	0	0	0	
75081-3-18	1	0	0	0	0	0	
75363-1-14	1	0	0	0	0	0	
75363-9-14	0	0	0	0	1	0	square box culvert
75461-7-7	1	0	0	0	0	1	
77311-10-12	1	0	0	0	0	0	
77311-12-12	1	0	0	0	0	0	square box culvert
77312-7-7	1	0	0	0	0	0	square box culvert
77313-4-23	1	0	0	0	0	0	square box culvert

BRIDGENO	COUNTY BRIDGES CLASSIFICATION		CHANNEL NAME	LOCATION
	ROADNo	ROADName		
335	69051	Boardman Rd	Thacher Creek	0.29 mi. S. of State Hwy. 150
322	69112	Gridley Rd	Crooked Creek	1.27 mi. N. of Ojai Avenue
320	68431	Camino Cielo	Matlilija Creek	0.06 mi. S. of State Hwy. 33
311	64265	Santa Ana Rd	Santa Ana Creek	0.27 mi. N. of Baldwin Road
315	66043	Creek Rd	San Antonio Creek	4.60 mi. NE of State Rte. 33
336	69251	Koenigstein Rd	Bear Creek	0.49 mi. E. of State Hwy. 150
326	69251	Koenigstein Rd	Sisar Creek	0.01 mi. E. of State Hwy.150
426	76181	Goodenough Rd	drainage ditch	2.49 mi. N. of Fifth Street
487	76241	Old Telegraph Rd	Sespe W. Fork	1.76 mi. NE of State Rte. 126
485	76241	Old Telegraph Rd	Sespe E. Fork	1.92 mi. E. of State Rte. 126
437	77212	Center St	Piru Creek	0.33 mi.E. of Main Street
413	77311	Piru Canyon Rd	creek	1.30 mi. N. of Orchard Street
435	77361	Torrey Rd	Santa Clara River	0.45 mi. S. of Howe Road
307	64241	Casitas Vista Rd	Ventura River	0.15 mi. W. of Ventura Avenue
394	64561	Santa Ana Blvd	Ventura River	0.65 mi. W. of State Hwy. 33
398	64561	Santa Ana Blvd	Live Oak Canyon Creek	0.88 mi. W. of State Hwy. 33
367	64511	Chaparral Rd	Live Oak Creek	0.03 mi. E. of Burnham Road
312	64501	Burnham Rd	Live Oak Creek	0.40 mi. E&N of Santa Ana Road
314	66043	Creek Rd	San Antonio Creek	4.17 mi. NE of State Rte. 33
417	77312	Piru Canyon Rd	Piru Creek	3.00 mi. N. of State Rte. 126
412 UPSTREAM	77031	Guiberson Rd	Calumet Canyon	2.54 mi. E. of State Hwy. 23
469	77031	Guiberson Rd	Frey Canyon Wash	3.36 mi. E. of State Hwy. 23
448	76022	South Mountain Rd	Santa Clara River	0.22 mi. S. of Harvard Blvd.
235	75442	Tapo Canyon Rd	Tapo Creek	3.27 mi. N. of Cochran Street
270	75081	Box Canyon Rd	side canyon	1.78 mi. S. of Santa Susana Pass Road
550	62042	Harbor Blvd	Santa Clara River	0.69 mi. s/o Olivas Park Dr.
442	76111	Bridge Rd	Santa Paula Creek	Santa Paula 0.02 mi. E of S.H. 150
415	77313	Piru Canyon Rd	Sisar Creek	2.89 mi. N. of Orchard Street
421	77312	Piru Canyon Rd	Piru Creek	3.70 mi. N. of State Rte. 126
121	62073	Victoria Ave	Santa Clara River	1.30 mi. S. of State Hwy. 101
443	76221	Mupu Rd	Santa Paula Creek	0.25 mi. E. of State Hwy. 150
255	75364	Moorpark Rd	Arroyo Santa Rosa	0.84 mi. S. of Tierra Rejada Road
392	66081	Old Creek Rd	San Antonio Creek	0.01 mi. E/O Rte 33

BRIDGENO	CTLOCATION	Sum of Functional Features (Must be >=4)	Sum of Exclusionary Features	Exclusionary Features		
				Grate or covering at entrance that would prevent most wildlife from passing? (Y=1, N=0)	Steep Slope: Either entrance must not be immediately adjacent or on a slope of 65 degrees or higher (Y=1, N=0)	Are there other obstructions at bridge entrances (e.g. 10+ ft drop at entrance) (Y=1, N=0)
335	0.3 mi. S of S.R. 150	6	0	0	0	0
322	1.27 mi. N of Ojai Avenue	6	0	0	0	0
320	0.1 mi. W of SR 33	7	0	0	0	0
311	0.3 mi. N. of SR 150	7	0	0	0	0
315	W of Country Club Dr.	7	0	0	0	0
336	0.5 mi. NE of SR 150	7	0	0	0	0
326	0.01 mi. N. of State RT 150	7	0	0	0	0
426	2.39 mi. N. of Fifth Street	6	0	0	0	0
487	1.1 mi. NW of "A" St.	6	0	0	0	0
485	1.0 mi N/W of "A" St.	7	0	0	0	0
437	0.7 mi N. of RTE 126	8	0	0	0	0
413	1.3 mi. N of Orchard Street	6	0	0	0	0
435	1.1 mi. S of SR 126	6	0	0	0	0
307	0.1 mi, W of RTE 33	7	0	0	0	0
394	0.5 mi. W. of SR 33	7	0	0	0	0
398	0.7 mi. W.of SR 33	5	0	0	0	0
367	0.03 mi. E of Burnham Road	6	0	0	0	0
312		5	0	0	0	0
314	0.1 mi. NE of Hermosa Road	7	0	0	0	0
417	2.4 mi. N. of Center Street	7	0	0	0	0
412	2.54 mi. E. Of SH.23	7	0	0	0	0
UPSTREAM						
469	3.45 mi. E. of SH 23	4	0	0	0	0
448	0.2 mi. S. of SR 126	7	0	0	0	0
235	3.27 mi. N. of Cochran Street	6	0	0	0	0
270	1.78 mi. S of Sta. Susana Pass Rd.	5	0	0	0	0
550	0.5 mi. S. of Olivas Park Dr.	8	0	0	0	0
442	East of SR 150	7	0	0	0	0
415	3.0 mi. N. of Orchard Street	6	0	0	0	0
421	3.0 mi. N. of Center Street	6	0	0	0	0
121	1.3 mi. S. of Route 101	8	0	0	0	0
443	0.2 mi. E. of SR 150	7	0	0	0	0
255	0.84 mi. S. of Tierra Rejada Road	5	0	0	0	0
392	0.01 mi. E/O Rte 33	8	0	0	0	0

BRIDGENO	Functional Features						Openness Ratio (Calculates automatically)
	Vegetation present within 130 feet of both entrances? (Y=1, N=0)	Light/view of other side is visible at entrance based on photo and lack of bend based on specs/plans (Y=1, N=0)	Crossing Length (from entrance to exit in feet)	Opening height (if rectangular) (feet)	Opening width (if rectangular) in Feet)	**Use this column if it's a round culvert to calculate openness ratio (cross sectional area divided by length)	
335	1	1	48	10	12.1		2.622
322	1	1	18	5	41		11.250
320	1	1	16	5	10		2.996
311	1	1	35	9	88		21.178
315	1	1	38	12	119		37.200
336	1	1	39	12	88		26.951
326	1	1	27	10	51		18.588
426	1	1	42	4	10		0.843
487	1	1	43	12	118		33.293
485	1	1	43	22	120		63.158
437	1	2	38	18	89		40.627
413	1	1	57	10	10		1.754
435	1	1	33	11	30		10.096
307	1	1	32	19	92		55.758
394	1	1	31	15	57		27.446
398	1	1	59	4	8		0.504
367	1	1	38	8	9		1.813
312	1	1	61	18	9		2.508
314	1	1	35	12	120		39.273
417	1	1	35	19	68		36.604
412	1	1	85			95.0	1.117
UPSTREAM							
469	1	1	34	5	12		1.791
448	1	1	36	18	78		38.688
235	1	1	34	8	12		2.824
270	1	1	70	5	10		0.714
550	1	1	32	13	68		26.361
442	1	1	20	14	129		93.472
415	1	1	57	10	10		1.748
421	1	1	48	12	14		3.500
121	1	1	92	15	85		13.630
443	1	1	31	17	25		13.773
255	1	1	192			683.1	3.558
392	1	1	24	22	106		96.740

BRIDGENO						
	Higher Openness Ratio? (>0.80) Calculates automatically	Major Barrier e.g. SR 33, 118, 126, 101, Tierra Rejada Rd (Y=1, N=0)	Drainage contains fairly high quality Habitat (Y=1, N=0)	Drainage (not bridge) is mostly natural substrate (Y=1, N=0)	Natural substrate through the crossing (Y=1, N=0)	Drainage provides desirable path through landscape that may otherwise be difficult to pass (Y=1, N=0) Y=Creates desirable pathway through landscape N=Creates Undesirable pathway through landscape
335	1	0	1	1	0	1
322	1	0	1	1	0	1
320	1	0	1	1	1	1
311	1	0	1	1	1	1
315	1	0	1	1	1	1
336	1	0	1	1	1	1
326	1	0	1	1	1	1
426	1	0	0	1	1	1
487	1	0	0	1	1	1
485	1	0	1	1	1	1
437	1	0	1	1	1	1
413	1	1	0	1	0	1
435	1	0	0	1	1	1
307	1	0	1	1	1	1
394	1	0	1	1	1	1
398	0	0	0	1	1	1
367	1	0	0	1	1	1
312	1	0	0	1	0	1
314	1	0	1	1	1	1
417	1	0	1	1	1	1
412 UPSTREAM	1	0	1	1	1	1
469	1	0	0	0	0	1
448	1	0	1	1	1	1
235	1	0	1	1	0	1
270	0	0	1	1	0	1
550	1	1	1	1	1	1
442	1	0	1	1	1	1
415	1	0	1	1	0	1
421	1	0	1	1	0	1
121	1	1	1	1	1	1
443	1	0	1	1	1	1
255	1	0	0	1	0	1
392	1	1	1	1	1	1

BRIDGENO	
	Notes: Please include any notes that clarify something that should be described or if you feel a selection needs to be justified). Also, include a description of a factor not considered in the previous columns but relevant in the classification
335	
322	
320	
311	
315	
336	*Vertical clearance estimated based on bridge cross section measurements taken from top of top of deck to channel bottom rather than bottom of span to channel bottom.
326	
426	
487	*Vertical clearance estimated based on bridge cross section measurements taken from top of top of deck to channel bottom rather than bottom of span to channel bottom.
485	
437	
413	Gate across upstream entrance, preable to majority of wildlife.
435	
307	*Vertical clearance estimated based on bridge cross section measurements taken from top of top of deck to channel bottom (~9 m depending on measurement location) rather than bottom of span to channel bottom.
394	*Vertical clearance estimated based on bridge cross section measurements taken from top of top of deck to channel bottom (~9 m depending on measurement location) rather than bottom of span to channel bottom.
398	
367	
312	
314	*Vertical clearance estimated based on bridge cross section measurements taken from top of top of deck to channel bottom rather than bottom of span to channel bottom.
417	*Vertical clearance estimated based on bridge cross section measurements taken from top of top of deck to channel bottom rather than bottom of span to channel bottom.
412	Upstream contains circular openings, downstream is rectangular.
UPSTREAM	
469	
448	*Vertical clearance estimated based on bridge cross section measurements taken from top of top of deck to channel bottom rather than bottom of span to channel bottom.
235	
270	
550	
442	
415	Gate across upstream entrance, preable to majority of wildlife. Grouted rip rap floor.
421	
121	*Vertical clearance estimated based on bridge cross section measurements taken from top of top of deck to channel bottom rather than bottom of span to channel bottom.
443	
255	Entrance elliptical at 34' in width and 24.5' in height, calculated as circular with dimension at median of actual measurements; 29.25' in diameter.
392	*Vertical clearance estimated based on bridge cross section measurements taken from top of top of deck to channel bottom rather than bottom of span to channel bottom.

CALTRANS CROSSING CLASSIFICATION

ST_BR_	ST_BR_ID	RTE	PostMile	BRIDGE NO	LAT	LONG	NAME	LOC	FAC
4668	4669	0	R32.43	52 0283	341606	1183806	ROCKY PEAK ROAD OC	07-VEN-118-R32.43	ROCKY PEAK RD OC
4761	4762	0	R21.86	52 0355L	341712	1184742	ALAMOS CYN RD UC	07-VEN-118-R21.86	STATE ROUTE 118
4762	4763	0	R21.86	52 0355R	341712	1184742	ALAMOS CYN RD UC	07-VEN-118-R21.86	STATE ROUTE 118
4741	4742	0	T18.68	52 0331L	341712	1185154	ARROYO SIMI OH	07-VEN-118-T18.68	STATE ROUTE 118
4500	4501	0	28.82	52 0037	342436	1184712	PIRU CREEK	07-VEN-126-28.82	STATE ROUTE 126
4652	4653	0	R12.71	52 0267L	342118	1190248	SANTA PAULA CREEK	07-VEN-126-R12.71-SP	STATE ROUTE 126
4653	4654	0	R12.7	52 0267R	342118	1190248	SANTA PAULA CREEK	07-VEN-126-R12.70-SP	STATE ROUTE 126
4568	4569	0	19.26	52 0183	342336	1185654	SESPE CREEK	07-VEN-126-19.26	STATE ROUTE 126
4567	4568	0	19.73	52 0182	342336	1185624	SESPE CREEK OVERFLOWW	07-VEN-126-19.73	STATE ROUTE 126
NA	UNK	0	UNK	UNK	344066	1187383	NEWHALL RANCH ROAD		STATE ROUTE 126
NA	UNK	0	UNK	UNK	343953	1188831	FISH HATCHERY		STATE ROUTE 126
4750	4751	0	R13.84	52 0345	342536	1191742	HAPPY VAL DRN	07-VEN-150-R13.84	STATE ROUTE 150
4538	4539	0	21.7	52 0099	342600	1191200	LION CANYON CREEK	07-VEN-150-21.70	STATE ROUTE 150
4626	4627	0	10.98	52 0244	342512	1192024	SANTA ANA CREEK	07-VEN-150-10.98	STATE ROUTE 150
4541	4542	0	28.53	52 0104	342536	1190524	SANTA PAULA CREEK	07-VEN-150-28.53	STATE ROUTE 150
4542	4543	0	28.61	52 0105	342536	1190518	SANTA PAULA CREEK	07-VEN-150-28.61	STATE ROUTE 150
4540	4541	0	28.48	52 0103	342536	1190536	SISAR CREEK	07-VEN-150-28.48	STATE ROUTE 150
4763	4764	0	R13.42	52 0358	342530	1191806	VENTURA RIVER	07-VEN-150-R13.42	STATE ROUTE 150
4768	4769	23	R9.84	52 0368	341548	1185048	TIERRA REJADA CHANNEL	07-VEN-023-R9.84	STATE ROUTE 23
NA	NA	23	NA	NA	342520	1188408	DAY FARMS CULVERT		STATE ROUTE 23
4519	4520	33	19.36	52 0074	343048	1191618	BEAR CREEK	07-VEN-033-19.36	STATE ROUTE 33
4521	4522	33	20.76	52 0076	343012	1191648	CANON CREEK	07-VEN-033-20.76	STATE ROUTE 33
4560	4561	33	20.48	52 0170	343000	1191636	CANON CREEK	07-VEN-033-20.48	STATE ROUTE 33
4535	4536	33	50.7	52 0092	344236	1192236	CASTLE CREEK	07-VEN-033-50.70	STATE ROUTE 33
4532	4533	33	51.78	52 0088	344318	1192300	CORRAL CANYON CREEK	07-VEN-033-51.78	STATE ROUTE 33
4530	4531	33	48.69	52 0086	344118	1192130	CUYAMA RIVER	07-VEN-033-48.69	STATE ROUTE 33
4504	4505	33	15.52	52 0043	342912	1191812	N FORK MATILIJA CREEK	07-VEN-033-15.52	STATE ROUTE 33
4505	4506	33	15.82	52 0044	342918	1191818	N FORK MATILIJA CREEK	07-VEN-033-15.82	STATE ROUTE 33
4511	4512	33	17.41	52 0066	343024	1191736	NORTH FORK MATILIJA CR	07-VEN-033-17.41	STATE ROUTE 33
4512	4513	33	17.84	52 0067	343036	1191712	NORTH FORK MATILIJA CR	07-VEN-033-17.84	STATE ROUTE 33
4563	4564	33	16.13	52 0173	342930	1191818	NORTH FORK MATILIJA CR	07-VEN-033-16.13	STATE ROUTE 33
4548	4549	33	52.09	52 0120	344342	1192318	OAK CREEK	07-VEN-033-52.09	STATE ROUTE 33
4531	4532	33	50.91	52 0087	344248	1192248	ROUND SPRINGS CREEK	07-VEN-033-50.91	STATE ROUTE 33
4510	4511	33	7.58	52 0065	342248	1191812	SAN ANTONIO CREEK	07-VEN-033-7.58	STATE ROUTE 33
4503	4504	33	14.58	52 0042	342806	1191706	SHELDON CANYON	07-VEN-033-14.58	STATE ROUTE 33
4549	4550	33	52.59	52 0121	344406	1192348	TIMBA CREEK	07-VEN-033-52.59	STATE ROUTE 33
4522	4523	33	29.65	52 0077	343336	1191600	TULE CREEK	07-VEN-033-29.65	STATE ROUTE 33
NA	NA	0	NA	NA	34	1189775	CONEJO GRADE BOX CULVERT		U.S. HIGHWAY 101
4624	4625	0	30.94	52 0241L	341654	1191830	VENTURA RIVER	07-VEN-101-30.94-VEN	U.S. HIGHWAY 101
4625	4626	0	30.94	52 0241R	341654	1191830	VENTURA RIVER	07-VEN-101-30.94-VEN	U.S. HIGHWAY 101
NA	UNK	0	UNK	UNK	344032	1187038	CAMINO DEL REMEDIO		STATE ROUTE 126
4709	4710	23	R8.19	52 0312L	341436	1185012	OLSEN ROAD UC	07-VEN-023-R8.19-THC	STATE ROUTE 23
4710	4711	23	R8.21	52 0312R	341436	1185012	OLSEN ROAD UC	07-VEN-023-R8.21-THC	STATE ROUTE 23
4711	4712	23	R8.21	52 0312S	341436	1185012	OLSEN ROAD UC	07-VEN-023-R8.21-THC	STATE ROUTE 23
4720	4721	23	R10.16	52 0319L	341600	1185100	TIERRA REJADA ROAD UC	07-VEN-023-R10.16-MI	STATE ROUTE 23
4721	4722	23	R10.16	52 0319R	341600	1185100	TIERRA REJADA ROAD UC	07-VEN-023-R10.16-MI	STATE ROUTE 23
4719	4720	23	R10.16	52 0319K	341600	1185100	TIERRA REJADA ROAD UC	07-VEN-023-R10.16-MI	RAMP/CONNECTOR 23

BRIDGE NO	Sum of Functional Features (>=4 is needed to be included)	Exclusionary Features				Functional Features	
		Sum of Exclusionary Features	Grate or covering at entrance? (Y=1, N=0)	Steep Slope: Either entrance must not be immediately adjacent or on a slope of 65 degrees or higher (Y=1, N=0)	Other obstructions at bridge entrances (e.g. 10+ ft drop at entrance) (Y=1, N=0)	Vegetation present within 130 feet of both entrances? (Y=1, N=0)	Light/view of other side is visible at entrance based on photo and lack of bend based on specs/plans (Y=1, N=0)
52 0283	5	0	0	0	0	1	1
52 0355L	6	0	0	0	0	1	1
52 0355R	6	0	0	0	0	1	1
52 0331L	8	0	0	0	0	1	1
52 0037	8	0	0	0	0	1	1
52 0267L	5	0	0	0	0	1	1
52 0267R	5	0	0	0	0	1	1
52 0183	8	0	0	0	0	1	1
52 0182	8	0	0	0	0	1	1
UNK	5	0	0	0	0	0	1
UNK	5	0	0	0	0	1	1
52 0345	7	0	0	0	0	1	1
52 0099	8	0	0	0	0	1	1
52 0244	7	0	0	0	0	1	1
52 0104	8	0	0	0	0	1	1
52 0105	8	0	0	0	0	1	1
52 0103	8	0	0	0	0	1	1
52 0358	7	0	0	0	0	1	1
52 0368	5	0	0	0	0	1	1
NA	5	0	0	0	0	1	1
52 0074	7	0	0	0	0	1	1
52 0076	6	0	0	0	0	1	1
52 0170	6	0	0	0	0	1	1
52 0092	7	0	0	0	0	1	1
52 0088	7	0	0	0	0	1	1
52 0086	7	0	0	0	0	1	1
52 0043	8	0	0	0	0	1	1
52 0044	8	0	0	0	0	1	1
52 0066	8	0	0	0	0	1	1
52 0067	8	0	0	0	0	1	1
52 0173	7	0	0	0	0	1	1
52 0120	7	0	0	0	0	1	1
52 0087	7	0	0	0	0	1	1
52 0065	7	0	0	0	0	1	1
52 0042	7	0	0	0	0	1	1
52 0121	7	0	0	0	0	1	1
52 0077	8	0	0	0	0	1	1
NA	5	0	0	0	0	1	1
52 0241L	8	0	0	0	0	1	1
52 0241R	8	0	0	0	0	1	1
UNK	4	0	0	0	0	1	0
52 0312L	4	0	0	0	0	1	1
52 0312R	4	0	0	0	0	1	1
52 0312S	4	0	0	0	0	1	1
52 0319L	4	0	0	0	0	1	1
52 0319R	4	0	0	0	0	1	1
52 0319K	4	0	0	0	0	1	1

BRIDGE NO	Crossing Length (from entrance to exit in feet)	Opening height (if rectangular) (feet)	Opening width (if rectangular in Feet)	**Use this column if it's a round culvert to calculate openness ratio (cross sectional area divided by length)	Openness Ratio (Calculates automatically)	Higher Openness Ratio? (>0.80) Calculates automatically	Major Barrier e.g. SR 33, 118, 126, 101, Tierra Rejada Rd (Y=1, N=0)
52 0283	41	18	88		38.672	1	1
52 0355L	41	16	72		27.780	1	1
52 0355R	41	16	72		27.780	1	1
52 0331L	46	24	177		94.317	1	1
52 0037	84	9	120		12.931	1	1
52 0267L	39	25	68		43.027	1	1
52 0267R	39	25	68		43.027	1	1
52 0183	79	16	45.76		9.263	1	1
52 0182	79	10	57		6.879	1	1
UNK	147	15	91		9.088	1	1
UNK	104	2	7		0.144	0	1
52 0345	28	11	23		9.108	1	1
52 0099	23			2542.4	111.903	1	1
52 0244	50	10	11		2.106	1	1
52 0104	33	28	170		143.508	1	1
52 0105	32	13	65		26.376	1	1
52 0103	32	15	55		26.531	1	1
52 0358	46	13	107		31.110	1	0
52 0368	267	6	10		0.207	0	1
NA	448	9	10	91.8	0.205	0	1
52 0074	35	12	71		24.778	1	0
52 0076	51	5	10		0.911	1	0
52 0170	42	5	8		0.879	1	0
52 0092	31	9	20		5.398	1	0
52 0088	32	2	19		1.331	1	0
52 0086	35	33	146		138.522	1	0
52 0043	33	18	140		76.065	1	1
52 0044	28	21	59		44.192	1	1
52 0066	35	15	95		39.741	1	1
52 0067	35	16	144		66.815	1	1
52 0173	28	10	52		18.409	1	
52 0120	32	7	19		4.247	1	0
52 0087	32	5	16		2.525	1	0
52 0065	43	13	55		16.707	1	0
52 0042	31	7	74		17.221	1	0
52 0121	31	6	20		3.579	1	0
52 0077	34	11	130		39.939	1	1
NA	135	10	10		0.741	0	1
52 0241L	52	26	79		39.374	1	1
52 0241R	44	27	79		47.596	1	1
UNK	229	1	5		0.022	0	1
52 0312L	56	18	134		43.842	1	1
52 0312R	40	18	124		56.502	1	1
52 0312S	34	17	25		12.398	1	1
52 0319L	40	16	89		35.811	1	1
52 0319R	55	16	89		26.177	1	1
52 0319K	25	16	82		52.367	1	1

BRIDGE NO	Drainage or path near entrances contains fairly high quality Habitat (Y=1, N=0)	Drainage or path near entrance (not bridge) is mostly natural substrate (Y=1, N=0)	Natural substrate through the crossing (Y=1, N=0)	Does the path that leads to crossing entrances provides desirable path through landscape that is otherwise difficult to pass (Y=1, N=0)	Is the crossing structure used as a bridge more than a tunnel (Y=1, N=0)	Crossing apart of an Agency or Academic Study
52 0283	0	0	0	1	1	
52 0355L	0	0	1	1		
52 0355R	0	0	1	1		
52 0331L	1	1	1	1		
52 0037	1	1	1	1		
52 0267L	0	0	0	1		
52 0267R	0	0	0	1		
52 0183	1	1	1	1		
52 0182	1	1	1	1		
UNK	0	1	1	0	0	1
UNK	0	1	1	0	0	1
52 0345	1	1	0	1	0	
52 0099	1	1	1	1		
52 0244	1	1	0	1		
52 0104	1	1	1	1		
52 0105	1	1	1	1		
52 0103	1	1	1	1		
52 0358	1	1	1	1		
52 0368	0	1	0	1	0	1
NA	0	1	1	0	0	1
52 0074	1	1	1	1		
52 0076	1	1	0	1		
52 0170	1	1	0	1		
52 0092	1	1	1	1		
52 0088	1	1	1	1		
52 0086	1	1	1	1		
52 0043	1	1	1	1		
52 0044	1	1	1	1		
52 0066	1	1	1	1		
52 0067	1	1	1	1		
52 0173	1	1	1	1		
52 0120	1	1	1	1		
52 0087	1	1	1	1	0	0
52 0065	1	1	1	1		
52 0042	1	1	1	1		
52 0121	1	1	1	1		
52 0077	1	1	1	1		
NA	0	1	1	0	0	1
52 0241L	1	1	1	1		
52 0241R	1	1	1	1		
UNK	0	1	0	1	0	1
52 0312L	0	0	0	0	0	0
52 0312R	0	0	0	0	0	0
52 0312S	0	0	0	0	0	0
52 0319L	0	0	0	0		
52 0319R	0	0	0	0		
52 0319K	0	0	0	0		

BRIDGE NO	Notes: Please include any notes that clarify something that should be described or if you feel a selection needs to be justified). Also, include a description of a factor not considered in the previous columns but relevant in the classification
52 0283	This is meant as a bridge instead of an overpass, so criteria were evaluated in light of this difference.
52 0355L	
52 0355R	
52 0331L	
52 0037	
52 0267L	
52 0267R	
52 0183	
52 0182	
UNK	Data input from NPS kmz file authored by Joanne Moriarty, Justin Brown, and Seth Riley
UNK	Data input from NPS kmz file authored by Joanne Moriarty, Justin Brown, and Seth Riley
52 0345	
52 0099	Opening is tall arch (i.e., semi circular) in shape, and spans a v-shaped drainage.
52 0244	Bridge over 2 box culverts (3 m x 3 m) and 1 trapezoidal culvert box of slightly smaller dimensions.
52 0104	*Opening height estimated from channel cross section which listed the height from top of bridge deck to channel bottom rather than bottom of bridge span to channel bottom.
52 0105	*Opening height estimated from channel cross section which listed the height from top of bridge deck to channel bottom rather than bottom of bridge span to channel bottom.
52 0103	
52 0358	Includes 7 independent bridge spans across the Ventura River, measurements provided for largest single span.
52 0368	
NA	Data from NPS Study of SR-23 (Riley and Brown 2012)
52 0074	
52 0076	
52 0170	
52 0092	*Opening height estimated from channel cross section which listed the height from top of bridge deck to channel bottom rather than bottom of bridge span to channel bottom.
52 0088	
52 0086	*Opening height estimated from channel cross section which listed the height from top of bridge deck to channel bottom rather than bottom of bridge span to channel bottom.
52 0043	Bridge number 52 0043
52 0044	Bridge number 52 0044
52 0066	Bridge number 52 0066
52 0067	Bridge number 52 0067
52 0173	Bridge number 52 0173
52 0120	
52 0087	Internal area of bridge underway not visible in reports or GIS. Substrate assumed to be natural as described in report but not visually verified.
52 0065	52 0065
52 0042	52 0042
52 0121	51 0121;
52 0077	52 0442;
NA	Height, width, and length measurements are approximated from photographs. Crossing was apart of Ng et al 2004 study
52 0241L	52 0241L
52 0241R	52 0241R
UNK	Data input from NPS kmz file authored by Joanne Moriarty, Justin Brown, and Seth Riley
52 0312L	52 0312L: Bridge spans cross over Olsen Road to provide crossing for Hwy 23.
52 0312R	52 0312R: Bridge spans cross over Olsen Road to provide crossing for Hwy 23.
52 0312S	52 0312S: Bridge spans cross over Olsen Road to provide crossing for Hwy 23. Part of offramp
52 0319L	53 0319L: Bridge spans cross over Tierra Rejada Road to provide crossing for Hwy 23.
52 0319R	53 0319R: Bridge spans cross over Tierra Rejada Road to provide crossing for Hwy 23.
52 0319K	53 0319K: Bridge spans cross over Tierra Rejada Road to provide crossing for Hwy 23.

Exhibit 22

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