May 28, 2021

Caltrans District 11
Attn: Debra Soifer
4050 Taylor Street, MS 242
San Diego, CA 92110
Via email only: D11.SR67Improvements@dot.ca.gov
Debra.Soifer@dot.ca.gov

Subject: Comments on the State Route 67 Highway Improvements Project

Dear Ms. Soifer,

The undersigned organizations appreciate that, per its Virtual Scoping Meeting on January 27, 2021, Caltrans is accepting comments on the State Route 67 Highway Improvements Project (Project) throughout its development process, even though the comment period for the Project-related Notice of Preparation (NOP) ended in February. We understand that our comments herein will not be published in the Project's joint draft Environmental Impact Report /Environmental Impact Statement and supporting documentation (DEIR/EIS) projected for public review in the summer of 2023. We nevertheless urge Caltrans to design Project alternatives that reflect our comments by incorporating multiple optimally designed and sited wildlife-only crossings (e.g., culverts, bridges, overpasses) and fencing based on field studies for the wildlife species known to date to cross State Route 67 (SR-67).

The biological importance of the lands around the Project area, many of which are in permanent conservation and part of the Multiple Species Conservation Plan (MSCP) – South, makes it vital that the Project's wildlife crossings, in conjunction with land acquisition, habitat restoration, and management, restore functional connections to adjacent linkages / core areas and thereby support viable wildlife populations in perpetuity.

Project Need and Purpose with Respect to Wildlife

The Project focuses on operational improvements emphasizing mobility and safety for the traveling public and goods. The Project-related NOP and webpage provide the following details about wildlife.[1]

a. SR-67 limits the movement of recreational users and wildlife, including endangered wildlife species. [2]
b. There are no crossings dedicated for wildlife within the 16-mile long project limits.
c. Various travel modes are considered during typical and emergency highway conditions, including emergency access, recreational access, and wildlife connectivity.
d. The improvements will address deficiencies in multimodal transportation along with recreational and wildlife movement.
e. Wildlife movement includes the following elements as part of wildlife corridors:
   - Culverts allowing wildlife to cross under the roadway; and
   - Bridges and/or roadway tunnels, allowing wildlife to cross over the roadway [sic].
f. The wildlife-related objectives of the Project are to:
   - facilitate wildlife movement along and across the route; and
   - actively preserve the natural environment along the route.

Project Description (information available to date)

For planning purposes, the approximately 16-mile long Project area along SR-67 is divided into six segments; which segments will be improved first will be decided after the environmental studies are completed. Table 1 provides information about each segment.

[1] NOP: https://files.ceqanet.opr.ca.gov/267073-2/attachment/dNxEOC-creKx311nLWiNyej2e3_fQ5FzIYqOAZZrGa99oCbYfoh9isgI64Qf7BqVnFZxIcRFKTBK0Ral0
Other Project-related information, including the video of the Virtual Scoping Meeting on January 27, 2021: https://dot.ca.gov/caltrans-near-me/district-11/current-projects/sr67-corridor/improvements

[2] Listed species having potential to use crossings of SR-67 and surrounding wildlife corridors are: Quino checkerspot butterfly (*Euphydryas editha quino*), Arroyo toad (*Anaxyrus californicus*), California gnatcatcher (*Polioptila californica*), and Stephens' kangaroo rat (*Dipodomys stephensi*) (Tables 1 and 3 in the 2017 SR-67 Report). Other species considered for potential to use crossings of SR-67 are: Cactus wren (*Campylorhynchus brunneicapillus*), Hermes copper butterfly (*Lycaena hermes*, federally proposed for listing), Coachwhip (*Coluber flagellum*), Granite spiny lizard (*Sceloporus orcutti*), Two-striped garter snake (*Thamnophis hammondii*), Western toad (*Anaxyrus boreas*), Western whiptail (*Aspidoscelis tigris*), Pallid bat (*Antrozous pallidus*), Townsend's big eared bat (*Corynorhinus townsendii*), American badger (*Taxidea taxus*), and Ringtail (*Bassariscus astutus*). Additional focal species in the Project area and representing a wide range of movement abilities and habitat requirements are: California mouse *(Peromyscus californicus*), Big-eared woodrat *(Neotoma macrotis*), Wrentit (*Chamaea fasciata*), Mule deer (*Odocoileus hemionus californicus*), Bobcat (*Lynx rufus*), and Puma *(Puma concolor*).

Table 1 SR-67 Project Planning Segments			
location	miles	driveways & unnamed roads	stop control roads
Mapleview Street to Willow Road	0.75	-	-
Willow Road to Vigilante Road	2.47	22	7
Vigilante Road to Scripps Poway Parkway	4.2	8	4
Scripps Poway Parkway to Poway Road	1.72	8	5
Poway Road to Archie Moore Road	3.35	8	10
Archie Moore Road to Highland Valley/Dye Road	2.75	46	18

Table 2 lists the conceptual Project alternatives (other than the no-project alternative) and the width of the roadway and total impact area of each alternative.

Table 2 SR-67 Conceptual Project Alternatives : widths in feet							
	Project Alternatives						
	1	**2**	**3**	**4**	**5**	**6A**	**6B**
Roadway	200	82	45	57	69	59	62
Total Impact Area	250	230	120	140	160	170	170

Overview of SR-67 with Respect to the Multiple Species Conservation Program (MSCP)

Per the 1998 MSCP Plan (Figure 2-2), most of SR-67 within the Project area lies within and bisects the Central Poway/San Vicente Reservoir/North Poway MSCP biological core area (i.e., BCA #11). The 2003 Wildlife Corridor Monitoring Study for the MSCP (CBI 2003) recommended several habitat management measures applicable to culvert and bridge locations to be implemented as part of the MSCP adaptive management program, explicitly identified culverts along SR-67 as appearing not to be functional for some species, and recommended evaluation of the feasibility of providing an additional passageway, a bridge instead of a culvert, and conservation of additional habitat. The 2004 San Diego Transportation Improvement Program Ordinance and Expenditure Plan (2004 Extension Ordinance, also known as Proposition A)[3] lists projects for three highways - SR 67, SR 76, and a portion of SR 94 – as including environmental enhancements, as described in the document titled "Environmental Enhancement Criteria Mitigating Highway 67, 76 and 94 Expansion Impacts" (Attachment 1); this document states that the regional wildlife movement corridors bisected by the roads are "essential 'infrastructure' for our region's nationally-recognized habitat preservation plans" and establishes the net benefit standard for these highway projects. The 2010 California Essential Habitat Connectivity Project maps the location the Project area traverses as essential connectivity area and natural landscape block (Spencer et al. 2010), calling for local-scale analyses and the preparation of road improvement plans prior to construction.

In 2014, the U.S. Geological Survey (USGS) conducted an evaluation of habitat linkages in San Diego County (based on previous work on connectivity [4]) and determined a need for SR-67 from Lakeside to Ramona to be redesigned to accommodate wildlife movement across it. [5] A 2015 SANDAG-funded report concluded that, while there is some level of functioning of crossings along SR-67, wildlife crossing

[3] https://www.sandag.org/uploads/publicationid/publicationid_1283_6596.pdf, the 2004 extension of the 1987 TransNet Ordinance.

[4] https://sdmmp.com/view_project.php?sdid=SDMMP_SDID_187_5d7fcda52b1ba 2011 documents; Appendix 3 contains helpful figures additional to the main document.

[5] https://sdmmp.com/upload/SDMMP_Repository/0/9cnjrspvyt4bkdz18w2mhgq7056fx.pdf 2014

rates are relatively low and roadkill rates are high, and that the research supports the supposition that SR-67 is having an impact on local wildlife populations both through the barrier effect and through direct mortality (Jennings and Lewison 2015; hereafter, the 2015 SR-67 Report). The San Diego Management and Monitoring Program's (SDMMP) 2017 MSP Roadmap includes SR-67 among five roadways within the MSCP and MHCP plan areas that stand out as impeding wildlife movement within biological core areas.[6] The SDMMP's MSP webpage dedicated to SR-67 multi-species connectivity planning reflects the concern about the impediment SR-67 presents to wildlife movement and is the repository for a 2017 SANDAG-funded report (Jennings and Zeller 2017; hereafter, the 2017 SR-67 Report). [7]

COMMENTS

The Project provides a rare opportunity to modify SR-67 to greatly facilitate safe wildlife movement across and along it – this would meet the longstanding challenge to wildlife of a barrier to movement between MSCP biological core areas by addressing the long-known need to redesign SR-67 to accommodate wildlife movement across it (CBI 2003, 2004 Extension Ordinance, Spencer et al. 2010, USGS 2014, the 2015 and 2017 SR-67 Reports). It would also meet the objectives for wildlife movement the 2004 Extension Ordinance mandated. As there are currently no crossings dedicated for wildlife within the 16-mile long Project area, the increase in volume of vehicles and vehicle miles travelled concomitant with widening SR-67 could worsen its impedance to wildlife movement and thereby exacerbate the already high incidence of roadkill, frequent wildlife-vehicle collisions, and vehicle- and bike-related maneuvers to avoid wildlife (footnote #3, page 39). These potential consequences for wildlife and human safety, in conjunction with concerns for human safety related to evacuation from wildfire, create an imperative to upgrade SR-67 in a manner that fully addresses all these issues.

Our comments focus on the need for multiple well-designed and strategically sited crossings for wildlife separate and appropriately distanced from crossings for humans. The separate crossings are necessary to avoid human disturbance to wildlife as they use their crossings. The basis of this focus is that the majority of the documented effects on wildlife from non-consumptive recreation are negative (Steven et al. 2011; Reed et al. 2014; Larson et al. 2016; Hennings 2017; Patten and Burger 2018). [8]

1. Given the background of SR-67 summarized above with respect to the MSCP, it is appropriate that the Project's need and purpose statements identify in various ways the mandate to facilitate wildlife movement along and across SR-67. It is therefore concerning that the descriptions provided during the Scoping Meeting of the six conceptual Project alternatives exclude mention of wildlife crossings; their locations are not yet known with certainty (comment #5), but the descriptions should have at least mentioned the crossings. The alternatives in the DEIR/EIS must include measures and structures to meet the Project's need and purpose statements so that wildlife movement along and across SR-67 is integral to the Project, part of the Project description, as important as any other component of the Project in every step of its planning, design, environmental analysis and decision-

[6] Management and Monitoring Strategic Plan for Conserved Lands in Western San Diego County: *A Strategic Habitat Conservation Roadmap* (MSP Roadmap, 2017) - https://sdmmp.com/msp_doc.php, specifically Section 8 - Loss of Connectivity - in Volume 2B: Goals and Objectives for Threats/Stressors : https://sdmmp.com/upload/threats/threats_background/MSP%20Vol2B%20Connectivity%202017_1494454325.pdf

[7] https://sdmmp.com/view_project.php?sdid=SDID_mjennings@mail.sdsu.edu_588ebd5fa8561

[8] Here, non-consumptive recreation includes only walking / hiking, wildlife photography, jogging, biking, and horseback riding. Other terms that often convey such recreation are "public access," "human use." For this context, any human presence can be a disturbance, regardless of whether it is recreational per se.

making processes.[9] The "Environmental Enhancement Criteria Mitigating Highway 67, 76 and 94 Expansion Impacts" in the 2004 Extension Ordinance mandate that a Net Environmental Benefit (NEB) objective be met as an essential and primary component of the road expansion projects. This can include habitat acquisition (e.g., Rancho Lilac for SR-76) but is primarily to ensure that wildlife movement will be ***enhanced*** by the projects. The DEIR/EIS must unambiguously establish this NEB objective, which is above and beyond the mitigation measures and capital improvements that will be required to meet standard CEQA and MSCP obligations.

Siting the Wildlife Crossings and Fencing

Provide Separate Crossings for Wildlife and Humans

2. During the Question and Answer (Q&A) session of Caltrans' Scoping Meeting was a question about whether the pathways for wildlife crossings would also be available for hikers. Caltrans staff stated that Caltrans will look at the "County and recreational pathways that are in the plan and in the foreseeable future…depending on the size and the nature of the crossing, it could possibly be accessible to hikers" (minute 1:48:10). Staff mentioned working with the resource agencies and then stated, "we want to make sure that anything we build is really accessible to all; I don't know that it will absolutely be accessible to wildlife and hikers, but it will be identified in the draft environmental document and it will be explained why it can or cannot…"

   Given the background of SR-67 summarized above with respect to the MSCP, and the information in points a – f below, we strongly recommend that all the proposed wildlife crossings be exclusively for wildlife and that Caltrans provide separate crossing opportunities for humans.

   The ensuing information in points a – f and the cited documentation provide substantial evidence for the need to integrate recreation ecology into the assessment of the compatibility of the analyzed crossing sites, to determine if the locations of extant or known future trails and recreation/human presence might allow for their wildlife-related disturbance to permeate into areas where they may disrupt wildlife use of the crossing sites. [10] [11]

   a. Hundreds of millions of dollars have been spent in assembling a regional preserve system in San Diego County. Key to the system providing the anticipated biological benefits is the assumption that habitat linkages would connect its biological core areas. [12] Similarly, crossings that allow wildlife to move under or over barriers within preserve linkages or core areas are critical to realizing the preserve system's biological benefits, and the wildlife using the crossings must be protected from human disturbance that impedes their use.

   b. The wildlife in the MSCP biological core areas which SR-67 bisects live with many constraints, and the wildlife crossings along SR-67 are choke points - the epitome of a physical constraint

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[9] Section 4.2.1 at https://arc-solutions.org/wp-content/uploads/2017/02/CaltransConnectivityForums_WTIFinalReport-1.pdf.

[10] Compatibility = compatible with the perpetuation of viable populations of native wildlife species on conserved lands and with the function of the wildlife crossings in the biological core areas and linkages where they are.

[11] Recreation ecology is the scientific study of the ecological effects of outdoor recreation and nature-based tourism activities and their effective management in natural or semi-natural environments (Monz et al. 2013; Gutzwiller et al. 2017).

[12] https://sdmmp.com/upload/SDMMP_Repository/0/hw4xq50mcbgy3vsd91k2fn6pzjt7r8.pdf 2011

(threat / stressor). As informed by recreation ecology, allowing humans to use the wildlife crossings is counter to conservation biology, nor is it protective of the species for which the crossings are intended. The geographic, regulatory, and biological context of the MSCP conserved lands is pertinent here - these lands represent long-negotiated compromises for the sensitive species they are intended to protect in perpetuity. For some of these lands, no ecologically sound further compromise (e.g., expansion of public access / human presence) is possible; while recreation may be considered conditionally compatible on such lands, if open to public access at all, the extant levels of recreation may strain their ability to meet their conservation objectives. Conserved lands that represent the final compromise for the species they support are particularly vulnerable to their wildlife values being compromised due to inadequate management (CDFW 2015). Limiting or prohibiting recreation in strategic circumstances and locations within conserved lands is necessary to achieve conservation objectives (Reed and Merenlender 2008; Bötsch et al. 2018; Dertien et al. 2018; Reed et al. 2019). Of course, this presumes sufficient management to maintain whatever recreational limits are set.

If the DEIS/EIR does not account for the ecological footprint of trails and recreation on wildlife the crossings are to serve, its biological analysis will be inadequate. Here, ecological footprint or effect zone is the area within which an animal's approach to, use of, or departure from a crossing is reversed, interrupted, or prolonged, respectively, because of human disturbance.[13] [14]

c. Volume 1 of SDMMP's MSP Roadmap [15] contains a discussion titled *Human Use of Preserves*, which provides an overview of the trail- and recreation-related effects on wildlife and the "growing awareness that even quiet, non-consumptive recreational activities can affect the distribution and abundance of certain species within areas." [16] In fact, the evidence documented in the recreation ecology literature of the trail- and recreation-related disturbances to wildlife reveals that recreation should not be assumed to be compatible with biological conservation. This is particularly true when authorized or unauthorized trails and recreation occur in areas where there is potential of their disturbing sensitive species and/or when there is insufficient monitoring, management, and enforcement of recreation to ensure the perpetuation of viable populations of the sensitive species. [17]

Recreation-related direct disturbance to wildlife is often easily seen, including trail-kill (e.g., trampled amphibians or reptiles) and flushing of animals. Indirect recreation-related adverse effects on wildlife are typically not easily discerned and include detrimental changes in behavior (e.g., vigilance, foraging, hunting), reproduction, growth, immune system

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[13] For more information about the effect zone, refer to https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178956&inline.

[14] Jennings and Lewison (2013) assign levels of recreation at 13 locations along SR-67 (Table 1, page 39). The levels were low, medium, and high with all of the five culverts listed having a low level of recreation. However, the 2013 report provides no description of the levels nor the distance from the crossings to which the assignations apply. And, the 2015 SR-67 Report notes high levels of human activity at two culverts then under study, one of them across from Sycamore Canyon – Goodan Ranch Preserve; the authors recommend limiting human activity in the ROW and through culverts as a top recommendation for improving culvert functionality (page 19).

[15] https://sdmmp.com/upload/SDMMP_Repository/0/s2fh85q3g1vdk7ry0nxpzb6mtcw9j.pdf

[16] https://sdmmp.com/upload/threats/threats_background/MSP%20Vol2B%20HumanUse%202017_1494454044.pdf

[17] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178943&inline, specifically the article at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178951&inline.

function, levels of stress hormones, the survival of individual animals, and ultimately the persistence of wildlife populations and communities. Refer to the Special Issue of the California Fish and Wildlife Journal titled *Effects Of Non-Consumptive Recreation On Wildlife In California* for more information about the trail- and recreation-related disturbance to wildlife. [17]

d. Recreational trails themselves can fragment habitat, thereby causing fragmentation that is internal to the areas they traverse (Pickering 2010a; Leung et al. 2011; Burgin and Hardiman 2012; Pickering and Norman 2017). Substantial evidence exists that trails may act as barriers to the movement of animals due to behavioral avoidance, the presence of a physical barrier, or development of a home range along the physical barrier (Burgin and Hardiman 2012). Trail density is a main factor influencing how wildlife respond to trail users and the ability of wildlife to disperse or reach seasonally important habitats such as breeding grounds (D'Acunto et al. 2018). Particularly when resulting from unauthorized trails or poorly sited and/or designed official trails, internal fragmentation can compound the negative effects of the external fragmentation in the surrounding landscape. A likely consequence of internal fragmentation within conserved lands is that the mere presence of trails, even in the absence of humans, can compromise conserved lands' ability to sustain sensitive species (Pickering and Norman 2017; Baker and Leberg 2018).[18]

e. As to human presence, mammalian carnivores' responses to human voices alone can result in landscape-scale effects across wildlife communities, including cascading effects on the behavior of lower trophic level animals (Suraci et al., 2019). Among other specific responses, increased human presence can (1) affect large carnivore movement, which could eventually limit carnivores' hunting and feeding behavior or force individuals to abandon high risk areas of their home range, and (2) suppress activity of medium-sized carnivorous species (Suraci et al., 2019). Clearly, both trails and human presence can affect how or even if wildlife use crossings.

f. The San Diego Tracking Team (SDTT) has documented the effects on wildlife from increasing recreational use of the Scripps Poway Parkway wildlife tunnel less than a mile west of SR-67, having monitored the tunnel since shortly after its construction. In the past few years, bicyclists and hikers have dramatically increased their use of the tunnel and the SDTT has seen a corresponding drop in the level of wildlife activity through the tunnel, with all other factors remaining the same. The SDTT has seen no evidence during this time of the grey fox pair that used to have their den just north of the tunnel entrance, and the barn owls that had nested inside the tunnel for several years do not appear to be nesting there any longer. Mountain bikers are even using the tunnel at night, conflicting with most of the wildlife traffic through the tunnel because it occurs between dusk and dawn (Phoenix Von Hendy, SDTT, personal communication, 2021).

3. Among the four crossing sites that the 2017 SR-67 Report rates as of extremely high importance to wildlife is the crossing site (#6) immediately south of Foster's Truck Trail. Any crossing site that is considered of such importance, whether in the 2017 SR-67 Report or through further analyses, must be a wildlife-only crossing**.**

4. Notwithstanding our recommendation for wildlife-only crossings (comment #2), if any of the proposed wildlife crossings (integral to the Project alternatives) are proposed to also serve as

[18] For more information about the effects of trails alone on wildlife, refer to https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178956&inline.

crossings for humans or are within trail- and/or recreation-related ecological footprints, the DEIR/EIS should analyze the potential related trail- and recreation-related impacts on the species targeted to use those crossings, and whether human presence is compatible with the purpose of the crossings. The analysis (or at least an initial assessment as to the applicability of an analysis) must be conducted for all the proposed wildlife crossings considered for dual use, whether they are culverts (pipes, box, or arched), tunnels, or overpasses, and needs to account for many factors (e.g., distance between the recreation and the crossings; proximity of other trails; topography; vegetation between the humans and crossings; sensitivity of the focal species to human presence; time, duration, level, and type of recreation; and seasonal trail closures).

This analysis must involve knowledge from recreation ecology and extend beyond the direct and readily visible effects of trails and recreation into the trail- and recreation-related indirect effects on wildlife. The DEIR/EIS should provide measures to either avoid significant adverse impacts or mitigate them to below a level of significance. Any proposed mitigation should reflect that knowing how to mitigate for recreation-related indirect impacts to wildlife requires knowing exactly what those impacts are and when they occur. At a minimum, appropriate impact analyses will require up-to-date surveys along SR-67 and within the adjacent core areas, scientifically sound modeling of the present and proposed future trails and recreation, and data on how the presence of humans both with and without their pets (if pets are allowed) affects animals; some such data already exists.

Collaboration with recreation ecologists using current knowledge from recreation ecology is necessary to appropriately conduct this analysis.[19] Just as road ecology, conservation biology, restoration ecology is each its own discipline, so too do recreation ecology. Granted, there can be overlap in expertise among these disciplines' biologists, but they vary in how they approach conservation and connectivity.

<u>Other Comments about Siting the Wildlife Crossings</u>

5. Researchers have studied wildlife and the issue of landscape connectivity within and beyond the Project area for many years, independent from any contemplated improvements to SR-67. In the last seven years, much concerted work has been done to determine the crossing sites that would provide functional connectivity for wildlife across SR-67. At least two SANDAG-funded reports resulted from this work (the 2015 and 2017 SR-67 Reports). We acknowledge that Catrans considers the existing connectivity studies fairly extensive and sufficient for the biological analyses to determine the wildlife crossing locations, sizes and directional fencing (Debra Soifer, Caltrans, personal communication - email, May 27, 2021). However, as mentioned in several comments herein, additional on-the-ground studies along SR-67 and within the adjacent core areas in collaboration with species, connectivity, and land management experts, are necessary to determine the optimal locations, designs, and fencing for the new crossing sites.

6. The DEIR/EIS should explain how wildlife movement would be accommodated during each phase of construction in both the segments of the Project area with numerous driveways and those segments where it would be less logistically problematical to install effective temporary directional fencing

[19] Some reputable recreation ecologists are (in random order): Courtney Larson, Jeremy Dertien, Adina Merenlender, Sarah Reed, Kevin Crooks, Christopher Monz, Milan Mitrovich, Jutta Burger, and Michael Patten. Some of them have done recreation ecology research on NCCP conserved lands in San Diego and Orange counties; the articles at the URLs in footnotes #17 and #18 cite some of their work.

needed for temporary wildlife crossings. Please provide schematics depicting where temporary wildlife crossings, if any, would be provided and a description of the type and size (width & height or diameter, length) of each crossing. This discussion should include measures to control human access to the temporary wildlife-only crossings. Where possible, the phasing of the Project should be done so that the crossing nearest to a crossing within an active phase is not impacted concurrently.

7. It is essential that Caltrans coordinate with the County of San Diego and the City of Poway to:
   a. ensure that the wildlife crossings within the Project area will not be co-located with trails and crossings for humans;
   b. provide information in the DEIR/EIS about known plans the City and County have to acquire land for conservation;
   c. identify and prioritize lands to be conserved to protect access to proposed wildlife crossing sites (comment #18);
   d. identify where road fencing and other directional fencing are needed; and
   e. ensure that the preparation of the DEIR/EIS accounts for the comments herein about the City and County (e.g., comments #8, #14, and #17).

8. It is unclear if Caltrans' reference during the Q&A session of the Scoping meeting to the "County and recreational pathways that are in the plan" (comment #2) is to the County's Community Trails Master Plan (CTMP; Community Trails Master Plan). It should not be a foregone conclusion that the locations of any trails depicted in the CTMP within the Project area are suitable with regard to the effects of the trails and recreation on wildlife, or their compatibility with wildlife conservation. Whether or not there is a suitable location should be determined based on analyses not yet done. If the DEIR/EIS cites the CTMP, it should make clear that doing so is not intended as an indication that the not-yet-built trails depicted in the CTMP within the Project area will unequivocally be built. The CTMP is a guiding and planning level document prepared over 10 years ago; each community map in the CTMP states *For Planning Purposes Only*. Environmental review and the need to conform with the MSCP can result in adjustments to the CMTP trail locations.

9. The analyses conducted to determine the optimal locations for the wildlife crossing sites must account for the physical and functional fragmentation caused by recreational trails and human presence, respectively (refer to comments #2d and e).

   It is not clear if any of the modeling done for the 2017 SR-67 Report accounted for the ecological footprint of trail- and/or recreation-related functional fragmentation. If not, the suitability of the habitat may be overestimated and the resistance underestimated in locations with trails and/or recreation. These shortcomings may also render the results of the resistant kernels and OmniScape modeling problematical. Though there may be a low level of recreation at culverts, there is still the possibility that human presence in the vicinity of culverts could disrupt wildlife use of culverts, and certainly larger crossings, particularly along portions of SR-67 where trails abound.

10. Among the data the 2015 and 2017 SR-67 Reports relied on for their recommendations for crossing sites were those from roadkill records. It is important to consider these data for this purpose. However, Spencer et al. (2010) caution that roadkill analyses should be used with caution when evaluating options for or proactive restoration of linkages because focusing planning on roadkill hotspots may ignore populations that have been reduced by past traffic-related mortality, and lack of evidence of wildlife movement cannot be interpreted as lack of need for crossing structures.

Furthermore, small populations of local importance may not show up well or at all in roadkill surveys, yet even low rates of mortality may have big impacts on population viability. [20] We recommend that the roadkill analysis conducted for the Project factor these caveats into the interpretation of its results. This information can be correlated with results of tracking and camera trap data from within the Project area to identify areas where wildlife appear to cross roads at grade rather than using under-crossings or overcrossings,[21] while accounting for the fact that non-detection of a species through camera traps does not necessarily indicate the absence of a species at a given site; detection of species at the camera-monitored culverts is likely a function of a number of features including vegetation, availability of suitable habitat for each species in the surrounding areas, topography, as well as the physical features of a culvert (Jennings and Lewison 2015).

11. The 2017 SR-67 Report identifies 14 crossing sites (13 of them existing) along SR-67 and prioritizes them in order of importance for wildlife and by whether they would require minor or major improvements and/or repairs or replacement (Tables 5 and B1) to function as wildlife crossings. The Report explains that the identification of the crossing sites is a starting point in targeting an optimal design for wildlife movement given the species, topography, and habitat, and in the process of designing a full infrastructure plan for SR-67 (pages 21 and 39). The Report also identifies some of the stakeholders' concerns about the shortcomings of the report, including the modeling used for it.

    a. The biological analyses for the Project should fully apply the points that species experts made during the stakeholder meetings, and rectify as necessary the modeling and/or analytical shortcomings to ensure that the crossings in the Project alternatives are optimally functional.[22]

    b. As Caltrans engages with the biological consultants working on the Project's wildlife crossings, we recommend continuation of the collaboration with species, connectivity, and land management experts[23] as occurred during the work for the 2015 and 2017 SR-67 Reports regarding both the species' needs and the optimal crossing and fencing sites and designs irrespective of existing crossings (e.g., culverts and bridge).

12. The 2017 SR-67 Report recommends one new crossing structure, a 164 - 230 foot wide overpass in the Mt. Woodson area (crossing site 13: Figure 12, Table 5, page 64, and Table B1 on pdf page 72) as one of the four crossing sites the Report rates as of extremely high importance for wildlife, and

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[20] Chapter 5, page 29 at https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/bmp-guide-rev-4-16-2021-a11y.pdf, March 2021.

[21] Page 14 at https://sdmmp.com/upload/SDMMP_Repository/0/1pbwhjr8gtz07nqy9563xmc4fvs2dk.pdf 2011, also accessed via https://sdmmp.com/view_project.php?sdid=SDMMP_SDID_187_5d7fcda52b1ba - Appendix 2, 2011. Though this references an MHCP document, it is reasonable to apply it to areas within the MSCP.

[22] Three examples of such points in the Appendices for the 2017 Report follow.
    a. Question: How to include data from other species of interest – for example, how to get arroyo toads across the road at Santa Maria Creek and how to account for small mammal movements. Answer: Can use species occurrences or expert opinion in prioritization phase to validate linkages and ensure we are providing connectivity for all species even those that are not modeled (e.g., arroyo toad, badger, ringtail) (4-16-16 meeting, page 119).
    b. Overall, the coarse scale of the models, data gaps, and input environmental variables used for modeling seem to limit the utility of these suitability models for connectivity analyses (2-15-17 meeting, page 124).
    c. Recommendation: If connectivity for large animals encompasses pathways for small animals, include more considerations for small species in crossing designs – cost to do so will be limited (2-15-17 meeting, page 124).

[23] Examples include personnel with USGS, SDTT, Western Transportation Institute, Road Ecology Center, U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife.

states, “Recreational path on bridge should be physically and visually isolated from remainder of overpass” (Table B1). We appreciate this recognition of the need to protect wildlife using the crossing from human disturbance, and we expect that the DEIR/EIS will analyze this matter as recommended above. However, based on the information in comment #2, and given the popularity of this area for recreationists and the high volume and timing (continual) of their presence, we urge Caltrans to dedicate any crossing for wildlife solely to wildlife. The DEIR/EIS should discuss the practicality and functionality (for wildlife movement) of one or more *narrower* modular overcrossings that have the flexibility for expansion should post-project data indicate it necessary (more at comment #20).

13. As shown in Attachment 2, the CTMP depicts a proposed community trail crossing SR-67 about 0.5 mile north of wildlife crossing site 13 in the 2017 SR-67 Report. [24] Hypothetically (because there are no project-specific analyses for either crossing), this would be an appropriate spatial relationship to pursue for the single-use purposes, provided that the route of the community trail leading to the CTMP overcrossing is generally outside the corridor that the target wildlife species using crossing site 13 are most likely to travel. Some species, such as ringtail and mountain lions, are very sensitive to human presence; the human voice alone can disrupt mammalian carnivores’ normal behaviors at long distances (depending on topography, vegetation, and other factors), and in turn disrupt wildlife communities and populations (Suraci et al. 2019).

14. In 2015, the County of San Diego and the City of Poway entered into an agreement to jointly seek funding to expand the Iron Mountain Preserve and to purchase from private landholders roughly 800 acres in the area for a future tunnel under Highway 67, about a mile north of the Poway Road/SR-67 intersection. In 2019, the County approved the acquisition of 160 acres of the 800 acres east of SR-67 and adjacent to 1,123 acres owned by the City of Poway and surrounding Iron Mountain, one of the most popular hiking destinations in the County. The acquisition was for habitat conservation to support numerous threatened species within the County’s MSCP and to add to the regional connection to other trails in the area, such as the Transcounty Trail. As contemplated, the tunnel would serve both humans and wildlife allowing both to avoid crossing SR-67 at grade (South Florida Sun March 29, 2016; San Diego Union Tribune - SDUT, July 10, 2019; County News Center, August 7, 2019; Baltimore Sun, August 8, 2019).

    The SDUT article states, “The tunnel would also act as a sort of central hub that would connect a massive series of trails crisscrossing the county” and “A design put together jointly by Poway and the county, with input from state transportation officials, determined a tunnel rather than a bridge would be more practical and less expensive.” We support the acquisition of land in this area for conservation under the MSCP as it is needed, particularly for the connectivity it provides between already conserved lands. However, for the reasons provided in comment #2, we again recommend that any wildlife crossings under or over SR-67 be planned, designed, built, and managed as wildlife-only tunnels and that separate crossings be provided for humans. Doing otherwise would undermine the wildlife conservation benefits of the conserved lands to the west and east of SR-67.

15. The County’s Sycamore Canyon – Goodan Ranch Preserve comprises a substantial portion of the local MSCP biological core area and supports a large variety of MSCP species and other sensitive species. For wildlife moving across the landscape, the only safe route to the north is through the Scripps Poway Parkway wildlife tunnel and to the east is through the culverts under SR-67. Not only

[24] The map in Attachment 2 is a cutout from the map at https://www.sandiegocounty.gov/content/dam/sdc/pds/CTMP/maps/Ramona.pdf .

are the culverts here constrained, but the Preserve's boundary touches SR-67 only along the easternmost Wu parcel and the Cielo parcel. Culverts that emerge onto these parcels from across SR-67 should be a high priority as wildlife crossings, so the preferred Project alternative allows for them to have a major retrofit or be replaced with crossings with appropriate dimensions. This will likely require significant excavation and/or raising the grade of the road. The Project should include the conservation of lands that provide protected access to these crossings (comment #18).

Crossing sites 7 and 8 are the closest to the Wu and Cielo parcels that the 2017 SR-67 Report identifies, but it's not clear where they emerge. There is a culvert on the east side of SR-67 closer to its intersection with Scripps Poway Parkway than crossing site 8 appears to be, though we do not know where it emerges on the west side of SR-67.

16. The Project alternatives must incorporate the fencing associated with each wildlife crossing site. The suitability of a site for wildlife crossings depends in part on how conducive it is to the installation of well-designed and properly sited fencing. If a road's right of way can fully accommodate such fencing, including necessary jump-outs and turn-arounds and the long-term management required for the crossing and fencing, the ownership of the adjacent land is less important at least with regard to the fencing and management. Depending on how privately-owned driveways are designed and "managed," they can disrupt the functionality of what might otherwise be a functional crossing. We recommend that the DEIR/EIS include a draft fencing plan that details the fencing (a) associated with each proposed wildlife crossing site, and (b) elsewhere within the Project area to prevent wildlife from trying to cross at grade. As indicated in the 2017 SR-67 Report, the fencing should be designed to direct birds to fly up and over traffic to avoid bird-vehicle collisions; possibly add flagging to the fencing for visibility. In the fencing plan or elsewhere, the DEIR/EIS should also discuss other non-lethal alternatives for discouraging animal passage (electric mats, cattle grates) other than fencing and for which species they are effective.

17. All the Project's conceptual alternatives include bike lanes or paths along one or both sides of SR-67. We generally support multi-modal efforts such as this along roads in the interest of reducing GHG emissions and reducing vehicular congestion. And, preliminarily, it's less likely that users of the lanes/paths would disturb wildlife to the degree that humans on dirt trails adjacent to or within wildlife habitat would. However, knowing the design of the lanes/paths and their placement relative to the wildlife crossings is necessary to assess their compatibility with wildlife connectivity. There may be wildlife crossing-critical segments of SR-67 where these lanes/paths should be closed between dusk and dawn and/or seasonally to allow wildlife most active at this time to more readily use the crossings during many species' prime time for movement.

    The City of Poway's General Plan Transportation Element Master Plan envisions a multi-purpose trail on the west side of SR-67 connecting trail linkages on Poway Road and Scripps Poway Parkway. This would include a separated two-way bike path and a fenced DG equestrian trail. Knowing the connector points for this trail from SR-67 and the location and design of the trail relative to wildlife crossings is necessary to assess its compatibility with wildlife connectivity; temporal restrictions on use may be warranted. [25]

[25] https://docs.poway.org/weblink/0/doc/50446/Electronic.aspx - page 3
https://www.sandag.org/uploads/meetingid/meetingid_5672_28753.pdf - search on "Poway"

Land Acquisition

18. We agree with the actions pertaining to land acquisition in Table 6 in the 2017 SR-67 Report: work to acquire parcels on both sides of SR-67 at all crossing sites to connect conserved lands (Attachment 3). One factor that influences the suitability of road crossings for wildlife is the ownership of the land on both sides of the road. For several reasons, it's optimal when the land is conserved either by outright ownership or by easement. Conserved lands are intermittent along both sides of SR-67. Therefore, given the importance to the Project of wildlife connectivity as evidenced by the Project's need and purpose statements, land acquisition for conservation should also be a stated need or purpose for the Project. While land acquisition (through eminent domain or otherwise) irrespective of wildlife movement may be necessary to build the approved Project alternative, land acquisition for wildlife movement should be pursued only in areas where data indicate the need for a new or improved crossing, and where, but for the fact that the land is privately owned, the location would be suitable for a crossing. Crossing site 13 (comment #12) in the 2017 SR-67 Report may be a case in point as a candidate for land acquisition efforts on both sides of SR-67. So too might be the crossing sites along the Sycamore Canyon – Goodan Ranch Preserve. The 2017 SR-67 Report highlights the creation of a decision support tool for scoring (among other things) potential acquisitions; if applicable to the scale of the Project area, perhaps utilizing it would be appropriate together with ground truthing, transect and camera trap data, and consultation with species experts.

Design of the Wildlife Crossings and Fencing

19. Caltrans has ample internal guidance on how to design wildlife crossings and associated fencing, and collaborates with leaders in the field of road ecology (e.g., researchers at the Road Ecology Center, USGS Western Ecological Research Center, and Western Transportation Institute). [26] Furthermore, Caltrans has much experience in planning for and building / installing wildlife crossings. [27] We expect that Caltrans will employ the information in these resources and the best available technology / knowledge for the Project to provide wildlife-only crossings and associated fencing that ensure functional connectivity for wildlife travelling across SR-67.

20. We recommend that Caltrans consider what has and has not worked with similar projects on other state routes (e.g., SR-76, SR-241). Non-Caltrans wildlife crossings too provide insights for this purpose. [28] Modular drop-in precast overpasses made to specifications are being considered for SR-62 in the Little San Bernardino Mountains and have a track record of success in other states. Upon the completion of site preparation for both new structures or upgrades to existing overpasses or underpasses, the modular structures allow for efficient installation, minimal traffic disruption, and are less costly than the build-in-place designs. In addition, the modular aspect of these precast structures allows for adding width to them if determined to be necessary, where conditions would permit. For each type of crossing proposed, the DEIR/EIS should provide information on its efficacy and track record as to how wildlife use it.

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[26] Examples: https://dot.ca.gov/programs/environmental-analysis/caltrans-biology/biological-studies/wildlife
https://arc-solutions.org/wp-content/uploads/2017/02/CaltransConnectivityForums_WTIFinalReport-1.pdf

[27] https://dot.ca.gov/-/media/dot-media/programs/risk-strategic-management/documents/mile-marker/mm-__2019-q2-wildlife-crossing-a11y.pdf

[28] https://sdmmp.com/upload/SDMMP_Repository/0/vym91rbw3tjsnhx5c46z80qg2kpfd7.pdf ;
https://sdmmp.com/view_article.php?cid=CID_201604011922_55 ;
https://www.pe.com/2018/09/20/carl-love-remodeled-murrieta-road-is-good-for-drivers-and-wildlife/ Clinton Keith Road in District 8

21. The DEIR/EIS should specify the species (target species) that each crossing is intended to accommodate and how the structures will be designed and supplied for those species; this should include internal structure to improve the use of the crossings by small animals (e.g., herps going through a larger crossing). Since no single type of crossing structure will allow all the target species to cross (Spencer et al. 2010) SR-67, the DEIR/EIS should explain how the proposed wildlife-only crossings will be designed to be suitable for the target species; this is particularly important for the Project alternatives involving widening of the roadway.

22. We generally agree with the design-related actions listed as Best Management Practices (BMPs) in the 2017 SR-67 Report (Table 6, page 36; Attachment 3) for under-crossings and fencing to address hydrology, light, noise, substrate, line of sight, etc.; the 2015 SR-67 Report also mentions many of these. However, we object to their being considered BMPs, as they should be incorporated into (as appropriate) and be considered permanent features of the Project design of each of the alternatives, rather than measures conducted during the Project's construction- (as in NPDES storm water construction BMPs) or as post-construction management.

23. The proposed under-crossings should have clear line of sight from end to end. If any of the under-crossings have tenuous line of sight from end to end are designed such that they are so dark as to hinder their functionality, the DEIR/EIS should include lighting in the design for these under-crossings. The lighting could come from skylights/tubes in median, addition of reflective paint inside structure at either end, or lights powered by a wired solar panel outside the structure (Table B1 in 2017 SR-67 Report).

24. Wildlife species often follow natural drainages as they travel on the landscape. So, it is expected that many species approach SR-67 where there are artificial drainage structures. However, drainage structures are typically unsuitable as wildlife crossings for several reasons, including the buildup of sediment, vegetation, and debris which reduce permeability for wildlife; conversely, counter to the purpose of drainage structures, some wildlife crossings need to have deliberately placed rocks and other items in them for suitability for certain species. Therefore, we recommend that the Project not use drainage structures as wildlife crossings if hydrological issues preclude optimal design for wildlife. Instead, consider co-location of structures for drainage and wildlife movement. Please provide in the DEIR/EIS schematics and or imagery of examples of how such structures would be co-located so that the wildlife has ready access to the structure intended for them and the flows would not reach the wildlife crossings. This will require on-the-ground surveys above and beyond any modeling efforts.

25. Some of the conceptual alternatives maintain a barrier in the median of the roadway. For these alternatives, the DEIR/EIS should describe in narrative and schematics how the barriers would be permeable to wildlife (e.g., use cables or beams) and not a safety hazard for drivers. The bollards currently on portions of SR-67 are quite distracting.

26. The description of each wildlife crossing structure in the DEIR/EIS should include schematics and a description of the type and size (width & height or diameter, length).

27. The DEIR/EIS should require the restoration of habitat along the approach to both sides of each wildlife crossings to provide proper functionality as a movement corridor. The habitat restoration should be considered part of the design for each crossing.

28. The DEIR/EIS should clearly and thoroughly describe and illustrate how the Project would be done. For example, how would for new culverts or other under-crossings (pipe, arched, or box) be installed - would the existing roadway be demolished, new or retrofitted structures situated, and then the new road surfaces placed? Would the new roadway be higher than the existing grade to accommodate the retrofitted and new under-crossings?

Management, Monitoring, and Enforcement [29]

No matter how well designed and sited a wildlife crossing and the associated fencing is, even if it is officially a wildlife-only crossing, if there is inadequate management / maintenance, monitoring, and enforcement provided for the crossing, it will not function optimally. Given the importance of the crossings and the time, effort, and expense of bringing them to fruition, these activities are essential and include studies before, during, and after construction.

29. The DEIR/EIS should provide a draft crossing efficacy monitoring plan (CEMP) for the wildlife crossings and associated fencing to assess their efficacy relative to the target and other species using the crossings, frequency of use, whether the animals travel entirely through the crossings, the incidence of roadkill, and other factors prior to and after Project construction. [30] Aspects of the CEMP follow. To the extent feasible, the monitoring methodology should allow for comparisons with data from previous monitoring efforts by USGS, SDTT, SDSU, etc. within the Project area.

    a. The design of the CEMP for the improved / retrofitted wildlife crossings should be a before-after control-impact (BACI) study with the first phase being prior to the onset of Project construction and long enough to span the breeding seasons of all the target/focal species.
    b. The design of the CEMP for the new wildlife crossings located where none were before does not need to be a BACI study, but the monitoring should start immediately after completion of each new crossing, including its full preparation for wildlife (e.g., plantings established, fencing, structural features within the under-crossings).
    c. For wildlife crossings that are also being considered for human use (notwithstanding comment #2), BACI studies designed in collaboration with recreation ecologists, should be conducted, with the first phase being after the wildlife have started to use the crossings and prior to the onset of human use and long enough to span the breeding seasons of all the target/focal species.
    d. As is often the case with BACI studies, camera traps should be an element of the designs.
    e. The onset of each monitoring study in “a” and “b” should be synchronized with the timing of the phased construction. For example, if Phase 1 starts in the summer of 2027, the BACI study for two culverts retrofitted for suitability for wildlife in Phase 1 would start in summer or early fall of 2026 to provide baseline data.
    f. Each monitoring study should last at least up to 4 years after the completion of the construction of the crossing.
    g. Upon full implementation of the CEMP, it should evolve into a long-term monitoring plan designed to provide sufficient data to determine how to best adaptively manage the crossings – the long-term monitoring plan can be a modified version of the CEMP, as warranted, as long as its compatibility with previous datasets is retained.

[29] Management encompasses maintenance, as is often used in road projects.

[30] https://sdmmp.com/upload/threats/threats_background/MSP%20Vol2B%20Connectivity%202017_1494454325.pdf – page 26

The data gathered from implementation of the CEMP would provide:

a. insights to the efficacy of the crossings;
b. evidence regarding causal links between human activity and wildlife responses relative to other known drivers of species distributions (for crossings within the ecological footprint of trails and recreation - comment #2b); and
c. for wildlife crossings that are for humans too, if any, information by which to assess the effects of human presence on the wildlife use of the crossings; recreation ecologists should be involved in the interpretation of the results of the BACI studies whose design they participated in.

30. The DEIR/EIS should provide a draft long-term management plan (LTMP) for the Project's wildlife crossings and fencing. The draft LTMP should include, but not be limited to, the following elements:
    a. a budget for the implementation of the LTMP;
    b. a plan to maintain the habitat along the approach to both sides of each crossings;
    c. BMPs – those in the 2017 SR-67 Report (Attachment 3) except those that are design-related (comment #22), plus signage;
    d. a long-term monitoring plan per comment #29g;
    e. an adaptive management plan; and
    f. an enforcement plan to address trespassing or unauthorized use of the crossings.

31. Regarding adaptive management of the wildlife crossings and fencing, if the monitoring results indicate that the structures and/or the fencing are inadequate (i.e., not all the target species present are using them to travel through and/or roadkill has not diminished sufficiently), measures must be implemented to address the inadequacies, such as human activity in the ROW and through culverts, sediment buildup (though this should not occur if all wildlife under-crossings are separate from drainage structures), obstruction from vegetation, and trash (2015 SR-67 Report). If the problems persist and they may result directly or indirectly from trails and recreation, recreation ecologists should be consulted in trying to resolve the problems.

    For wildlife crossings that are for humans too, if any, or that are within the ecological footprint of trails and recreation, the results of the BACI studies to assess the effects of human presence on the wildlife use of the crossings may warrant explicit testing of the efficacy of adaptive management that may be applied, including restricting or closing the crossings to human access (Reed et al. 2014).

    Adaptive management is essential to maintaining the functional connectivity within the Project area. "If recreation activity levels increase rapidly, management actions should be taken to decrease either the number of visitors, types of recreation activities, or spatial footprint of recreation trails and infrastructure…. It is too late to wait until wildlife detections or estimates of habitat use decrease, since we can anticipate from other studies that some species will be affected (Larson et al. 2016)" (Dertien et al. 2018).

    Burger (2012) and Dertien et al. (2018) are two good sources for information on adaptive management for the effects of trails and recreation on wildlife. Among the methods to be used is the deployment of camera trap arrays or networks year-round at least initially (Dertien et al. 2018). As motion-triggered camera trap technology improves, it is being increasingly used to monitor wildlife; their placement will determine the ability to determine the spatial magnitude of the

displacement of wildlife (Naidoo and Burton 2020). "A longer time series of data is needed to document whether wildlife detections, habitat use, or species richness are changing in correlation with increasing or decreasing human recreation and to inform adaptive management decisions" (Dertien et al.).

Other Comments

32. The DEIR/EIS should provide information on the influence of wildlife crossing infrastructure on wildlife-vehicle collisions, and provide documented examples of the benefits to wildlife from such infrastructure. For example, Utah and Colorado have documented a 98.5% and 89% reduction, respectively, in mule deer carcasses associated with wildlife-vehicle collisions on sections of highways where they have implemented wildlife crossing infrastructure. [31]

33. The DEIR/EIS should provide a detailed cost benefit analysis of each of the Project alternatives; the analyses should factor in the costs of not improving SR-67 with respect to losses associated with wildlife-vehicle collisions, wildlife-bike collisions, and drivers' and bikers' efforts to avoid wildlife on SR-67. Costs to be accounted for include death of humans and wildlife, human injury treatment and recovery, lost work, loss of wildlife, vehicle and property damage (e.g., roadway and surroundings). Table 1 in the document at the following link lists some direct costs to be considered: https://arc-solutions.org/wp-content/uploads/2017/02/CaltransConnectivityForums_WTIFinalReport-1.pdf. Using observations of reported traffic incidents and carcasses, the UC Davis Road Ecology Center estimated the total annual cost of reported (large) wildlife-vehicle collisions for 2018 in California to be at least $232 million in economic and socials costs. [32] While costs are only one consideration of the Project approval process, it is important to know for which segments of SR-67, if any, it would be less expensive to provide functional wildlife crossings than to allow the collisions to continue to occur.

34. The DEIR/EIS should explain in both narrative and with aerial photographs the importance of SR-67 as a route for evacuation from wildfire. How does it compare to other evacuation routes? Why are all the evacuation lanes south bound?

Thank you for your attention to our comments. Our understanding from the January 27 Scoping Meeting is that Caltrans will respond to them (slide at minute 16:58 of the Scoping Meeting – footnote #1), though not publish them in the DEIR/EIS. We look forward to, and thank Caltrans' in advance for, the responses. We may provide additional or modified comments about the Project as warranted upon review of further Project-related documentation made available for public review.

Please contact Libby Lucas at libbylucas5@gmail.com with questions you have about this letter and to provide responses to the comments.

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[31] https://bioone.org/journals/wildlife-biology/volume-18/issue-4/11-122/An-evaluation-of-a-mitigation-strategy-for-deer-vehicle-collisions/10.2981/11-122.full ; https://www.codot.gov/programs/research/pdfs/2019/SH9Yr3

[32] https://roadecology.ucdavis.edu/files/content/projects/2019%20WVC%20Report%20(for%202018%20data).pdf

Respectfully,

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Attachment 1 page 39 of the 2004 Extension Ordinance

TransNet Expenditure Plan:

Environmental Enhancement Criteria Mitigating Highway 67, 76, and 94 Expansion Impacts

Segments of Highways SR 67, SR 76 and SR 94 are proposed for expansion from two to four lanes through funding identified in the *TransNet* Expenditure Plan. The proposed expansions will have substantial direct and indirect impacts to plant and animal species and to the regional wildlife movement corridors bisected by the roads. These corridors are essential "infrastructure" for our region's nationally-recognized habitat preservation plans.

Very high levels of road kill are a significant existing condition on all of these highway segments, which could be exacerbated by the increased traffic along the expanded highways should they be widened. Direct and indirect impacts to sensitive plant and animal populations, and to the function of the wildlife corridors, should be mitigated in order to produce an on-site "net-benefit" to species and to the movement of wildlife along these wildlife corridors.

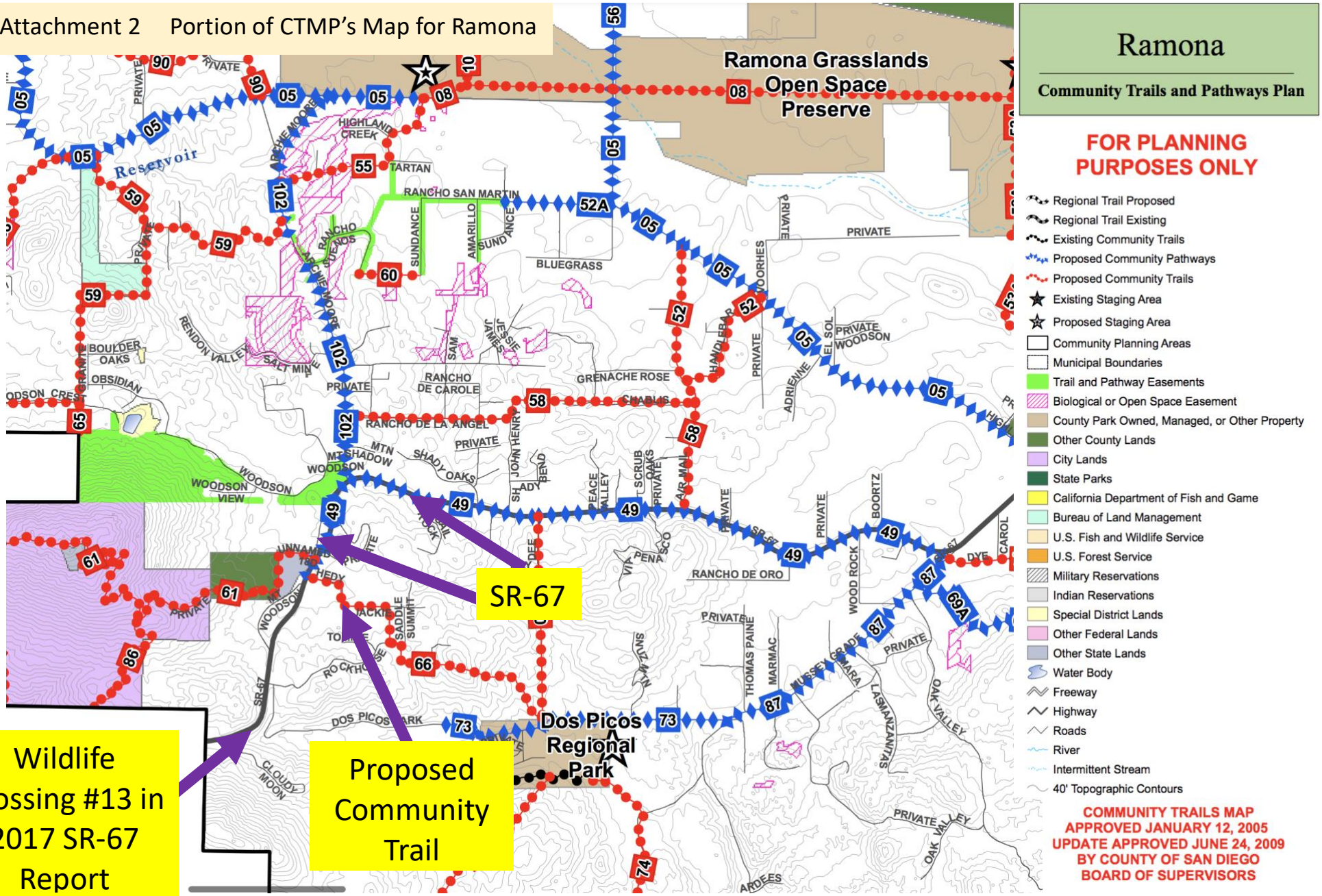
In order to accomplish this objective, it is necessary that the adopted *TransNet* Expenditure Plan include policy language and directives that insures the "net benefit" mitigation standard is met. This will require a comprehensive baseline analysis of existing and future conditions, adoption of measures to mitigate direct and indirect impacts to species, adoption of measures to accommodate species-specific wildlife movement through the corridors, and implementation of capital project designs that can reduce impacts.

Biological analysis and recommendations need to be consistent with Multiple Species Conservation Program (MSCP) and Multiple Habitat Conservation Program (MHCP) goals and objectives, data, and protocols. Analysis will commence at the time of, or prior to, *TransNet* funding availability.

Key road segments:

- SR67, Mapleview to Dye Road
- SR76, Melrose to I-15
- SR94, Jamacha Road to Steele Canyon Road

Attachment 2 Portion of CTMP's Map for Ramona



Attachment 3 Table from the 2017 SR-67 Report

Table 6. Wildlife crossing infrastructure best management practices recommendations

Type	Best Management Practices Recommendations
Barriers	If median barriers are installed or the k-rails along the section of SR-67 just north of Vigilante Road remain, stagger placement and installing scuppers to allow wildlife to pass through if they become trapped in the roadway
Conservation	Work to acquire parcels on either side of the road at all crossing locations
Conservation	Work to acquire parcels to connect conserved lands on either side of crossing locations
Construction	Implement mitigation measures to protect wildlife from wildlife-vehicle collisions and impacts during construction
Construction	Implement a BACI study to monitor efficacy of structures beginning prior to construction
Crossings	Maintain small culvert structures for small animal use at intervals of ~90m (300 feet). Structures should have diameter of 0.5 - 1.5m
Crossings	Target an average of 1 crossing per 2 km (1.2 mi) of roadway for medium to large animals
Crossings	Ensure structures have a straight alignment with no bends or curves; there should be a continuous line of sight
Crossings	If hydrological issues preclude optimal structure design for wildlife, consider dual siting of structures for drainage and wildlife movement
Fencing	Bury fencing several inches to prevent digging underneath
Fencing	Construct fence lip to prevent climbing/jumping over
Fencing	Ensure fence ends are tied into existing barriers (topographic or anthropogenic) wherever possible. If none exist, consider adding boulders or a berm to block access and line of sight
Fencing	Construct longer fences for funneling wildlife to crossing structures where possible (especially for large mammals)
Fencing	Construct walls or fencing high enough to encourage flight up and over traffic to avoid bird-vehicle collisions, possibly with flagging added for visibility
Fencing	Install jump outs at regular intervals based on length of fencing segments
Fencing	Conduct roadkill monitoring after crossing construction to determine if extended fencing or jump outs are necessary
Fencing	Once final fencing lengths have been determined, identify locations for jump outs to allow wildlife to exit the roadway if they become trapped. Recommend jump outs at 1/2 mile spacing if there in uninterrupted fencing
Fencing	Consider working with home owners to install gates or cattle guards at driveways to improve the functionality of fencing
Fencing	If gates and cattle guards on driveways are not possible, consider fence turn arounds to redirect animals. Recommend revisiting literature for new driveway fencing guidelines prior to the finalizing fencing plan.
Fencing	Place fencing as close to roadway as possible (rather than at the ROW) to limit wildlife crossing fencing to reach attractive habitat on the other side
Maintenance	Maintain structures free of sediment and debris build up; remove invasive and native vegetation that block access or line of sight through structure
Material	Native surface bottoms when possible
Material	Use noise dampening structure materials
Material	Avoid zinc coating if crossing is to be made of metal
Material	Consider limiting the use of rip rap at structure entrances where possible to facilitate use by small animals