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January 2, 2020

Governor's Office of Planning & Research

JAN 02 2020

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 California Department of Transportation
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STATE CLEARINGHOUSE

Subject: Comments on the Notice of Preparation and Preliminary Scoping Report of a Draft Environmental Impact Report for the South County Traffic Relief Effort Project

Dear Mr. Baker:

The California Department of Fish and Wildlife (Department) has reviewed the above-referenced Notice of Preparation (NOP) and Preliminary Scoping Report for the South County Traffic Relief Effort Draft Environmental Impact Report (DEIR). The following statements and comments have been prepared pursuant to the Department's authority as Trustee Agency with jurisdiction over natural resources affected by the project (California Environmental Quality Act [CEQA] Guidelines § 15386) and pursuant to our authority as a Responsible Agency under CEQA Guidelines section 15381 over those aspects of the proposed project that come under the purview of the California Endangered Species Act (Fish and Game Code § 2050 *et seq.*) and Fish and Game Code section 1600 *et seq.*

The project area is located in south Orange County. The project limits include State Route (SR) 241/Los Patrones Parkway from Oso Parkway to Interstate 5 (I-5) and I-5 from the Interstate 405 (I-405) connection in Irvine to the Orange County/San Diego County line. Six of the 10 Build Alternatives extend approximately one mile south of the Orange County/San Diego County line, terminating at the Basilone Road/I-5 interchange in San Diego County.

The project aims to reduce traffic congestion on I-5 by providing additional north-south capacity. The majority of the Build Alternatives include constructing new arterial connections between existing roads and highways across open spaces that are within the Southern Orange County Subregional Habitat Conservation Plan (HCP).

The Department offers the following comments and recommendations to assist the City in avoiding or minimizing potential project impacts on biological resources.

Specific Comments

Wildlife Connectivity

1. Per Fish and Game Code Section 1930.5 (c) (1), *"It is the policy of the state to promote the voluntary protection of wildlife corridors and habitat strongholds in order to enhance the resiliency of wildlife and their habitats to climate change, protect biodiversity, and allow for the migration and movement of species by providing connectivity between habitat lands. In order to further these goals, it is the policy of the state to encourage, wherever feasible and practicable, voluntary steps to protect the functioning of wildlife"*

corridors through various means, as applicable and to the extent feasible and practicable, those means may include, but are not limited to: (A) Acquisition or protection of wildlife corridors as open space through conservation easements. (B) Installing of wildlife-friendly or directional fencing. (C) Siting of mitigation and conservation banks in areas that provide habitat connectivity for affected fish and wildlife resources. (D) Provision of roadway undercrossings, overpasses, oversized culverts, or bridges to allow for fish passage and the movement of wildlife between habitat areas."

Wildlife movement is known to promote genetic exchange, allow response to habitat loss or stressors, and provide access to resources. Landscape connectivity, which allows for wildlife movement, is important for the long-term viability of the state's biodiversity. To move safely from one habitat area to another, wildlife species require safe passages, protective cover, visibility, and sensory cues. Preserving wildlife corridors have shown to increase the movement of individual wildlife and counteract population isolation¹. In some cases, wildlife movement is constrained by topographic or other landscape features, resulting in creation of a wildlife "corridor", but in other situations, movement patterns are more complex and may consist of any overland access route between population segments or habitat features.

Landscape features such as roadways, which segment connected habitats, can substantially interfere with or impede movement of native resident or migratory wildlife species. Examples of impediments include traffic volume or medians, thus interrupting habitat connectivity and preventing species from meeting daily and seasonal needs. Animal movement is based on many resource factors that should be considered including cover, forage, predator avoidance, and ease of movement. Maintaining continuity of the preferred habitats is essential for survival and becomes increasingly important as habitat is converted, developed and otherwise impacted. The California Wildlife Conservation Strategy lists wildlife habitat fragmentation as one of the biggest threats to the state's wildlife and suggests as a solution that wildlife considerations be incorporated early in the transportation planning process².

Many of the Build Alternatives include construction of new arterial connections through open spaces, including areas currently protected as Reserve under the HCP. According to the Department's California Natural Diversity Database (CNDDDB), terrestrial species whose habitat may be fragmented and whose movement may be impeded by the project include, but may not be limited to:

- Red-diamond rattlesnake (*Crotalus ruber*); Species of Special Concern (SSC)
- California glossy snake (*Arizona elegans occidentalis*); SSC
- Two-striped gartersnake (*Thamnophis hammondi*); SSC

¹ Gilbert-Norton, L., Wilson, R., Stevens, J. R., & Beard, K. H. (2010). A meta-analytic review of corridor effectiveness. *Conservation Biology*, 24, 660–668. <https://doi.org/10.1111/j.1523-1739.2010.01450.x>

² CDFW, 2016. *California State Wildlife Action Plan, Transportation Planning Companion Plan*. Prepared by Blue Earth Consultants, LLC., Sacramento, CA.

- Coast horned lizard (*Phrynosoma blainvillii*); SSC
- Orange-throated whiptail (*Aspidoscelis hyperythra*); CDFW Watch List
- Southern California legless lizard (*Anniella stebbinsi*); SSC
- Western spadefoot (*Spea hammondi*); SSC
- Arroyo toad (*Anaxyrus californicus*); federally endangered; SSC
- Western pond turtle (*Emys marmorata*); SSC

Therefore, the Department provides the following recommendations.

- a. The DEIR should include an analysis of the potential effects a new road alignment would have on terrestrial species with the likelihood of attempting to cross any alignments proposed in each of the Build Alternatives.
- b. The DEIR should also analyze the impacts of habitat fragmentation resulting from each of the proposed alignments and Build Alternatives. The analysis should also evaluate and seek to avoid impacting existing open space areas.
- c. The DEIR should utilize the Essential Habitat Connectivity (Chapter 6) analysis, which provides guidelines for assessing where mitigating road impacts to wildlife movement and ecological connectivity will be most effective, along with guidelines for how best to enhance functional connectivity while reducing the hazards of vehicle-wildlife collisions³. Utilize regional linkage designs where applicable. A detailed discussion of the analysis as it pertains to each of the proposed Build Alternatives should be included in the DEIR.
- d. To inform the CEQA analysis and design configurations, the project proponent should utilize the best available data, augment the data (as appropriate), and seek expert opinion (where appropriate) to identify and analyze existing wildlife movement pathways in support of any of the DEIR's inferences or conclusions. Because existing barriers, land use developments and potential alternative pathways are not always obvious, this creates difficulties in identifying potential mitigation options and accordingly, impacts should first be avoided, minimized, and mitigated if no other options remain. The specific objective of the DEIR's analysis should be to identify the most likely pathways used by various classes of wildlife utilizing modeling, field data, and genetic analysis, to inform development of appropriate avoidance/mitigation measures.

The DIER should also clearly describe the basis for conclusions. The narrative should include, but not be limited to, the indicators of wildlife corridors surveyors applied and the standards the surveyors used to determine whether or not

³ Spencer, W.D., et. al., 2010. *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California*. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

wildlife movement through the site was significant. Please also describe whether tools such as game cameras, track plates, CDFW collar data, or other field equipment were used to gather evidence of wildlife movement.

- e. As applicable, the DEIR should incorporate guidance from “*Highway Crossings for Herptiles (Reptiles and Amphibians)*”⁴ and “*California Amphibian and Reptile Crossing Preliminary Investigation*”⁵.
- f. The DEIR should include a commitment to integrate appropriate roadside fencing with wildlife crossing structures (e.g. wildlife overpasses, underpasses, bridges, and culverts) to facilitate wildlife movement across roads. Because species vary tremendously in their reactions to roads, fences, and different types of crossing structures, multiple types of crossing structures should be constructed and maintained to provide connectivity for species potentially impacted by the project. The structures should be spaced close enough to allow free movement by species with different spatial requirements and fencing with jumpout features to keep animals off the road and direct them towards crossing structures.
- g. The DEIR should evaluate the project’s effects on HCP designated wildlife corridors and habitat linkages, including but not limited to, linkages J, K, and N (see HCP figure 41-M). Previous analyses conducted during the HCP development and environmental review determined that past conceptual alignments of the SR 241 extension (previously termed the South Orange County Transportation Improvement Implementation Plan; SOCTIIP) would result in fragmentation of the HCP Reserve, reduced overall connectivity, and impact covered species habitat (HCP Environmental Impact Report [EIR] Section 6.2.3a). Although the alternatives currently proposed are different from previously evaluated SOCTIIP alternatives, they still pose a foreseeable threat to HCP Reserve connectivity and function due to potential impacts to critical linkages. Any discussion on connectivity should include an evaluation of impacts to larger mammals as well as smaller mammals and reptiles, including HCP Covered Species, and the potential isolating effect that the SR 241 extension may have on existing populations. Often these effects are more difficult to mitigate for with smaller and shorter ranging species. These species are less likely to take advantage of irregularly placed undercrossings and culverts and cannot be guided to utilize these corridors as readily as larger ranging mammals. Fencing is also ineffective from preventing these species from entering the roadway, and significant roadkill loss can occur. Finally, human use of undercrossings and noise levels associated with use of the highway can deter wildlife use, as has

⁴ CTC & Associates LLC, 2012. *Preliminary Investigation: Highway Crossings for Herptiles (Reptiles and Amphibians)*. Prepared for the California Department of Transportation Division of Environmental Planning and Engineering.

⁵ Haddad, N. M., Brudvig, L. A., Clobert, J., Davies, K. F., Gonzalez, A., Holt, R. D., & Lovejoy, T. E. (2015). Habitat fragmentation and its lasting impact on Earth’s ecosystems. *Science Advances*, 1, e1500052. <https://doi.org/10.1126/sciadv.1500052>

been observed along Interstate 15 at Temecula Creek and along SR 91 at Coal Canyon. We recommend any proposal to mitigate project impacts to connectivity address these specific concerns.

- h. Pre- and post-construction monitoring should be conducted to evaluate the effectiveness of any wildlife corridor mitigation measures or fences included in the project.

Sensitive Species and Communities

2. Many of the Build Alternatives appear to have the potential to impact the state and federally endangered least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*), state threatened tricolored blackbird (*Agelaius tricolor*), federally threatened coastal California gnatcatcher (*Poliophtila californica californica*), federally endangered tidewater goby (*Eucyclogobius newberryi*), state candidate endangered Crotch bumble bee (*Bombus crotchii*), and state endangered and federally threatened thread-leaved brodiaea (*Brodiaea filifolia*). We recommend habitat evaluations and, as appropriate, focused surveys be conducted for each Build Alternative to assess the potential project-related impacts to each of these species.
3. The coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), a California Species of Special Concern, is a habitat specialist of southern cactus scrub, and nests almost exclusively in mature stands of coastal cholla (*Cylindropuntia prolifera*) and coastal prickly pear cactus (*Opuntia littoralis*). These cactus species are slow-growing and not readily restored, requiring more time and funds to mitigate than more rapid growing species and habitat. The primary threats to cactus wren are habitat loss, degradation, and fragmentation due to urbanization and agricultural development⁶. Populations in southern Orange County are particularly vulnerable to habitat loss from urbanization because much of the habitat is located on private lands.

According to CNDDDB, coastal cactus wren-occupied areas overlap with, and occur near, many of the Build Alternatives. Additionally, Department staff observed slopes in the vicinity of some Build Alternatives supporting abundant coastal prickly pear cactus populations during a November 27, 2019, site visit. To avoid potential impacts to coastal cactus wren, we provide the following recommendations.

- a. The project area and 300 feet beyond each of the Build Alternatives should be evaluated for suitable habitat. The DEIR should include a habitat assessment and analysis of the project's potential impacts to the species. The project proponent should utilize the most current state protocols/guidance when assessing cactus wren habitat, impacts, and mitigation.

⁶ Harper, B. and L. Salata. 1991. A status review of the coastal cactus wren. U.S. Fish and Wildlife Service, Southern California Field Station, Laguna Niguel, California.

- b. Protocol surveys for coastal cactus wren should be conducted in areas where suitable habitat exists within 300 feet of all the Build Alternatives and the results should be included in the DEIR.
 - c. The project should avoid areas where a Build Alternative is located within 300 feet of previously or currently occupied habitat. We support avoidance rather than offsetting impacts through mitigation due to the level of temporal loss associated with southern cactus scrub.
4. According to the *Recovery Plan for Vernal Pools of Southern California*⁷, by 1998 vernal pool habitat was reduced by approximately 97 percent of historical value due to urbanization. Direct impacts to vernal pools include elimination of habitat by soil alteration, vegetation alteration, alterations in hydrological regimes, and degraded water quality. Indirect impacts include threats from dumping, trampling, vehicular activity, runoff, and intrusion of nonnative species.
- CNDDDB indicates a vernal pool supporting federally endangered Riverside fairy shrimp (*Streptocephalus woottoni*) and San Diego fairy shrimp (*Branchinecta sandiegonensis*) occurs within 0.25 mile of Build Alternatives 13, 14, 17, and 21 as well as several other vernal pools in the vicinity. We recommend that the DEIR include protocol surveys for vernal pools within the project area for each Build Alternative and evaluate potential direct and indirect impacts to the habitat, if present, and any sensitive species associated with the habitat.
5. Senate Bill (SB) 857 was enacted into law effective January 1, 2006 and, in part, requires that new projects and facility improvements on anadromous fish streams do not present a barrier to fish passage when designed or constructed. Anadromous fish streams include all streams that currently support or historically supported anadromous fish downstream of natural barriers that could prevent them from accessing appropriate habitat at any point in their life cycle.

Much of the project area is within the San Juan Creek watershed and many of the Build Alternatives include crossing San Juan Creek and other significant tributaries such as Arroyo Trabuco Creek and Horno Creek. Historically, San Juan Creek and tributaries supported federally endangered southern California steelhead (*Oncorhynchus mykiss irideus*) (steelhead) and suitable habitat still exists in the upper watershed.

Therefore, we recommend that the DEIR include an analysis of all proposed major stream crossings in the context of fish passage and SB 857. The analysis should include, but not be limited to, steelhead presence or historic presence, existing conditions including habitat and barrier assessments, any known projects to remove barriers or restore habitat that would affect or be affected by this project, and cumulative impacts to steelhead populations and/or habitat resulting from this project.

⁷ U.S. Department of the Interior, Fish and Wildlife Service, Region One, Portland Oregon. *Vernal Pools of Southern California Recovery Plan*. September 1998.
https://www.fws.gov/carlsbad/SpeciesStatusList/RP/19980903_RP_Vernal%20Pools%20of%20Southern%20CA.pdf

Potential Impacts Related to the Southern Orange County Subregional Habitat Conservation Plan

6. The cumulative impacts of the SOCTIIP project on the HCP habitat Reserve and conservation strategy could not be fully evaluated during the completion of the HCP EIR due to uncertainty regarding the final alignment and lack of finalized mitigation measures for the SOCTIIP project. Nonetheless, some cumulatively significant impacts were identified for the proposed alignments (HCP EIR Section 6.2.3a) and would be relevant to the currently proposed project. For the newly proposed alternatives, the DEIR should include a cumulative impacts analysis that is focused, in part, on the implications each Build Alternative may have on HCP Reserve functioning and the overall HCP conservation strategy, as these impacts could not be fully evaluated during past environmental review.
7. Many of the proposed alternatives would impact areas identified as open space in the HCP. These areas were protected as part of Section 4(d) permits and Federal Section 7 consultations or were conserved prior to the finalization of the HCP. We recommend the DEIR evaluate the existing protections for these conserved areas, include a discussion as to whether they were conserved as mitigation for past habitat impacts, and calculate total impacts to these areas for each project alternative. For permanent impacts to areas that were used as mitigation, the Department typically recommends mitigating for any current project impacts, in addition to past project impacts, through increased ratios or protection of habitat that is of higher quality and value to the HCP Reserve. For temporary impacts, the Department recommends that areas be restored immediately following project completion and additional mitigation should be provided for the temporal loss of habitat that was otherwise expected to provide benefits to previously impacted species.
8. Although the extension of SR 241 was contemplated during the development of the HCP and an alignment through the Reserve was not precluded by the HCP's completion, the habitat impacts associated with the SR 241 extension were not accounted for in the conservation and impact analysis for Covered Species (see HCP Section 13). The Department recommends the DEIR calculate total impacts to conserved habitat and discuss each Build Alternative's potential to impact the percent conservation goals for each HCP target vegetation community. In addition, any impacts to HCP Covered Species occurrences should be identified and the implications those impacts have on the long-term conservation for those Covered Species under the HCP should be discussed.

General Comments

Aquatic, Riparian, and Wetland Resources

9. The Department has responsibility for wetland and riparian habitats. It is the policy of the Department to strongly discourage construction in wetlands or conversion of wetlands to uplands. We oppose any construction or conversion that would result in a reduction of wetland acreage or wetland habitat values, unless, at a minimum, project mitigation assures there will be "no net loss" of either wetland habitat values or acreage. Construction and conversion include but are not limited to conversion to subsurface drains, placement of fill or building of structures within the wetland, and channelization or

removal of materials from the streambed. All wetlands and watercourses, whether ephemeral, intermittent, or perennial, should be retained and provided with substantial setbacks that preserve the riparian and aquatic values and maintain their value to on-site and off-site wildlife populations. Mitigation measures to compensate for impacts to mature riparian corridors must be included in the DEIR and must compensate for the loss of function and value of a wildlife corridor. Roads should only enter the riparian zone to cross a stream or wetland.

- a. The project area supports aquatic, riparian, and wetland habitats; therefore, a jurisdictional delineation of the creeks and their associated riparian habitats should be included in the DEIR. The delineation should be conducted pursuant to the U. S. Fish and Wildlife Service wetland definition adopted by the Department.⁸ Please note that some wetland and riparian habitats subject to the Department's authority may extend beyond the jurisdictional limits of the U.S. Army Corps of Engineers.
- b. The Department also has regulatory authority over activities in streams and/or lakes that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) of any river, stream, or lake or use material from a river, stream, or lake. For any such activities, the project applicant (or "entity") must provide written notification to the Department pursuant to section 1600 *et seq.* of the Fish and Game Code. Based on this notification and other information, the Department determines whether a Lake and Streambed Alteration Agreement (LSAA) with the applicant is required prior to conducting the proposed activities. The Department's issuance of a LSAA for a project that is subject to CEQA will require CEQA compliance actions by the Department as a Responsible Agency. The Department as a Responsible Agency under CEQA may consider the local jurisdiction's (lead agency) EIR for the project. To minimize additional requirements by the Department pursuant to section 1600 *et seq.* and/or under CEQA, the document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the LSAA.⁹

Biological Resources within the Project's Area of Potential Effect

10. The DEIR should provide a complete assessment of the flora and fauna within and adjacent to each project alternative, including but not limited to, staging areas and access routes, with particular emphasis upon identifying endangered, threatened, sensitive, and locally unique species and sensitive habitats. This should include a

⁸ Cowardin, Lewis M., et al. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service.

⁹ A notification package may be obtained by accessing the Department's web site at <http://www.wildlife.ca.gov/Conservation/LSA>

complete floral and faunal species compendium of the entire project site, undertaken at the appropriate time of year. The DEIR should include the following information.

- a. CEQA Guidelines, section 15125(c), specifies that knowledge on the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.
 - b. A thorough, recent floristic-based assessment of special status plants and natural communities, following the Department's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (see <https://www.wildlife.ca.gov/Conservation/Plants/Info>). The Department recommends that floristic, alliance-based and/or association-based mapping and vegetation impact assessments be conducted at the project site and neighboring vicinity. The Manual of California Vegetation, second edition, should also be used to inform this mapping and assessment (Sawyer et al. 2008¹⁰). Adjoining habitat areas should be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.
 - c. A current inventory of the biological resources associated with each habitat type on site and within the area of potential effect. The Department's California Natural Diversity Data Base in Sacramento should be contacted at www.wildlife.ca.gov/biogeodata/ to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.
 - d. An inventory of rare, threatened, endangered and other sensitive species on site and within the area of potential effect. Species to be addressed should include all those which meet the CEQA definition (see CEQA Guidelines, § 15380). This should include sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service.
11. The Department considers adverse impacts to a species protected by the California Endangered Species Act (CESA), for the purposes of CEQA, to be significant without mitigation. As to CESA, take of any endangered, threatened, or candidate species that results from the project is prohibited, except as authorized by state law (Fish and Game Code, §§ 2080, 2085). Consequently, if the project, project construction, or any project-related activity during the life of the project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, the Department recommends that the project proponent seek appropriate take authorization under CESA

¹⁰ Sawyer, J. O., T. Keeler-Wolf and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society Press, Sacramento.

prior to implementing the project. Appropriate authorization from the Department may include an incidental take permit (ITP) or a consistency determination in certain circumstances, among other options (Fish and Game Code §§ 2080.1, 2081, subds. (b),(c)). Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that the Department issue a separate CEQA document for the issuance of an ITP unless the project CEQA document addresses all project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.

Analyses of the Potential Project-Related Impacts on the Biological Resources

12. To provide a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts, the following should be addressed in the DEIR.
 - a. A discussion of potential adverse impacts from lighting, noise, human activity, exotic species, and drainages, particularly areas adjacent to HCP open space, should also be included. The latter subject should address: project-related changes on drainage patterns on and downstream of the project site; the volume, velocity, and frequency of existing and post-project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-project fate of runoff from the project site. Mitigation measures proposed to alleviate such impacts should be included.
 - b. Discussions regarding indirect project impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands (e.g., preserve lands associated with a HCP, prior mitigation sites, conservation easements). Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated in the DEIR.
 - c. A cumulative effects analysis should be developed as described under CEQA Guidelines, section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

Mitigation for the Project-related Biological Impacts

13. The DEIR should include measures to fully avoid and otherwise protect Rare Natural Communities from project-related impacts. The Department considers these communities as threatened habitats having both regional and local significance.

14. The DEIR should include mitigation measures for adverse project-related impacts to sensitive plants, animals, and habitats. Mitigation measures should emphasize avoidance and reduction of project impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed.
15. For proposed preservation and/or restoration, the DEIR should include measures to perpetually protect the targeted habitat values from direct and indirect negative impacts. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.
16. In order to avoid impacts to nesting birds, the DEIR should require that clearing of vegetation, and when biologically warranted, construction, occur outside of the peak avian breeding season which generally runs from February 1 through September 1 (as early as January 1 for some raptors). If project construction is necessary during the bird breeding season, a qualified biologist with experience in conducting bird breeding surveys should conduct weekly bird surveys for nesting birds, within three days prior to the work in the area, and ensure no nesting birds in the project area would be impacted by the project. If an active nest is identified, a buffer shall be established between the construction activities and the nest so that nesting activities are not interrupted. The buffer should be a minimum width of 300 feet (500 feet for raptors), be delineated by temporary fencing, and remain in effect as long as construction is occurring or until the nest is no longer active. No project construction shall occur within the fenced nest zone until the young have fledged, are no longer being fed by the parents, have left the nest, and will no longer be impacted by the project. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.
17. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Studies have shown that these efforts are experimental in nature and largely unsuccessful.
18. Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant revegetation techniques. Each plan should include, at a minimum: (a) the location of the mitigation site; (b) the plant species to be used, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity.

19. The polyphagous and Kuroshio shot hole borers (*Euwallacea* sp.; shot hole borers) are invasive ambrosia beetles that introduce fungi and other pathogens into host trees. The adult female (1.8-2.5 mm long) tunnels galleries into the cambium of a wide variety of host trees, where it lays its eggs and propagates the *Fusarium* fungi species for the express purpose of feeding its young. These fungi cause *Fusarium* dieback disease, which interrupts the transport of water and nutrients in at least 58 reproductive host tree species, with impacts to other host tree species as well. With documented shot hole borer occurrences within the San Juan Creek watershed, the spread of shot hole borers could have significant impacts in local ecosystems. Therefore, we recommend the DEIR include the following:

- a. a thorough discussion of the direct, indirect, and cumulative impacts that could occur from the potential spread of shot hole borers as a result of proposed activities in the DEIR;
- b. an analysis of the likelihood of the spread of shot hole borers as a result of the invasive species' proximity to above referenced activities;
- c. figures that depict potentially sensitive or susceptible vegetation communities within the project area, the known occurrences of shot hole borers within the project area (if any), and proximity to above referenced activities; and
- d. a mitigation measure or measure(s) within the DEIR that describe Best Management Practices (BMPs) that bring impacts of the project on the spread of shot hole borers below a level of significance. Examples of such BMPs include:
 - i. education of on-site workers regarding shot hole borer and its spread;
 - ii. reporting sign of shot hole borer infestation, including sugary exudate ("weeping") on trunks or branches and shot hole borer entry/exit-holes (about the size of the tip of a ballpoint pen), to the Department and University of California Riverside's (UCR) Eskalen Lab;
 - iii. equipment disinfection;
 - iv. pruning infected limbs in infested areas where project activities may occur;
 - v. avoidance and minimization of transport of potential host tree materials;
 - vi. chipping potential host materials to less than 1 inch and solarization, prior to delivering to a landfill;
 - vii. chipping potential host materials to less than 1 inch, and solarization, prior to composting on-site;
 - viii. solarization of cut logs; and/or
 - ix. burning of potential host tree materials.

Please refer to UCR's Eskalen lab website for more information regarding shot hole borers: <http://eskalenlab.ucr.edu/psheb.html>.

Mr. Charles Baker
California Department of Transportation
January 2, 2020
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We appreciate the opportunity to comment on the referenced NOP. Questions regarding this letter and further coordination on these issues should be directed to Simona Altman at (858) 467-4283 or simona.altman@wildlife.ca.gov.

Sincerely,



FOR

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ec: David Mayer (CDFW)
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