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STATE CLEARINGHOUSE

Subject: Comments on the Draft Environmental Impact Report (DEIR) for the Refugio Road Undercrossing Bridges Replacement Project; SCH 2019011050; Santa Barbara County

Dear Ms. Bertaina:

The California Department of Fish and Wildlife (CDFW) has reviewed the Draft Environmental Impact Report (DEIR) for the Refugio Road Undercrossing Bridges Replacement Project (Project). The California Department of Transportation (Caltrans) is the lead agency preparing a DEIR pursuant to the California Environmental Quality Act (CEQA; Pub. Resources Code, § 21000 *et. seq.*) with the purpose of informing decision-makers and the public regarding potential environmental effects related to the Project. Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. [Fish & Game Code, §§ 711.7, subdivision (a) & 1802; Public Resources Code, § 21070; CEQA Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect state fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Public Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & Game Code, § 1600 *et seq.*). Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by State law, of any species protected under the California Endangered Species Act (CESA) (Fish & Game Code, § 2050 *et seq.*), or state-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish

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and Game Code, §1900 et seq.) authorization as provided by the applicable Fish and Game Code will be required.

Project Description and Summary

Objective: The presence of alkali-silica reactivity in the concrete of both Refugio Road undercrossing bridges has caused the deterioration of the bridge decks and the formation of cracks in the bridge abutments. The Project would remove the two existing bridges (each consisting of two spans) at post mile R36.6 and construct new bridges that comply with current design standards. The new bridges would be 7-feet-wider than the existing structures to meet current design standards for six-lane freeways. The northbound bridge would accommodate three 12-foot-wide travel lanes and 10-foot-wide inside and outside shoulders; the southbound bridge would accommodate two 12-foot-wide lanes and 10-foot-wide inside and outside shoulders, which matches the existing configuration. Pile driving would be necessary to construct the Project as proposed.

Fish passage improvements are proposed as part of the Project as well. The concrete-grouted rock slope protection along the bed of Cañada del Refugio Creek would be removed to eliminate the partial barrier to fish passage and enhance habitat conditions. This portion of Cañada del Refugio Creek (creek) was lined with concrete-grouted rock slope protection during construction of the Refugio Road Bridges in 1974 and is a partial barrier to the upstream migration of southern California steelhead trout (*Oncorhynchus mykiss*) and other anadromous fish. This portion of the creek is passable by adult fish during high flow conditions, but water depths are too shallow for adult fish during low flow conditions. Fish passage criteria for juvenile fish were not met for either low flow or high flow conditions. California Fish and Game Code, sections 5901 and 5931 make it unlawful to impede fish passage, and Article 3.5 of the California Streets and Highways Code, section 156 requires that Caltrans remediate fish passage barriers for any project using state or federal transportation funds that affect stream crossings where anadromous fish are currently, or were historically, found. The rock slope protection along the creek bottom within the Caltrans right-of-way and drainage easement would be removed, whereas the rock slope protection along the creek banks would remain to prevent scour. The new creek bottom would be naturalized to improve habitat for fish. Improvements include the use of stone and gravel to create weirs that would provide resting pools for fish. Riparian trees would also be planted along the creek to help provide canopy for shade that is important to fish habitat.

The Project would take approximately two and a half years (three construction seasons) to complete. The bridges would be reconstructed one at a time and would be replaced during the first two construction seasons. Demolition of each bridge would occur during the dry season of each year, when the creek is low or not flowing. Fish passage improvements would occur throughout the duration of the Project and would require a third construction season to complete.

Additional Project activities include upgrading railings/metal beam guard rails to current standards, replacing the lighting system within the project limits, and applying contrasting surface treatment along the pavement to the southbound U.S. 101 off-ramp.

To isolate the construction site from flowing water, a temporary clear-water stream diversion system would need to be installed to pass upstream flows around the active construction zone.

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The precise water management strategy would be proposed by the construction contractor upon approval of the construction contract, and in accordance with Caltrans' best management practices and regulatory permit conditions. It is expected that the stream diversion system would include installation of a diversion pipe beneath the Refugio Road bridges during demolition. The diversion pipe and creek bed would be covered by clean washed gravel fill wrapped in thick plastic sheeting. This strategy would protect the diversion pipe and existing rock slope protection from falling debris, while isolating the gravel from spilling into the creek or washing downstream. Temporary diversion methods may also include pump-arounds and cofferdams, depending on the location and nature of the work being performed.

Comments and Recommendations

CDFW offers the comments and recommendations below to assist Caltrans in adequately identifying, avoiding, minimizing, and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

Project Description and Related Impact Shortcoming

Comment #1: Fish Passage Assessment

Issue: The DEIR states "A Location Hydraulic Study was completed in April 2019, a Fish Passage Analysis [a 1-page concept] was completed in May 2018, and a Draft Final Hydraulic Report was completed in November 2019." Page 77 of the DEIR states "Leaving the concrete-grouted rock slope protection on the creek banks and removing the rock slope protection from the creek bed was identified as the preferred design option because it would withstand the high flow velocities expected during storms while minimizing environmental impacts."

CDFW's hydraulic engineers reviewed the Hydraulic Study provided to CDFW and concluded the report is a flood analysis study. It provides estimates of peak discharges, channel velocities and water surface elevations during peak discharges, and a 100-year scour analysis at the bridges' foundation components. This Hydraulic Study does not sufficiently address fish passage. In addition, Caltrans should provide a shear stress analysis at the channel banks/slopes for various discharges to determine if the soils underlying the grouted rock slope protection will actually be "highly erosive". Without a shear stress analysis or a study to show grouted rock protection is necessary, CDFW's hydraulic engineers would like to have other alternatives analyzed for a more bio-engineered revetment at the channel banks/slopes.

Specific Impact: The Project includes fish passage as a main component of the Project. In communication with Caltrans, via email on April 2, 2020, Caltrans staff stated that they do not have detailed fish passage design plans at this time but provided CDFW a 1-page fish passage concept for the Project. They further stated that Caltrans does not complete detailed design work until after the environmental document is finalized and a preferred alternative has been identified. CDFW would need to see further design information, including a geomorphic assessment and a fish passage study, (1) to determine whether the Project will improve or hinder fish passage, and (2) to recommend feasible alternatives that avoid impacts to steelhead trout and other anadromous fish.

In addition, if the Project will have a substantial adverse effect on fish and wildlife resources, the entity is required to notify CDFW, per Fish and Game Code, section 1600 *et seq.* CDFW is

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unlikely to authorize an activity that will create a substantial adverse effect on fish and wildlife resources and is in conflict with other sections of the Fish and Game Code; specifically, section 5901 which prohibits the construction or maintenance of any device that prevents, impedes, or tends to prevent or impede the passing of fish up and downstream. CDFW recommends that the diversion and stream erosion control structures be modified to allow for passage at varying flows and velocities thus reducing impacts to fish and wildlife resources.

Why Impact Would Occur: Alterations of the streambed can cause changes in stream flow regimes. Subsequently, flow regime changes may affect the viability of salmonids, among other native fish, that persist in the affected watershed.

- More specifically, loss of high flows and prolonged low flows, can be especially detrimental to salmonids (Moyle 2002);
- Reducing the transport of fine sediment downstream causing streams to become graded or buried (Poff et al. 1997, Bauer et al. 2015);
- Disconnecting channels from floodplains that are important nursery grounds, leading to reductions in reproduction and recruitment (Junk et al. 1989, Sparks 1995, Poff et al. 1997);
- Wash-out and stranding of fish (Cushman 1985);
- Disrupting cues for life cycle events such as spawning, egg hatching, and migration (Montgomery et al. 1983, Jonsson 1991, Næsje et al. 1995);
- Decreasing prey availability (macroinvertebrates) of juvenile salmon (McKay and King 2006) that can then decrease growth rates (Harvey et al. 2006);
- Increasing water temperatures of streams that can slow growth, increase predation risk, and increase susceptibility to disease (Moore and Townsend 1998, Marine and Cech, Jr. 2004); and,
- Dewatering small streams used by juvenile salmon (Richardson et al. 2005).

Evidence Impact would be significant: The Project may substantially adversely affect the existing stream pattern, upstream, and downstream of the Project location. Absent appropriate mitigation measures, the alteration and/or diversion of a stream could result in substantial erosion or siltation on-site or on-site of the Project.

Constructions of dams and stream crossings can also modify flow regimes and reduce the magnitude and frequency of high flows (Poff et al. 1997). They can also degrade water quality and decrease habitat for aquatic species if improperly constructed (Santucci, Jr. et al. 2005). Construction of dams can also prevent fish from completing life cycle events, such as outmigration, and can prevent adults from reaching spawning grounds (Liermann et al. 2012).

Road construction can cause soil erosion and run-off that can transfer sediment into streams (Beschta 1978, Seyedbagheri 1996, Richardson et al. 2001). Road use can supply fine sediments and contaminants to aquatic systems, which decreases water clarity (Gjessing et al. 1984, Reid and Dunne 1984); this can then impact survival and growth of fish (Newcombe and Jensen 1996). Road crossings can act as barriers to salmonids if they are improperly constructed (Furniss et al. 1991, Rieman et al. 1997).

Artificial lighting can suppress the immune system of fish, resulting in increased pathogen and parasite infections (Leonardi and Klempau 2003, Navara and Nelson 2007). Artificial lighting can also disrupt feeding patterns of juvenile salmonids (Valdimarsson et al. 1997). Salmonids

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also use changes in ambient light to guide their migration patterns, which can be disrupted by artificial lighting (Grau et al. 1981).

Certain fish and/or wildlife are reliant upon stream-related ecosystems, which in turn are reliant upon adequate instream flows. CDFW develops flow criteria for watercourses and streams throughout the state for which minimum flow levels need to be established in order to assure the continued viability of fish and wildlife as required by Public Resources Code, sections 10000-10005 and Fish and Game Code, section 5937.

Recommended Feasible Mitigation Measures:

Mitigation Measure #1: Adult steelhead are expected to be in the area during periods of high flow (January 1st to March 31st) and smolt are likely to be in the area during periods of receding flows (March 1st to July 31st). No work should occur in the stream during these times unless permitted by National Marine Fisheries Service (NMFS), and consultation with CDFW has occurred. CDFW and the NMFS should be contacted to coordinate additional fish salvage and avoidance measures.

Mitigation Measure #2: Any structure/culvert placed within the stream where fish may occur shall be designed, constructed, and maintained such that it does not constitute a permanent barrier to upstream or downstream movement of aquatic life including steelhead, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes but is not limited to the supply of water at an appropriate depth, temperature, and velocity to facilitate upstream and downstream fish migration. If any aspect of the proposed project results in a long-term reduction in fish movement, Caltrans shall be responsible for all future activities and expenditures necessary (as determined by CDFW) to secure passage of fish across the structure.

Comment #2: Relying of Preconstruction surveys for Presence of CESA-listed and CEQA-rare species.

Issue 1: The DEIR calls for future surveys, "preconstruction surveys", without demonstrating it was infeasible to perform these surveys prior to Project approval so the DEIR could provide an accurate assessment of the sensitive animal populations that may be impacted (Save Agoura Cornell Knoll v. City of Agoura Hills) (CEQA Guidelines, § 15126.4, subd. (a)(1)(B).)

An environmental impact report is inadequate if the success or failure of mitigation efforts may largely depend upon management plans that have not yet been formulated and have not been subject to analysis and review within the EIR (Pub. Resources Code, § 21000 et seq).

The DEIR defers formulation of mitigation measures AS-2, AS-5, TES-32 and TES-33 without setting specific performance criteria to ensure that these measures, as implemented, will be effective (Save Agoura Cornell Knoll v. City of Agoura Hills).

The use of pre-construction surveys, in lieu of appropriate protocol surveys, is not adequate for detection of CESA-listed and CEQA-rare (including species of special concern (SSC)), per Fish and Game Code, section 2081 (b) and California Code of Regulations, sections 783.2-783.8.

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Protocol surveys were not conducted for the following CESA-listed species that have a likelihood of presence in or adjacent to the Project: foothill yellow legged frog (*Rana boylei*), southwestern willow flycatcher (*Empidonax traillii extimus*), and least Bell's vireo (*Vireo bellii pusillus*)

Protocol surveys were not conducted for the SSC southern western pond turtle (*Actinemys pallida*), which has been documented in Refugio Creek and has a high likelihood of presence in or adjacent to the Project.

Specific Impact:

Foothill yellow legged frog:

The DIER's mitigation measures TES 1 – 31 only list USFWS as the agency Caltrans would be responsible to coordinate with for impacts to CESA-listed and CEQA-rare species. TES-32 states: "In the unlikely event that foothill yellow-legged frogs are observed during preconstruction surveys or construction monitoring, all in-stream project activities will stop immediately, and Caltrans will contact California Department of Fish and Wildlife within 48 hours to determine if a Section 2081 Incidental Take Permit is necessary". The DEIR should contain survey results to demonstrate presence or absence of the CESA-listed foothill yellow legged frog. This is so the DEIR can provide an accurate assessment of the foothill yellow legged frog population that may be impacted (CEQA Guidelines, § 15126.4, subd. (a)(1)(B).).

Southern western pond turtle:

AS-1 (worker education) and AS-2 (relocation of southern western pond turtle if found during construction, to Refugio Lagoon), do not appear adequate to demonstrate avoidance, or minimization of take of southern western pond turtle, which is designated an SSC.

Southern western pond turtles spend a majority of their time on land adjacent to water features, often underground in burrows up to 500 meters from an aquatic site. Southern western pond turtles are found in permanent and intermittent waters of rivers and creeks and can spend upwards to 200 days out of water. Males may be found on land for up to ten months annually, while females can be found on land during all months of the year due to nesting and overwintering. Depending on the season and rainfall of a given year, preconstruction surveys may miss visually detection of southern western pond turtle, even though they may be present and would likely be impacted by the Project.

The DEIR has not demonstrated Refugio Lagoon is an adequate receptor for any salvaged southern western pond turtles. For a site to be considered adequate, it should be surveyed for the presence of any existing southern western pond turtles, invasive aquatic species that prey on southern western pond turtles, and whether the site can adequately support all life stages of the species, and the current protection (both legally and from human disturbance) of this receptor site. CDFW is concerned about the salinity of Refugio Lagoon being within the acceptable range for southern western pond turtle to survive. CDFW recommends that southern western pond turtle not be placed in Refugio Lagoon unless Caltrans can demonstrate this is biologically appropriate to support the species.

Southwestern willow flycatcher and least Bell's vireo:

The DIER's mitigation measures for nesting birds, AS-5 and TES-33, do not appear adequate to demonstrate avoidance or minimization of take of CESA-listed species (southwestern willow

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flycatcher and least Bell's vireo). AS-5 calls for removal of trees outside of the bird nesting season, and TES-33 calls for establishing an exclusion zone of 100-feet of any active nest or contacting CDFW if a 100-foot exclusion zone cannot be made from any active nest.

This language is more applicable as general nesting bird protection language. These measures don't acknowledge that take of habitat, at any time of the year, that is documented to support least Bell's vireo, may still trigger take under CESA and could necessitate an incidental take permit (ITP). CESA, as defined by State law, prohibits take of any species protected under the California Endangered Species Act (CESA) (Fish & Game Code, § 2050 et seq.) Birds that display high site fidelity, such as least Bell's vireo, return to the same nesting site annually. Take of known nesting habitat, even outside of the nesting season, could still be considered take subject to CESA.

Why impact would occur:

The Project may result in impacts to CEQA-rare (including SSC) or CESA-listed species without including any specific disclosure or analysis in the DEIR. Deferring impact assessment and disclosure to pre-construction surveys does not allow adequate disclosure of impacts during the CEQA review period. Potential occurrences of CEQA-rare (including SSC) or CESA-listed species within the Project area are supported by suitable habitat and California Natural Diversity Database observations of these species in the vicinity of the Project. Surveys should be conducted to determine presence or absence so the DEIR can analyze the Project's impact to any CEQA-rare (including SSC) or CESA-listed species present and provide specific avoidance and mitigation measures. The species analysis should be included in the DEIR, including location (map), population/occurrence size estimates, and an assessment of specific impacts with avoidance and minimization measures containing specific performance criteria (Save Agoura Cornell Knoll v. City of Agoura Hills).

Direct impacts via habitat removal, noise, percussive vibration, human disturbance, channel diversion, sedimentation in the channel affecting food supply, increased exposure to predation, and direct take would reasonably occur during the Project. Anthropogenic noise can disrupt the communication of many wildlife species including frogs, birds, and bats (Sun and Narins 2005, Patricelli and Blickley 2006, Gillam and McCracken 2007, Slabbekoorn and Ripmeester 2008). Noise can also affect predator-prey relationships as many nocturnal animals such as bats and owls primarily use auditory cues (i.e., hearing) to hunt. Additionally, many prey species increase their vigilance behavior when exposed to noise because they need to rely more on visual detection of predators when auditory cues may be masked by noise (Rabin et al. 2006, Quinn et al. 2017). Noise has also been shown to reduce the density of nesting birds (Francis et al. 2009) and cause increased stress that results in decreased immune responses (Kight and Swaddle 2011). The DEIR analyzed noise and vibration affects only to human-based sensitive receptors and without analyzing these impacts to sensitive wildlife species or providing any minimization or mitigation measures for impacts to sensitive species.

Increased ambient lighting levels can increase predation risks and disorientation and disrupt normal behaviors in adjacent feeding, breeding, and roosting habitat (Longcore and Rich)

Evidence impact would be significant: CEQA Guidelines, sections 15070 and 15071 require the DEIR to analyze if the Project may have a significant effect on the environment as well as review if the Project will 'avoid the effect or mitigate to a point where clearly no significant effects would occur'. In order to analyze if a project may have a significant effect on the environment,

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the Project related impacts, including protocol survey results for CEQA-rare (including SSC) or CESA-listed species that occur in the Project footprint need to be disclosed. This disclosure is necessary to allow the Department to comment on alternatives to avoid impacts, as well as to assess the significance of the specific impact relative to the species (e.g., current range, distribution, population trends, and connectivity).

The DEIR includes moving (translocation) of animals as a primary mitigation strategy. CDFW does not generally support the translocation of CEQA-rare (including SSC) or CESA-listed species as translocation typically impacts individuals being translocated and well as individuals in the translocation site.

The loss of occupied habitat or reductions in the number of least Bell's vireo or southwestern willow flycatcher, either directly or indirectly through nest abandonment or reproductive suppression, may constitute a significant impact absent appropriate mitigation. Furthermore, nests of all native bird species are protected under both federal and state laws and regulations, including the Migratory Bird Treaty Act (MBTA; U.S.C., §§ 703 - 712) and California Fish and Game Code, sections 3503 and 3503.5, respectively.

Absent survey data, CDFW is unable to provide meaningful avoidance, minimization, or mitigation measures related to biological resources. CDFW recommends the lead agency conduct appropriate, species-specific, protocol biological surveys and to consult with CDFW for avoidance, minimization, and mitigation measures prior to finalizing the DEIR.

Recommendations:

CDFW recommends protocol surveys be conducted by a qualified biologist to determine the presence of foothill yellow legged frog, southwestern willow flycatcher, least Bell's vireo, and southern western pond turtle (following with following protocol https://sdmmp.com/upload/SDMMP_Repository/0/q4x2pztbkns61wv9hy30rjc78fg5dm.pdf).

Surveys should be conducted within the Project and an adjacent 500-foot buffer and analyze the potential significant effects of the proposed Project on the species (CEQA Guidelines, §15125).

Surveys for these species should follow accepted scientific protocol to allow the Department to determine the extent of impacts to the species associated with the Project and provide meaningful avoidance, minimization, and mitigation measures. The Department recommends the DEIR be recirculated after these surveys are completed to fully disclose the potential impacts to these species. Additionally, any proposed mitigation area should include a discussion on the territory size and breeding locations, invasive aquatic species present, food availability, and how all life cycle functions will be mitigated.

CDFW recommends Caltrans develop a southern western pond turtle mitigation plan in coordination with CDFW biologists to develop a strategy for avoidance and minimization of southern western pond turtle consistent with CDFW policy.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends coordinating with CDFW regarding impacts to southern western pond turtle. The Project, as proposed, may detrimentally impact the species,

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which is a SSC. Impacts may occur during construction and specimen relocation, as suggested in the DEIR.

Mitigation Measure #2: The salinity of Refugio lagoon may be outside the acceptable range for southern western pond turtle. CDFW recommends that southern western pond turtle not be placed in Refugio Lagoon. CDFW recommends alternatives to relocating southern western pond turtle be investigated, such as the compensatory mitigation recommended in the next comment, Mitigation Measure #3, directly below. CDFW does not support translocation of animals as a primary compensatory mitigation strategy. Any proposed mitigation should have suitable protection, success criteria, and a non-wasting funding mechanism to provide for long-term management.

Mitigation Measure #3: CDFW recommends that Caltrans develop mitigation strategies, with specific performance criteria, that appropriately offset detrimental impacts to southern western pond turtle and its associated habitat (including appropriate upland habitat). The mitigation site should provide equivalent function/value, be protected with a conservation easement (or equivalent) and include appropriate management and monitoring with sufficient funding to ensure long-term protection of the habitat. To account 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 would 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 pursued. If off-site mitigation is selected, CDFW recommends it be at a state-approved mitigation bank or via an entity that has been approved by CDFW to hold and manage mitigation lands pursuant to AB 1094 (2012), which amended Government Code, sections 65965-65968. All mitigation and mitigation plans should be provided in advance of any Project entitlements and the DEIR should include the specific performance standards detailed in these plans. CDFW can provide guidance to Caltrans regarding appropriate mitigation ratios.

Mitigation Measure #4: CDFW recommends monitoring noise generated by Project operations during construction and post-construction operations to ensure noise from the Project does not affect wildlife in the adjacent wetland/riverine/upland habitat. The DEIR should set acceptable noise thresholds that would be part of a long-term monitoring and reporting program to ensure impact to adjacent habitat is below a threshold that would have an adverse effect. The DEIR should provide noise and vibration analysis with contour maps, and provide specific avoidance, minimization, mitigation, monitoring and reporting commitments to assure identified minimization measures are effective.

Mitigation Measure #5: CDFW recommends the Project restrict use of equipment and lighting to hours least likely to disrupt wildlife (e.g., not at night or in early morning before 9 a.m.). Generators should not be used except for temporary use in emergencies. Power to sites can be provided by solar PV (photovoltaic) systems, cogeneration systems (natural gas generator), or small wind turbine systems. CDFW recommends use of noise suppression devices such as mufflers or enclosure for generators. Sounds generated from any means should be below the 55-60 dB range within 50-feet from the source.

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Comment #3: Project Impact to Bats

Issue: Inadequate bat reconnaissance work completed. Exclusion alone is not adequate mitigation for removing bat roosting habitat

Specific Impact: The DEIR states “On April 11, 2017, a daytime roosting bat survey was conducted by Caltrans Biologists...No bats were observed during the survey...there is a low possibility that bats may be using cliff swallow mud nests on the bridge for day roosting. This inference is based on bats found roosting in mud nests removed from other bridges in Caltrans District 5. The Refugio undercrossing bridges have roughly 500 mud nests in the horizontal angle under the bridge decks. Therefore, the presence of day roosting bats could not be completely ruled out as mud nests and drain holes may provide day roosting habitat.”

The daytime roosting bat survey Caltrans conducted looked for external signs of bat presence but did not include visual inspections inside swallow nests or inside bridge structures that could be supporting bats. CDFW questions the conclusion that there is a low probability that bats utilize the bridge, since abandoned swallow nests have routinely been documented to host bats, even with swallows still using the bridge to actively nest. In addition, bats have often been found in drain holes comparable to the ones discussed in the DEIR. Neither of these features (swallow nests and drain holes) were visually inspected to determine bat presence during the daytime roosting survey conducted by Caltrans.

Since bats are not typically ever active during the day, CDFW questions the reliance on solely using a daytime visual survey for a bridge that very likely supports bat species. At a minimum, a simple dusk exit survey should have been completed.

Specific Impact: The DEIR states several species of bats have the potential to occur onsite; however, surveys were not conducted prior to circulation of the DEIR to inform actual bat usage of the bridge. Therefore, the DEIR does not adequately disclose the potential for impacts to bats.

Bats in southern California can be active year-round, however, all potential breeding species are most active between March 15 and September 15. Surveys should be conducted at different times of year for at least one year and include at least one survey in the middle of the above dates and at least one in fall/winter during periods of warm weather. Each bat species has unique habitat needs, such as specific gap size of cracks and seasonality, that should be used to formulate appropriate mitigation into the Project CEQA document and to minimize impacts to sensitive bat species. The DEIR should document the presence of any bats to the species level and include species specific mitigation measures to reduce impacts to below a level of significance. The mitigation for bats using swallow nests will be very different from the mitigation for bats using bridge cracks or holes.

Evidence Impact would be significant: Bats are considered non-game mammals and are afforded protection by State law from take and/or harassment, (Fish and Game Code, § 4150, California Code of Regulations, § 251.1). Several bat species are also considered SSC and meet the CEQA definition of rare, threatened or endangered species (CEQA Guidelines, § 15065). Take of SSC could require a mandatory finding of significance by the Lead Agency, (CEQA Guidelines, § 15065).

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Each bat species has unique habitat needs, such as specific gap size of cracks and seasonality that should be used to formulate appropriate mitigation into the Project CEQA document and to minimize impacts to sensitive bat species. The DEIR should document the presence of any bats and include species specific mitigation measures to reduce impacts to below a level of significance, which include providing replacement roosting habitat. Without specific species presence information, CDFW cannot recommend appropriate species-specific habitat features such as designing false gaps into the bridge, creating swallow nest habitat, or any other habitat feature that would provide meaningful mitigation for impacts to bat roosting habitat.

Recommended Feasible Mitigation Measures:

Mitigation Measure #1: CDFW recommends bat surveys be conducted by a qualified bat specialist to determine bat presence within the Project and within a 500-foot buffer and analyze the potential significant effects of the proposed Project on the species (CEQA Guidelines, §15125). CDFW recommends the DEIR include the use of acoustic recognition technology to maximize detection of bats and determine species presence, for disclosure in the CEQA document.

To avoid the direct loss of bats that could result from removal of the bridge, swallow nests, trees, rock crevices, structures, that may provide roosting habitat (winter hibernacula, summer, and maternity), CDFW recommends that the following steps should be implemented:

1. Identify the species of bats present on the site;
2. Determine how and when these species utilize the site and what specific habitat requirements are necessary [(thermal gradients throughout the year, size of crevices, tree types, location of hibernacula/roost (height, aspect, etc.)];
3. Avoid the areas being utilized by bats for hibernacula/roosting; If avoidance is not feasible, a bat specialist should design alternative habitat that is specific to the species of bat being displaced and develop a relocation plan in coordination with CDFW;
4. The bat specialist should document all demolition monitoring activities and prepare a summary report to the Lead Agency upon completion of tree/rock disturbance and/or building demolition activities. CDFW requests copies of any reports prepared related to bat surveys (e.g., monitoring, demolition);
5. If confirmed occupied or formerly occupied bat roosting/hibernacula and foraging habitat is destroyed, habitat of comparable size, function and quality should be created or preserved and maintained at a nearby suitable undisturbed area. The bat habitat mitigation shall be determined by the bat specialist in consultation with CDFW;
6. A monitoring plan should be prepared and submitted to the Lead Agency and the specific details outlined in the DEIR. The monitoring plan should describe proposed mitigation habitat, and include performance standards for the use of replacement roosts/hibernacula by the displaced species, as well as provisions to prevent harassment, predation, and disease of relocated bats; and,
7. Annual reports detailing the success of roost replacement and bat relocation should be

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prepared and submitted to Lead Agency and the CDFW for five years following relocation or until performance standards are met, whichever period is longer.

Mitigation Measure #2: CDFW recommends any new bridge be designed to include design features to replace niches of the bridge currently used by bats including allowing future swallow nests to be rebuilt. Suitable conditions required for swallow nesting habitat include horizontal ledges or rough vertical surfaces with a sheltered overhang, allow swallow to freely enter and exit nests, and ensure a design to deter predators. New bridge design should also include weep holes, (faux) expansion cracks to mimic any current bat habitat, and any other bridge features that currently supports bat roosting.

Mitigation Measure #3: Prior to the demolition of the current bridges, temporary nesting/roosting habitat should be provided. Nesting structures must be created before the onset of demolition activities during a period bats are active and able to move to the new roosting habitat.

Comment 4: Adequacy of CEQA-Rare Plant Mitigation Proposed

Issue 1: The DIER states cliff aster and Santa Catalina island buckwheat plants will be impacted by the Project. Roughly 20 cliff aster plants are growing beneath the bridges and would need to be removed prior to bridge demolition. An estimated 30 Santa Catalina island buckwheat plants are growing beneath metal-beam guardrail along the edges of the highway where permanent vegetation control would be placed.

Cliff aster is ranked 4.2, limited distribution by the California Native Plant Society (CNPS). There are 54 observations of this plant documented in Santa Barbara County, of which 24 are observations older than 1970. Santa Catalina island buckwheat is ranked 4.3 by CNPS. This plant is known from 18 records in Santa Barbara County.

Many of the plants listed by the CNPS as California Rare Plant Rank 3 and 4 meet the definitions of the California Endangered Species Act of the California Fish and Game Code and are eligible for state listing. Many California Rare Plant Rank 3 and 4 plants are significant locally, and CDFW recommends that they be evaluated for impact significance during preparation of environmental documents relating to CEQA, based on CEQA Guidelines §15125 (c) and/or §15380. Impacts to these species or their habitat must be analyzed during preparation of environmental documents relating to CEQA, as they meet the definition of Rare or Endangered under CEQA Guidelines §15125 (c) and/or §15380 (CEQA-rare). To assist botanists in evaluating California Rare Plant Rank 4 species for CEQA consideration the California Native Plant Society (CNPS) has prepared a technical memorandum titled *Considerations for Including CRPR 4 Plant Taxa in CEQA Biological Resource Impact Analysis* (https://www.cnps.org/wp-content/uploads/2020/02/crpr4_technical_memo.pdf)

The DEIR PLA-1 proposes salvage of the top two inches of topsoil, and possibly spreading this on suitable habitat, as mitigation for taking CNPS-ranked, CEQA-rare plants. The DEIR states if invasive species are found in the soil occupied by the rare plants, soil will not be collected, stockpiled, or spread. The DIER does not have any criteria for establishing any cliff aster or Santa Catalina island buckwheat plants, nor include any monitoring or assessment to demonstrate how this would mitigate take of CEQA-rare plants.

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“PLA-1: Prior to construction, the top two inches of the soil within about 1.5 feet of all Santa Catalina island buckwheat and cliff aster plants affected in the project work area will be collected by the contractor and stockpiled during construction. Prior to collection, soils should be inspected for the presence of invasive species such as fountain grass. If invasive species are present, the soils will not be collected and stockpiled. Toward the end of construction and prior to permanent erosion control application the stockpiled soil will be spread in areas that are suitable habitat. The contractor will coordinate with the Caltrans district biologist, no sooner than 60 working days prior to construction.”

Specific impact: Several studies have documented topsoil salvage had no effect on the recolonization of the target plant species (Hinshaw, 1998, Dixon, 2018). Based on the scientific literature available, relying on topsoil salvage alone to mitigate impacts to CEQA-rare plant species does not appear to provide any value to mitigate impacts to the plant.

Transplantation is rarely successful in establishing rare plants at new locations. A study by CDFW (Fiedler, 1991) found that, even under optimum conditions with ample time for planning, transplantation was effective in only 15% of cases studied. Other reviews (e.g. Allen, 1994; Howald, 1996) have found similar problems digging up, transporting, and replanting plants, bulbs, rhizomes or seeds imposes a tremendous stress on a plant. They can easily die in the process. Scientifically tested, reliable methods for salvage, propagation, translocation or transplantation are not available for many rare species. Transplantation can also cause problems at the target site. Genetic contamination can occur if the plant being transplanted can exchange genetic material with local taxa. Disturbance at the target site may facilitate invasion by non-native invasive species (CNPS, 1991).

Additionally, CDFW is concerned with translocating, or moving collected seed to an undisclosed location. The biological implication of mixing genes and specific alleles into new areas is not supported by CDFW and may cause loss of both the transplanted species as well as the population they are being moved to/near.

Why impact would occur: The DIER does not provide any specific requirements to replace the number of cliff aster plants or the Santa Catalina island buckwheat plants impacted. CEQA Guidelines, sections 15070 and §15071 require the document to analyze if the Project may have a significant effect on the environment as well as review if the Project will ‘avoid the effect or mitigate to a point where clearly no significant effects would occur’.

This information is necessary to allow CDFW to comment on alternatives to avoid impacts, as well as to assess the significance of the specific impact relative to the species (e.g., current range, distribution, population trends, and connectivity).

The Project may result in impacts to CEQA-rare species without including any specific avoidance and minimization measures. CDFW does not consider translocation (including soil salvage) of CEQA-rare plant species as adequate mitigation under CEQA.

Evidence impact would be significant: Impacts to CEQA-rare plant species should be considered significant under CEQA unless they are clearly mitigated below a level of significance. Inadequate avoidance, minimization, and mitigation measures for impacts to these CEQA-rare plant species will result in the Project continuing to have a substantial adverse direct, indirect, and cumulative effect, either directly or through habitat modifications, on any

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species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: Any mitigation for CEQA-rare plant impacts should include specific, measurable criteria for success. Monitoring for CEQA-rare plants should occur for a sufficient period to allow trends to be analyzed and demonstrate the occurrence is stable over time. No negative trend in CEQA-rare plant individuals (counted separately as flowering, seed set and non-flowering individuals), and no positive trend in non-native plant cover should occur over the monitoring period. CDFW recommends a ratio of no less than 2:1 for both the acreage and number of plants impacted.

Mitigation Measure #2: CDFW recommends a Documented Conservation Seed Collection of the impacted rare plant species be made and deposited at either Santa Barbara Botanic Garden or the California Botanic Garden (formerly known as Rancho Santa Ana Botanic Garden). A Documented Conservation Seed Collection is when seed from a CNPS-ranked CESA-rare, and/or CESA-listed plant species is collected and stored as part of a permanent genetic collection in a protected location. This collection preserves the genome, and any unique alleles that are present in any given occurrence, for future study and reintroduction projects.

Funding should be provided to maintain the collection, as well as conduct periodic germination and viability tests, in perpetuity. Documented conservation collections (long-term storage) are important for conserving rare, gene pool representative germplasm designated for long-term storage to provide protection against extinction and as a source material for future restoration and recovery.

Mitigation Measure #3: A weed management plan should be developed for the Project area and implemented during the duration of this Project. On-going soil disturbance promotes establishment and growth of non-native weeds. As part of the Project, non-native weeds should be prevented from becoming established. The Project area should be monitored via mapping for new introductions and expansions of non-native weeds.

Filing Fees

The Project, as proposed, would have an impact on fish and/or wildlife resources, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying Project approval to be operative, vested, and final. (California Code of Regulations, tit. 14, § 753.5; Fish and Game Code, § 711.4; Public Resources Code, § 21089).

Conclusion

We appreciate the opportunity to comment on the project to assist Caltrans in adequately analyzing and minimizing/mitigating impacts to biological resources. CDFW requests an opportunity to review and comment on any response that the County has to our comments and to receive notification of any forthcoming hearing date(s) for the project. Questions regarding this letter and further coordination on these issues should be directed to Kelly Schmoker-

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Stanphill, Senior Environmental Scientist (Specialist), at (626) 335-9092 or
Kelly.schmoker@wildlife.ca.gov.

Sincerely,

DocuSigned by:



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Erinn Wilson

Environmental Program Manager I

ec: CDFW

Steve Gibson – Los Alamitos
Kelly Schmoker-Stanphill – Glendora
Sarah Rains – Ventura
Baron Barrera – Los Alamitos
Dolores Duarte – San Diego

Scott Morgan (State Clearinghouse)

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CDFW recommends the following language to be incorporated into a future environmental document for the Project.

Biological Resources			
	Mitigation Measure	Timing	Responsible Party
MM-BIO-1 – Fish Passage	Adult steelhead are expected to be in the area during periods of high flow (January 1st to March 31st) and smolt are likely to be in the area during periods of receding flows (March 1st to July 31st). No work should occur in the stream during these times unless permitted by the appropriate federal agency regulating this Federal Endangered Species Act-listed species. CDFW and the National Marine Fisheries Service should be contacted to coordinate additional fish salvage and avoidance measures.	Prior to construction	Caltrans
MM-BIO-2 – Fish Passage	Any structure/culvert placed within the stream where fish may occur shall be designed, constructed, and maintained such that it does not constitute a permanent barrier to upstream or downstream movement of aquatic life including steelhead, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes but is not limited to the supply of water at an appropriate depth, temperature, and velocity to facilitate upstream and downstream fish migration. If any aspect of the proposed project results in a long-term reduction in fish movement, Permittee shall be responsible for all future activities and expenditures necessary (as determined by CDFW) to secure passage of fish across the structure.	Prior to Finalizing the EIR	Caltrans
MM-BIO-3 – Protocol Surveys and DEIR Recirculation	<p>CDFW recommends protocol surveys be conducted by a qualified biologist to determine the presence of foothill yellow legged frog, southwestern willow flycatcher, least Bell's vireo, and southern western pond turtle (following with following protocol https://sdmmp.com/upload/SDMMP_Repository/0/q4x2pztkns61wv9hy30rjc78fg5dm.pdf). Surveys should be conducted within the Project and an adjacent 500-foot buffer and analyze the potential significant effects of the proposed Project on the species (CEQA Guidelines, §15125).</p> <p>Surveys for these species should follow accepted scientific protocol to allow the Department to determine the extent of impacts to the species associated with the Project and provide meaningful avoidance, minimization, and mitigation measures. The Department recommends the DEIR be recirculated after these surveys are completed to fully disclose the potential impacts to these species.</p>	Prior to Finalizing the EIR	Caltrans

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	The DEIR should be recirculated after these surveys are completed to fully disclose the potential impacts to the number and kind of southern western pond turtles, yellow-legged frog, least Bell's vireo, and willow flycatcher.		
MM-BIO-4 – CESA	CDFW recommends initiating consultation for this Project under CESA.	Prior to construction	Caltrans
MM-BIO-5 – Pond Turtle Relocation	The salinity of Refugio lagoon may be outside the acceptable range for southern western pond turtle. CDFW recommends that southern western pond turtle not be placed in Refugio Lagoon. CDFW recommends alternatives to relocating southern western pond turtle be investigated, such as the compensatory mitigation recommended in the next comment, MM-Bio-7, directly below. CDFW does not support translocation of animals as a primary compensatory mitigation strategy. Any proposed mitigation should have suitable protection, success criteria, and a non-wasting funding mechanism to provide for long-term management.	Prior to Finalizing the EIR	Caltrans
MM-Bio-6- Habitat Mitigation	CDFW recommends that Caltrans develop mitigation strategies, with specific performance criteria, that appropriately offset detrimental impacts to southern western pond turtle and its associated habitat (including appropriate upland habitat). The mitigation site should provide equivalent function/value, be protected with a conservation easement (or equivalent) and include appropriate management and monitoring with sufficient funding to ensure long-term protection of the habitat. To account 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 would 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 pursued. If off-site mitigation is selected, CDFW recommends it be at a state-approved mitigation bank or via an entity that has been approved by CDFW to hold and manage mitigation lands pursuant to AB 1094 (2012), which amended Government Code, sections 65965-65968. All mitigation and mitigation plans should be provided in advance of any Project entitlements and the DEIR should include the specific performance standards detailed in these plans. CDFW can provide guidance to Caltrans regarding appropriate mitigation ratios.	Prior to Finalizing the EIR	Caltrans
MM-Bio-7- Noise Monitoring	CDFW recommends monitoring noise generated by Project operations during construction and post-construction operations to ensure noise from the Project does not affect wildlife in the adjacent wetland/riverine/upland habitat. The DEIR should set acceptable noise thresholds that would be part of a long-term monitoring and reporting program to	Prior to Finalizing the EIR	Caltrans

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	ensure impact to adjacent habitat is below a threshold that would have an adverse effect. The DEIR should provide noise and vibration analysis with contour maps, and provide specific avoidance, minimization, mitigation, monitoring and reporting commitments to assure identified minimization measures are effective.		
MM-Bio-8-Construction Monitoring	CDFW recommends the Project restrict use of equipment and lighting to hours least likely to disrupt wildlife (e.g., not at night or in early morning before 9am). Generators should not be used except for temporary use in emergencies. Power to sites can be provided by solar PV (photovoltaic) systems, cogeneration systems (natural gas generator), or small wind turbine systems. CDFW recommends use of noise suppression devices such as mufflers or enclosure for generators. Sounds generated from any means should be below the 55-60 dB range within 50-feet from the source.	Prior to Finalizing the EIR	Caltrans
MM-Bio-9-Bats	<p>Mitigation Measure #1: CDFW recommends bat surveys be conducted by a qualified bat specialist to determine bat presence within the Project and within a 500-foot buffer and analyze the potential significant effects of the proposed Project on the species (CEQA Guidelines, §15125). CDFW recommends the DEIR include the use of acoustic recognition technology to maximize detection of bats and determine species presence, for disclosure in the CEQA document. Bats in southern California can be active year-round, however, all potential breeding species are most active between March 15 and September 15. Surveys should be conducted at different times of year for at least one year and include at least one survey in the middle of the above dates and at least 1 in fall/winter during periods of warm weather. Each bat species has unique habitat needs, such as specific gap size of cracks and seasonality, that should be used to formulate appropriate mitigation into the Project CEQA document and to minimize impacts to sensitive bat species. The DEIR should document the presence of any bats and include species specific mitigation measures to reduce impacts to below a level of significance. The mitigation for bats using swallow nests will be very different from the mitigation for bats using bridge cracks or holes.</p> <p>To avoid the direct loss of bats that could result from removal of the bridge, swallow nests, trees, rock crevices, structures, that may provide roosting habitat (winter hibernacula, summer, and maternity), CDFW recommends that the following steps should be implemented:</p>	Prior to Finalizing the EIR	Caltrans

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	<ol style="list-style-type: none"> 1. Identify the species of bats present on the site; 2. Determine how and when these species utilize the site and what specific habitat requirements are necessary [(thermal gradients throughout the year, size of crevices, tree types, location of hibernacula/roost (height, aspect, etc.))]; 3. Avoid the areas being utilized by bats for hibernacula/roosting; If avoidance is not feasible, a bat specialist should design alternative habitat that is specific to the species of bat being displaced and develop a relocation plan in coordination with CDFW. 4. The bat specialist should document all demolition monitoring activities and prepare a summary report to the Lead Agency upon completion of tree/rock disturbance and/or building demolition activities. CDFW requests copies of any reports prepared related to bat surveys (e.g., monitoring, demolition); 5. If confirmed occupied or formerly occupied bat roosting/hibernacula and foraging habitat is destroyed, habitat of comparable size, function and quality should be created or preserved and maintained at a nearby suitable undisturbed area. The bat habitat mitigation shall be determined by the bat specialist in consultation with CDFW; 6. A monitoring plan should be prepared and submitted to the Lead Agency and the specific details outlined in the DEIR. The monitoring plan should describe proposed mitigation habitat, and include performance standards for the use of replacement roosts/hibernacula by the displaced species, as well as provisions to prevent harassment, predation, and disease of relocated bats; and, 7. Annual reports detailing the success of roost replacement and bat relocation should be prepared and submitted to Lead Agency and the CDFW for five years following relocation or until performance standards are met, whichever period is longer. 		
<p>MM-Bio-10-Bats</p>	<p>CDFW recommends any new bridge be designed to include design features to replace niches of the bridge currently used by bats including allowing future swallow nests to be rebuilt. Suitable conditions required for swallow nesting habitat include horizontal ledges or rough vertical surfaces</p>	<p>Prior to Finalizing the EIR</p>	<p>Caltrans</p>

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	with a sheltered overhang, allow swallow to freely enter and exit nests, and ensure a design to deter predators. New bridge design should also include weep holes, (faux) expansion cracks to mimic any current bat habitat, and any other bridge feature that currently supports bat roosting.		
MM-Bio-11-Bats	Prior to the demolition of the current bridges, temporary nesting/roosting habitat should be provided. Nesting structures must be created before the onset of demolition activities during a period bats are active and able to move to the new roosting habitat.	Prior to Finalizing the EIR	Caltrans
MM-Bio-12-CEQA-Rare Plants	Any mitigation for CEQA-rare plant impacts should include specific, measurable criteria for success. Monitoring for CNPS California Rare Plant Ranked (CEQA-rare) plants should occur for a sufficient period to allow trends to be analyzed and demonstrate the occurrence is stable over time. No negative trend in CEQA-rare plant individuals (counted separately as flowering, seed set and non-flowering individuals), and no positive trend in non-native plant cover should occur over the monitoring period. CDFW recommends a ratio of at least 2:1 for both the acreage and number of plants impacted.	Prior to Finalizing the EIR	Caltrans
MM-Bio-13-CEQA-Rare Plants	CDFW recommends a Documented Conservation Seed Collection of the impacted rare plant species be made and deposited at either Santa Barbara Botanic Garden or the California Botanic Garden (formerly known as Rancho Santa Ana Botanic Garden). A Documented Conservation Seed Collection is when seed from a CNPS-ranked and/or CESA-listed plant species is collected and stored as part of a permanent genetic collection in a protected location. This collection preserves the genome, and any unique alleles that are present in any given occurrence, for future study and reintroduction projects. Funding should be provided to maintain the collection, as well as conduct periodic germination and viability tests, in perpetuity. Documented conservation collections (long-term storage) are important for conserving rare, gene pool representative germplasm designated for long-term storage to provide protection against extinction and as a source material for future restoration and recovery.	Prior to Finalizing the EIR	Caltrans
MM-Bio-14-CEQA-Rare Plants	A weed management plan should be developed for the Project area and implemented during the duration of this Project. On-going soil disturbance promotes establishment and growth of non-native weeds. As part of the Project, non-native weeds should be prevented from becoming established. The Project area should be monitored via mapping for new introductions and expansions of non-native weeds.	Prior to Finalizing the EIR	Caltrans

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