

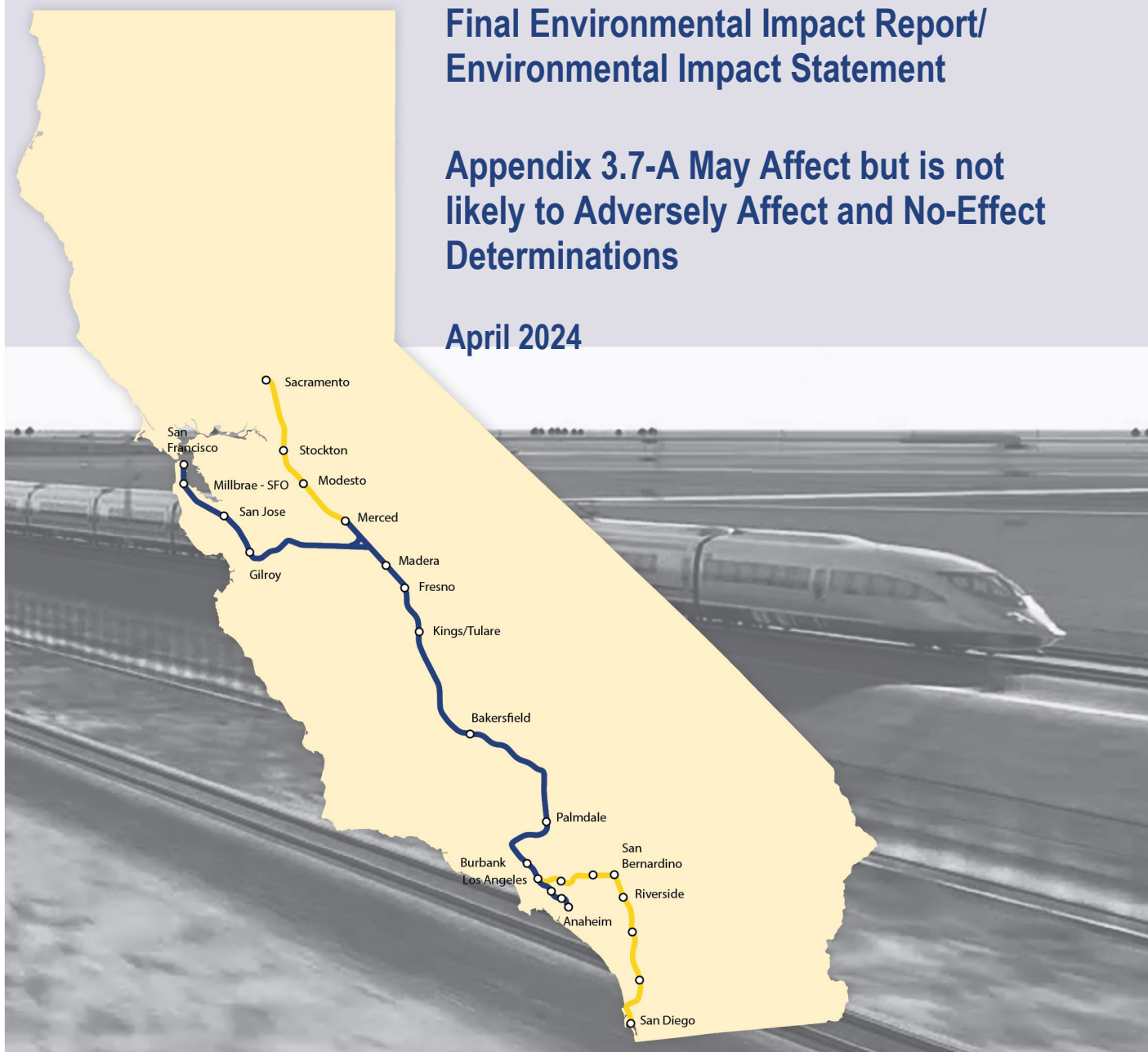
California High-Speed Rail Authority

Palmdale to Burbank Project Section

Final Environmental Impact Report/
Environmental Impact Statement

Appendix 3.7-A May Affect but is not
likely to Adversely Affect and No-Effect
Determinations

April 2024



The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being or have been carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.

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Since publication of the Palmdale to Burbank Section Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS), the following substantive changes have been made to this appendix:

- Unarmored Threespine Stickleback and California Spotted Owl were added as species for which the Authority has determined the Project may affect but is not likely to adversely affect.
- Sections on Braunton’s Milkvetch, Nevin’s Barberry, California Orcutt Grass, and Spreading Navarretia were updated to include conservation measures to avoid and minimize effects to federally listed plant species.
- The Section on Vernal Pool Fairy Shrimp was updated to include conservation measures to avoid and minimize effects to federally listed invertebrate species.
- Sections on California Red-Legged Frog and Mountain Yellow-Legged Frog were updated to include conservation measures to avoid and minimize effects to federally listed amphibian species.
- The Section on Desert Tortoise was updated to include conservation measures to avoid and minimize effects to federally listed reptile species.
- The Section on Yellow-billed Cuckoo was updated to include conservation measures to avoid and minimize effects to federally listed bird species.
- Sections on Gambel’s Watercress, Marsh Sandwort, and Kern Primrose Sphinx Moth were updated to indicate the HSR Palmdale to Burbank Project Section may affect will have no effect on these special-status plant species.

This appendix includes additional information supporting the rationale for the “may affect but is not likely to adversely affect” and the no potential to occur “no effect” determinations. The Authority requests concurrence with these determinations from USFWS.

Braunton’s Milkvetch

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect Braunton’s milkvetch (*Astragalus brauntonii*), a federally endangered and a U.S. Forest Service (USFS) sensitive species.

Rationale

The Authority reviewed species information for Braunton’s milkvetch from the USFWS five-year species review, CNDDDB, and other relevant data sources (see list of references). Botanical surveys were conducted in 2016 and 2017 (see Section 4.1.2 of this Biological Assessment). Data analyzed included known occurrence records (Figure 3.7-1 and Figure 3.7-2), and habitat and range information relative to the proposed action. Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

Braunton’s milk-vetch is endemic to the Santa Monica Mountains, Simi Hills, San Gabriel Mountains, and Santa Ana Mountains in coastal southern California. The CNDDDB reports 44 occurrences, of which 39 are presumed extant and five are extirpated or possibly extirpated. The nearest record documented by the CNDDDB is an extirpated occurrence located approximately 5.8 miles south of the action area and north of Beverly Hills. No extant occurrences of Braunton’s milk-vetch are documented within 10 miles of the action area (CDFW 2020). According to the USFS, populations of Braunton’s milk-vetch not documented in the CNDDDB occur near the proposed action in the Angeles National Forest (ANF). However, these populations do not occur in in the action area. The species was not observed during the 2016 and 2017 botanical surveys conducted for the proposed action. The nearest critical habitat is 14 miles southwest of the action area in the Santa Monica Mountains (USFWS 2020; USFWS 2006).

Public Utilities and Energy

It is important to understand where utility conflicts may occur early in project development. This early identification of conflicts may identify opportunities to avoid utility relocations, decrease the public’s inconveniences experienced during utility relocations, and decrease project cost.

Conclusion

The Braunton's milk-vetch reported by the USFS in the ANF will be avoided and will not be directly affected by the proposed action. Based on the lack of other documented occurrences of the species within 10 miles of the action area, the proposed action may affect but is not likely to adversely affect any Braunton's milk-vetch. Additionally, the USFWS stated during informal consultation conducted in 2019 that due to rarity of the species, Braunton's milk-vetch are not expected to occur in the action area (USFWS 2019a).

To ensure that this species is not present at the time of construction, suitable habitat within the project footprint will be surveyed prior to ground- or vegetation-disturbing activities. The survey(s) will be conducted by a Designated Biologist familiar with the distinguishing characteristics of the species during the species bloom period. If Braunton's milk-vetch is observed, no project activities that could adversely affect the species will be conducted within 100 feet of individuals. The Authority will reinstate Section 7 consultation if circumstances meeting the reinstatement criteria occur.

Conservation Measures Specific to Braunton's Milkvetch

The purpose of these conservation measures is to avoid and minimize effects to federally listed plant species.

CM-PLT-01: Conduct Presence/ Absence Pre-construction Surveys for Listed Plants

To detect the presence of federally listed plant species, the Designated Biologist(s) will conduct protocol-level surveys in all suitable habitat for federally listed plant species within the project impact footprint and 100-foot plant buffer prior to any ground- or vegetation-disturbing activities. Initially, habitat suitability assessment surveys will be performed to "ground-truth" the habitat suitability models developed in 2015. Areas that are determined to not be suitable habitat for federally listed species will not be further surveyed to protocol level, following coordination with and approval from USFWS. Where further protocol surveys are indicated based on the habitat suitability assessment, the surveys shall be consistent with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018b) and *Guidelines for Conducting and Report Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 2000). Prior to surveys, and if a reference population exists, reference populations for target survey species will be visited to confirm blooming conditions and ensure target species have flowers or other discernible features necessary to identify plants.

The Designated Biologist will flag and record in GIS the locations of any observed federally listed plant species. If federally listed plant species are detected, the Authority will reinstate Section 7 consultation with the USFWS regarding minimization, salvage, and relocation.

CM-PLT-02: Avoidance Measures for Listed Plants

If federally listed plant species are detected and cannot be avoided by project impacts, prior to implementation of salvage or relocation, the Authority will reinstate consultation with the USFWS to determine the best course of action to preserve the plant population. Upon approval from the USFWS, prior to any ground-disturbing activity, the Project Biologist will collect seeds and plant materials and stockpile and segregate the top four inches of topsoil from locations in the work area where species listed as threatened or endangered under FESA, were observed during surveys for use on off-site locations. Suitable sites to receive salvaged material include Authority mitigation sites, refuges, reserves, federal or state lands, and public/private mitigation banks.

If authorizations issued under FESA require relocation or propagation is selected to address impacts, the Project Biologist will prepare a plant species salvage plan to address monitoring, salvage, relocation, and/or seed banking of federally listed plant species. The plan will include provisions that address the techniques, locations, and procedures required for the collection, storage, and relocation of seed or plant material; collection, stockpiling, and redistribution of topsoil and associated seed. The plan will also include requirements related to outcomes, such as percent absolute cover of highly invasive species as defined by the California Invasive Plant Council (less than documented baseline conditions), maintenance, monitoring, implementation,

and annual reporting. The plan will reflect conditions required under regulatory authorizations issued for federally listed species and will be submitted to the USFWS for review and approval. The Project Biologist will submit the plan to the Authority for review and approval.

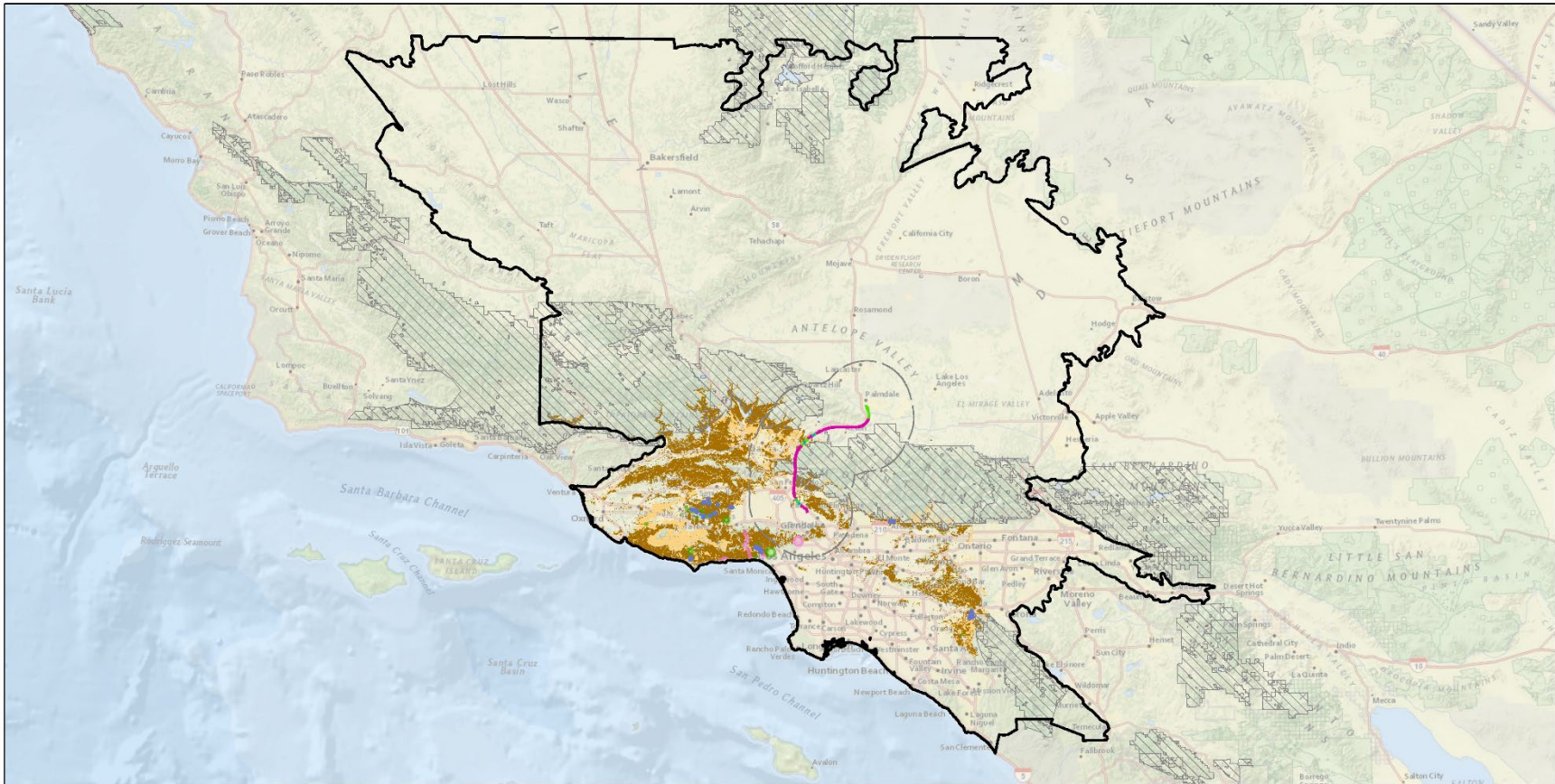
CM-PLT-03: Maintenance of Existing Hydrologic Conditions to Maintain Slender-horned Spineflower Habitat Below the Preferred Alternative Alignment in Bee Canyon

To maintain habitat for slender-horned spineflower, and other federally listed plant species, hydraulic capacity in Bee Canyon and Pacoima Wash will be maintained at preconstruction conditions through the implementation of on-site stormwater management BMPs to provide runoff dispersion, infiltration, detention, and evaporation. Hydraulic capacity in Bee Canyon and Pacoima Wash will be maintained by minimizing alterations to watercourses, implementing erosion control BMPs, and maintaining existing stormwater patterns through implementation of conservation measures (CM-GEN-04 and CM-GEN-05) and HYD-IAMF#1 through HYD-IMAF#3 (Appendix K) into project design. A construction-period SWPPP (CM-GEN-05 and HYD-IAMF#3) will incorporate BMPs to reduce short-term increases in construction-site runoff, and a Stormwater Management and Treatment Plan (Appendix K, HYD-IAMF#1) will address stormwater runoff and system capacity. Water crossings will be implemented to maintain preconstruction hydraulic capacity (Appendix K, HYD-IAMF#2) and maintenance of existing drainage patterns within channels and washes (Appendix K, HYD-IAMF#1 and HYD-IAMF#3) will minimize impacts to hydraulic condition. The Authority will provide the SWPPP and Stormwater Management and Treatment Plan for review by USFWS at the 60 percent design stage.

References

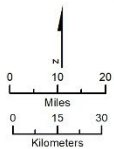
- Calflora. 2019. *Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria*. Berkeley, California: The Calflora Database [a non-profit organization]. <https://www.calflora.org/> (Accessed 2019).
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- . 2009. *Astragalus brauntonii* (Braunton's Milk-vetch) 5-Year Review: Summary and Evaluation. Ventura, CA.
- . 2019a. Meetings with the California High-Speed Rail Authority regarding Braunton's milk-vetch. October 24, 2019 and November 22, 2019.

- . 2019b. *Environmental Conservation Online System (ECOS)*. Washington, DC. <http://ecos.fws.gov/ecp/report/table/critical-habitat.html> (Accessed 2019).
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SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDb (08/2020), USFWS Critical Habitat (09/2020).

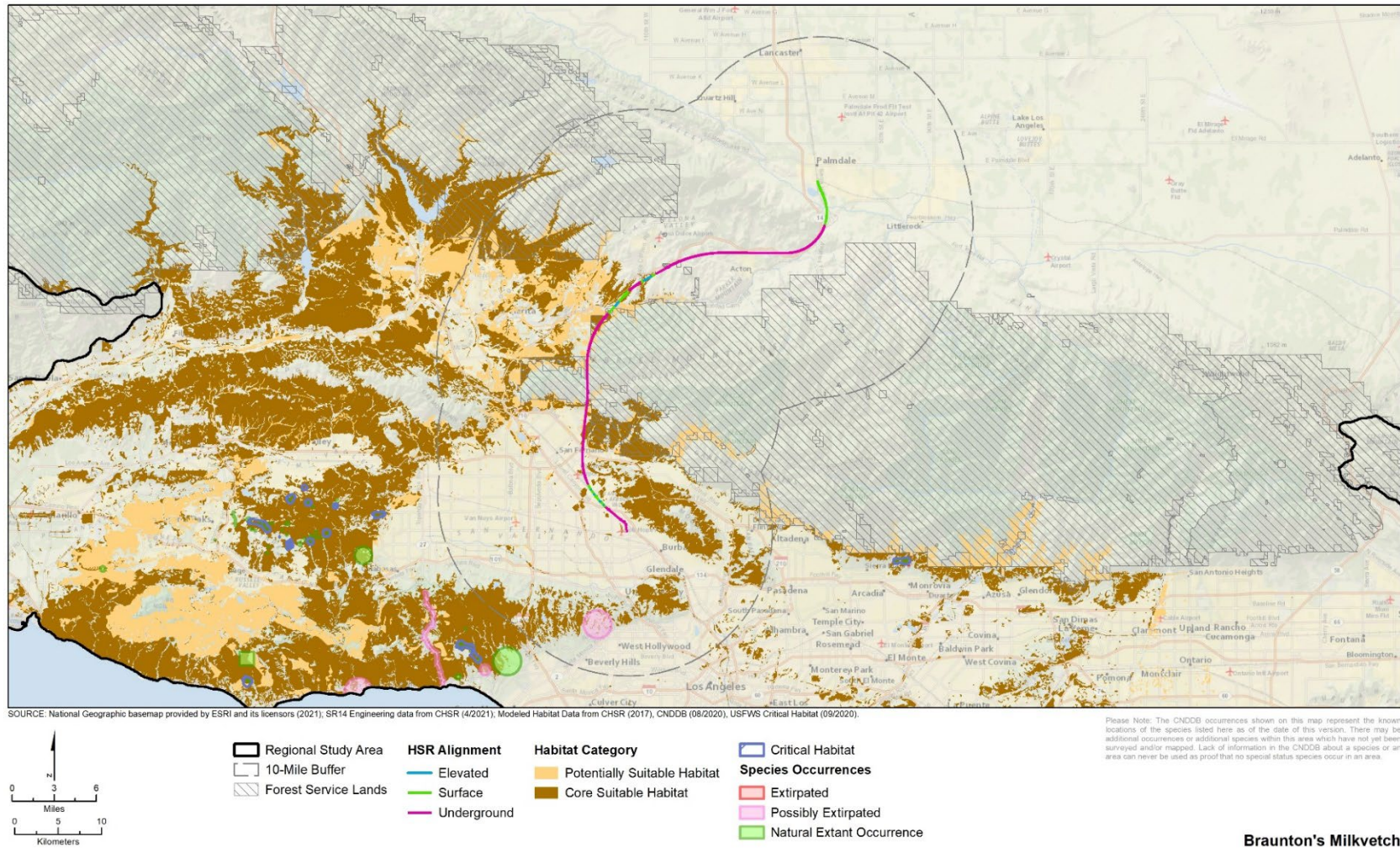
Please Note: The CNDDb occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDb about a species or an area can never be used as proof that no special status species occur in an area.



- | | | | |
|----------------------|-------------|------------------------------|---------------------------|
| Regional Study | Elevated | Potentially Suitable Habitat | Extirpated |
| 10-Mile Buffer | Surface | Core Suitable Habitat | Possibly Extirpated |
| Forest Service Lands | Underground | | Natural Extant Occurrence |
| | | Critical Habitat | |
| | | Species Occurrences | |

Braunton's Milkvetch

Figure 3.7-1 Braunton's Milkvetch Occurrences and Habitat in the Regional Study Area



Braunton's Milkvetch

Figure 3.7-2 Braunton's Milkvetch Occurrences and Habitat in the Palmdale to Burbank Project Section

Gambel's Watercress

The Authority has determined that the HSR Palmdale to Burbank Project Section will have no effect on Gambel's watercress (*Nasturtium gambelii*), a federally endangered and State threatened species.

Rationale

The Authority reviewed species information for Gambel's watercress that was available on the USFWS' Environmental Conservation Online System and the Endangered Species Recovery Program websites for range information, and the CNDDDB for occurrence records relative to the proposed action (see list of references).

Historical records of Gambel's watercress indicate it inhabited low, marshy areas below approximately 1,480 feet in proximity to the coast from San Luis Obispo County south to Orange and San Bernardino Counties (USFWS 2011; CNPS 2019). All documented populations south of Santa Barbara County are now considered extirpated (CNDDDB 2019) (Figure 3.7-3 and Figure 3.7-4). The proposed action is over 100 miles from the only extant documented populations, located in Santa Barbara County (at Vandenberg Air Force Base) and in San Luis Obispo County (USFWS 2011; Calflora 2019; CNPS 2019). The three populations in San Luis Obispo County appear to have suffered genetic introgression from common watercress (*Nasturtium officinale*; USFWS 2011).

The southern portion of the proposed action in the San Fernando and Burbank areas overlap the historical geographic and elevation range of Gambel's watercress. These areas are completely developed, with the exception of remaining 'natural' vegetation limited to small areas of upland vegetation on hills and scattered patches of common riparian and non-native species between the concrete-lined banks of Tujunga Wash and Pacoima Wash.

The last observation of Gambel's watercress in the Los Angeles area, which has been extensively surveyed in the past century, was in 1904 (CNDDDB Occurrence Number 7, at "Cienega." This occurrence is mapped to within approximately 11 miles southeast of the proposed action. Any suitable habitat that may have existed in this area has been removed by urbanization and by the channelization of Ballona Creek and the Los Angeles River, which began in 1938 and was completed by 1960 (County of Los Angeles, n.d.). Low-lying areas that remain consist of artificial basins and channels that are regularly maintained. The Los Angeles River's urban flood control channels are predominantly vegetated with common native riparian species and non-native, ruderal and invasive species.

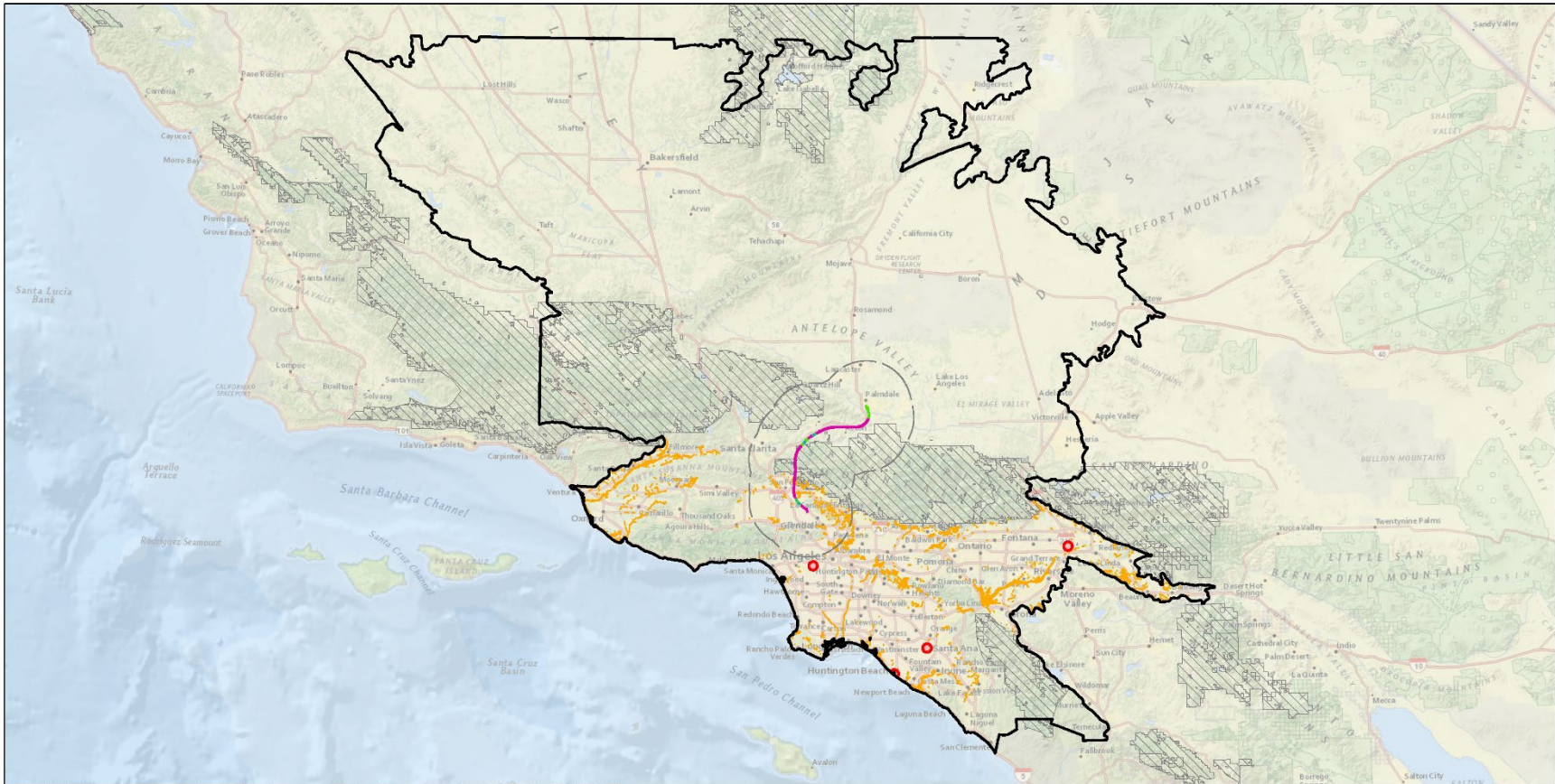
Conclusion

Given the absence of suitable habitat and the distance to known populations, there is no evidence that the species is present in or near the proposed action. Therefore, the proposed action will have no effect on Gambel's watercress. The Authority will reinstate Section 7 consultation if circumstances meeting the reinstatement criteria occur.

References

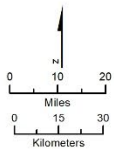
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- U.S. Fish and Wildlife Service (USFWS). 1998. *Recovery Plan for Marsh Sandwort (Arenaria paludicola) and Gambel's Watercress (Rorippa gambelii)*. Portland, OR.
- . 2011. *Rorippa gambelii [Nasturtium gambelii] (Gambel's watercress) 5-Year Review: Summary and Evaluation*. Ventura, CA.
- . 2019. *Recovery Plan Amendment for Marsh Sandwort and Gambel's Watercress*. Ventura, CA.



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), CNDDDB (08/2020).

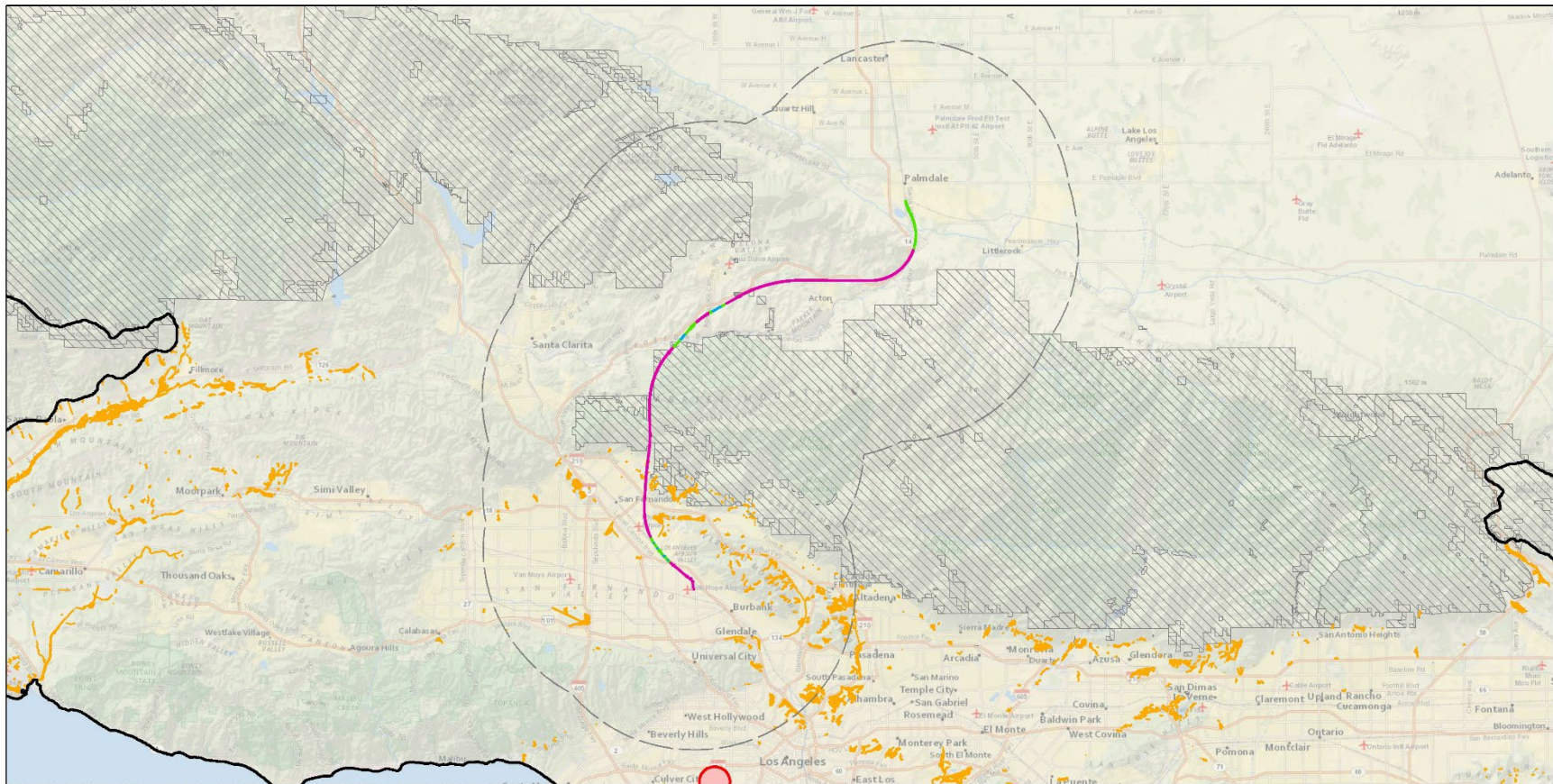
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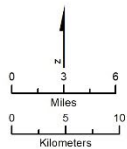
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|----------------------|---------------|------------------------------|---------------------|
| Regional Study | HSR Alignment | Habitat Category | Species Occurrences |
| 10-Mile Buffer | Elevated | Potentially Suitable Habitat | Extirpated |
| Forest Service Lands | Surface | | |
| | Underground | | |

Gambel's Water Cress

Figure 3.7-3 Gambel's Watercress Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); CNDDB (08/2020)



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|----------------------|---------------|------------------------------|---------------------|
| Regional Study | HSR Alignment | Habitat Category | Species Occurrences |
| 10-Mile Buffer | Elevated | Potentially Suitable Habitat | Extirpated |
| Forest Service Lands | Surface | | |
| | Underground | | |

Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

Gambel's Water Cress

Figure 3.7-4 Gambel's Watercress Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Marsh Sandwort

The Authority has determined that the HSR Palmdale to Burbank Project Section will have no effect on marsh sandwort (*Arenaria paludicola*), a federally endangered and State endangered species.

Rationale

The Authority reviewed species information for marsh sandwort from the USFWS five-year species review, the CNDDDB, and other relevant data sources (see list of references). Data analyzed included known occurrence records (Figure 3.7-5 and Figure 3.7-6), and habitat and range information relative to the proposed action.

Historical records for marsh sandwort indicate it occurred along the Pacific coast from central Washington to southern California, and was associated with wetlands and freshwater marsh habitats below 1,480 feet with or without standing water, and acidic, organic bog soils and sandy substrates with high organic content (USFWS 2008; CNPS 2019).

The occurrence records document ten historical sites within six general locations (USFWS 2008). The species is considered extirpated from all these locations with the exception of one in southern San Luis Obispo County. The San Luis Obispo location consists of two tenuous populations at two separate sites (CNDDDB Occurrence Numbers 3, 4, 9, 12, and 14) (USFWS 2008; CNDDDB 2019). The proposed action is located more than 70 miles from these populations. There have been attempts to reestablish the species in other locations, but none of these attempts have been reported successful (USFWS 2008).

There are two CNDDDB occurrence locations. In the Los Angeles basin, two historical collections of the species from “Cienega” in 1890 and in 1900 (CNDDDB Occurrence Number 15, roughly mapped to within approximately 11 miles southeast of the proposed action). A second occurrence record or location in southern California was a population along the Santa Ana River near San Bernardino collected in 1899 (CNDDDB Occurrence No. 8). Marsh sandwort is considered extirpated in both locations. Any suitable habitat near the proposed action in the Los Angeles area has been altered and removed by urbanization and by the channelization of Ballona Creek and the Los Angeles River, which began in 1938 and was completed by 1960 (County of Los Angeles, n.d.). Low-lying areas that remain consist of artificial basins and channels that are regularly maintained.

Only the southern portion of the proposed action in the San Fernando and Burbank areas overlap the historical geographic and elevation range of marsh sandwort. This area is nearly completely developed. Any remaining ‘natural’ vegetation in this area is limited to small areas of upland vegetation on hills and scattered patches of common riparian and non-native species between the concrete-lined banks of Tujunga Wash and Pacoima Wash.

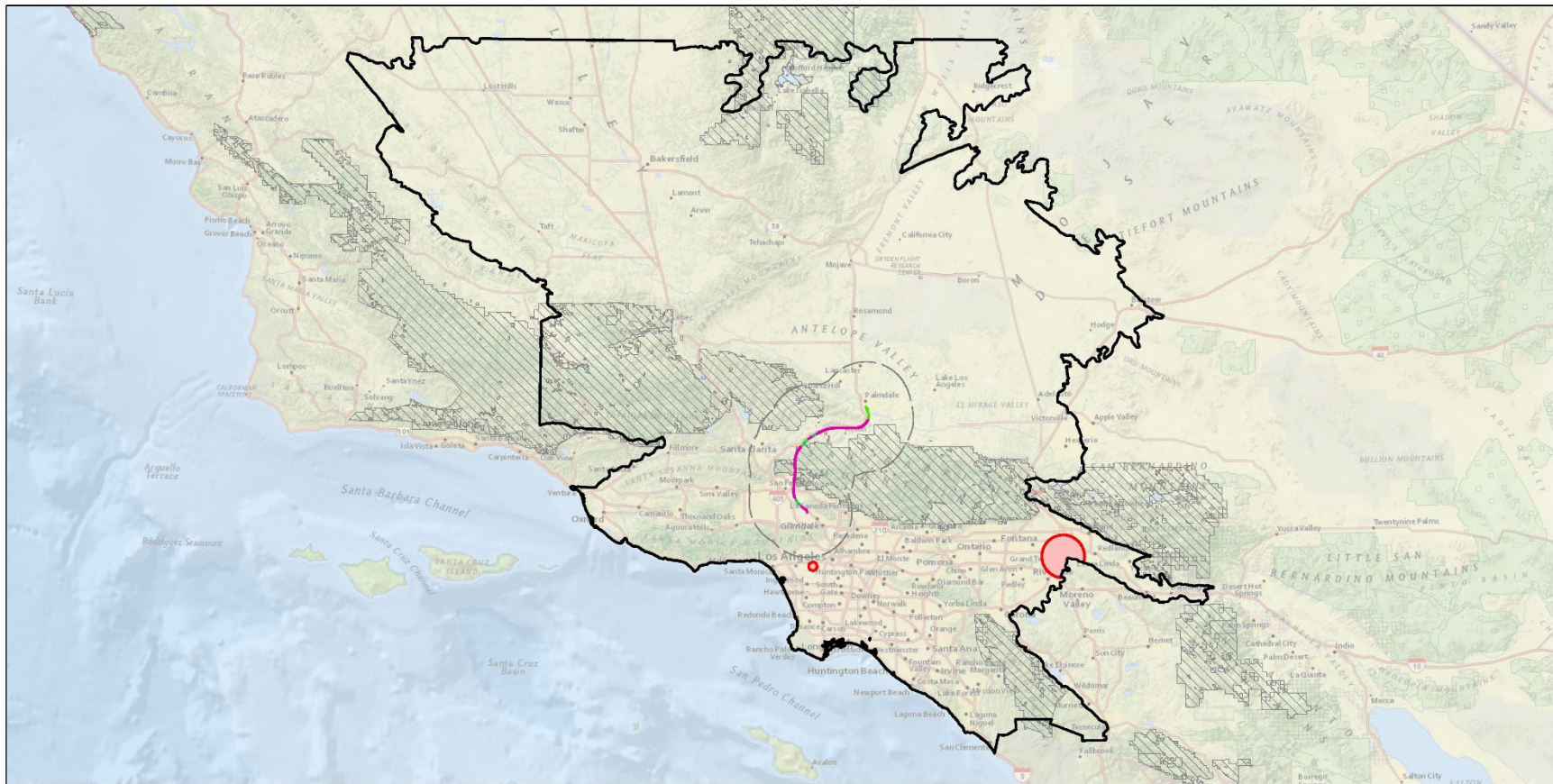
Conclusion

Given the absence of suitable habitat and the distance to known populations, there is no evidence that the species is present in or near the proposed action. Therefore, the proposed action will have no effect on marsh sandwort. The Authority will reinitiate Section 7 consultation if circumstances meeting the reinitiation criteria occur.

References

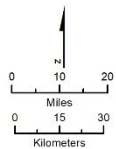
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- Mazer, S., A. Parikh, and N. Gale. 2000. *Arenaria paludicola* (marsh sandwort: Caryophyllaceae) and *Rorippa gambelii* (Gambel's watercress: Brassicaceae) in Black Lake Canyon and the Oso Flaco Lake Region. Joint Report for FG 7590-R3 and FG8647-R3. California State Department of Fish and Game, Vol. 1. 145 pp.
- U.S. Fish and Wildlife Service (USFWS). 1998. Recovery Plan for Marsh Sandwort (*Arenaria paludicola*) and Gambel's Watercress (*Rorippa gambelii*). Portland, OR.
- . 2008. *Arenaria paludicola* Marsh Sandwort; 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, Ventura, California.
- . 2019. Recovery Plan Amendment for Marsh Sandwort and Gambel's Watercress. Ventura, CA.



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), CNDDDB (08/2020).

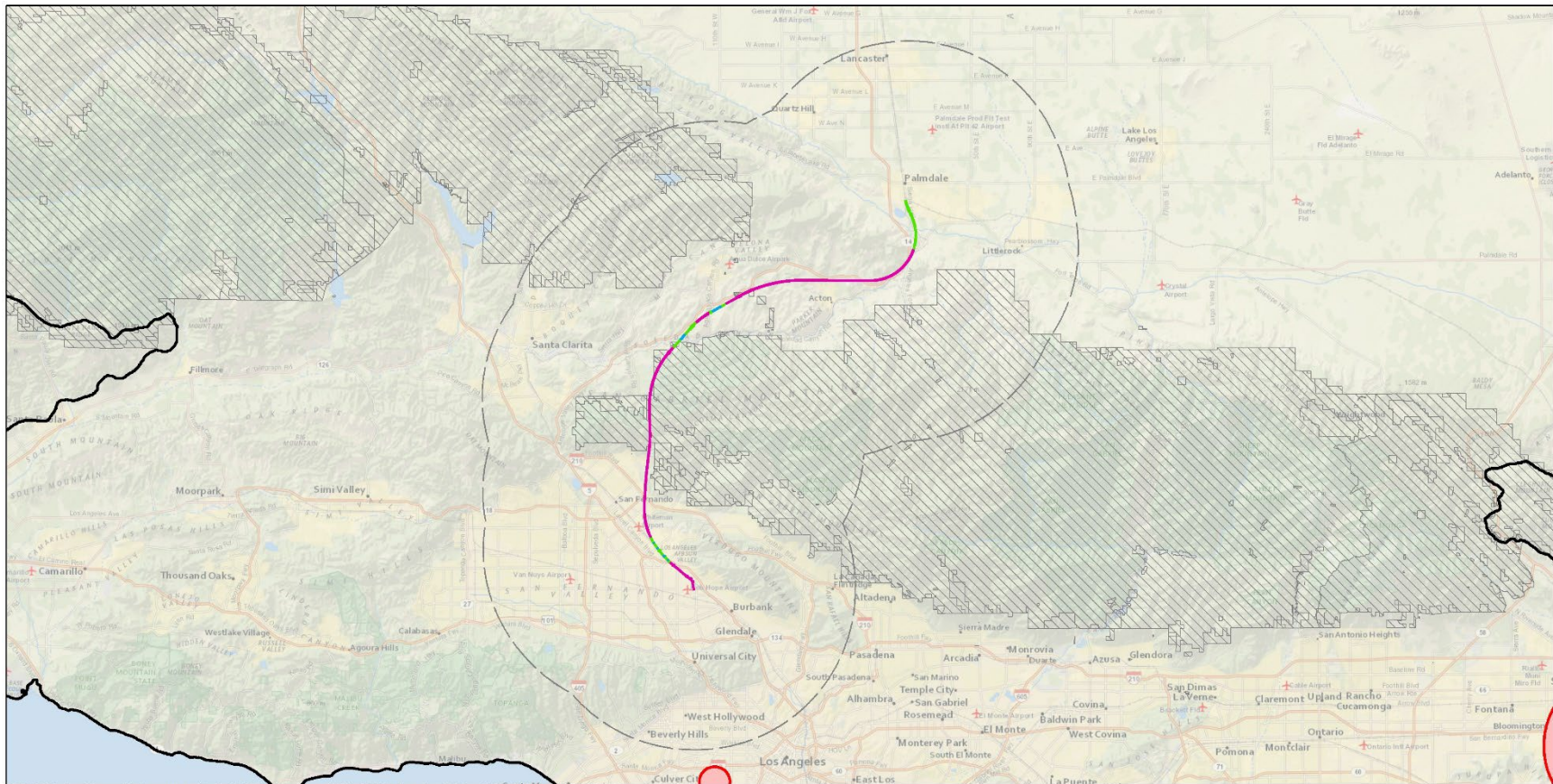
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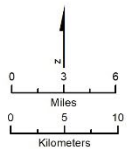
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|----------------------|---------------|----------------------------|
| Regional Study Area | HSR Alignment | Species Occurrences |
| 10-Mile Buffer | Elevated | Extirpated |
| Forest Service Lands | Surface | |
| | Underground | |

Marsh Sandwort

Figure 3.7-5 Marsh Sandwort Occurrences in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); CNDDB (08/2020)



- | | | |
|----------------------|---------------|---------------------|
| Regional Study Area | HSR Alignment | Species Occurrences |
| 10-Mile Buffer | Elevated | Extirpated |
| Forest Service Lands | Surface | |
| | Underground | |

Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

Marsh Sandwort

Figure 3.7-6 Marsh Sandwort Occurrences in the Vicinity of the Palmdale to Burbank Project Section

Nevin's Barberrry

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect Nevin's barberry (*Berberis nevinii*), a federally endangered and USFS sensitive species.

Rationale

The Authority reviewed species information for Nevin's barberry from the USFWS five-year species review, the CNDDDB, and other relevant data sources (see list of references). Botanical surveys were conducted in 2016 and 2017 and a focused Nevin's barberry survey was conducted near Lopez Canyon in the ANF in 2017 (see Section 4.1.2 of this Biological Assessment). Data analyzed included known occurrence records (Figure 3.7-7 and Figure 3.7-8), and habitat and range information relative to the proposed action. Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

Nevin's barberry is endemic to California and occurs in the South Coast region of the State, including the San Gabriel Mountains (USFWS 2009). The historical distribution of Nevin's barberry likely consisted of fewer than 30 scattered occurrences in Los Angeles, Riverside, San Bernardino, and San Diego counties (USFWS 2009). Five presumed extant occurrences of Nevin's barberry are documented from 2000 and later and occur within 10 miles of the action area (CDFW 2020). The closest occurrence, in year 2000, was located approximately 0.9 mile east of the action area near the eastern edge of the San Fernando Valley near Lopez Canyon Road. One individual was observed at this location during project surveys in 2019; the location of the observed individual is well outside the action area and the proposed action will avoid this individual. Three additional extant occurrences, located five to six miles south of the action area, include individuals transplanted in Griffith Park. One extirpated occurrence from 1941 was documented approximately 0.6 mile west of the action area, in a heavily developed area of the San Fernando Valley.

Designated critical habitat is approximately 90 miles southeast of the action area, 10 miles east of Temecula (USFWS 2020).

Conclusion

The Nevin's barberry individual in Lopez Canyon occurs well outside the action area and will be avoided and will not be directly affected by the proposed action. Based on the lack of other documented occurrences in the vicinity of the action area, the proposed action may affect but is not likely to adversely affect any Nevin's barberry. Furthermore, the USFWS stated during informal consultation conducted in 2019 that due to rarity of the species, Nevin's barberry are not expected to occur in the action area (USFWS 2019).

To ensure that this species is not present at the time of construction, suitable habitat within the project footprint will be surveyed prior to ground- or vegetation-disturbing activities. The survey(s) will be conducted by a Designated Biologist familiar with the distinguishing characteristics of the species during the species bloom period. If Nevin's barberry is observed, no project activities that could adversely affect the species will be conducted within 100 feet of individuals. The Authority will reinstate Section 7 consultation if circumstances meeting the reinitiation criteria occur.

Conservation Measures Specific to Nevin's Barberrry

The purpose of these conservation measures is to avoid and minimize effects to federally listed plant species.

CM-PLT-01: Conduct Presence/ Absence Pre-construction Surveys for Listed Plants

To detect the presence of federally listed plant species, the Designated Biologist(s) will conduct protocol-level surveys in all suitable habitat for federally listed plant species within the project impact footprint and 100-foot plant buffer prior to any ground- or vegetation-disturbing activities. Initially, habitat suitability assessment surveys will be performed to "ground-truth" the habitat suitability models developed in 2015. Areas that are determined to not be suitable habitat for

federally listed species will not be further surveyed to protocol level, following coordination with and approval from USFWS. Where further protocol surveys are indicated based on the habitat suitability assessment, the surveys shall be consistent with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018b) and *Guidelines for Conducting and Report Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 2000). Prior to surveys, and if a reference population exists, reference populations for target survey species will be visited to confirm blooming conditions and ensure target species have flowers or other discernible features necessary to identify plants.

The Designated Biologist will flag and record in GIS the locations of any observed federally listed plant species. If federally listed plant species are detected, the Authority will reinitiate Section 7 consultation with the USFWS regarding minimization, salvage, and relocation.

CM-PLT-02: Avoidance Measures for Listed Plants

If federally listed plant species are detected and cannot be avoided by project impacts, prior to implementation of salvage or relocation, the Authority will reinitiate consultation with the USFWS to determine the best course of action to preserve the plant population. Upon approval from the USFWS, prior to any ground-disturbing activity, the Project Biologist will collect seeds and plant materials and stockpile and segregate the top four inches of topsoil from locations in the work area where species listed as threatened or endangered under FESA, were observed during surveys for use on off-site locations. Suitable sites to receive salvaged material include Authority mitigation sites, refuges, reserves, federal or state lands, and public/private mitigation banks.

If authorizations issued under FESA require relocation or propagation is selected to address impacts, the Project Biologist will prepare a plant species salvage plan to address monitoring, salvage, relocation, and/or seed banking of federally listed plant species. The plan will include provisions that address the techniques, locations, and procedures required for the collection, storage, and relocation of seed or plant material; collection, stockpiling, and redistribution of topsoil and associated seed. The plan will also include requirements related to outcomes, such as percent absolute cover of highly invasive species as defined by the California Invasive Plant Council (less than documented baseline conditions), maintenance, monitoring, implementation, and annual reporting. The plan will reflect conditions required under regulatory authorizations issued for federally listed species and will be submitted to the USFWS for review and approval. The Project Biologist will submit the plan to the Authority for review and approval.

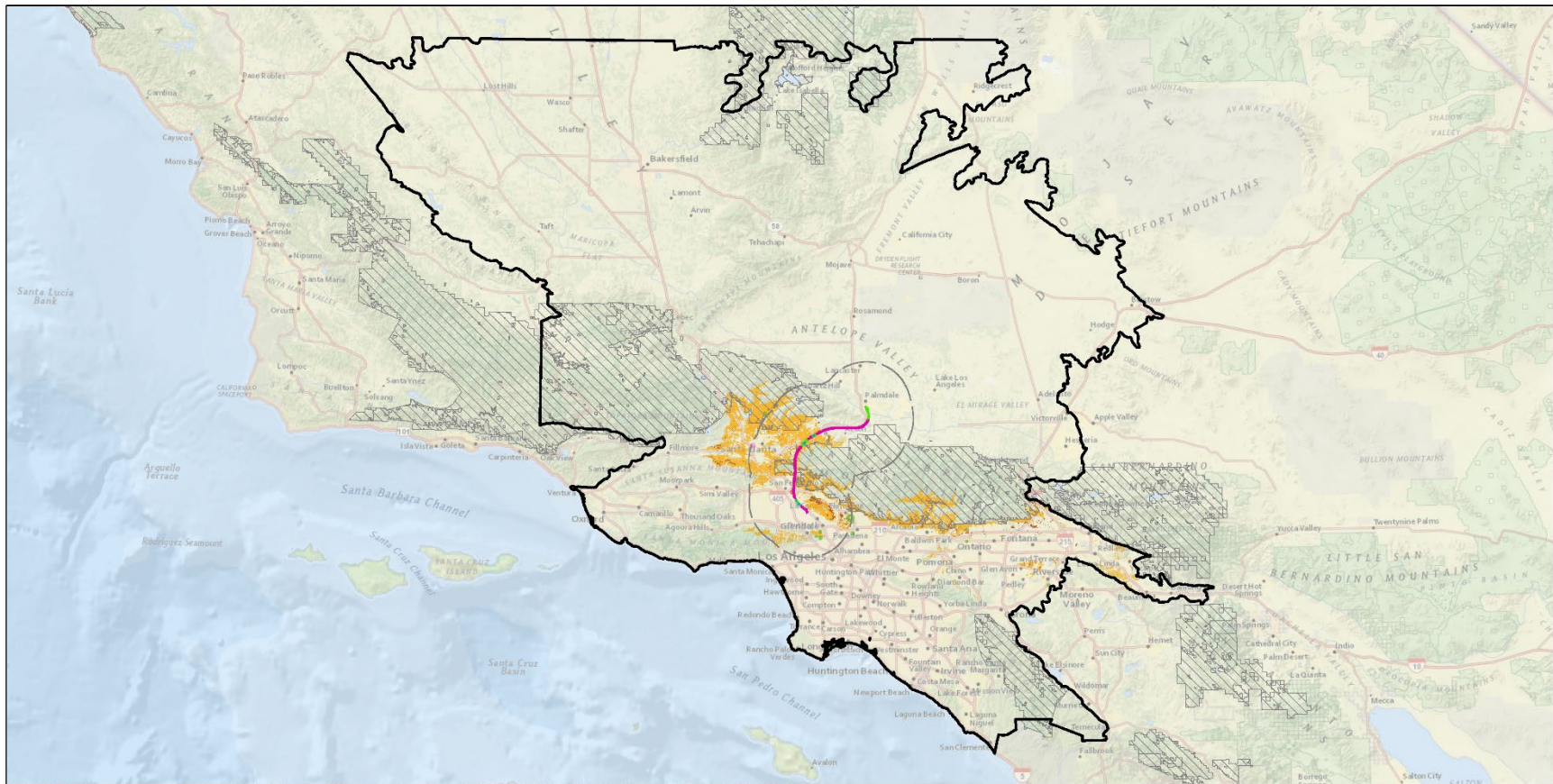
CM-PLT-03: Maintenance of Existing Hydrologic Conditions to Maintain Slender-horned Spineflower Habitat Below the Preferred Alternative Alignment in Bee Canyon

To maintain habitat for slender-horned spineflower, and other federally listed plant species, hydraulic capacity in Bee Canyon and Pacoima Wash will be maintained at preconstruction conditions through the implementation of on-site stormwater management BMPs to provide runoff dispersion, infiltration, detention, and evaporation. Hydraulic capacity in Bee Canyon and Pacoima Wash will be maintained by minimizing alterations to watercourses, implementing erosion control BMPs, and maintaining existing stormwater patterns through implementation of conservation measures (CM-GEN-04 and CM-GEN-05) and HYD-IAMF#1 through HYD-IAMF#3 (Appendix K) into project design. A construction-period SWPPP (CM-GEN-05 and HYD-IAMF#3) will incorporate BMPs to reduce short-term increases in construction-site runoff, and a Stormwater Management and Treatment Plan (Appendix K, HYD-IAMF#1) will address stormwater runoff and system capacity. Water crossings will be implemented to maintain preconstruction hydraulic capacity (Appendix K, HYD-IAMF#2) and maintenance of existing drainage patterns within channels and washes (Appendix K, HYD-IAMF#1 and HYD-IAMF#3) will minimize impacts to hydraulic condition. The Authority will provide the SWPPP and Stormwater Management and Treatment Plan for review by USFWS at the 60 percent design stage.

References

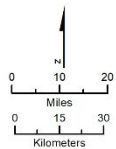
Calflora. 2019. *Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the*

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- California Department of Fish and Wildlife (CDFW). 2020. *California Natural Diversity Database RareFind 5*. Maintained by the Biogeographic Data Branch. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data> (Accessed 2020).
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- . 2019. Meetings with the California High-Speed Rail Authority regarding Nevin's barberry. October 24, 2019 and November 22, 2019.
- . 2020. Environmental Conservation Online System (ECOS). Washington, DC. <http://ecos.fws.gov/ecp/report/table/critical-habitat.html> (Accessed 2020).



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); Modeled Habitat Data from CHSR (2017); CNDDB (08/2020).

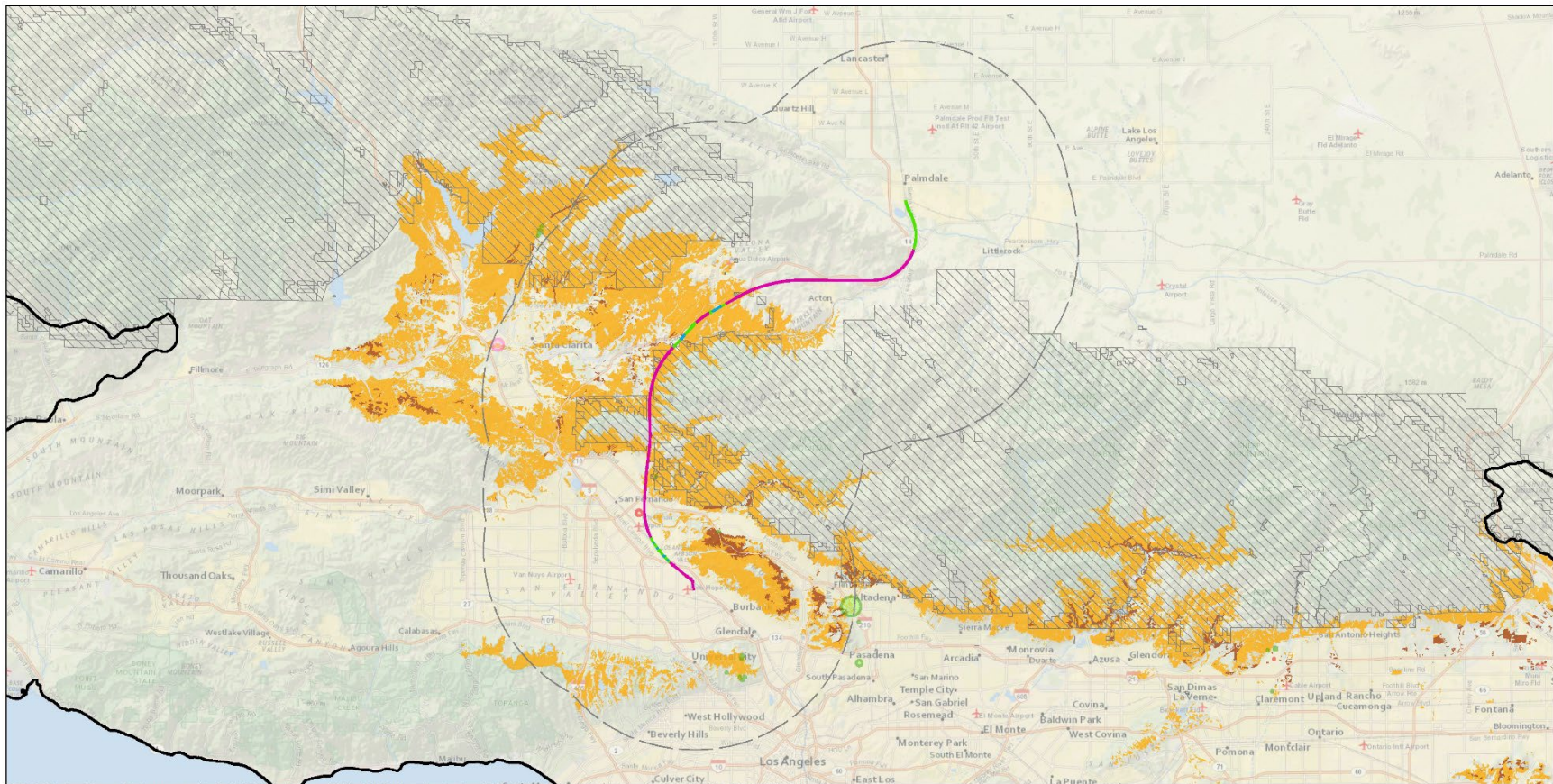
Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.



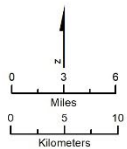
Legend Item	HSR Alignment	Species Occurrences	Habitat Category
Regional Study Area	Elevated	Natural Extant Occurrence	Core Suitable Habitat
10-Mile Buffer	Surface	Possibly Extirpated	Potentially Suitable Habitat
Forest Service Lands	Underground	Extirpated	Core Suitable Habitat - Intermediate Zone
			Potentially Suitable Habitat - Intermediate Zone

Nevin's Barberry

Figure 3.7-7 Nevin's Barberry Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); Modeled Habitat Data from CHSR (2017); CNDDB (08/2020).



Regional Study Area	HSR Alignment	Species Occurrences	Habitat Category
10-Mile Buffer	Elevated	Natural Extant Occurrence	Core Suitable Habitat
Forest Service Lands	Surface	Possibly Extirpated	Potentially Suitable Habitat
	Underground	Extirpated	Core Suitable Habitat - Intermediate Zone
			Potentially Suitable Habitat - Intermediate Zone

Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within the area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

Nevin's Barberry

Figure 3.7-8 Nevin's Barberry Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Ventura Marsh Milk-Vetch

The Authority have determined that the HSR Palmdale to Burbank Project Section will have no effect on the Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), a federally and State as endangered species.

Rationale

The Authority reviewed species information for Ventura marsh milk-vetch available from the USFWS Environmental Conservation Online System, CDFW for range information, and the CNDDDB for occurrence records relative to the proposed action (see list of references) (Figure 3.7-9 and Figure 3.7-10).

Ventura marsh milk-vetch is endemic to California's southern coast where it historically occurred, in discontinuous populations, from near the City of Ventura (San Buenaventura; Ventura County) at the northern end of its range to near Huntington Beach (Orange County) at the southern end of its range. It was considered extinct from the 1970s until 1997 when it was rediscovered near the City of Oxnard (Ventura County). Since then, it has been reestablished at several coastal sites in Ventura and Los Angeles counties. Ventura marsh milk-vetch occurs at low elevation (0 to 328 feet) in coastal dune-swales where its root system has access to freshwater, such as along coastal seeps near the edges of brackish and salt marshes. It is also associated with sandy ocean bluffs and springs along streams opening to the ocean.

Three areas have been designated as critical habitat for the species: Mandalay Bay in the City of Oxnard, Ventura County; McGrath Lake area at McGrath State Beach in Ventura County, managed by California Department of Parks and Recreation; and Carpinteria Salt Marsh Reserve in Santa Barbara County, managed by the University of California, Santa Barbara. Of these three designated critical habitat areas, only the Mandalay site supports an extant population of Ventura marsh milk-vetch.

As shown in Figure 3.7-9 and Figure 3.7-10, the proposed action is located more than 50 miles from the only known native extant occurrence of Ventura marsh milk-vetch at Mandalay Bay (CNDDDB Occurrence Number 7). This is also the approximate distance to the nearest designated critical habitat areas at Mandalay Bay and McGrath State Beach. The proposed action is substantially inland of all known occurrences, both current and historical.

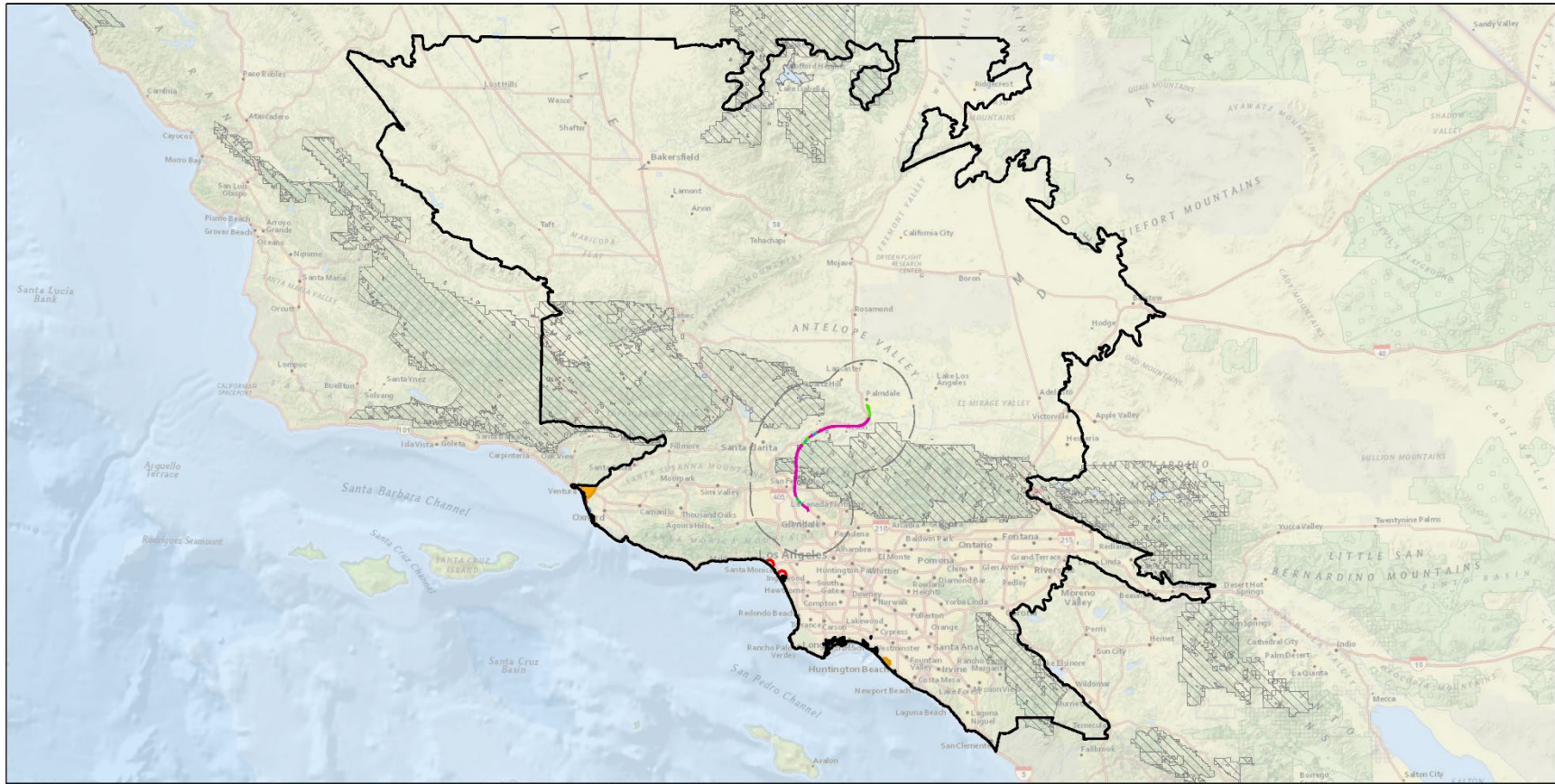
Conclusion

Given the distance between the proposed action and the only known extant occurrence and designated critical habitat areas, there is no evidence that the species is present in or near the proposed action. Therefore, the proposed action will have no effect on Ventura marsh milk-vetch. The Authority will reinstate Section 7 consultation if circumstances meeting the reinstatement criteria occur.

References

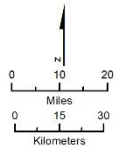
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- . 2004. Final designation of critical habitat for *Astragalus pycnostachyus* var. *lanosissimus* (Ventura Marsh milk-vetch); final rule 69 FR 29081 29100. May.



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), CNADB (08/2020), USFW Critical Habitat (9/2020).

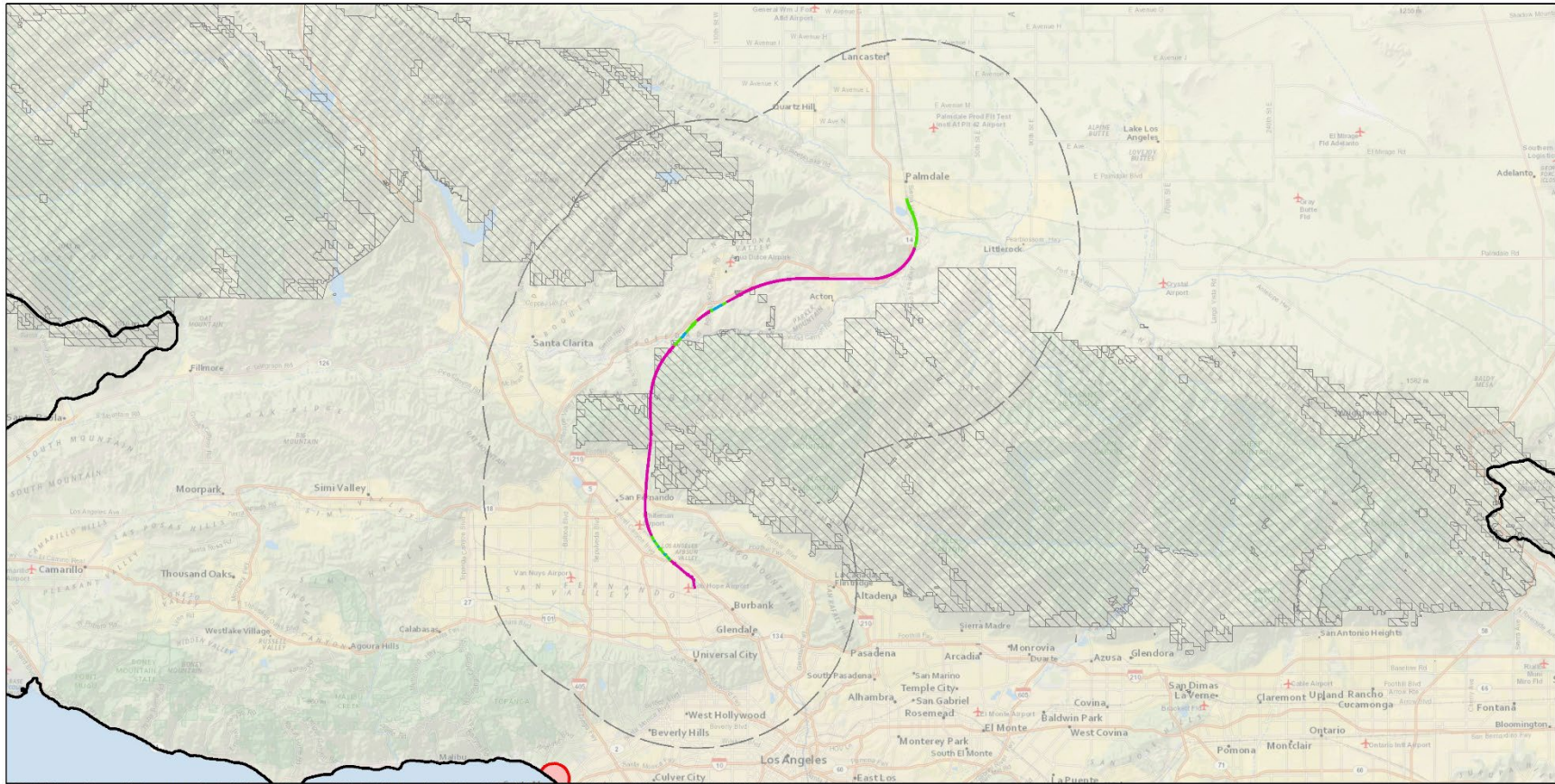
Please Note: The CNADB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNADB about a species or an area can never be used as proof that no special status species occur in an area.



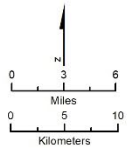
- | | | |
|----------------------|---------------|----------------------------|
| Regional Study | HSR Alignment | Species Occurrences |
| 10-Mile Buffer | Elevated | Extirpated |
| Forest Service Lands | Surface | Possibly Extirpated |
| Critical Habitat | Underground | Natural Extant Occurrence |

Ventura Marsh Milk-Vetch

Figure 3.7-9 Ventura Marsh Milk-Vetch Occurrences in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); CNDDB (08/2020); USFW Critical Habitat (9/2020).



- | | | |
|----------------------|---------------|---------------------|
| Regional Study Area | HSR Alignment | Species Occurrences |
| 10-Mile Buffer | Elevated | Extirpated |
| Forest Service Lands | Surface | |
| | Underground | |

Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

Ventura Marsh Milk-Vetch

Figure 3.7-10 Ventura Marsh Milk-Vetch Occurrences in the Vicinity of the Palmdale to Burbank Project Section

California Orcutt Grass

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect California Orcutt grass (*Orcuttia californica*), a federally and State endangered species, and a USFS sensitive species.

Rationale

The Authority reviewed species information for California Orcutt grass including from the USFWS five-year species review, the CNDDDB, and other relevant data sources (see list of references). In addition, a vernal pool assessment was conducted in the action area in the winter of 2017 and botanical surveys were conducted in 2016 and 2017 (see Section 4.1.2 of this Biological Assessment). Data analyzed included known occurrence records (Figure 3.7-11 and Figure 3.7-12) and habitat and range information relative to the proposed action. Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

California Orcutt grass is a vernal pool obligate species that occurs in Los Angeles County northwest of Santa Clarita, in Ventura County near State Route 23, and in southwestern Riverside County near Winchester, Murrieta, and Bachelor Mountain. Specimens have been recorded from Orange and San Bernardino counties, as well. The CNDDDB reports 32 presumed extant occurrences in five counties: San Diego (16 occurrences), Riverside (9 occurrences), Los Angeles (3 occurrences), Ventura (3 occurrences), and Orange (1 occurrence) (CDFW 2020). Five occurrences are listed as extirpated or possibly extirpated: three in Los Angeles County and two in Riverside County. Three presumed extant CNDDDB occurrences are within 10 miles of the action area east of Santa Clarita and north of State Route 14: one 2.6 miles west of the action area near Newhall; one 3.8 miles northwest of the action area on Cruzan Mesa, south of Vasquez Canyon Road between the Sierra Highway and Bouquet Canyon Road; and one 4.2 miles northwest of the action area on the north side of Plum Canyon Fire Road and 1.6 miles west of where Plum Canyon Fire Road intersects with Sierra Highway (CDFW 2020). The species was not observed during the 2016 and 2017 botanical surveys (see Appendix D of this Biological Assessment).

Conclusion

Due to the distance to known populations, lack of observations during the 2016 and 2017 botanical surveys, and limited potential vernal pool habitat in or near the action area, the species is unlikely to be present in the action area. Additionally, the USFWS stated during informal consultation conducted in 2019 that due to rarity of the species, California Orcutt grass is not expected to occur in the action area (USFWS 2019a). Given the presence of potential vernal pool habitat, the proposed action may affect but, is not likely to adversely affect California Orcutt grass.

To ensure that this species is not present at the time of construction, a Designated Biologist familiar with the distinguishing characteristics of the species will survey suitable vernal pool habitat within the project footprint prior to ground- or vegetation-disturbing activities. If California Orcutt grass is observed, no project activities that could adversely affect the species will be conducted within 100 feet of occupied vernal pools. The Authority will reinstate Section 7 consultation if circumstances meeting the reinstatement criteria occur.

Conservation Measures Specific to California Orcutt Grass

The purpose of these conservation measures is to avoid and minimize effects to federally listed plant species.

CM-PLT-01: Conduct Presence/ Absence Pre-construction Surveys for Listed Plants

To detect the presence of federally listed plant species, the Designated Biologist(s) will conduct protocol-level surveys in all suitable habitat for federally listed plant species within the project impact footprint and 100-foot plant buffer prior to any ground- or vegetation-disturbing activities. Initially, habitat suitability assessment surveys will be performed to “ground-truth” the habitat

suitability models developed in 2015. Areas that are determined to not be suitable habitat for federally listed species will not be further surveyed to protocol level, following coordination with and approval from USFWS. Where further protocol surveys are indicated based on the habitat suitability assessment, the surveys shall be consistent with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018b) and *Guidelines for Conducting and Report Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 2000). Prior to surveys, and if a reference population exists, reference populations for target survey species will be visited to confirm blooming conditions and ensure target species have flowers or other discernible features necessary to identify plants.

The Designated Biologist will flag and record in GIS the locations of any observed federally listed plant species. If federally listed plant species are detected, the Authority will reinitiate Section 7 consultation with the USFWS regarding minimization, salvage, and relocation.

CM-PLT-02: Avoidance Measures for Listed Plants

If federally listed plant species are detected and cannot be avoided by project impacts, prior to implementation of salvage or relocation, the Authority will reinitiate consultation with the USFWS to determine the best course of action to preserve the plant population. Upon approval from the USFWS, prior to any ground-disturbing activity, the Project Biologist will collect seeds and plant materials and stockpile and segregate the top four inches of topsoil from locations in the work area where species listed as threatened or endangered under FESA, were observed during surveys for use on off-site locations. Suitable sites to receive salvaged material include Authority mitigation sites, refuges, reserves, federal or state lands, and public/private mitigation banks.

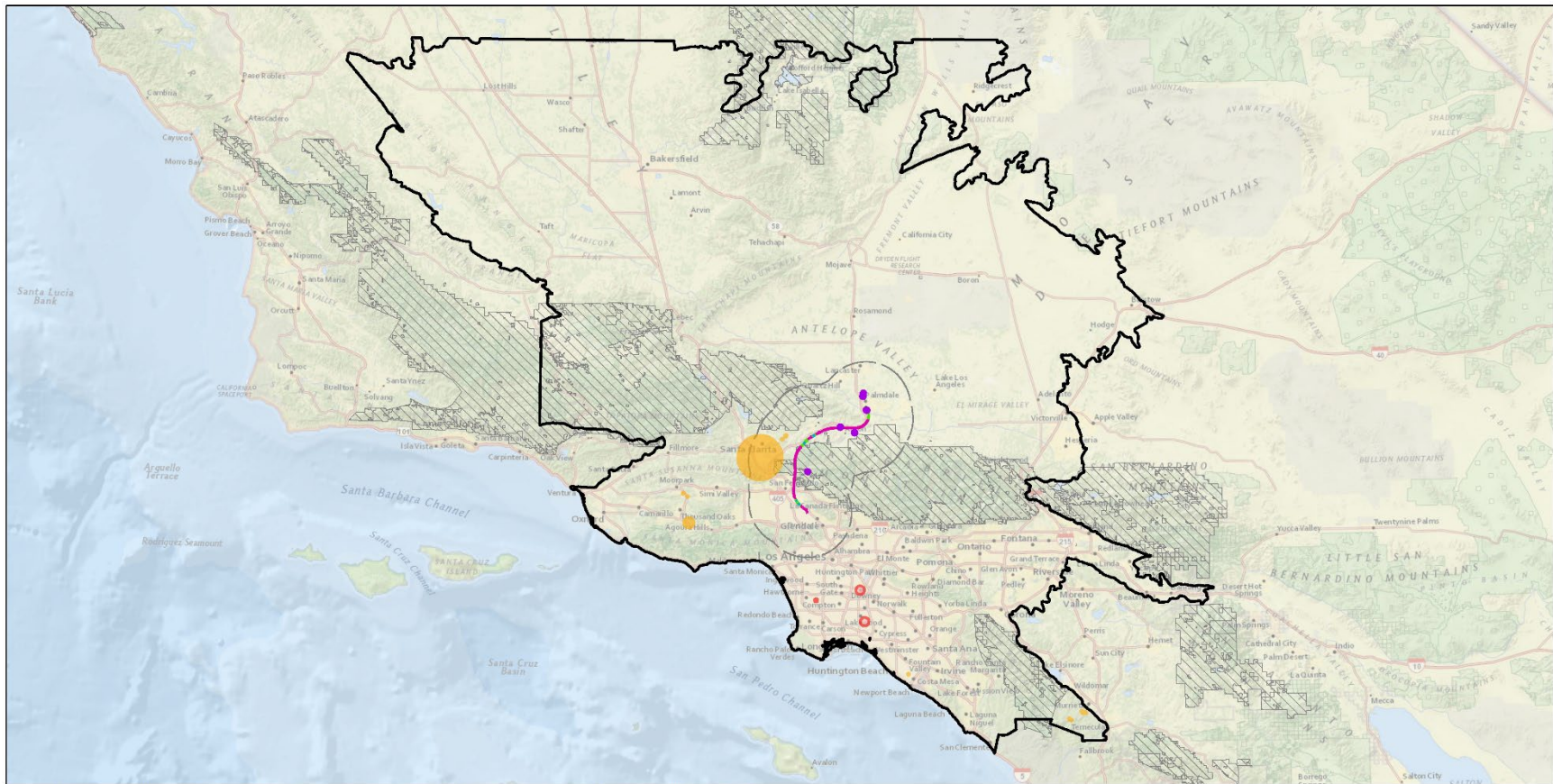
If authorizations issued under FESA require relocation or propagation is selected to address impacts, the Project Biologist will prepare a plant species salvage plan to address monitoring, salvage, relocation, and/or seed banking of federally listed plant species. The plan will include provisions that address the techniques, locations, and procedures required for the collection, storage, and relocation of seed or plant material; collection, stockpiling, and redistribution of topsoil and associated seed. The plan will also include requirements related to outcomes, such as percent absolute cover of highly invasive species as defined by the California Invasive Plant Council (less than documented baseline conditions), maintenance, monitoring, implementation, and annual reporting. The plan will reflect conditions required under regulatory authorizations issued for federally listed species and will be submitted to the USFWS for review and approval. The Project Biologist will submit the plan to the Authority for review and approval.

CM-PLT-03: Maintenance of Existing Hydrologic Conditions to Maintain Slender-horned Spineflower Habitat Below the Preferred Alternative Alignment in Bee Canyon

To maintain habitat for slender-horned spineflower, and other federally listed plant species, hydraulic capacity in Bee Canyon and Pacoima Wash will be maintained at preconstruction conditions through the implementation of on-site stormwater management BMPs to provide runoff dispersion, infiltration, detention, and evaporation. Hydraulic capacity in Bee Canyon and Pacoima Wash will be maintained by minimizing alterations to watercourses, implementing erosion control BMPs, and maintaining existing stormwater patterns through implementation of conservation measures (CM-GEN-04 and CM-GEN-05) and HYD-IAMF#1 through HYD-IMAF#3 (Appendix K) into project design. A construction-period SWPPP (CM-GEN-05 and HYD-IAMF#3) will incorporate BMPs to reduce short-term increases in construction-site runoff, and a Stormwater Management and Treatment Plan (Appendix K, HYD-IAMF#1) will address stormwater runoff and system capacity. Water crossings will be implemented to maintain preconstruction hydraulic capacity (Appendix K, HYD-IAMF#2) and maintenance of existing drainage patterns within channels and washes (Appendix K, HYD-IAMF#1 and HYD-IAMF#3) will minimize impacts to hydraulic condition. The Authority will provide the SWPPP and Stormwater Management and Treatment Plan for review by USFWS at the 60 percent design stage.

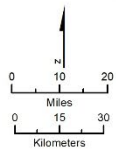
References

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- . 2019b. *A Manual of California Vegetation, Online Edition*. California Native Plant Society, Sacramento, California. <http://www.cnps.org/cnps/vegetation/> (Accessed 2019).
- Consortium of California Herbaria. 2019. Records of special-status plant data provided by the participants of the Consortium of California Herbaria.
<http://ucjeps.berkeley.edu/consortium/> (Accessed 2019).
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- . 2019b. Environmental Conservation Online System (ECOS). Washington, DC.
<http://ecos.fws.gov/ecp/report/table/critical-habitat.html> (Accessed 2019).



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Habitat Data from CHSR (2016), CNDDDB (08/2020).

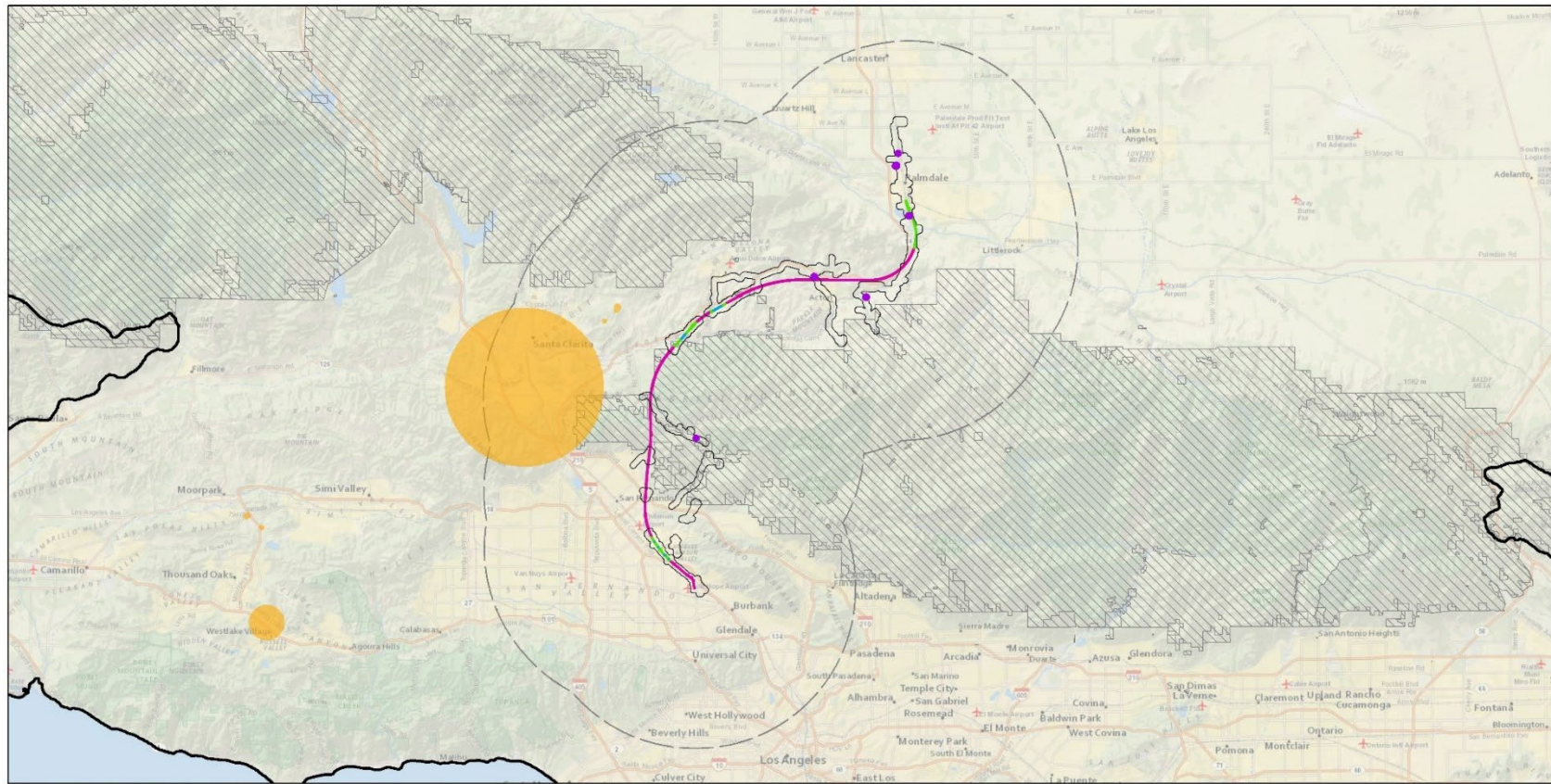
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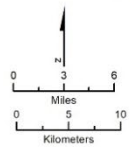
- Regional Study Area
- 10-Mile Buffer
- Forest Service Lands
- Potential Habitat (Within Survey Area)
- Species Occurrences**
- Extirpated
- Possibly Extirpated
- Natural Extant Occurrence
- HSR Alignment**
- Elevated
- Surface
- Underground

California Orcutt Grass

Figure 3.7-11 California Orcutt Grass Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Habitat Data from CHSR (2016), CNDDB (08/2020).



- | | | | |
|----------------------|-----------------------------------|---------------------------|-------------|
| Regional Study | Potential Habitat (Within Survey) | Extirpated | Elevated |
| 10-Mile Buffer | 1,000 Foot Vernal Pool Survey | Possibly Extirpated | Surface |
| Forest Service Lands | | Natural Extant Occurrence | Underground |

Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

California Orcutt Grass

Figure 3.7-12 California Orcutt Grass Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Spreading Navarretia

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect spreading navarretia (*Navarretia fossalis*), a federally threatened and a USFS sensitive species.

Rationale

The Authority reviewed species information for spreading navarretia including from the USFWS five-year species review, the CNDDDB, and other relevant data sources (see list of references). Data analyzed included known occurrence records (Figure 3.7-13 and Figure 3.7-14), and habitat and range information relative to the proposed action. A vernal pool assessment was conducted in the action area in the winter of 2017 and botanical surveys were conducted in 2016 and 2017 (see Section 4.1.2 of this Biological Assessment). Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

Spreading navarretia is a vernal pool obligate species found from California to Baja California, Mexico. Within California it occurs from the Outer South Coast Ranges south to the South Coast and Mojave Desert (USFWS 2009). The CNDDDB reports 68 presumed extant occurrences in four counties: San Diego (38 occurrences), Riverside (26 occurrences), Los Angeles (3 occurrences), and San Luis Obispo (1 occurrence) (CDFW 2020). Another 10 occurrences are listed as extirpated or possibly extirpated. According to the CNDDDB, there are two presumed extant occurrences of spreading navarretia within 10 miles of the action area (CDFW 2020). The closest is located approximately 3.7 miles northwest of the action area on Cruzan Mesa, approximately seven miles northeast of Santa Clarita. The species was not observed during the 2016 and 2017 botanical surveys (see Appendix D of this BA).

Conclusion

Due to the distance to known populations, lack of observations during the 2016 and 2017 botanical surveys, and limited potential vernal pool habitat in or near the action area, this species is unlikely to be present in the action area. Additionally, the USFWS stated during informal consultation conducted in 2019 that due to rarity of the species, spreading navarretia is not expected to occur in the action area (USFWS 2019a). Given the presence of potential vernal pool habitat, the proposed action may affect but, is not likely to adversely affect spreading navarretia.

To ensure that this species is present at the time of construction, a Designated Biologist familiar with the distinguishing characteristics of the species will survey suitable vernal pool habitat within the project footprint prior to ground- or vegetation-disturbing activities. If spreading navarretia is observed, no project activities that could adversely affect the species will be conducted within 100 feet of occupied vernal pools. The Authority will reinitiate Section 7 consultation if circumstances meeting the reinitiation criteria occur.

Conservation Measures Specific to Spreading Navarretia

The purpose of these conservation measures is to avoid and minimize effects to federally listed plant species.

CM-PLT-01: Conduct Presence/ Absence Pre-construction Surveys for Listed Plants

To detect the presence of federally listed plant species, the Designated Biologist(s) will conduct protocol-level surveys in all suitable habitat for federally listed plant species within the project impact footprint and 100-foot plant buffer prior to any ground- or vegetation-disturbing activities. Initially, habitat suitability assessment surveys will be performed to “ground-truth” the habitat suitability models developed in 2015. Areas that are determined to not be suitable habitat for federally listed species will not be further surveyed to protocol level, following coordination with and approval from USFWS. Where further protocol surveys are indicated based on the habitat suitability assessment, the surveys shall be consistent with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018b) and *Guidelines for Conducting and Report Botanical Inventories for*

Federally Listed, Proposed and Candidate Plants (USFWS 2000). Prior to surveys, and if a reference population exists, reference populations for target survey species will be visited to confirm blooming conditions and ensure target species have flowers or other discernible features necessary to identify plants.

The Designated Biologist will flag and record in GIS the locations of any observed federally listed plant species. If federally listed plant species are detected, the Authority will reinitiate Section 7 consultation with the USFWS regarding minimization, salvage, and relocation.

CM-PLT-02: Avoidance Measures for Listed Plants

If federally listed plant species are detected and cannot be avoided by project impacts, prior to implementation of salvage or relocation, the Authority will reinitiate consultation with the USFWS to determine the best course of action to preserve the plant population. Upon approval from the USFWS, prior to any ground-disturbing activity, the Project Biologist will collect seeds and plant materials and stockpile and segregate the top four inches of topsoil from locations in the work area where species listed as threatened or endangered under FESA, were observed during surveys for use on off-site locations. Suitable sites to receive salvaged material include Authority mitigation sites, refuges, reserves, federal or state lands, and public/private mitigation banks.

If authorizations issued under FESA require relocation or propagation is selected to address impacts, the Project Biologist will prepare a plant species salvage plan to address monitoring, salvage, relocation, and/or seed banking of federally listed plant species. The plan will include provisions that address the techniques, locations, and procedures required for the collection, storage, and relocation of seed or plant material; collection, stockpiling, and redistribution of topsoil and associated seed. The plan will also include requirements related to outcomes, such as percent absolute cover of highly invasive species as defined by the California Invasive Plant Council (less than documented baseline conditions), maintenance, monitoring, implementation, and annual reporting. The plan will reflect conditions required under regulatory authorizations issued for federally listed species and will be submitted to the USFWS for review and approval. The Project Biologist will submit the plan to the Authority for review and approval.

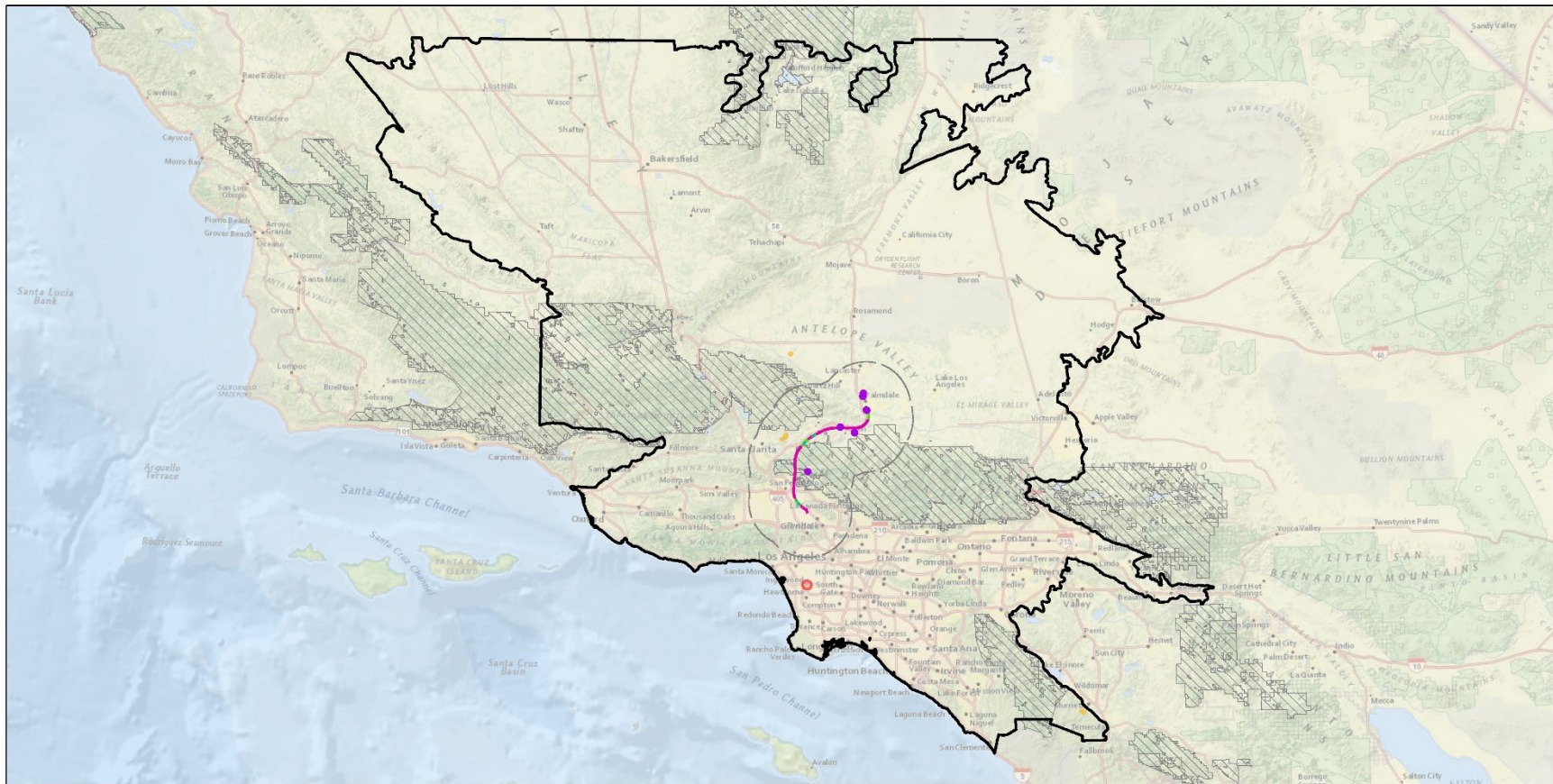
CM-PLT-03: Maintenance of Existing Hydrologic Conditions to Maintain Slender-horned Spineflower Habitat Below the Preferred Alternative Alignment in Bee Canyon

To maintain habitat for slender-horned spineflower, and other federally listed plant species, hydraulic capacity in Bee Canyon and Pacoima Wash will be maintained at preconstruction conditions through the implementation of on-site stormwater management BMPs to provide runoff dispersion, infiltration, detention, and evaporation. Hydraulic capacity in Bee Canyon and Pacoima Wash will be maintained by minimizing alterations to watercourses, implementing erosion control BMPs, and maintaining existing stormwater patterns through implementation of conservation measures (CM-GEN-04 and CM-GEN-05) and HYD-IAMF#1 through HYD-IMAF#3 (Appendix K) into project design. A construction-period SWPPP (CM-GEN-05 and HYD-IAMF#3) will incorporate BMPs to reduce short-term increases in construction-site runoff, and a Stormwater Management and Treatment Plan (Appendix K, HYD-IAMF#1) will address stormwater runoff and system capacity. Water crossings will be implemented to maintain preconstruction hydraulic capacity (Appendix K, HYD-IAMF#2) and maintenance of existing drainage patterns within channels and washes (Appendix K, HYD-IAMF#1 and HYD-IAMF#3) will minimize impacts to hydraulic condition. The Authority will provide the SWPPP and Stormwater Management and Treatment Plan for review by USFWS at the 60 percent design stage.

References

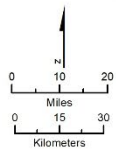
- California Department of Fish and Wildlife (CDFW). 2020. *California Natural Diversity Database RareFind 5*. Maintained by the Biogeographic Data Branch.
<https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data> (Accessed 2020).
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<http://www.rareplants.cnps.org> (Accessed 2019).

- . 2019b. A Manual of California Vegetation, Online Edition. California Native Plant Society, Sacramento, California. <http://www.cnps.org/cnps/vegetation/> (Accessed 2019).
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- U.S. Fish and Wildlife Service (USFWS). 2005. *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon*. U.S. Fish and Wildlife Service, Region 1, Portland, OR. December 15, 2005.
- . 2009. *Navarretia fossalis* (Spreading Navarretia) 5-Year Review: Summary and Evaluation. Carlsbad, CA.
- . 2010. *Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for Navarretia fossalis (Spreading Navarretia)*. Federal Register 75:62192–62255.
- . 2019a. Meetings with the California High-Speed Rail Authority regarding spreading navarretia. October 24, 2019 and November 22, 2019.
- . 2020. Environmental Conservation Online System (ECOS). Washington, DC. <http://ecos.fws.gov/ecp/report/table/critical-habitat.html> (Accessed 2020).



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Habitat Data from CHSR (2016), CNDDDB (08/2020).

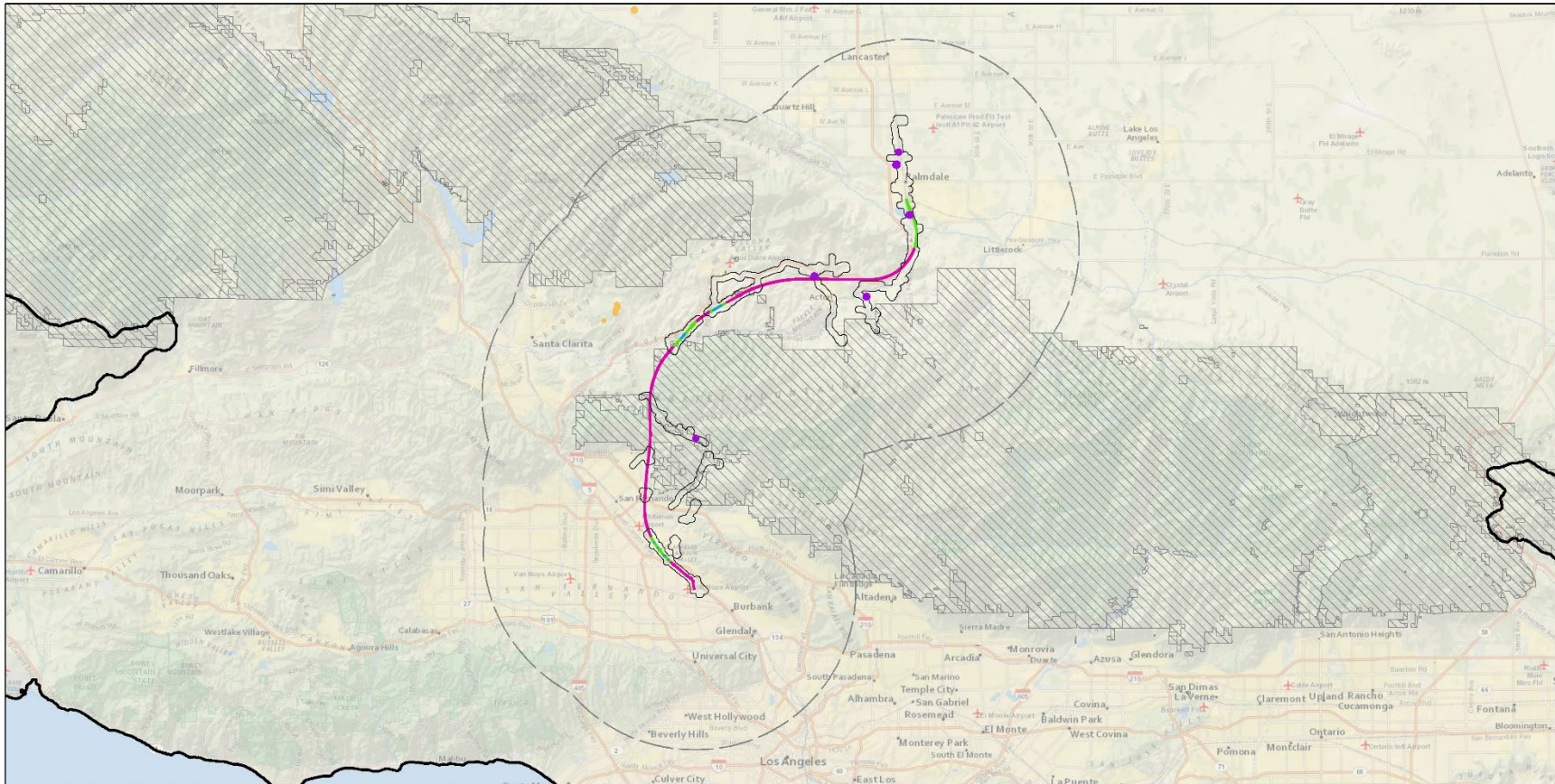
Please Note: The CNDDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.



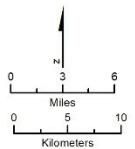
- Regional Study Area
- 10-Mile Buffer
- Forest Service Lands
- Potential Habitat (Within Survey Area)
- Species Occurrences**
- Extirpated
- Possibly Extirpated
- Natural Extant Occurrence
- HSR Alignment**
- Elevated
- Surface
- Underground

Spreading Navarretia

Figure 3.7-13 Spreading Navarretia Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Habitat Data from CHSR (2016), CNDDb (08/2020).



- Regional Study Area
- 10-Mile Buffer
- Forest Service Lands
- Potential Habitat (Within Survey Area)
- 1,000 Foot Vernal Pool Survey Area
- Species Occurrences**
- Extirpated
- Possibly Extirpated
- Natural Extant Occurrence
- HSR Alignment**
- Elevated
- Surface
- Underground

Please Note: The CNDDb occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDb about a species or an area can never be used as proof that no special status species occur in an area.

Spreading Navarretia

Figure 3.7-14 Spreading Navarretia and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Conservancy Fairy Shrimp

The Authority has determined that the HSR Palmdale to Burbank Project Section will have no effect on the conservancy fairy shrimp (*Branchinecta conservatio*), a federally endangered species.

Rationale

The Authority reviewed species information for conservancy fairy shrimp available on the USFWS' Environmental Conservation Online System website, and the *Recovery Plan for Vernal Pool Systems of California and Southern Oregon* to gather range information (see list of references). The CNDDDB and *Fairy Shrimps of California's Puddles, Pools and Playas* (Eriksen and Belk 1999) was also reviewed for occurrence records relative to the proposed action.

The conservancy fairy shrimp is endemic to California's Central Valley where it occurs in large "playa" type vernal pools. Most populations are located in Solano, Merced and Tehama counties. There is a single record (CNDDDB Occurrence Number 46) for conservancy fairy shrimp from a location near Frasier Mountain, Ventura County (CDFW 2020). This record is based on eggs hatched in the laboratory by a Ph.D. student from soil received second hand in 1989. The exact location of the soil collection site is unknown but reported as north of Frazier Mountain Road near its intersection with Lockwood Valley Road in Ventura County (CDFW 2020). The record has never been confirmed and is considered questionable by some authorities (Eriksen and Belk 1999) but is presumed extant by agencies (CDFW 2020; USFWS 2005).

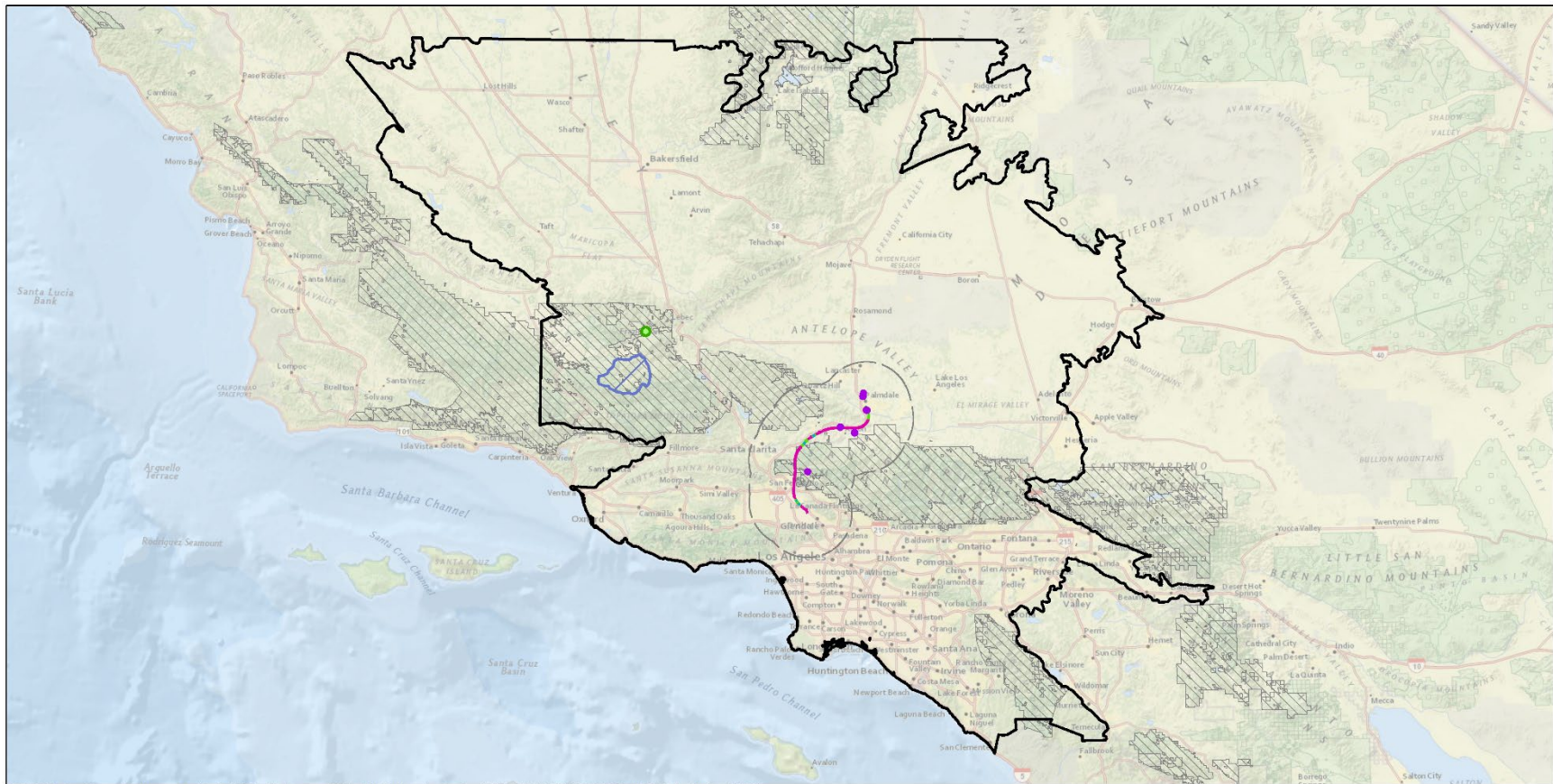
There are no known records within 10 miles of the project. As shown in Figure 3.7-15 and Figure 3.7-16, the proposed action is located more than 40 miles from the Ventura record and over 150 miles from the known populations in eastern Merced County.

Conclusion

Given the substantial distance between the proposed action, the species' range and known occurrences, this species is likely not present in the action area. Therefore, the proposed action will have no effect on conservancy fairy shrimp. The Authority will reinitiate Section 7 consultation if conservancy fairy shrimp are observed during pre-construction surveys, project construction or O&M activities.

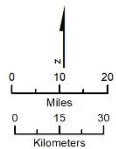
References

- California Department of Fish and Wildlife (CDFW). 2020. *California Natural Diversity Database RareFind 5*. Maintained by the Biogeographic Data Branch.
<https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data> (Accessed 2020).
- Eriksen, C. and D. Belk. 1999. *Fairy Shrimp of California's Puddles, Pools, and Playas*. Mad River Press, Inc., Eureka, CA. 196 pp.
- U.S. Fish and Wildlife Service (USFWS). 2005. *Recovery Plan for Vernal Pool Systems of California and Southern Oregon*. Region 1, Portland, OR. 319 pp.
- . 2015. *Species Profile for Conservancy fairy shrimp (Branchinecta conservatio)*. Environmental Conservation Online System.
http://ecos.fws.gov/tess_public/profile/speciesProfile?spscode=K03D



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); CNDDB (08/2020); USFW Critical Habitat (9/2020).

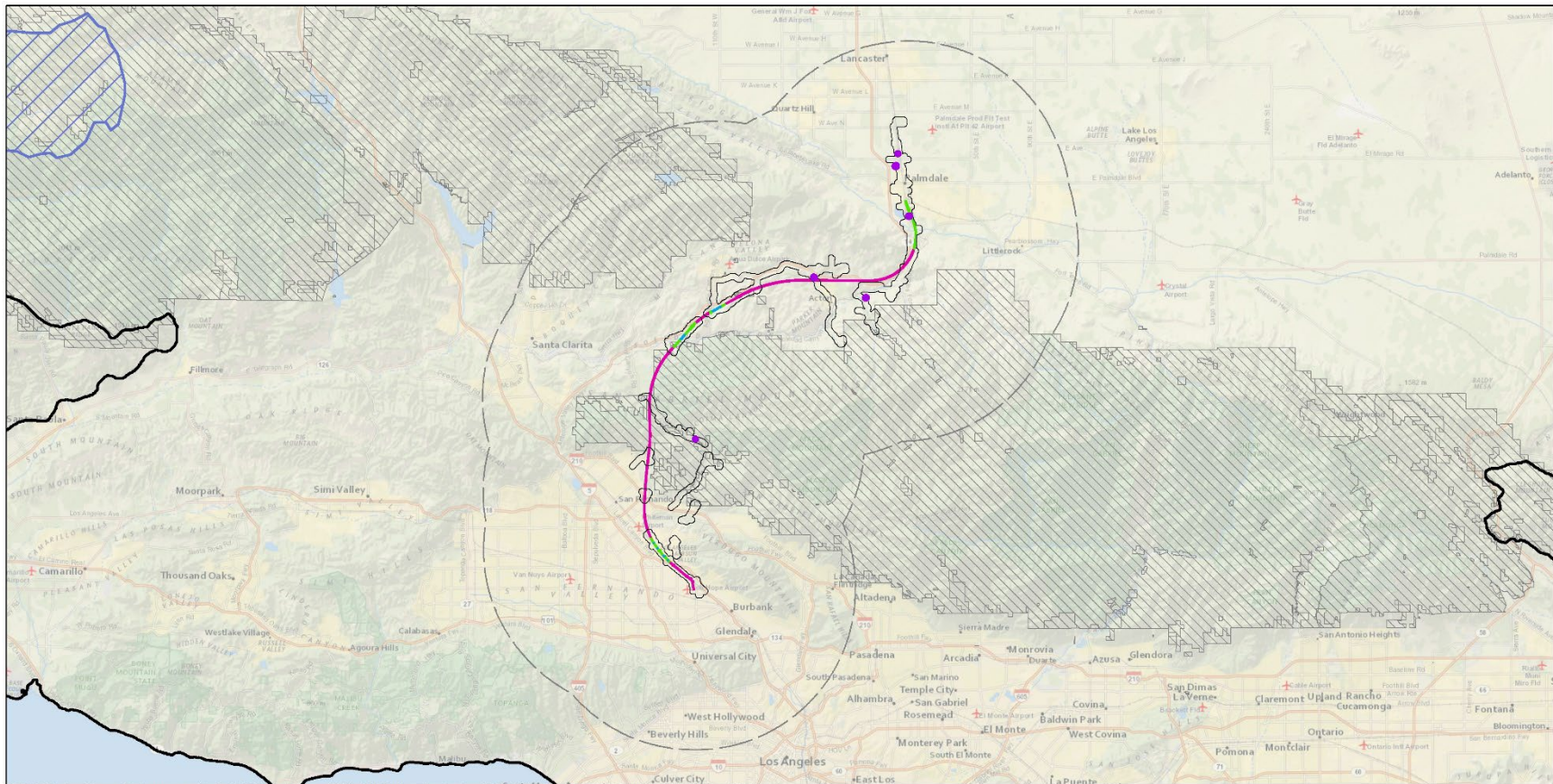
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- Regional Study Area
- 10-Mile Buffer
- Forest Service Lands
- Potential Habitat (Within Survey)
- Critical Habitat
- HSR Alignment
- Elevated
- Surface
- Underground
- Species Occurrences
- Natural Extant Occurrence

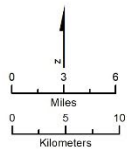
Conservancy Fairy Shrimp

Figure 3.7-15 Conservancy Fairy Shrimp Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); CNDDB (08/2020); USFW Critical Habitat (9/2020).

Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within the area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.



- | | | |
|----------------------|------------------------------------|----------------------|
| Regional Study Area | Potential Habitat (Within Survey) | HSR Alignment |
| 10-Mile Buffer | 1,000 Foot Vernal Pool Survey Area | Elevated |
| Forest Service Lands | Critical Habitat | Surface |
| | | Underground |

Conservancy Fairy Shrimp

Figure 3.7-16 Conservancy Fairy Shrimp Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Riverside Fairy Shrimp

The Authority has determined that the HSR Palmdale to Burbank Project Section will have no effect on the Riverside fairy shrimp (*Streptocephalus woottoni*), a federally endangered species.

Rationale

The Authority reviewed species information for Riverside fairy shrimp available on the USFWS Environmental Conservation Online System website, and as the *Revised Critical Habitat for the Riverside Fairy Shrimp* to gather range information (see list of references). The CNDDDB and *Fairy Shrimps of California's Puddles, Pools and Playas* (Eriksen and Belk, 1999) was also reviewed to obtain occurrence records relative to the proposed action.

The species' range indicates it is endemic to the Los Angeles and San Diego Basins where it occurs in larger long lasting vernal pools from Ventura County to San Diego County (Eriksen and Belk 1999; CDFW 2020). While the historical range of the Riverside fairy shrimp is presumed to have included Los Angeles County, the species is considered extinct there (USFWS 2008). The single record from Ventura County is considered an isolated population, but designated critical habitat for this species includes lands to the east of this location (USFWS 2012). The species is considered distributed throughout its historical range; however, its vernal pool habitat has been reduced to 3-10 percent of its original extent. As a result, populations have become severely fragmented and isolated by agriculture and urbanization (USFWS 2012).

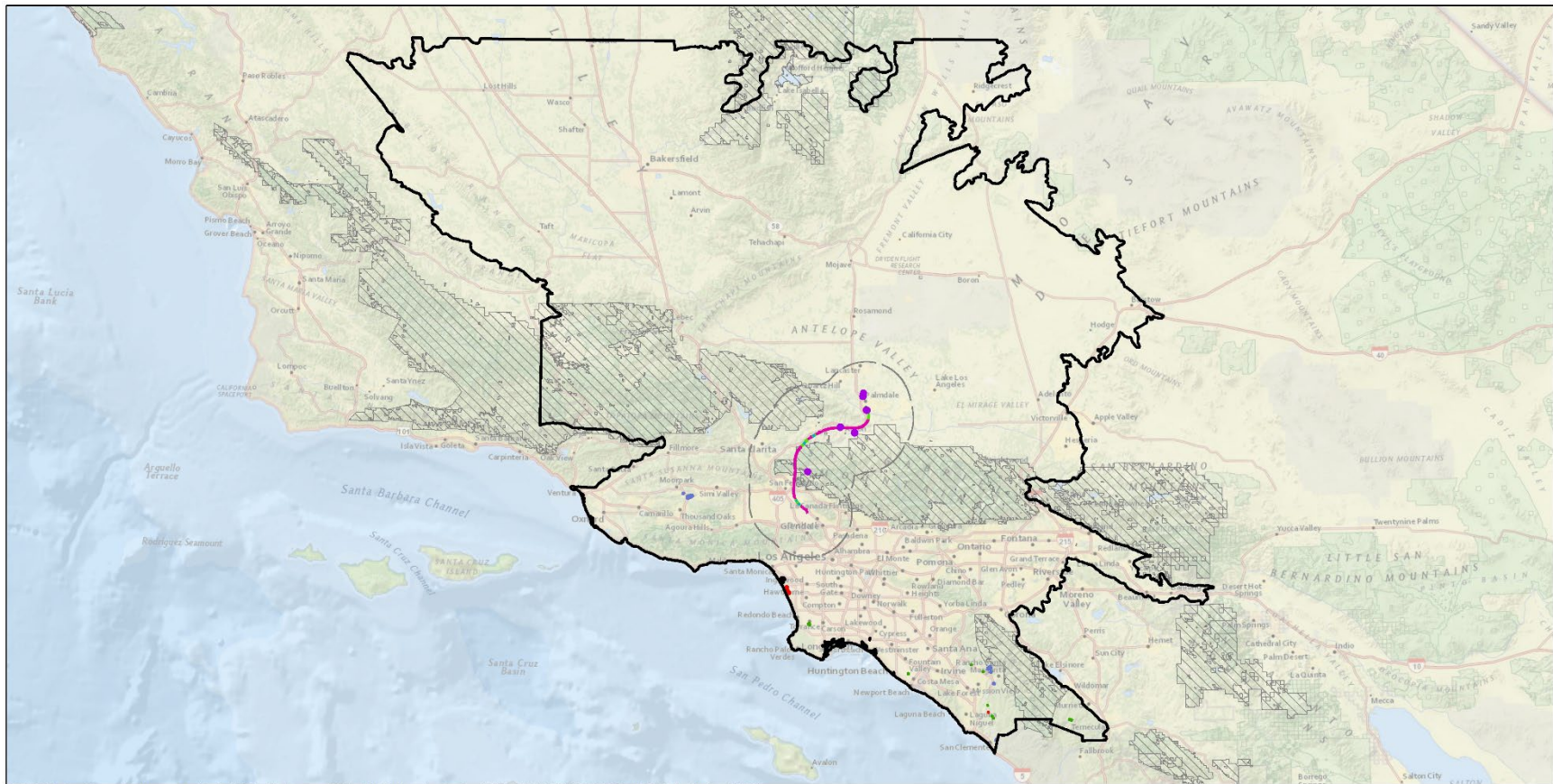
As shown in Figure 3.7-17 and Figure 3.7-18, the proposed action is over 20 miles east of the closest known occurrence of Riverside fairy shrimp in Moorpark, Ventura County (CNDDDB Occurrence Number 9). The alignment is 22.8 miles from designated critical habitat for the species.

Conclusion

Given the distance between the proposed action and the species' range and known occurrences, this species is likely not present in the action area. Therefore, the proposed action will have no effect on Riverside fairy shrimp. The Authority will reinitiate Section 7 consultation if Riverside fairy shrimp are observed during pre-construction surveys of suitable habitat or project construction or O&M activities.

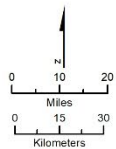
References

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- Eriksen, C. and D. Belk. 1999. *Fairy Shrimp of California's Puddles, Pools, and Playas*. Mad River Press, Inc., Eureka, CA. 196 pp.
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- . 2012. *Revised Critical Habitat for the Riverside Fairy Shrimp*. Federal Register / Vol. 77, No. 233.
- . 2015. *Species Profile for Riverside fairy shrimp (Streptocephalus woottoni)*. Environmental Conservation Online System. http://ecos.fws.gov/tess_public/profile/speciesProfile?spcode=K03F.



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); CNDDB (08/2020); USFW Critical Habitat (9/2020).

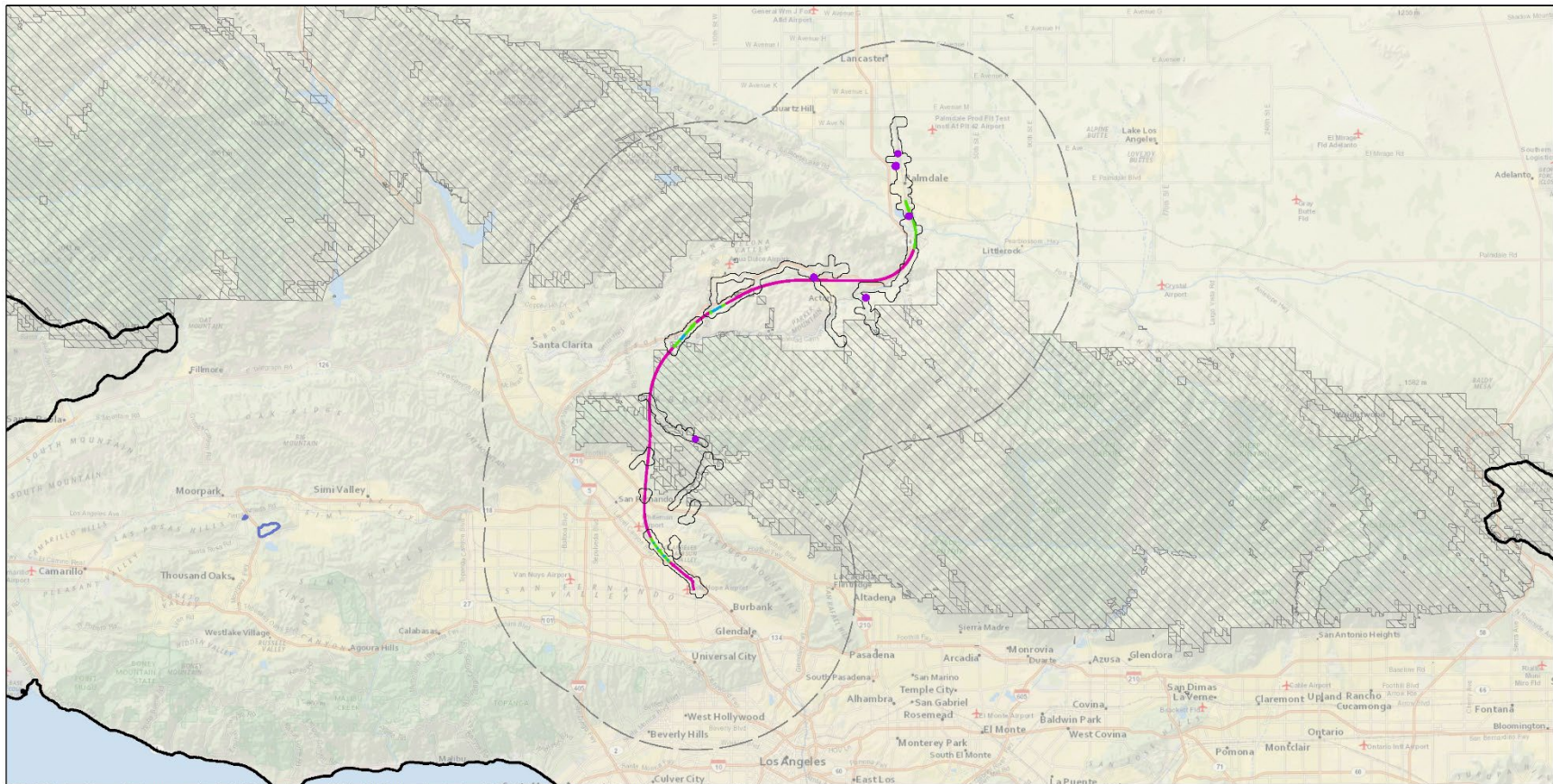
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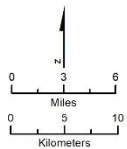
- | | | | |
|----------------------|-----------------------------------|---------------|---------------------------|
| Regional Study Area | Potential Habitat (Within Survey) | HSR Alignment | Extirpated |
| 10-Mile Buffer | Critical Habitat | Surface | Possibly Extirpated |
| Forest Service Lands | | Underground | Natural Extant Occurrence |

Riverside Fairy Shrimp

Figure 3.7-17 Riverside Fairy Shrimp Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); CNDDB (08/2020); USFW Critical Habitat (9/2020).



- | | | | |
|----------------------|------------------------------------|---------------|---------------------------|
| Regional Study Area | Potential Habitat (Within Survey) | HSR Alignment | Species Occurrences |
| 10-Mile Buffer | 1,000 Foot Vernal Pool Survey Area | Elevated | Natural Extant Occurrence |
| Forest Service Lands | Critical Habitat | Surface | |
| | | Underground | |

Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within the area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.

Riverside Fairy Shrimp

Figure 3.7-18 Riverside Fairy Shrimp Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Vernal Pool Fairy Shrimp

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect vernal pool fairy shrimp (*Branchinecta lynchi*), a federally threatened species.

Rationale

The Authority reviewed species information for vernal pool fairy shrimp including from the USFWS five-year species review, the CNDDDB, and other relevant data sources (see list of references). A vernal pool assessment was conducted in the action area in the winter of 2017 (see Section 4.1.2 of this Biological Assessment). Data analyzed included known occurrence records (Figure 3.7-19 and Figure 3.7-20), and habitat and range information relative to the proposed action. Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

Vernal pool fairy shrimp is a vernal pool obligate species found at scattered locations throughout California's Central Valley, ranging from the Millville Plains and Stillwater Plains in Shasta County, south through most of the length of the Central Valley, and to the eastern margins of the Coast Ranges, from San Benito County south, to Ventura County (USFWS 2005). According to the CNDDDB, two presumed extant CNDDDB occurrences of vernal pool fairy shrimp are within 10 miles of the action area (CDFW 2020). The closest occurrence is approximately 3.5 miles northwest of the action area on Cruzan Mesa, and seven miles northeast of Santa Clarita. The second occurrence is located 4.8 miles west of the action area, on a hill above Golden Valley High School east of Santa Clarita. The closest designated critical habitat is approximately 40 miles northwest of the action area in Los Padres National Forest (USFWS 2020).

Conclusion

Due to the distance to known populations and limited potential vernal pool habitat in or near the action area, the species is unlikely to be present in the action area. Furthermore, the USFWS stated during informal consultation conducted in 2019 that due to rarity of the species, vernal pool fairy shrimp are not expected to occur in the action area (USFWS 2019). Due to the limited presence of potentially suitable vernal pool habitat, the proposed action may affect but is not likely to adversely affect vernal pool fairy shrimp.

To ensure that this species is present at the time of construction, a Designated Biologist familiar with the distinguishing characteristics of the species will survey suitable vernal pool habitat within the project footprint prior to ground- or vegetation-disturbing activities. If vernal pool fairy shrimp are observed, no project activities that could adversely affect the species will be conducted within 250 feet of occupied vernal pools. The Authority will reinitiate Section 7 consultation if circumstances meeting the reinitiation criteria occur.

Conservation Measures Specific to Vernal Pool Fairy Shrimp

The purpose of these conservation measures is to avoid and minimize effects to federally listed invertebrate species.

CM-VRN-01: Conduct Pre-construction Surveys for Vernal Pool Wildlife Species

Prior to any ground disturbing activities, the Project Biologist will conduct an aquatic habitat assessment and survey for vernal pool wildlife species in seasonal wetlands and vernal pools that occur within both the work area and the area extending 250 feet from the outer boundary of the work area where access is available, consistent with USFWS vernal pool survey protocols. The Project Biologist will visit these areas after the first rain event of the season to determine whether seasonal wetlands and vernal pools have been inundated. A seasonal wetland/vernal pool will be considered to be inundated when it holds greater than 3 centimeters of standing water 24 hours after a rain event. Approximately two weeks after the pools have been determined to be inundated, the Project Biologist will conduct surveys in appropriate seasonal wetland and vernal pool habitats. The Project Biologist will submit a report to the Authority within 30 days of completing the work.

CM-VRN-02: Implement Seasonal Vernal Pool Work Restriction

To the extent feasible, ground disturbing activities will not occur within 250 feet of vernal pools or seasonal wetlands during the rainy season (October 15 to April 15). In the event ground disturbing activities are to occur within the buffer area during the rainy season, such activities should, to the extent feasible, be undertaken when the aquatic features are not inundated.

CM-VRN-03: Implement and Monitor Vernal Pool Avoidance and Minimization Measures within Temporary Impact Areas

To the extent feasible, impacts on vernal pools in work areas outside of the permanent right-of-way will be avoided. The Project Biologist will install and maintain exclusionary fencing to prevent impacts on vernal pools from construction activities. When avoidance of impacts on vernal pools is not feasible, the construction activity will be scheduled to occur in the dry season where feasible. Prior to the initiation of a ground disturbing activity occurring during the dry season, the Project Biologist will collect a representative sampling of soils from the affected vernal pools to obtain viable plant seeds and vernal pool branchiopod cysts.

The soils containing seeds and cysts may later be returned to the affected pool after work has been completed or incorporated into other vernal pools, as provided by regulatory authorizations issued under FESA.

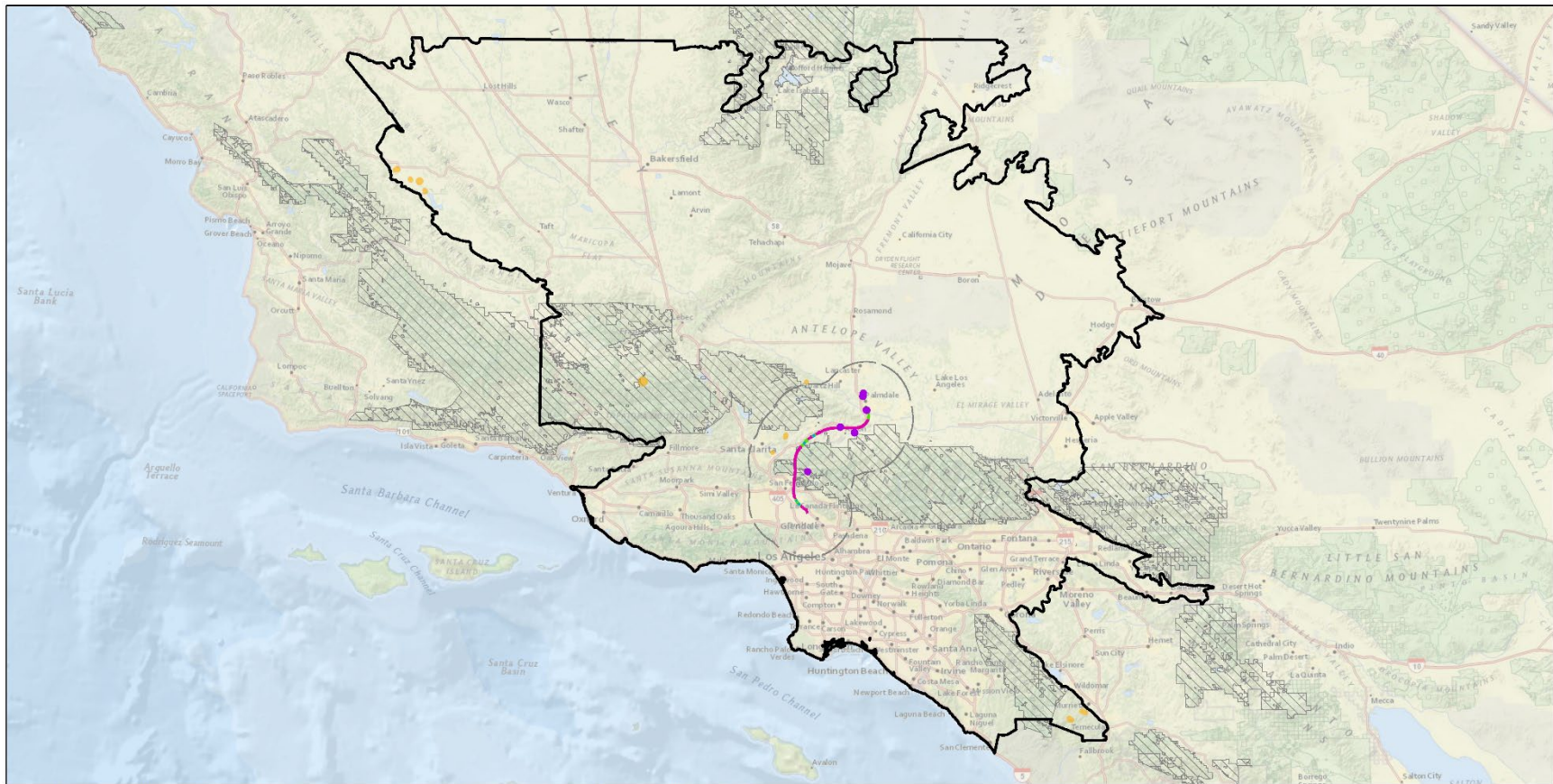
CM-VRN-04: Provide Compensatory Mitigation for Impacts on Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp Habitat

The Authority will provide compensatory mitigation for direct and indirect impacts, including both temporary and permanent impacts, on vernal pool branchiopod habitat at a 1:1 ratio unless a higher ratio is required by the FESA.

Compensatory mitigation will be provided using one or more of the methods described in the Compensatory Mitigation Plan, BIO-MM#53.

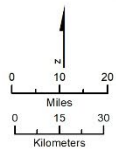
References

- California Department of Fish and Wildlife (CDFW). 2020. *California Natural Diversity Database RareFind 5*. Maintained by the Biogeographic Data Branch.
<https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data> (Accessed 2020).
- U.S. Fish and Wildlife Service (USFWS). 2005. *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon*. U.S. Fish and Wildlife Service, Region 1, Portland, OR. December 15, 2005.
- . 2007. Vernal Pool Fairy Shrimp (*Branchinecta lynchi*), 5-Year Review: Summary and Evaluation. September. Sacramento, CA.
- . 2019. Meetings with the California High-Speed Rail Authority regarding vernal pool fairy shrimp. October 24, 2019 and November 22, 2019.
- . 2020. Environmental Conservation Online System (ECOS). Washington, DC.
<http://ecos.fws.gov/ecp/report/table/critical-habitat.html> (Accessed 2020).



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); Habitat Data from CHSR (2016); CNDDDB (08/2020).

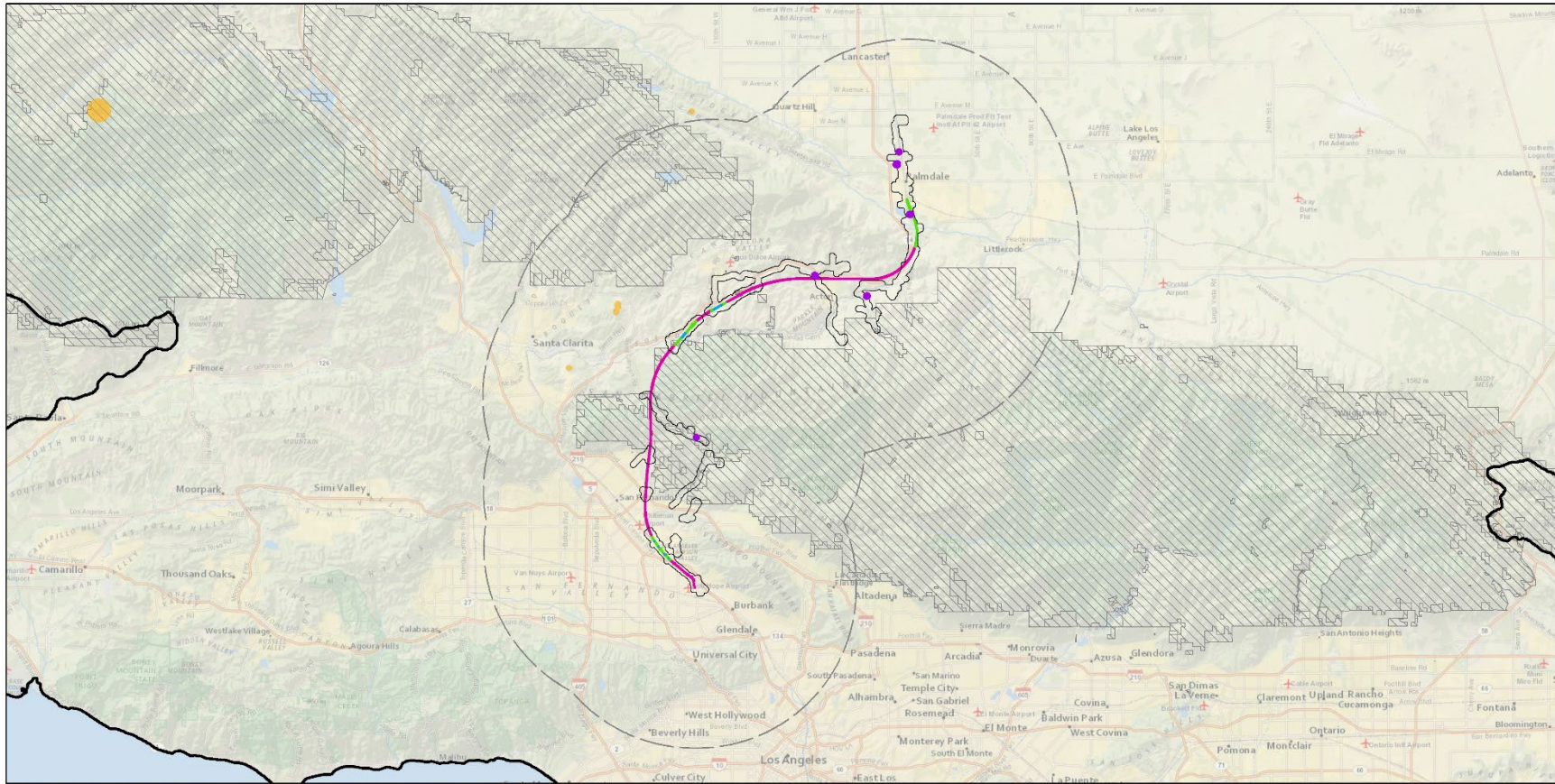
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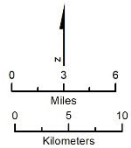
- | | | | |
|----------------------|--|----------------------------|----------------------|
| Regional Study Area | Potential Habitat (Within Survey Area) | Species Occurrences | HSR Alignment |
| 10-Mile Buffer | | Extirpated | Elevated |
| Forest Service Lands | | Possibly Extirpated | Surface |
| | | Natural Extant Occurrence | Underground |

Vernal Pool Fairy Shrimp

Figure 3.7-19 Vernal Pool Fairy Shrimp Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Habitat Data from CHSR (2016), CNDDb (08/2020).



- | | | | |
|----------------------|-----------------------------------|----------------------------|----------------------|
| Regional Study | Potential Habitat (Within Survey) | Species Occurrences | HSR Alignment |
| 10-Mile Buffer | 1,000 Foot Vernal Pool Survey | Extirpated | Elevated |
| Forest Service Lands | | Possibly Extirpated | Surface |
| | | Natural Extant Occurrence | Underground |

Please Note: The CNDDb occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDb about a species or an area can never be used as proof that no special status species occur in an area.

Vernal Pool Fairy Shrimp

Figure 3.7-20 Vernal Pool Fairy Shrimp Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Kern Primrose Sphinx Moth

The Authority has determined that the HSR Palmdale to Burbank Project Section will have no effect on Kern primrose sphinx moth (*Euproserpinus editha*), a federally threatened species.

Rationale

The Authority reviewed species information for Kern primrose sphinx moth including from the USFWS five-year species review, the CNDDDB, and other relevant data sources (see list of references). Data analyzed included known occurrence records (Figure 3.7-21 and Figure 3.7-22), and habitat and range information relative to the proposed action. Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

Kern primrose sphinx moth is typically found in sandy alluvial soils in and beside washes that support its larval host plants, evening primrose (*Camissonia contorta*) in the Walker Basin, and sun cup (*Camissonia campestris*) in the Carrizo Plain and Cuyama Valley. The CNDDDB reports 11 presumed extant occurrences of Kern primrose sphinx moth, distributed across four counties: Kern (1 occurrence), San Luis Obispo (5 occurrences), Santa Barbara (4 occurrences), and Ventura (1 occurrence) (CDFW 2020). The CNDDDB reports no extant, extirpated, or possibly extirpated occurrences within 10 miles of the action area. The geographic range of the Kern primrose sphinx moth does not overlap with the action area and it is not known to occur in the Mojave Desert surrounding Lancaster and Palmdale and it has not been observed on the southeast side of the Tehachapi Mountains. The action area is not included in the recovery plan for Kern primrose sphinx moth (USFWS 1984).

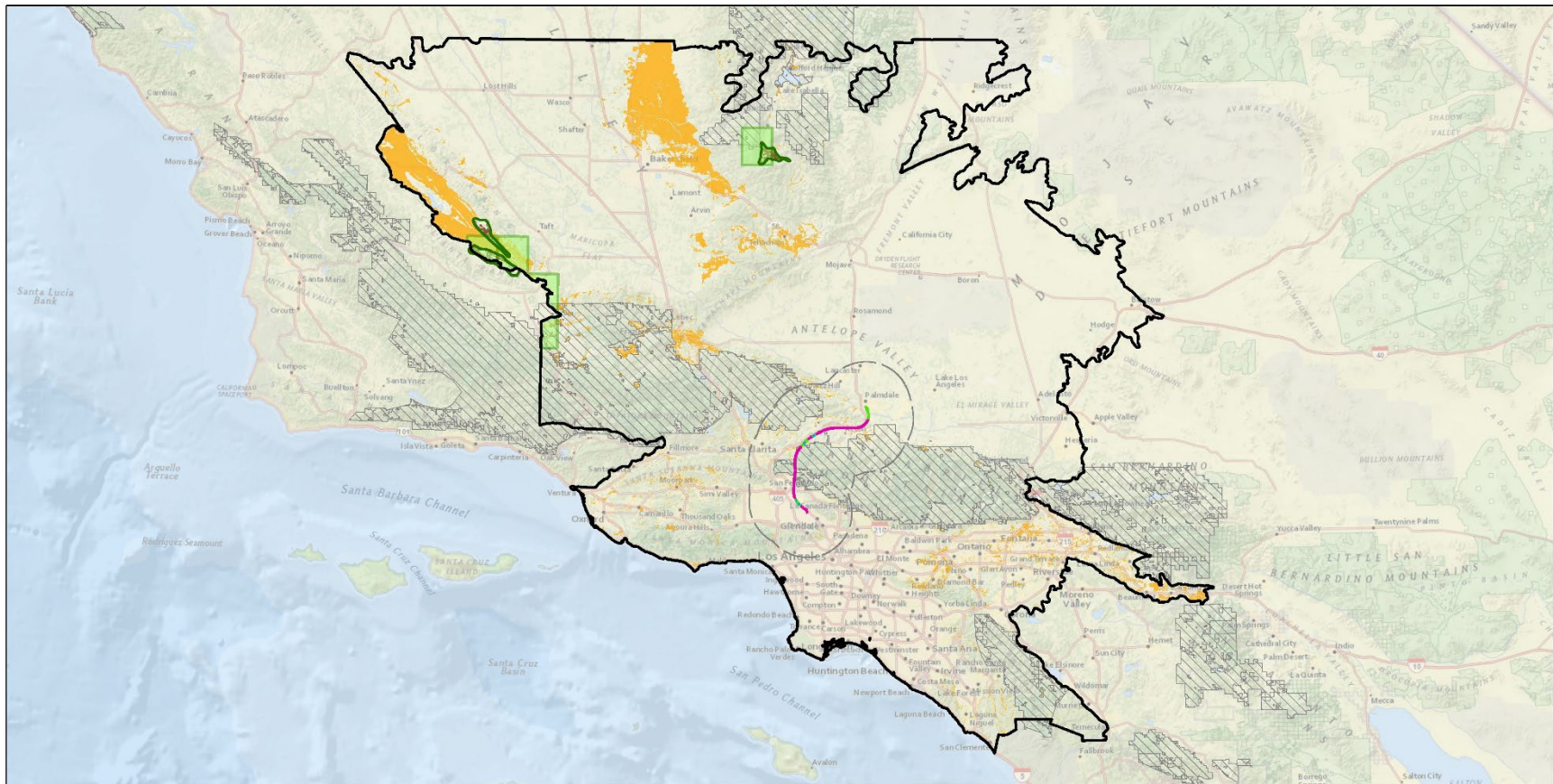
Conclusion

Due to the proposed action being outside of the current geographic range of the species, the lack of CNDDDB records within 10 miles of the project, the nearest occurrence 60 miles north of the action area, and limited amount of suitable habitat the action area (Figure H-22), the species is likely not present in the action area and project will have no effect on the Kern primrose sphinx moth. Additionally, the USFWS stated during informal consultation in 2019 that based on expert opinion (Josh Hull), Kern primrose sphinx moth are not expected to occur in the action area (USFWS 2019). To ensure that this species is present at the time of construction, suitable habitat within the project footprint will be surveyed prior to ground- or vegetation-disturbing activities. The survey(s) will be conducted by a Designated Biologist familiar with the distinguishing characteristics of the species. Surveys for Kern primrose sphinx moth generally will be based on methods in Jump et al. (2006) and information in the USFWS's 5-year status review of this species (USFWS 2007). If Kern primrose sphinx moths are observed, no project activities that could adversely affect the species will be conducted within 1,000 feet of individuals. The Authority will reinstate Section 7 consultation if circumstances meeting the reinitiation criteria occur.

References

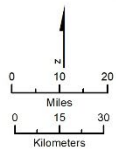
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- . 2020. Environmental Conservation Online System (ECOS). Washington, DC. <http://ecos.fws.gov/ecp/report/table/critical-habitat.html> (accessed 2020).



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); Modeled Habitat Data from CHSR (2017); CNDDB (08/2020).

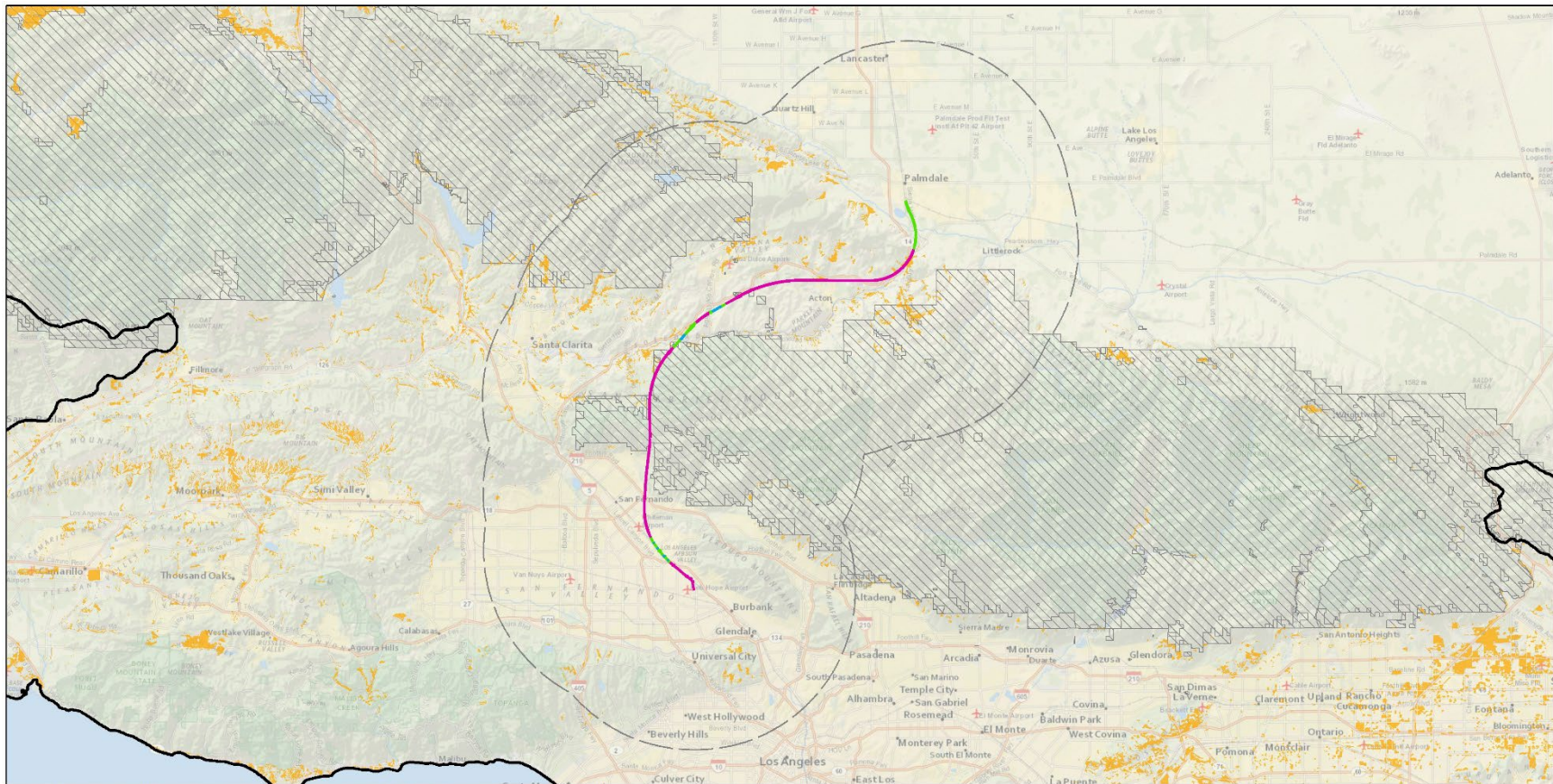
Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.



- | | | | |
|----------------------|-------------|------------------------|------------------------------|
| Regional Study | Elevated | Presumed Extant | Core Suitable Habitat |
| 10-Mile Buffer | Surface | Possibly Extirpated | Potentially Suitable Habitat |
| Forest Service Lands | Underground | Extirpated | |
| | | Known Occurrence Areas | |

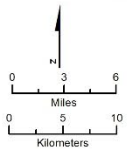
Kern Primrose Sphinx Moth

Figure 3.7-21 Kern Primrose Sphinx Moth Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); Modeled Habitat Data from CHSR (2017); CNDDb (08/2020).

Please Note: The CNDDb occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDb about a species or an area can never be used as proof that no special status species occur in an area.



- | | | | |
|----------------------|---------------|------------------------|------------------------------|
| Regional Study Area | HSR Alignment | Species Occurrences | Habitat Category |
| 10-Mile Buffer | Elevated | Presumed Extant | Potentially Suitable Habitat |
| Forest Service Lands | Surface | Possibly Extirpated | |
| | Underground | Extirpated | |
| | | Known Occurrence Areas | |

Kern Primrose Sphinx Moth

Figure 3.7-22 Kern Primrose Sphinx Moth Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Quino Checkerspot Butterfly

The Authority has determined that the HSR Palmdale to Burbank Project Section will have no effect on Quino checkerspot butterfly (*Euphydryas editha quino*), a federally endangered species.

Rationale

The Authority reviewed species information for Quino checkerspot butterfly from the USFWS five-year species review, the CNDDDB, and other relevant data sources (see list of references). Data analyzed included known occurrence records (Figure 3.7-23 and Figure 3.7-24), and habitat and range information relative to the proposed HSR project alignment. Additionally, the Authority conducted informal consultation with the USFWS, including biweekly meetings initiated in July 2019.

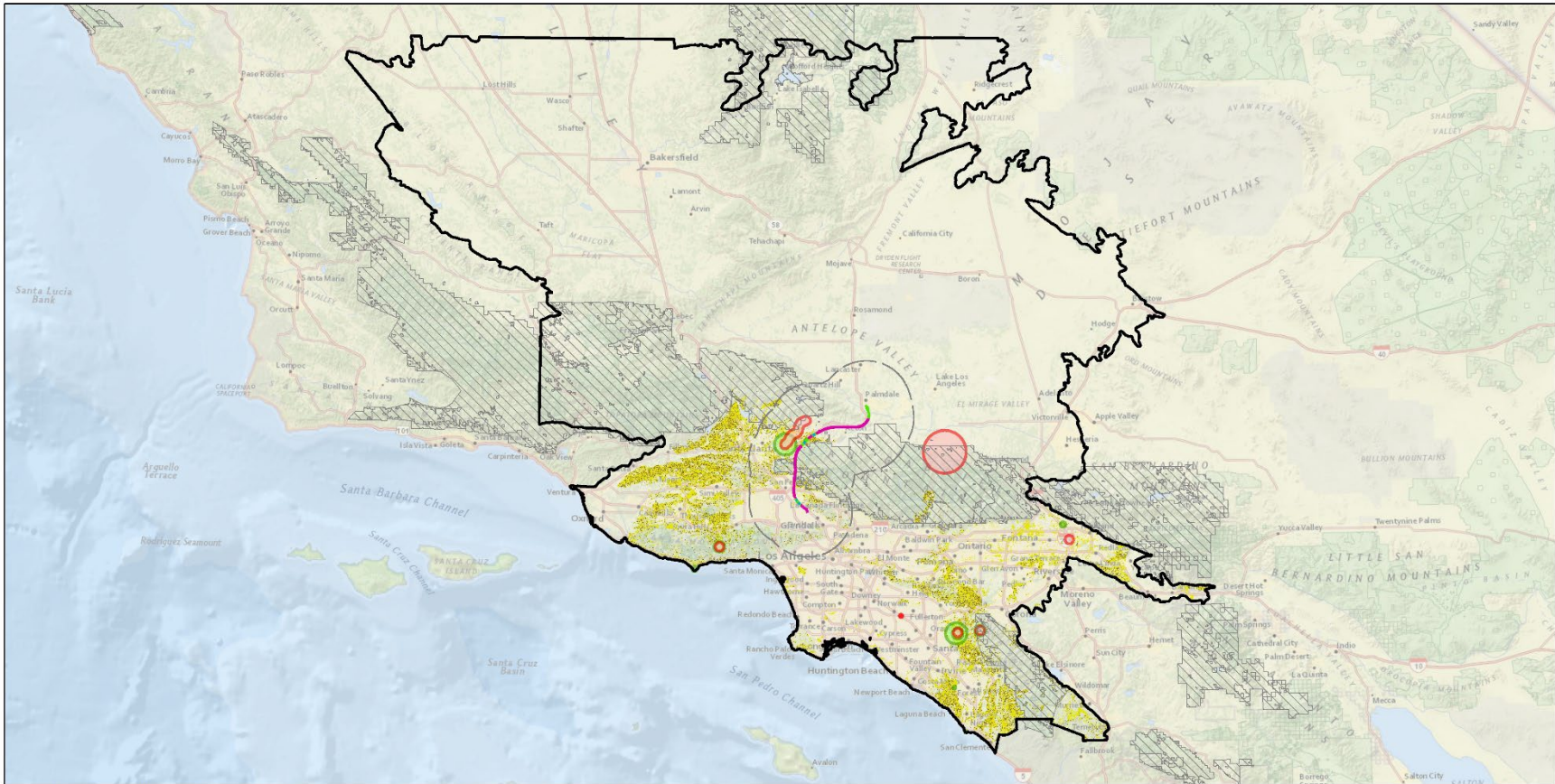
The geographic range of Quino checkerspot butterfly historically extended from Point Dume in Los Angeles County to northern Baja California, Mexico. At the time of listing in 1997, only seven or eight known extant populations occurred in the United States, all in southwestern Riverside County and San Diego County (USFWS 2009a). The species current geographic range does not overlap the action area and there are no occurrences located within 10 miles of the action area (CNDDDB 2020). The nearest designated critical habitat is approximately 85 miles southeast of the action area at Skinner Reservoir (USFWS 2020; USFWS 2009b). The action area is not included in the recovery plan for Quino checkerspot butterfly (USFWS 2003).

Conclusion

Due to the proposed action being outside of the current geographic range of the species, the lack of CNDDDB records within 10 miles of the project, and limited amount of suitable habitat the action area (Figure 3.7-23 and Figure 3.7-24), this species likely is absent from the action area. Additionally, the USFWS stated during informal consultation conducted in 2019 that based on expert opinion (Ken Osborne per. Comm.), Quino checkerspot butterfly are not expected to occur in the action area (USFWS 2019). Therefore, the proposed action will have no effect on Quino checkerspot butterfly. The Authority will reinstate Section 7 consultation if Quino checkerspot butterfly are observed during pre-construction surveys or project construction or O&M activities.

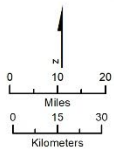
References

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- . 2020. Environmental Conservation Online System (ECOS). Washington, DC. <http://ecos.fws.gov/ecp/report/table/critical-habitat.html> (Accessed 2020).



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDDB (08/2020).

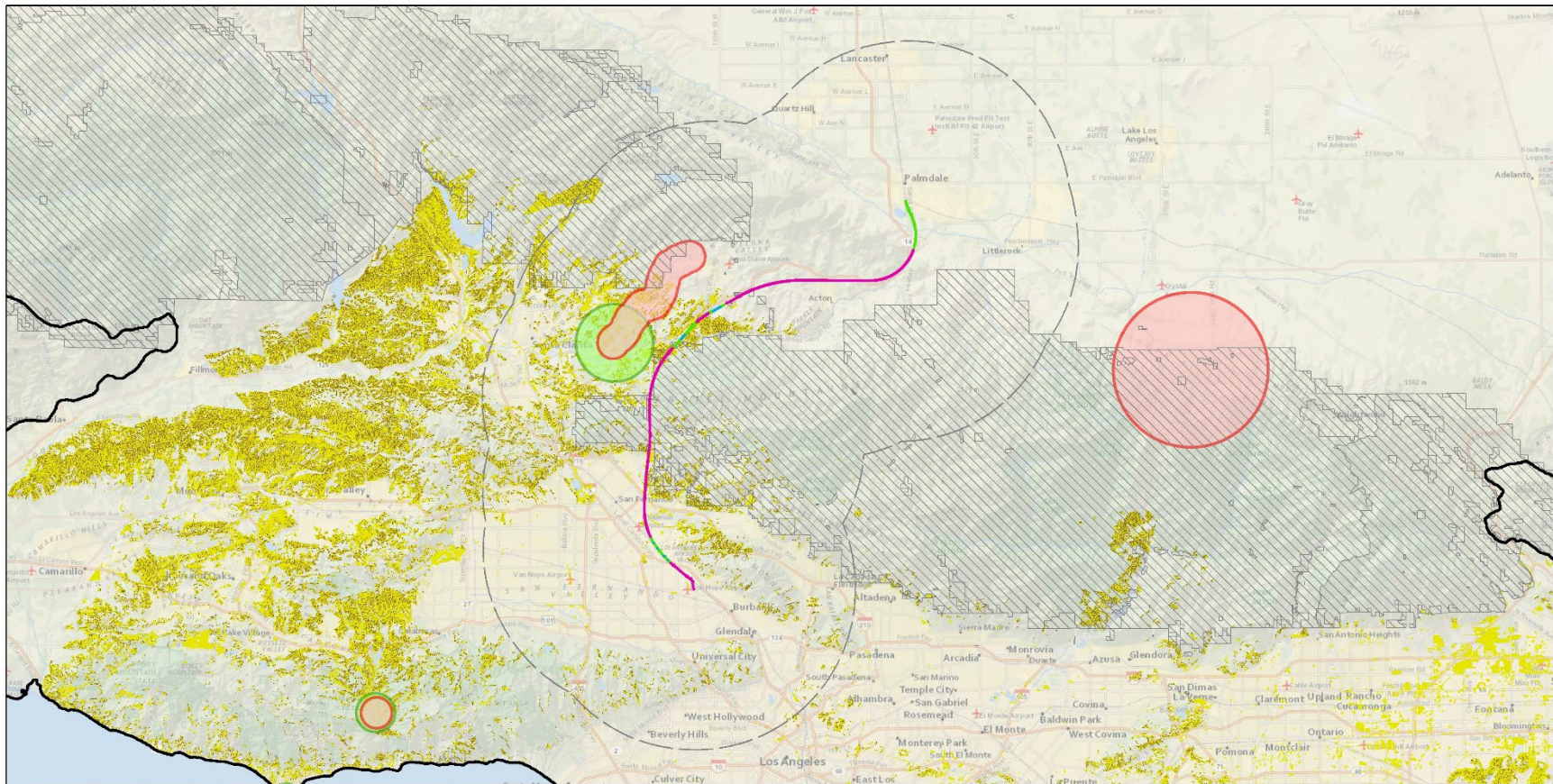
Please Note: The CNDDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.



- | | | | |
|----------------------|---------------|------------------------------|---------------------------|
| Regional Study Area | HSR Alignment | Hill/Ridge Breeding Habitat | Species Occurrences |
| 10-Mile Buffer | Surface | Potentially Suitable Habitat | Extirpated |
| Forest Service Lands | Underground | | Natural Extant Occurrence |

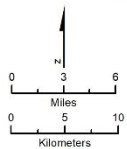
Quino Checkerspot Butterfly

Figure 3.7-23 Quino Checkerspot Butterfly Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDDB (08/2020).

Please Note: The CNDDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.



- | | | | |
|----------------------|-------------|------------------------------|----------------------------|
| Regional Study | HSR | Habitat Category | Species Occurrences |
| 10-Mile Buffer | Elevated | Hill/Ridge Breeding Habitat | Extirpated |
| Forest Service Lands | Surface | Potentially Suitable Habitat | Natural Extant Occurrence |
| | Underground | | |

Quino Checkerspot Butterfly

Figure 3.7-24 Quino Checkerspot Butterfly Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Unarmored Threespine Stickleback

The Authority has determined that construction of the HSR Palmdale to Burbank Project Section (project) may affect but is not likely to adversely affect the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) (UTS), a federally endangered species that is also listed as endangered and designated as fully protected by the State of California.

Species Presence in the Action Area

The Authority reviewed species information for unarmored threespine stickleback including the most recent U.S. Fish and Wildlife Service (USFWS) 5-Year Review, the California Natural Diversity Database (CNDDDB), and other relevant data sources (see list of references). Data analyzed included known occurrence records (Figure 3.7-25 and Figure 3.7-26), and habitat and range information relative to the proposed action.

Unarmored threespine stickleback is a small freshwater fish that inhabits areas of slow-moving water in streams and rivers and is distinguished from other subspecies of threespine stickleback by its lack of scales. It was once widely distributed in southern California but has been extirpated from much of its former range due to loss of habitat, introduction of non-native predators, and introgression with other subspecies. Currently, unarmored threespine stickleback is known to occur in the upper Santa Clara River and its tributaries in Los Angeles County, San Antonio Creek in Santa Barbara County, and at several locations in San Bernardino County (USFWS 2021). Critical habitat has not been designated for this species (USFWS 2002).

According to the CNDDDB, seven presumed extant occurrences of unarmored threespine stickleback are within 10 miles of the action area (CDFW 2022). Two of the mapped occurrences coincide with the action area: where the alignment crosses Agua Dulce Creek south of State Route (SR) 14 and where it crosses the Santa Clara River at Soledad Canyon. No populations of unarmored threespine stickleback are currently known in Agua Dulce Creek (USFWS 2021), but the species has recently been documented in Soledad Canyon. In 2016, the California Department of Fish and Wildlife (CDFW) rescued approximately 1,600 unarmored threespine stickleback from drying pools and stream segments in Soledad Canyon in or immediately upstream of the action area. The fish were released farther upstream in the Santa Clara River. In 2018, CDFW translocated 300 individuals to Stickleback Ranch approximately four miles upstream of the action area, and in 2020 an additional 300 were released at three locations in Soledad Canyon (USFWS 2021). A single adult male unarmored threespine stickleback was observed in December 2019 in the action area approximately 0.2 mile downstream of the point where the alignment crosses the Santa Clara River (Hovey 2019).

Habitat modeled as “occupied aquatic habitat” and “occupied supporting aquatic habitat” for unarmored threespine stickleback is present in the action area in Soledad Canyon. Modeled occupied aquatic habitat is occupied by the species only when water is present and supports the presence of unarmored threespine stickleback (typically between October and April). Occupied supporting aquatic habitat consists of the adjacent riparian vegetation community and channel structure that supports the presence of unarmored threespine stickleback when water is present.

Proposed Construction Activities

The alignment will cross the Santa Clara River on a viaduct, with permanent viaduct infrastructure elevated above the ground and spanning the low-flow channel. During construction, temporary power lines would extend across Lang Station Road coinciding with the existing access road. Permanent support structures will be installed only outside of the 25-year flood limit using a “no-water-contact” approach that is reflected in the UTS conservation measures (Authority 2019). To avoid the low-flow channel of the Santa Clara River, other bridge components—most notably girders and bridge decks—will be constructed to span the low-flow channel. Implementation of the conservation measures for viaduct/bridge construction activities will ensure that contact with the wetted channel of the river is avoided and that bridge construction equipment, concrete, or other materials are not allowed to enter or be discharged into the wetted channel. The approach

follows guidance issued by California Department of Fish and Wildlife (CDFW) for unarmored threespine stickleback (CDFW 2017; Warburton and Fisher 2002).

The permanent bridge will include construction of structural elements in a pre-determined sequence. This sequence of construction is as follows:

- i. Clear vegetation at construction site and grade access ramps.
- ii. Construct bridge footings. This includes pile driving using the site-specific appropriate technique.
- iii. Extend bridge columns above the support piles to the height of the bridge deck.
- iv. Install pile caps to receive pre-cast girder members.
- v. Construct girders to span the space between columns in areas above the dry riverbed.
- vi. Place pre-cast girders above the wetted channel of the Santa Clara River.
- vii. Pour bridge decks and complete bridge deck work.
- viii. Remove ramps, return soils to pre-project grade, and revegetate cleared areas.

Construction items (i), (ii), (iii), and (iv) will be constructed during the dry season. (The dry season is defined as May 1 to September 30 and represents the period when the Santa Clara River is not subject to large storm-induced flows and associated flooding.) The remaining items—(v), (vi), and (vii)—except restoration (viii) will be constructed with all work conducted from the top of the bridge structure (i.e., no access to the riverbed required).

A work zone (estimated at 100 feet upstream and 100 feet downstream of the bridge location) may require that vegetation be cut and cleared to facilitate bridge construction. Such clearing activities, however, would not require equipment to cross or make contact with the wetted channel of the Santa Clara River. Woody debris generated by vegetation clearing activities will be prevented from making contact with the wetted channel, either by hand or by deploying an underslung tarp, netting, or equivalent catchment or deflecting barrier.

Grading activity within the riverbed (during the dry season) may take place to create ramps between the terraces of the dry riverbed and staging areas, with some surface contouring. This is required to ensure a safe, level work area at bridge pier or falsework locations. Because this work will take place within the active channel, it is still considered “in-water work” and will require all necessary CDFW Lake and Streambed Alteration Agreement (LSAA), 401 and 404 permitting.

To prevent the inadvertent discharge of concrete, debris, or other construction materials into the wetted channel of the Santa Clara River, an underslung tarp, netting, or equivalent catchment or deflecting barrier will be deployed beneath each bridge deck during construction. This catchment system will be maintained in place until the bridge is complete. Furthermore, equipment and personnel access to the dry portion of the riverbed will be restricted to the dry season.

To confirm that water quality is not being affected by bridge construction concrete pouring activities, water quality monitoring will take place at points, upstream, downstream, and immediately adjacent to the construction work zone daily during concrete pouring operations. These will be tabulated and reported monthly, or as directed, to CDFW. Key parameters to be monitored include pH and turbidity. In summary, proposed permanent and temporary bridge structures will be constructed using standard techniques and best management practices that eliminate any need for construction work to take place in the wetted channel of the Santa Clara River.

Geotechnical investigations will likely be required during the detailed design phase prior to construction to determine both design and construction techniques. These pre-construction investigations would follow the same standard techniques and best management practices listed above.

Construction of the viaduct structure is expected to last three and a half years and both rail decks would be constructed simultaneously to minimize the construction timeframe. Construction

activities in and adjacent to the low-flow channel will be restricted to the dry season (May 1 to September 30) when no water is present (e.g., vegetation clearing, construction of bridge footings, extension of bridge columns above supporting piles, installation of pile caps to receive pre-cast girder members). Construction activities that can be completed from the top of the bridge structure (e.g., construction of girders to span space between columns, placement of pre-cast girders above wetted channel, pouring bridge decks) will not be time restricted because they will involve no riverbed access or contact with water. Initial vegetation clearing and final site recontouring and restoration would be completed without equipment crossing or contacting the wetted channel. Any such work will be conducted by hand as needed to avoid contacting the wetted channel. No equipment will at any time contact water during construction or during the operations and maintenance phases of the project.

The viaduct design places the bridge support piers on either side of the river channel, spaced a greater distance apart (395 feet) than the width of the 25-year flood limit and species' modeled habitat where the Santa Clara River crossing would occur. Temporary support structures may be installed inside the 25-year flood limit during the dry season, but will be removed at the end of the dry season, and would at no time contact water (Authority 2019). Temporarily disturbed areas will be returned to pre-project grade and revegetated. A Stormwater Pollution and Prevention Plan (SWPPP) will be in place during all work activities that will provide best management practices to avoid increasing turbidity or pollution of unarmored threespine stickleback habitat.

Effects Analysis

Installation of Structures

Impacts to modeled occupied aquatic habitat and occupied supporting aquatic habitat within the action area and crossed by the project footprint are assessed based on a "birds eye view;" however, the permanent project footprint would be considerably smaller than that depicted on a graphic given it would be limited to the permanent area of support structures. Conservation measures, including CM-UTS-01, CM-UTS-02, CM-UTS-03, CM-UTS-06, and CM-UTS-09 are incorporated into the project to further limit the construction and operations and maintenance footprint in the low-flow channel and when water is present and so would aid in avoiding impacts to UTS.

Shading from Constructed Viaduct

The SR14A Build Alternative alignment is oriented in a northeasterly-southwesterly direction, while the river channel is roughly oriented in a northwesterly-southeasterly direction, resulting in a near perpendicular profile for the alignment crossing at the river channel (Figure 3.7-25 and Figure 3.7-26). The perpendicular channel crossing profile, the height of the viaduct structure (approximately 100 feet above the channel), and the split rail deck design, all provide for minimal shading on species' habitat beneath the viaduct. Minimal shading of the channel would not be considered an adverse effect on the species because of the short daily duration and small footprint shading is expected to affect.

Potential for Scour around Structures

During large storm events, for example storm events larger than a 25-year event, water may contact the permanent bridge pilings and flows may generate scour depressions around a piling due to changes in direction and acceleration of flowing water. As storm waters recede, these scour depressions would retain water and may strand UTS, if the species is present. Stranded UTS would be at risk of take through mortality if pools did not become reconnected to permanent water sources and completely dried. Scour creates significant concern the bridge structure integrity and so is also a considerable engineering design concern. Engineering design is current around 15% and scour will be addressed further and the design phase progresses. Conservation measure CM-UTS-08, is incorporated into the project specifically address concerns for UTS to eliminate the potential for scour around bridge pilings and stranding of the species.

Disposal of Groundwater

During construction, groundwater may become present in the project site where it seeps up into excavations and casing water may be present for certain construction activities. Excavations where groundwater or casing water may be present would only be outside of the 25-year floodplain. For construction to continue, excess water will need to be pumped out of excavations and disposed of. No other construction dewatering associated with installation of the Santa Clara River crossing bridges will occur within the work areas. Procedures for addressing and pumping excess water and groundwater and for designation of disposal site are addressed in conservation measures, CM-UTS-04 and CM-UTS-07. These conservation measures will collectively ensure that no wastewater is discharged to the Santa Clara River and no impacts to UTS from water disposal activities occurs.

Maintenance Activities

Contamination of occupied habitat from pesticide and herbicide use has the potential to reduce breeding and survival. Maintenance activities that involve the use of pesticides, herbicides, or soil binders may leak into the river and reduce water quality or otherwise alter the vegetation compositions of aquatic habitats adjacent to the project footprint. Erosion and runoff from the California HSR System could degrade habitat and pollute or add sedimentation to aquatic features occupied by unarmored threespine stickleback. O&M equipment or the clothing and boots of personnel could transport seeds of non-native invasive plant species into the project area. The introduction or spread of such species may cause changes in the aquatic vegetation community, leading to the degradation of unarmored threespine stickleback habitat. Conservation measures are incorporated into the project to ensure that maintenance workers are properly trained to avoid contamination and unauthorized contact with aquatic habitat (CM-UTS-01), that environmentally sensitive areas are designated for avoidance (CM-UTS-02), that seasonal work restrictions on maintenance activities will avoid the channel when water is present (CM-UTS-03, CM-UTS-06, and CM-UTS-08), and that spill and containment measures are established to avoid any accidental contamination of the Santa Clara River.

Tunnel Construction

Tunnels will be designed and constructed to avoid or minimize groundwater inflows during construction that may affect surface water resources. The areas of potential concern for such effects do not include occupied UTS habitat (no unarmored threespine stickleback modeled habitat occurs in the High or Moderate Risk Areas for groundwater impacts associated with tunnel construction [Authority 2022]). Therefore, tunnel construction will not adversely affect the species.

Conclusion

To avoid potential adverse impacts to the species, the project has been designed to avoid siting construction activities and permanent structures (e.g., bridge piers) in the low-flow channel and unarmored threespine stickleback aquatic habitat (Authority 2019). Implementation of the project's conservation measures specific to unarmored threespine stickleback (CM-UTS-01 through CM-UTS-09), in conjunction with the project design elements described above, will ensure that effects to UTS and its habitat are insignificant. Therefore, the proposed action may affect but is not likely to adversely affect unarmored threespine stickleback.

Conservation Measures Specific to Unarmored Threespine Stickleback

CM-UTS-01: Implement Worker Environmental Awareness Program for Unarmored Threespine Stickleback

Prior to initiation of construction activities, implement CM-GEN-10 Prepare Worker Environmental Awareness Program (WEAP) Training Materials and Conduct Construction Period WEAP Training; prior to Operation and Maintenance activities, implement CM-GEN-11 Conduct Operation and Maintenance Period WEAP.

The WEAP will include site-specific information developed for the restriction of access to the wetted channel of the Santa Clara River, including restrictions on the introduction and handling of concrete or other contaminants, and debris and vegetation disposal.

Training will include the repercussions to unarmored threespine stickleback resulting from contaminants and debris, and access to wetted channel.

CM-UTS-02: Establish Construction Zones and Environmentally Sensitive Areas

During temporary and permanent bridge construction, the Authority will implement CM-GEN-14 Delineate Equipment Staging Areas and Traffic Routes and CM-GEN-18 Establish Environmentally Sensitive Areas and Non-Disturbance Zones to ensure no work takes place where unarmored threespine stickleback may be affected. Additional measures include:

Prior to the commencement of construction activities, a Designated Biologist will survey the proposed work locations to confirm that the construction zone is outside the wetted channel of the river, that the proposed permanent pile installation locations are located outside of the 25-year flood zone and away from the wetted channel.

A Biological Monitor will be present during all construction and maintenance activities upstream or downstream of the bridge crossing to prevent activities, personnel, and debris from making contact with or disturbing the wetted channel of the Santa Clara River.

Prior to ground-disturbing activities, and to the extent feasible, a K-rail construction barrier and Endangered Species Act (ESA) fencing (CM-GEN-18) will be installed between the bridge construction work zone and the ESA area of the wetted channel of the Santa Clara River to prevent access to the wetted channel. The ESA will be installed a minimum of 10 feet away from the wetted channel and the K-rail will be installed approximately 10 feet from the ESA to the extent practicable.

No construction activities or personnel will occur within 10 feet of the wetted channel. Permanent structures associated with bridge construction will remain outside of the 25-year flood zone and all other construction activities associated with bridge construction, such as the installation of K-rail barriers and ESA fencing, will remain a minimum of 10 feet away from the wetted channel.

CM-UTS-03: Santa Clara River Construction and Maintenance Activity Weather Related and Seasonal Work Restrictions

Prior to and during any storm event, a Biological Monitor will inspect work sites to ensure sites are secure so that flooding does not cause damage to tarps or plug diversion drains or allow construction materials, such as uncured concrete, and debris to flow into the river.

Seasonal Work Restrictions. All permanent bridge pier and structure construction in the Santa Clara riverbed will be completed during the dry season, defined as June 1 through November 1, and all work will completely avoid the wetted channel during construction and maintenance.

All measures implemented during bridge construction will be implemented to avoid accidental contact, spills, or falling debris into the wetted channel. During operation and maintenance (O&M), if the wetted portion of the Santa Clara River shifts in location (for example, in response to a flood event that alters the wetted channel alignment), all maintenance and repair activities will continue to occur where those activities are outside of the wetted channel:

CM-UTS-04: Prepare and Implement Spill Prevention and Containment Measures

All fuels and components with hazardous materials or wastes will be handled in accordance with applicable regulations, the Stormwater Pollution Prevention Plan (SWPPP) prepared for CM-GEN-07, and the Construction Management Plan prepared for CM-GEN-08. These materials will be kept in segregated, secured, and/or secondary containment facilities, as necessary.

During concrete pours of the permanent bridge piles and bridge decks or other structures, spill containment will be installed and maintained to prevent uncured concrete releases to the wetted channel of the Santa Clara River. Spill containment may include installation of K-rail barriers at the perimeter of work areas, between work areas and the wetted channel and/or underslung tarps to intercept all potential uncured concrete flows to the Santa Clara River.

During bridge construction, no continuous dewatering or drawdown within the shafts will occur. Casing water, if any, will be extracted and disposed at a legal disposal site in an upland location. No other construction dewatering associated with installation of the Santa Clara River crossing bridges will occur within the work areas.

To ensure that water quality is not being affected by bridge and bank stabilization-related concrete pouring activities, the Authority will monitor the water quality at points upstream, downstream, and immediately adjacent to the construction work zone daily during concrete pouring operations. Key parameters to be monitored are pH and turbidity.

CM-UTS-05: Implement Construction or Maintenance Activity Debris Prevention Measures

Prior to initiation of construction or O&M activities, an underslung tarp, debris platform or equivalent barrier extending at least 10 feet away from the wetted channel will be deployed beneath the bridge deck to prevent the inadvertent discharge of equipment, chemicals, or debris into the Santa Clara River.

The Authority will inspect and maintain tarps, debris platform or equivalent barrier to ensure catchments are functioning appropriately.

CM-UTS-06: Implement Construction Measures for Unarmored Threespine Stickleback Avoidance

During the installation of piles and piers for the bridge, vibratory, oscillating, or other approved pile driving methods will be used in the Santa Clara riverbed, outside of the wetted channel 25-year flood zone, in order to avoid effects to unarmored threespine stickleback. Piles and footings associated with temporary structures required to construct the bridge will be installed and removed only by vibratory methods. Temporary piles and footings will be installed and removed at least 10 feet away from the wetted channel at the time of installation or removal.

Construction activities in areas susceptible to winter flood flows will be conducted from June 1 through September 30, when winter flood flows do not occur in the Santa Clara River. Other construction activities in areas not at risk of flood flows may be constructed year-round.

Vegetation management will be limited to trimming existing riparian vegetation outside the wetted channel. No vegetation management or personnel will occur within 10 feet of the wetted channel. Woody debris generated by vegetation management activities will be prevented from contacting the wetted channel, either by hand or by deploying physical restraints or tarps. A Designated Biologist will review, delineate, and monitor the vegetation management plan locations.

CM-UTS-07: Prepare a Construction Groundwater Dewatering Plan

The Authority will prepare a Construction Groundwater Dewatering Plan for areas close to stream flow to ensure that any dewatering is conducted in a manner that does not affect river flow. Dewatering will be implemented in a manner that (1) does not create temporary wetted channel habitat suitable for unarmored threespine stickleback; (2) does not diminish existing river flow, and therefore does not result in stranding of unarmored threespine stickleback or other fish; and (3) does not introduce pollutants to surface waters.

The plan will include, but not be limited to:

- No direct removal of surface water from or to the Santa Clara River or activities that may result in stranding of unarmored threespine stickleback.
- Groundwater discharges will be directed to appropriate legal disposal sites in an upland area that cannot flow into the Santa Clara River or otherwise change the river's flow and water quality.
- The Authority will monitor daily surface water elevations upstream, adjacent to, and downstream of the extraction points, to assess any critical flow regimes susceptible to excessive draw down before, during, and after groundwater dewatering activities.

- The Biological Monitor will have the authority to halt dewatering activities if water levels decrease in the wetted portion of the Santa Clara River where unarmored threespine stickleback are present.

CM-UTS-08: Implement Scour Avoidance Features Around Bridge Piers

Scour and cavity (i.e., depression) formation around the base of bridge piers will be avoided through implementation of design features that prevent erosion by dissipating the energy of the water flowing around the base of piers. The following structural designs will be considered and implemented according to the best design considerations, constructability, and environmental protections at the time of construction of the project:

- **Vegetated riprap:** Biotechnical methods can be used alongside rock or other inert materials to resist hydraulic forces, stabilize the stream system and prevent scour. Such methods can include the use of brush layering and poles, grass and ground cover, willow bundles, or other vegetated features that can resist hydraulic forces, increase geotechnical stability, and prevent soil loss behind the structures. Vegetation can thrive where riprap is constructed to encourage ongoing vegetative growth, and can also function to enhance riparian habitat while also protecting stream banks and bridge piers.
- **Collars:** Collars are metal or concrete structures that are placed around the base of the bridge pier to prevent the erosion of the soil around it. The collars can be designed to create turbulence in the flowing water, which helps to prevent scour.
- **Varying the bridge pier shape:** Design the piers with a cross section hydraulically favorable to the water flow to reduce the generation of the turbulent regime and consequently of the vortices that originate the scour.
- **Orientation of the bridge piers** in a manner that follows the water flow lines, to minimize the bridge's obstruction to flow. This method typically involves minimizing the angle between approach flow and major horizontal axes of pier faces.

Scour prevention features will be designed in such a way that no gaps, cracks, crevices, or spaces exist in the feature that might experience micro-scour or otherwise retain water that could strand unarmored three-spine stickleback as flows recede. Scour prevention features will be solid in structure and will be developed within the existing design footprint of the bridge structures. No additional permanent impact footprint would be required for the scour prevention features.

CM-UTS-09: Implement Avoidance Measures During Operations and Maintenance for the Santa Clara River

All maintenance of project facilities on the Santa Clara River will adhere to timing and work area restrictions, specifically:

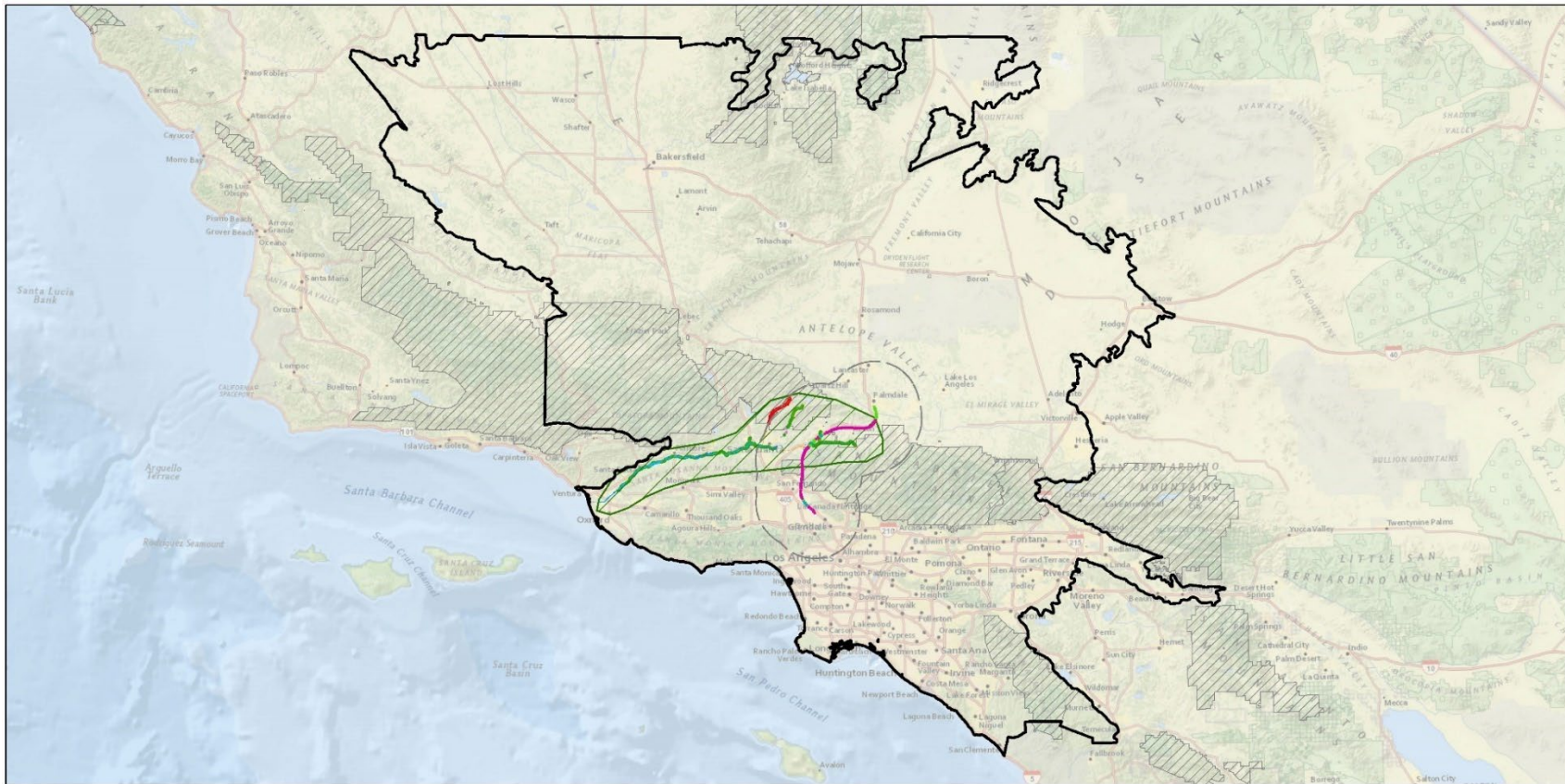
- Maintenance activities will not take place in the wetted channel of the Santa Clara River.
- Maintenance activities and personnel will remain at least 10 feet from the wetted channel.
- Repair or replacement of bridge structures requiring access to the 25-year flood zone of the riverbed will be restricted to the period from June 1 to September 30, except in the case of an emergency.

Any dewatering necessary during O&M activities will not create a risk of fish stranding, either through draw down (zone of influence) or by flow discharge creating temporary habitat suitable for federally listed fish, nor will it involve direct removal of surface water from, or discharge to, the wetted channel of the Santa Clara River.

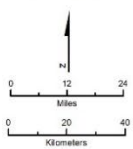
Maintenance activities will implement additional conservation measures, CM-UTS-01 through CM-UTS-07, as applicable to the activity.

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<https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data> (Accessed February 18, 2022).
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SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDDB (01/2019), USFWS Critical Habitat (12/2018).

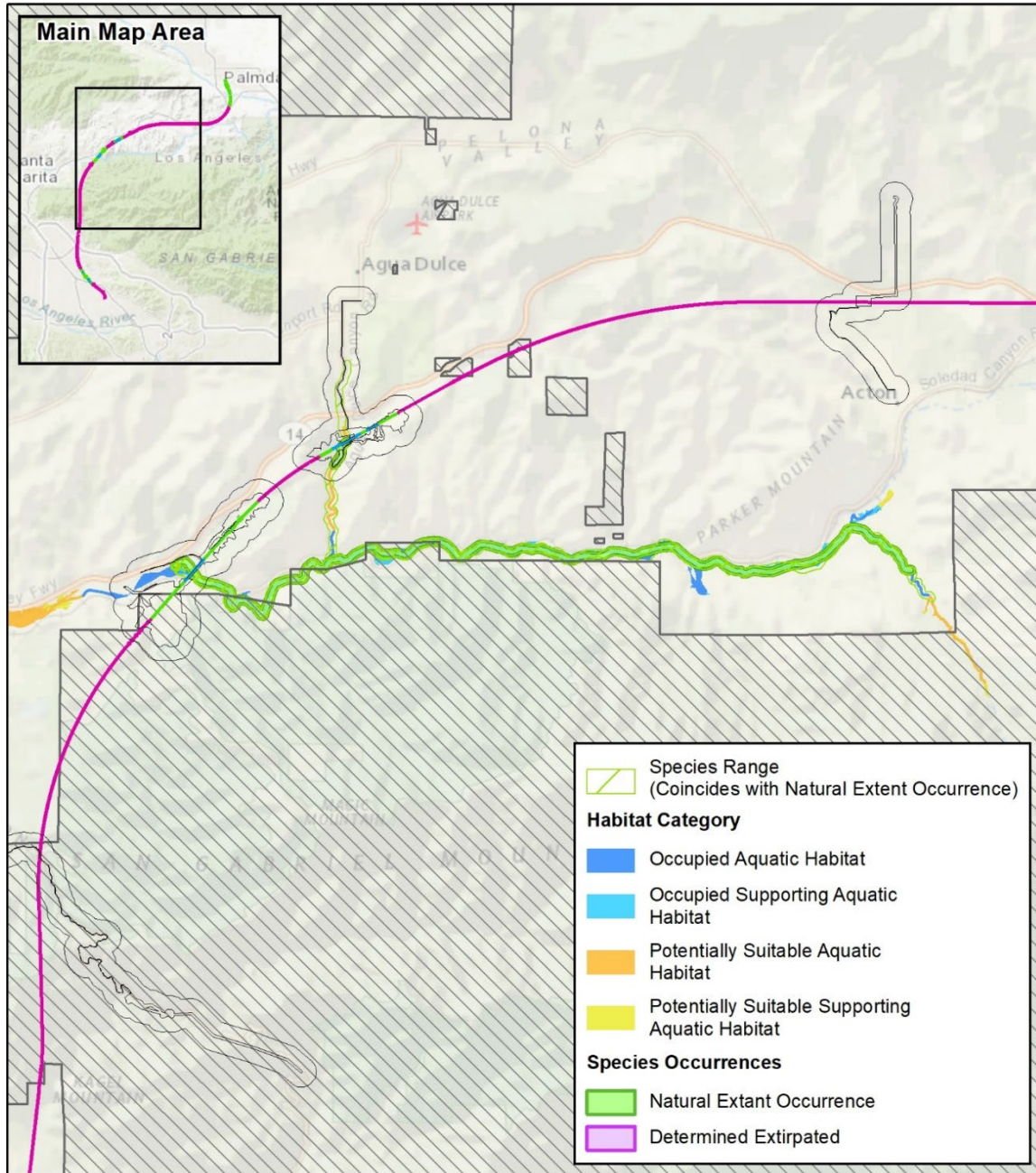


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|----------------------|---|---------------------------|----------------------|
| Project Area | Habitat Category | Natural Extant Occurrence | Species Range |
| 10-Mile Buffer | Occupied Aquatic Habitat | Extirpated | Forest Service Lands |
| HSR Alignment | Occupied Supporting Aquatic | Determined Extirpated | |
| Elevated | Potentially Suitable Aquatic Habitat | Possibly Extirpated | |
| Surface | Potentially Suitable Supporting Aquatic Habitat | | |
| Underground | | | |

Please Note: The CNDDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.

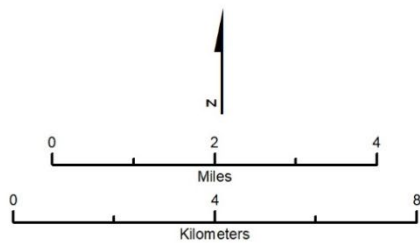
Unarmored Threespine Stickleback

Figure 3.7-25 Unarmored Threespine Stickleback Occurrences and Habitat in the Regional Study Area



SOURCE: Esri National Geographic Basemap, 2021; CHSR, 4/2021.

January 26, 2022



- 10-Mile Buffer
- Forest Service Lands
- Wildlife Action Area
- HSR Alignment - Elevated
- HSR Alignment - Surface
- HSR Alignment - Underground

Unarmored Threespine Stickleback

Figure 3.7-26 Unarmored Threespine Stickleback Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Southern California Steelhead

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect the Southern California distinct population segment (DPS) of steelhead (*Oncorhynchus mykiss*), a federally endangered species.

Rationale

The Authority reviewed species information for Southern California steelhead including the National Marine Fisheries Service (NMFS) recovery plan, the CNDDDB, and other relevant data sources (see list of references). Data analyzed included known occurrence records (Figure 3.7-27 and Figure 3.7-28), and habitat and range information relative to the proposed action. Southern California steelhead is an anadromous salmonid fish that historically occurred in streams and rivers draining the Coast Ranges between Point Sal in the north and the U.S.-Mexico border in the south (NMFS 2012). The current range of steelhead is constrained by dams, diversions, and other man-made obstacles that restrict adult migration upstream from the ocean as well as ever-changing regional climatic conditions such as prolonged periods of reduced precipitation. Non-migratory rainbow trout (also *Oncorhynchus mykiss*) is present in some of the watersheds not accessible to adult steelhead. These populations may produce smolts that migrate to the ocean, which at that point are considered part of the Southern California DPS of steelhead.

The action area crosses the Santa Clara River in its upper reaches at Soledad Canyon where steelhead may have historically occurred prior to anthropogenic influences. This eastern portion of the Santa Clara basin is located within the boundary of the DPS (National Oceanic and Atmospheric Administration [NOAA] 2021) and the Recovery Planning Area identified for the species by NMFS (NMFS 2012). However, it is likely that steelhead was historically limited to the western part of the Santa Clara basin (NOAA 2006) due to a naturally occurring dry gap in the Santa Clara River above the confluence with Piru Creek, approximately 26 miles downstream from the action area. This gap is large, stable, and only covered by surface flows during exceptional storm events (Richmond et al. 2017), effectively blocking the migration of adults and smolts during normal rain years. Although rainbow trout have been observed and/or stocked in Soledad Canyon, CDFW is not aware of historical steelhead runs in the area (Titus et al. 2021). According to the CNDDDB, there are presumed extant occurrences of steelhead in the lower Santa Clara River and its tributaries, Santa Paula Creek and Sespe Creek (CDFW 2021). The occurrence closest to the action area is approximately 36 miles downstream at the confluence of Sespe Creek and the Santa Clara River. No extirpated or possibly extirpated occurrences are documented by CNDDDB in the Santa Clara River upstream of Sespe Creek. Critical habitat for the species is designated in the Santa Clara River up to the confluence with Piru Creek (USFWS 2005). In the Final Rule on federally designated critical habitat for the Southern California DPS of steelhead, it is stated that the portion of the Santa Clara River upstream of Piru Creek was not included in the designation because it was not occupied by steelhead.

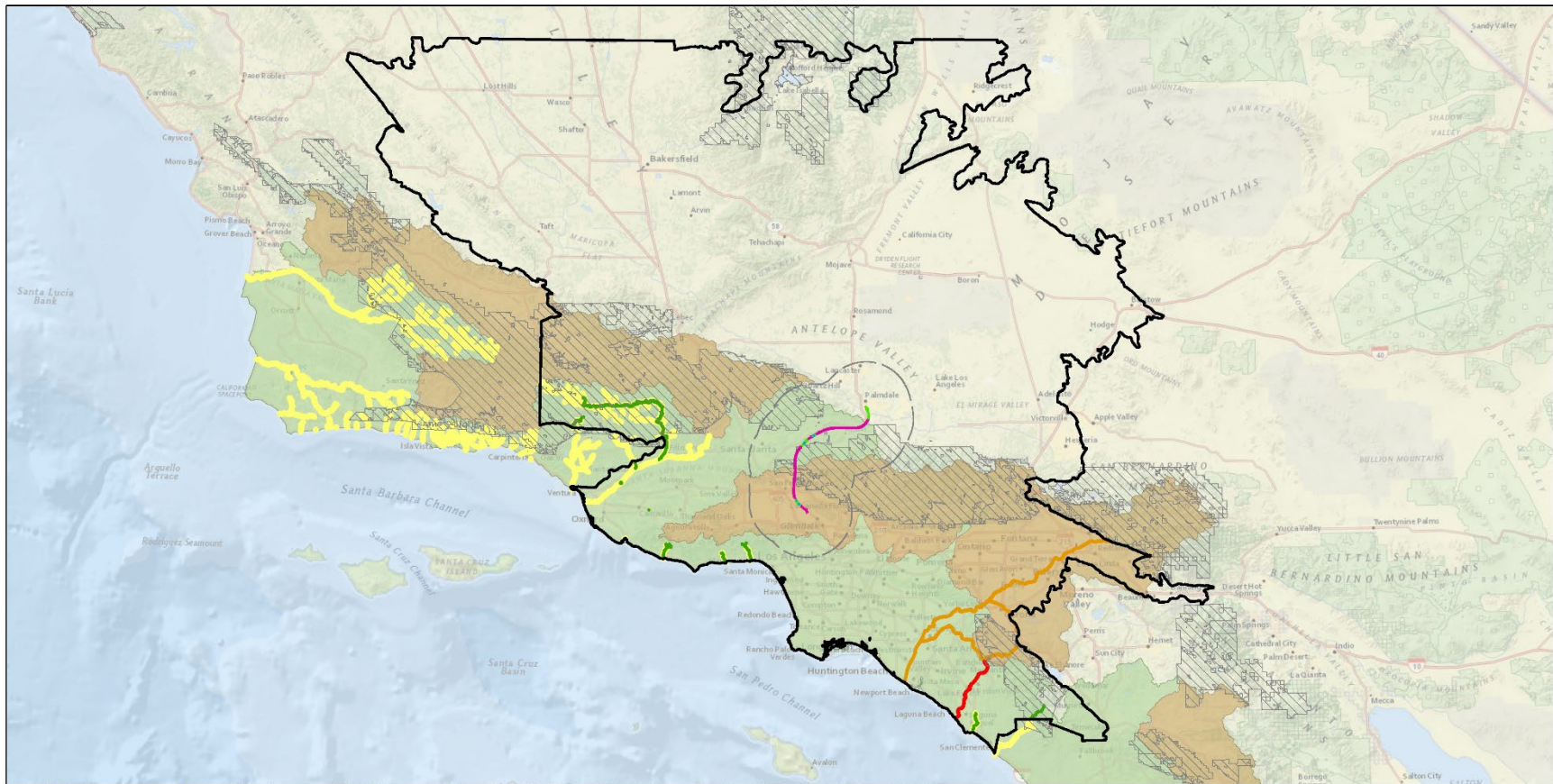
Conclusion

Due to the distance of the action area from known extant occurrences of steelhead, presence of naturally occurring barriers to fish passage several miles downstream and outside of the action area, historically occupied habitat occurring several miles downstream and outside of the action area, and designated critical habitat also located several miles downstream and outside of the action area, the species is not likely to be present in the action area. However, because rainbow trout are known to exist in the vicinity of the action area, and because smolts produced by these trout may migrate to the ocean under rare storm conditions, the possible presence of individuals belonging to the Southern California DPS of steelhead cannot be ruled out. Potential impacts to steelhead would be avoided and minimized through implementation of the project's conservation measures designed for unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*). These include requirements that all work will occur outside the wetted channel of the river, proposed permanent pile installation locations will be located outside of the 25-year flood zone, and permanent structure construction will be completed during the dry season (June 1 through November 1). Therefore, the proposed action may affect but is not likely to adversely affect the Southern California DPS of steelhead. Furthermore, the proposed action will not adversely modify

or destroy federally designated critical habitat for the Southern California DPS of steelhead. The Authority will reinstate Section 7 consultation if circumstances meeting the reinstatement criteria occur.

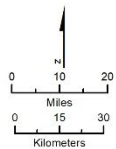
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SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), CNDDDB (08/2020), DPS Segments from NOAA (01/2012), Critical Habitat from NOAA (9/2021).

Please Note: The CNDDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.



- | | | |
|--|---------------|----------------------------|
| Regional Study Area | HSR Alignment | Critical Habitat |
| 10-Mile Buffer | Elevated | Species Occurrences |
| Forest Service Lands | Surface | Extirpated |
| DPS Boundary | Underground | Possibly Extirpated |
| Historical Watershed: Anthropogenically Restricted | | Natural Extant Occurrence |

Steelhead

Figure 3.7-27 Southern California Steelhead Occurrences and Habitat in the Regional Study Area

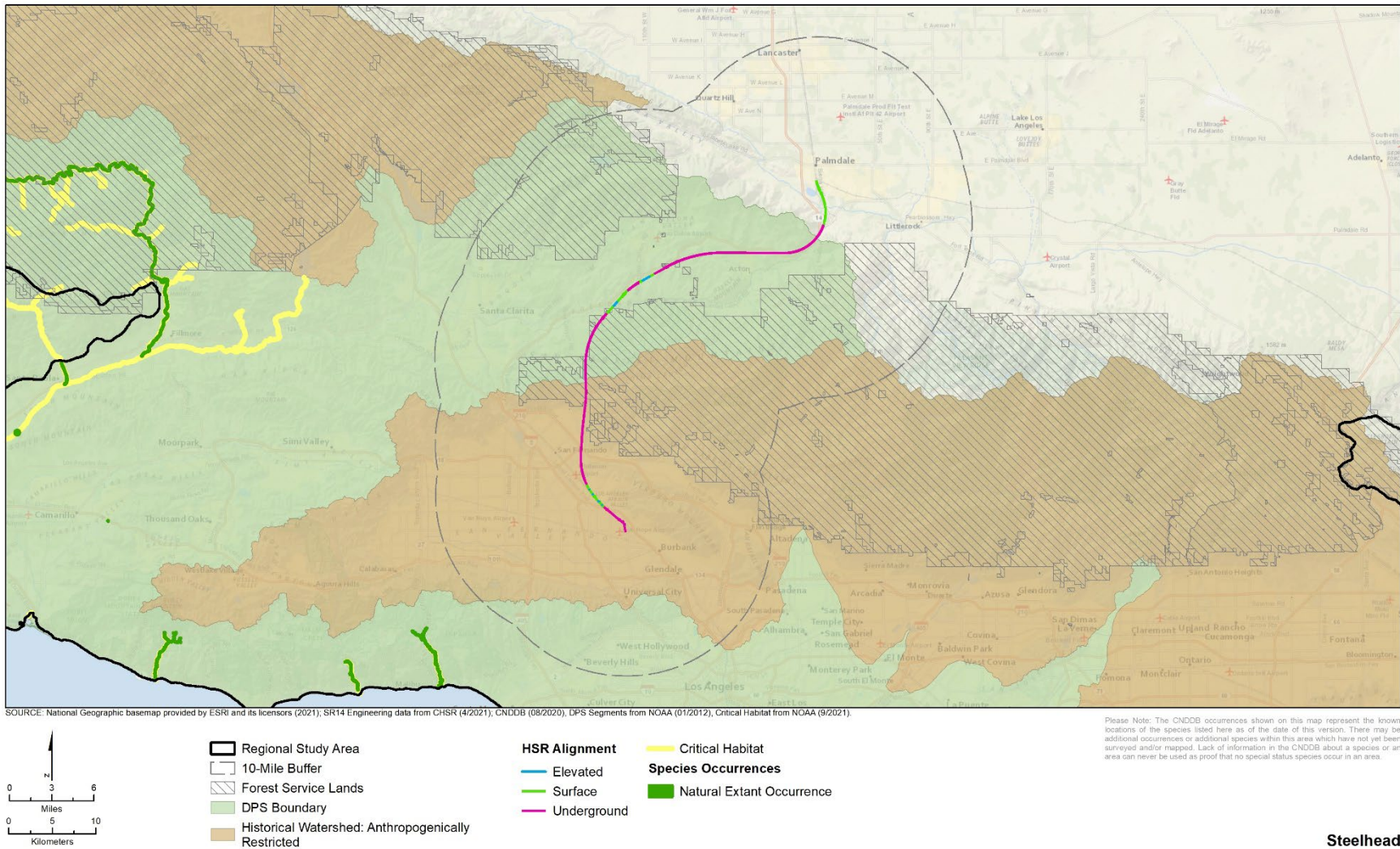


Figure 3.7-28 Southern California Steelhead Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

California Red-legged Frog

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect California red-legged frog (*Rana [aurora] draytonii*), a federally threatened species and a CDFW Species of Special Concern.

Rationale

The Authority reviewed species information for California red-legged frog including from the USFWS draft recovery plan, the CNDDDB, and other relevant data sources (see list of references). Data analyzed included known occurrence records (Figure 3.7-29 and Figure 3.7-30), and habitat and range information relative to the proposed action. Species specific protocol-level surveys were conducted in 2017. Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

California red-legged frog historically occurred in the foothills of the Sierra Nevada and throughout the Coastal and Transverse mountain ranges. The species is currently found in the Central Coast Range with occasional localized populations remaining in the Sierra Nevada foothills. California red-legged frogs are considered extirpated from the Central Valley, the Southern Sierras, and the San Gabriel Mountains (USFWS 2002). According to the CNDDDB, there are three presumed extant occurrences of California red-legged frog within 10 miles of the action area (CDFW 2020). Two of these occurrences are located 2.8 miles and 3.2 miles east of the action area in Aliso Canyon in the ANF from 2015 and 2011, respectively. One record from 1995 is located 7.0 miles west of the action area, in the Leona Valley 9 miles west of Palmdale.

Suitable habitat near or within the action area occurs primarily around Lake Palmdale and Una Lake, and between Escondido Canyon and Pacoima Wash. However, the species (adults, metamorphs, tadpoles, or egg masses) was not detected during protocol-level surveys conducted for the proposed action in 2017 (see Appendix F of this Biological Assessment).

The nearest designated critical habitat is located in the ANF in San Francisquito Canyon north of Santa Clarita, approximately 9.7 miles west of the action area (USFWS 2001; USFWS 2020).

Conclusion

Due to the limited suitable habitat in the action area, distance to known populations, presence of predatory trout and negative results of the 2017 protocol-level surveys, the species is not likely to be present in the action area. Additionally, the USFWS stated during informal consultation conducted in 2019 that due to rarity of the species in southern California, California red-legged frogs are not expected to occur in the action area (USFWS 2019). However, due the presence of suitable habitat, the proposed action may affect but is not likely to adversely affect California red-legged frog.

To ensure that this species is not present at the time of construction, suitable habitat within the project footprint will be surveyed prior to ground- or vegetation-disturbing activities. The survey(s) will be conducted by a Designated Biologist familiar with the distinguishing characteristics of the species and adhering to guidance in *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USWS 2005). If California red-legged frogs are observed, no project activities that could adversely affect the species will be conducted within 1,000 feet of individuals. The Authority will reinitiate Section 7 consultation if circumstances meeting the reinitiation criteria occur.

Conservation Measures Specific to California Red-legged Frog

The purpose of these conservation measures is to avoid and minimize effects to federally listed amphibian species.

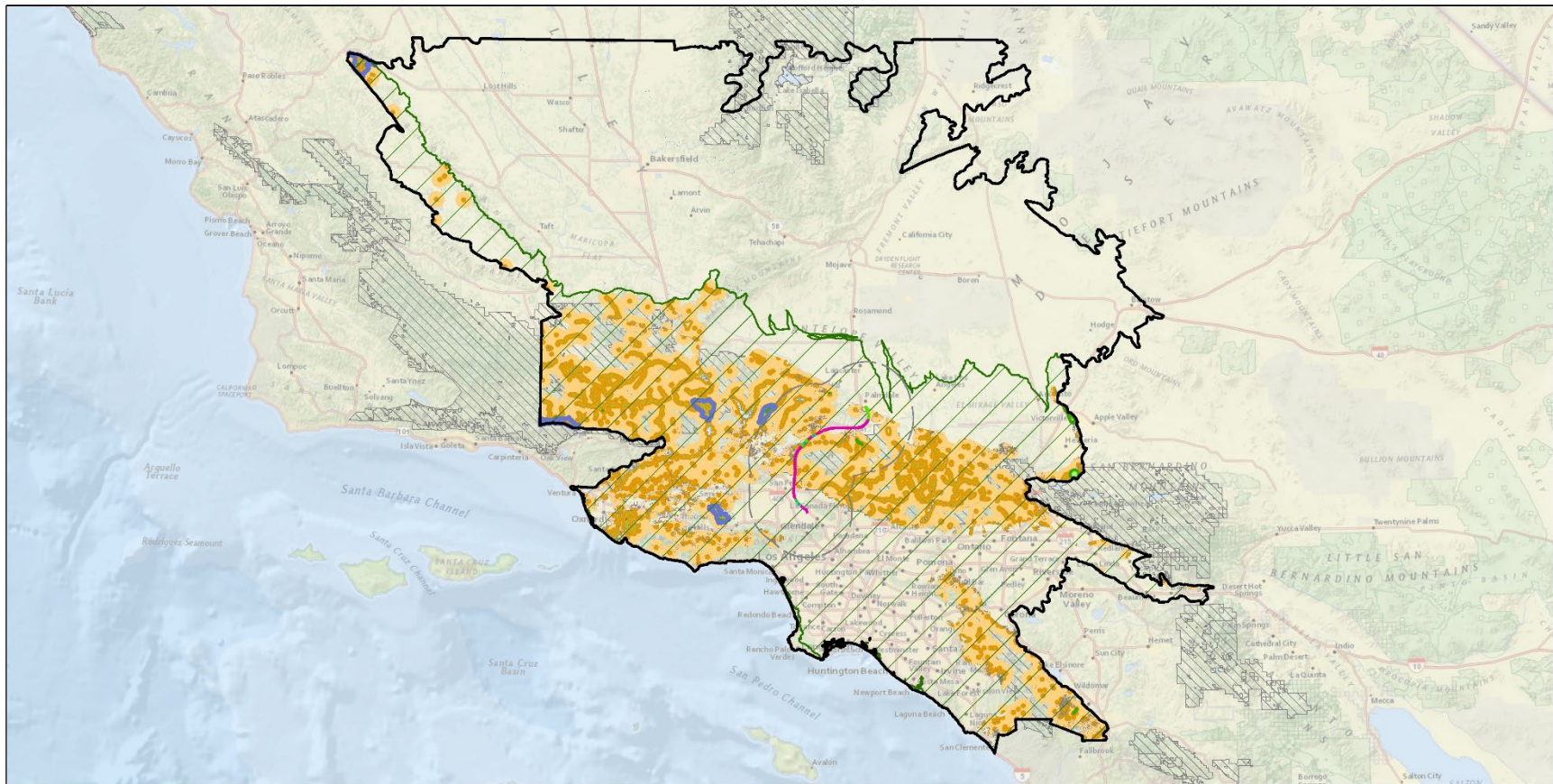
CM-CRLF-01: Conduct Pre-construction Surveys for Special-Status Amphibian Species and Implement Salvage and Relocation of Individuals

Prior to any ground disturbing activities, the Project Biologist will conduct pre-construction surveys in suitable habitat to determine the presence or absence of special-status amphibian

species within the work area. These surveys will be conducted in accordance with any required agency protocols. Surveys will be conducted before the start of grounddisturbing activities in a work area providing ample time to complete a given species' protocol survey methodology. Protocol surveys for the detection of special-status amphibians will be according to CDFW Survey and Monitoring Protocols and Guidelines (<https://wildlife.ca.gov/Conservation/Survey-Protocols#377281282-amphibians>) and the USFWS Survey Protocols and Guidelines (<https://www.fws.gov/library/collections/surveyprotocols-and-guidelines-recovery-permits-pacific-southwest-region>). The results of the protocol survey will be used to guide the placement of Environmentally Sensitive Areas (ESA) for avoidance of impacts to the species. If California red-legged frogs are present, the Authority will reinitiate Section 7 consultation with the USFWS regarding minimization of impacts and potential salvage and relocation of individuals. The qualified Project Biologist will prepare a Relocation and Avoidance Plan that includes species-specific avoidance buffers and suitable relocation areas at least 200 feet outside of the Project site. The Authority will submit a copy of a Relocation and Avoidance Plan to USFWS for approval prior to any clearing, grading, or excavation work on the Project site.

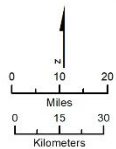
References

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SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDDB (08/2020), USFWS Critical Habitat (09/2020).

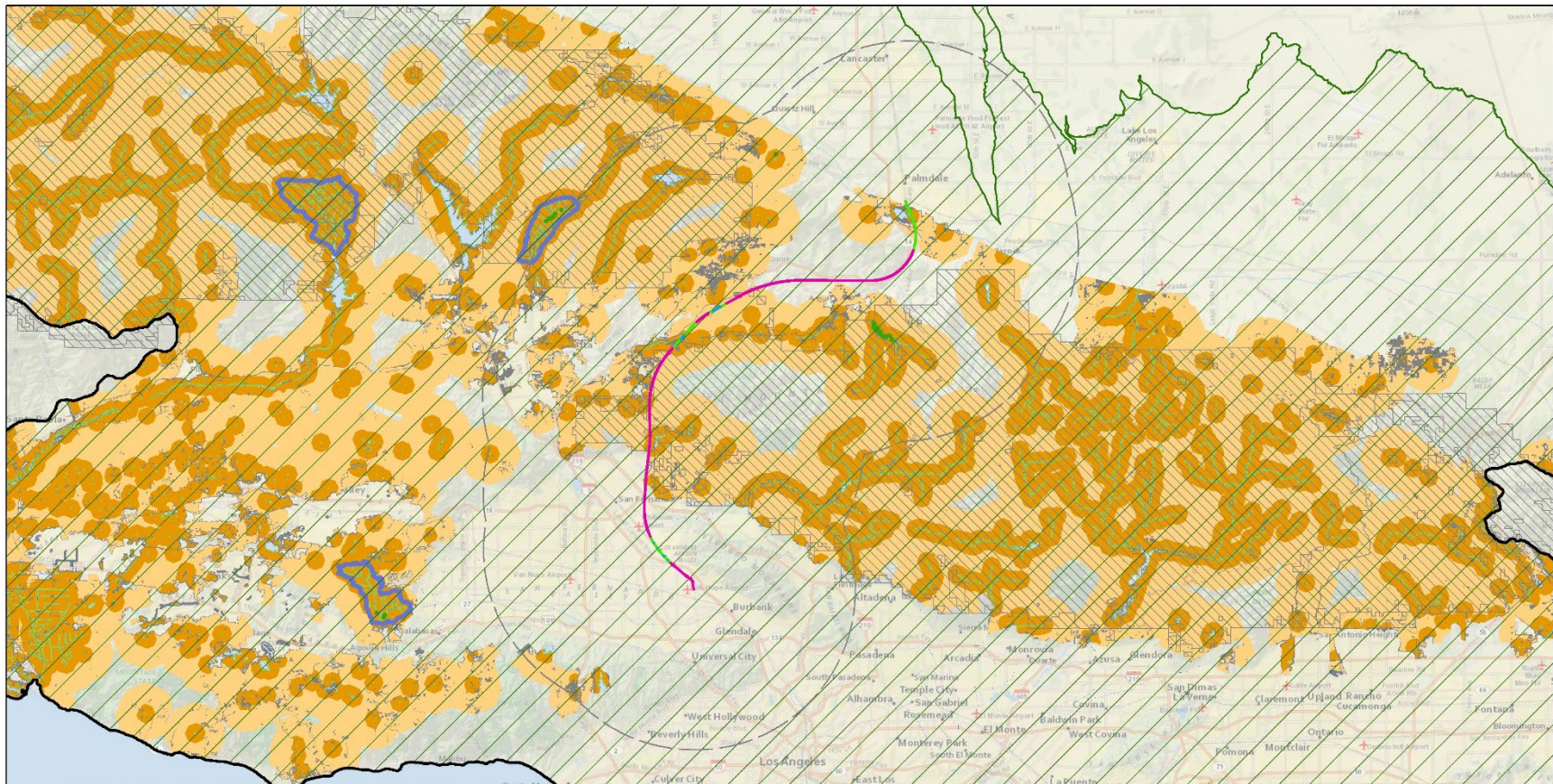
Please Note: The CNDDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.



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|----------------------|---------------|-----------------------------|--|
| Regional Study | HSR Alignment | Habitat Category | Dispersal/Seasonal Movement Habitat |
| 10-Mile Buffer | Elevated | Breeding Season Aquatic | Other Potential Movement Habitat |
| Forest Service Lands | Surface | Refugia/Foraging Habitat | Permeable Movement Area (Dev, Ag, Disturbed) |
| Species Range | Underground | Non-Breeding Season Aquatic | Occurrence |
| Critical Habitat | | | Natural Extant Occurrence |

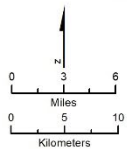
California Red-legged Frog

Figure 3.7-29 California Red-legged Frog Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); Modeled Habitat Data from CHSR (2017); CNDDDB (08/2020); USFWS Critical Habitat (09/2020).

Please Note: The CNDDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within the area which have not yet been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.



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| Regional Study | HSR Alignment | Habitat Category | Dispersal/Seasonal Movement Habitat |
| 10-Mile Buffer | Elevated | Breeding Season Aquatic | Other Potential Movement Habitat |
| Forest Service Lands | Surface | Refugia/Foraging Habitat | Permeable Movement Area (Dev, Ag, Disturbed) |
| Species Range | Underground | Non-Breeding Season Aquatic | Occurrence |
| Critical Habitat | | | Natural Extant Occurrence |

California Red-legged Frog

Figure 3.7-30 California Red-legged Frog Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Mountain Yellow-legged Frog

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect the southern California distinct population segment (DPS) of mountain yellow-legged frog (*Rana muscosa*), a federally endangered species and a USFS sensitive species.

Rationale

The Authority reviewed species information for mountain yellow-legged frog including from the USFWS five-year species review, the CNDDDB, results from surveys conducted for the proposed action, and other relevant data sources (see list of references). Data analyzed included known occurrence records (Figure 3.7-31 and Figure 3.7-32), and habitat and range information relative to the proposed action. Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

Mountain yellow-legged frog occurs in the southern Sierra Nevada and Transverse ranges, including San Gabriel, San Bernardino, and San Jacinto mountains, in Los Angeles, Riverside, and San Bernardino counties at elevations between 1,200 and 7,500 feet (USFWS 2012). There are no CNDDDB occurrences more recent than 1970 within 10 miles of the action area (CDFW 2020). The CNDDDB documents three extirpated and five possibly extirpated occurrences of mountain yellow-legged frog within 10 miles of the action area, all located in the ANF. One extirpated occurrence from 1918 (CNDDDB Occurrence Number 39) overlaps the action area at Pacoima Canyon but habitat was lost or significantly altered following the creation of the Pacoima Reservoir. The closest possibly extirpated (due to presence of predatory trout) occurrence is 6.1 miles east of the action area in the ANF from 1969. This species was not detected during the 2017 protocol-level surveys for California red-legged frogs conducted in drainages in the action area. The nearest critical habitat is in ANF approximately 14.3 miles east of the action area (USFWS 2020).

Conclusion

Due to the lack of extant records within 10 miles of the project and limited amount of suitable habitat in the action area (Figure 3.7-31), this species likely is not present in the action area. Additionally, the USFWS stated during informal consultation conducted in 2019 that due to rarity of the species in southern California and the presence of predatory trout in many streams, mountain yellow-legged frogs are not expected to occur in the action area (USFWS 2019). Due to the presence of suitable habitat, presence cannot be discounted entirely. Therefore, the proposed action may affect but is not likely to adversely affect mountain yellow-legged frogs.

To ensure that this species is not present at the time of construction, suitable habitat within the project footprint will be surveyed prior to ground- or vegetation-disturbing activities. The survey(s) will be conducted by a Designated Biologist familiar with the distinguishing characteristics of the species and adhering to the current accepted survey protocol guidance for mountain yellow-legged frog. If mountain yellow-legged frogs are observed, no project activities that could adversely affect the species will be conducted within 1,000 feet of individuals. The Authority will reinstate Section 7 consultation if circumstances meeting the reinstatement criteria occur.

Conservation Measures Specific to Mountain Yellow-legged Frog

The purpose of these conservation measures is to avoid and minimize effects to federally listed amphibian species.

CM-MYLF-01: Conduct Pre-construction Surveys for Special-Status Amphibian Species and Implement Salvage and Relocation of Individuals

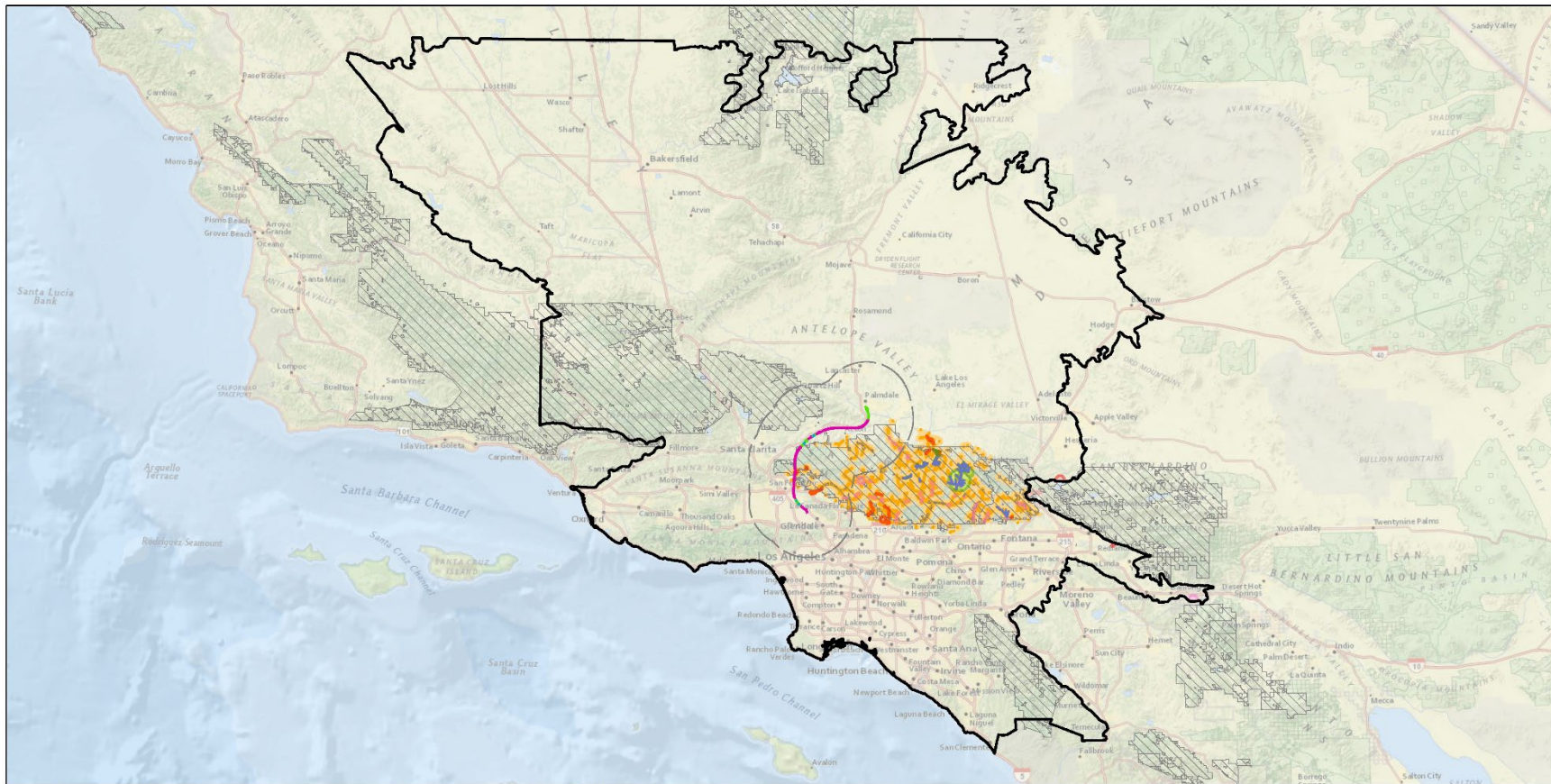
Prior to any ground disturbing activities, the Project Biologist will conduct pre-construction surveys in suitable habitat to determine the presence or absence of special-status amphibian species within the work area. These surveys will be conducted in accordance with any required agency protocols. Surveys will be conducted before the start of ground-disturbing activities in a work area providing ample time to complete a given species' protocol survey methodology. Protocol surveys

for the detection of special-status amphibians will be according to CDFW Survey and Monitoring Protocols and Guidelines (<https://wildlife.ca.gov/Conservation/Survey-Protocols#377281282-amphibians>) and the USFWS Survey Protocols and Guidelines (<https://www.fws.gov/library/collections/survey-protocols-and-guidelines-recovery-permits-pacific-southwest-region>).

The results of the protocol survey will be used to guide the placement of Environmentally Sensitive Areas (ESA) for avoidance of impacts to the species. If Mountain yellow-legged frogs are present, the Authority will reinitiate Section 7 consultation with the USFWS regarding minimization of impacts and potential salvage and relocation of individuals. The qualified Project Biologist will prepare a Relocation and Avoidance Plan that includes species-specific avoidance buffers and suitable relocation areas at least 200 feet outside of the Project site. The Authority will submit a copy of a Relocation and Avoidance Plan to USFWS for approval prior to any clearing, grading, or excavation work on the Project site.

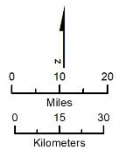
References

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- . 2020. Environmental Conservation Online System (ECOS). Washington, DC. <http://ecos.fws.gov/ecp/report/table/critical-habitat.html> (Accessed 2020).



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDB (08/2020), USFWS Critical Habitat (09/2020).

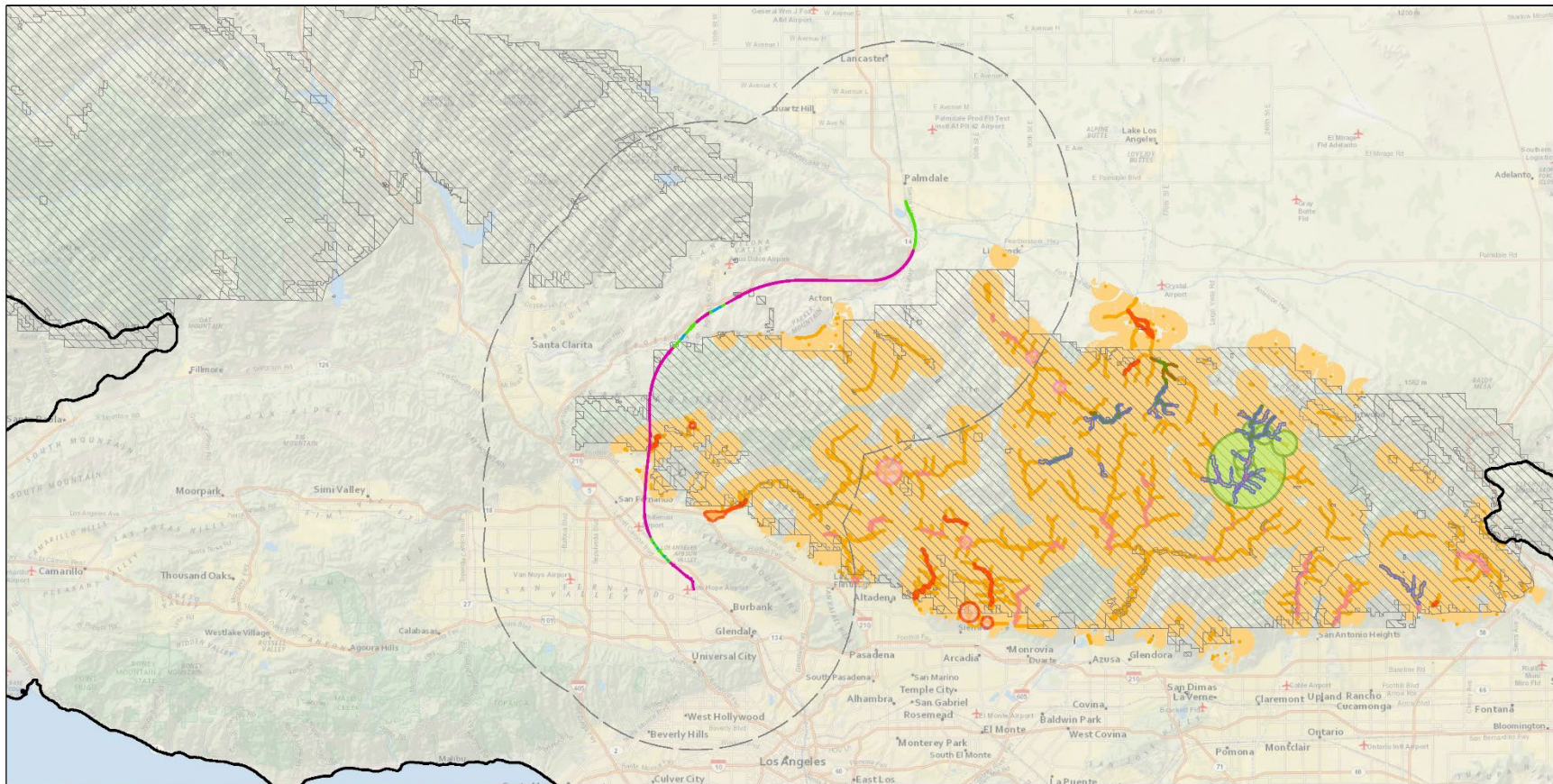
Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.



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|----------------------|---------------|------------------------------------|---------------------------|
| Regional Study | HSR Alignment | Habitat Category | Species Occurrences |
| 10-Mile Buffer | Elevated | Occupied Aquatic | Documented Extirpated |
| Forest Service Lands | Surface | Potentially Suitable Aquatic | Possibly Extirpated |
| Critical Habitat | Underground | Refugia/Foraging/Dispersal Habitat | Natural Extant Occurrence |

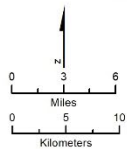
Mountain Yellow-legged Frog

Figure 3.7-31 California Mountain Yellow-legged Frog Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDB (08/2020), USFWS Critical Habitat (09/2020).

Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.



Regional Study	HSR Alignment	Habitat Category	Species Occurrences
10-Mile Buffer	Elevated	Occupied Aquatic	Documented Extirpated
Forest Service Lands	Surface	Potentially Suitable Aquatic	Possibly Extirpated
Critical Habitat	Underground	Refugia/Foraging/Dispersal Habitat	Natural Extant Occurrence

Mountain Yellow-legged Frog

Figure 3.7-32 Mountain Yellow-legged Frog Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Desert Tortoise

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect the desert tortoise (*Gopherus agassizii*), a federally- and State-threatened species.

Rationale

The Authority reviewed species information for desert tortoise including from USFWS federal listing documents, the CNDDDB, and other relevant data sources. Data analyzed included known occurrence records, and habitat and range information relative to the proposed action (Figure 3.7-33 and Figure 3.7-34). Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

In California, the historic range of desert tortoise extended from the Searles Valley in the Mojave Desert to the Mexican border and from the western edge of the Antelope Valley to the Colorado River (Nussear et al. 2009). The species is now extirpated from much of the northern portion of that range, including Antelope Valley, Searles Valley, and Indian Wells (USFWS 2010). However, numerous CNDDDB occurrences support the observation by USFWS that desert tortoise continues to occupy scattered locations in these areas where the habitat has not been altered to agricultural and other development (USFWS 2010). No desert tortoises have been reported within 10 miles of the action area (CDFW 2021) but the northern portion of the action area is within the historic range of the species.

The northern end of the action area lies in the Western Mojave Recovery Unit (USFWS 2011). The nearest designated critical habitat (Fremont-Kramer Unit) is located approximately 19.1 miles northeast of the action area (USFWS 2021).

Conclusion

Because the northern portion of the action area is within the historic range of the species, and because scattered remnants of suitable habitat exists there, desert tortoise may be present in the action area. However, due to the limited amount of suitable habitat and its location in a predominantly urban setting in the city of Palmdale, and because no desert tortoises have been reported within 10 miles of the action area, the species is not likely to be present in the action area. Therefore, the proposed action may affect but is not likely to adversely affect desert tortoise.

To ensure that this species is not present at the time of construction, suitable habitat within the project footprint will be surveyed prior to ground- or vegetation-disturbing activities. The survey(s) will be conducted by a Designated Biologist familiar with the distinguishing characteristics of the species and adhering to guidance in the *Desert Tortoise (Mojave Population) Field Manual* (USFWS 2009). If desert tortoise are observed, no project activities that could adversely affect the species will be conducted within 1,000 feet of individuals. The Authority will reinstate Section 7 consultation if circumstances meeting the reinitiation criteria occur.

Conservation Measures Specific to Desert Tortoise

The purpose of these conservation measures is to avoid and minimize effects to federally listed reptile species.

CM-DT-01: Conduct Pre-construction Surveys for Desert Tortoise

Prior to the start of ground- or vegetation-disturbing activities, a Designated Biologist familiar with desert tortoise and their sign will conduct pre-construction surveys in modeled habitat for desert tortoise. The survey(s) shall be conducted in general accordance with the USFWS protocol Preparing for Any Action That May Occur within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*; USFWS 2018b) or current pre-project survey protocol. The survey(s) will occur no more than 48 hours before the start of ground- or vegetation-disturbing activity in modeled habitat for desert tortoise and may be conducted any time of year, but preferably during the desert tortoise active period (i.e., early March through early June, and September through early November). The survey will consist of transect surveys spaced no greater than 15 feet apart

and will include a 50-foot buffer around the work area, where access is permitted. Results of the survey effort will be transmitted to the USFWS prior to the initiation of ground- or vegetation-disturbing activities at the survey site.

CM-DT-02: Prepare and Implement Project Guidelines for Handling Desert Tortoise during Construction

If desert tortoise are present, prior to construction activities, the Authority will reinitiate Section 7 consultation with the USFWS regarding minimization of impacts and salvage and relocation of individuals. Upon authorization from USFWS, the Designated Biologist will prepare and implement project specific guidelines to move desert tortoise a short distance (i.e., no more than 984 feet) out of harm's way, based on the Translocation of Mojave Desert Tortoises from Project Sites: Plan Development Guidance (USFWS 2018c), Health Assessment Procedures for the Mojave Desert Tortoise (*Gopherus agassizii*): A Handbook Pertinent to Translocation (USFWS 2013b), and Desert Tortoise (Mojave Population) Field Manual (*Gopherus agassizii*) (USFWS 2009c) or other current USFWS guidelines. The project guidelines will provide details on desert tortoise surveys, for moving desert tortoises out of harm's way, and will include methodology for visual desert tortoise body condition assessments. Project procedures and guidelines will be provided to the USFWS for review and approval prior to the start of construction.

- Desert tortoise found in work areas will be moved out of harm's way a short distance to an undisturbed suitable habitat area beyond the construction site, no more than 984 feet from where it was found and within its territory, to the greatest extent feasible. Preferred locations for release include areas where alternate burrows are available.
- Prior to the Designated Biologist moving desert tortoise out of the work area, the biologist shall survey the relocation site to ensure that suitable burrows for desert tortoise exist. If few or no burrows are available, artificial burrows and/or shade structures will be created along the outer perimeter of the ESA and WEF following the guidelines in the Desert Tortoise (Mojave Population) Field Manual (*Gopherus agassizii*) (USFWS 2009c) and Shade Structures for Desert Tortoise Exclusion Fence: Design Guidance (USFWS 2018d), or as updated or replaced by the USFWS.
- Artificial burrows will be installed outside of the work area along the outer perimeter of the ESA and WEF where the individual was relocated from to provide cover and prevent exposure to predators and dehydration. Artificial burrows will be installed prior to excavation of an occupied burrow.
- Only Designated Biologists authorized by the USFWS will handle desert tortoises.

CM-DT-03: Implement Avoidance Measures for Desert Tortoise

Following the pre-construction desert tortoise survey(s):

- Where construction activities will be of short duration (i.e., less than one month) in suitable tortoise habitat, full-time monitoring by a Biological Monitor with experience with desert tortoise may be used in lieu of fencing. In these situations, a daily pre-activity clearance sweep will be conducted by the Biological Monitor prior to start of daily construction activities.
- Where construction activities will occur for more than one consecutive month in suitable tortoise habitat:
 - A Biological Monitor with desert tortoise experience will be present during all construction activities.
 - Desert tortoise exclusionary fencing, barriers, and guards will be installed and maintained to avoid take of desert tortoise, including destruction of nests, or their potential habitat in the project footprint. ESA fencing and WEF in desert tortoise habitat will be constructed to standards outlined in Preparing for Any Action That May Occur within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*) (USFWS 2018b) and will be used to delineate the area. The WEF will be maintained and monitored daily during the desert tortoise activity period (i.e.,

- early March through early June, and September through early November) to ensure it is maintained in good condition, and to determine if tortoises are “trapped” along the fence searching for a way to access the other side. Outside of the desert tortoise active period, fence inspections will occur at least once weekly.
 - ESA fence and WEF design will incorporate areas of shade or predation protection (e.g. artificial burrows) if a desert tortoise becomes trapped along the fence.
- If any project vehicle must drive off established routes in suitable tortoise habitat, a Biological Monitor will walk immediately in front of the vehicle to search for desert tortoise. The Biological Monitor shall visually account for 100 percent of the footprint of the route or work location plus a 15-foot buffer on each side.
- During project implementation, all workers will immediately inform the Biological Monitor if a desert tortoise is observed in or near project work areas. All work in the vicinity of the animal which could cause disturbance, injury or mortality, will cease immediately.

CM-DT-04: Implement Avoidance Measures for Desert Tortoise Burrows

If active burrows are identified in the project footprint, if practical, and if PTE is granted, a 50-foot non-disturbance buffer will be established, maintained, and monitored. The buffer will be established by routing the ESA fence and WEF around the active burrows in a manner that allows for desert tortoise to leave the project footprint. Following the procedures and precautions outlined in the Desert Tortoise Field Manual (USFWS 2009c), all desert tortoise burrows and burrows that are not practical to avoid will be examined and excavated by hand during the clearance survey by the Designated Biologist and collapsed to prevent re-entry.

CM-DT-05: Inspect Structures that Provide Potential Shelter for Desert Tortoise

Any construction pipe, culvert, or similar structure with a diameter greater than three inches that is stored less than eight inches aboveground, outside a fenced area of desert tortoise habitat, and left unattended for any time during period when the desert tortoise are active (i.e., early March through early June and September through early November) will be inspected for desert tortoise before the material is moved, buried, or capped. As an alternative, all such structures will be capped or placed on pipe racks.

CM-DT-06: Inspect under Vehicles in Desert Tortoise Habitat

Any time a vehicle or construction equipment is parked for more than 10 minutes outside of the fenced area, the ground under the vehicle will be inspected for the presence of desert tortoise before the vehicle/equipment is moved. If a desert tortoise is present, the vehicle/equipment will not be moved until the desert tortoise moves on its own away from the vehicle/equipment. If it does not move in 15 minutes during construction, the Designated Biologist may move the animal out of harm’s way to a safe location a distance of no greater than 984 feet (300 meters), according to USFWS protocol.

CM-DT-07: Installation of Desert Tortoise Guards

In occupied desert tortoise habitat and in areas of high vehicular construction traffic, desert tortoise guards that resemble cattle guards will be installed and connected to the exclusionary fencing at construction area entry points and permanent rail alignment maintenance access points to prohibit desert tortoise from crossing into the construction area right-of-way and alignment but still allowing the passage of construction vehicles. The desert tortoise guard will have a clear escape route away from construction activity for any desert tortoise that should fall in to the guard. The guard will be inspected daily for desert tortoise and to ensure the escape route is free of obstruction. The guard will also be cleared of debris that may allow desert tortoise passage across the guard and out of construction area. The desert tortoise guard will be maintained throughout its use during the construction process by the Designated Biologist or Biological Monitor.

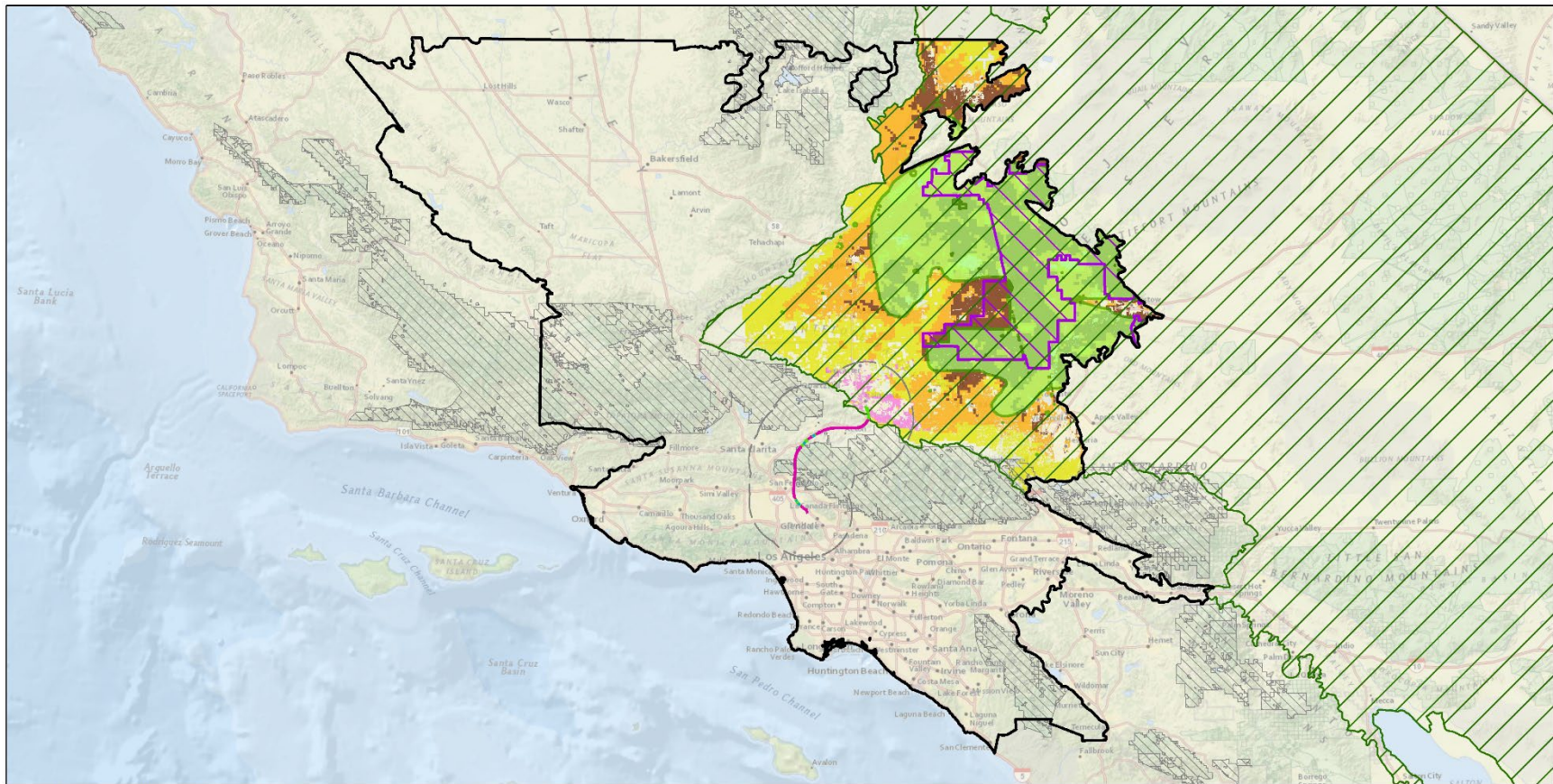
CM-DT-08: Implement Common Raven Avoidance Measures in Desert Tortoise Habitat

In desert tortoise habitat, measures will be implemented to ensure construction and O&M activities do not attract common ravens to the right-of-way by creating food or water subsidies, perch sites, roost sites, or nest sites. All activity work areas will be kept free of trash and debris. Particular attention will be paid to “micro-trash” (including such small items as screws, nuts, washers, nails, coins, rags, small electrical components, small pieces of plastic, glass or wire, and any debris or trash that is colorful or shiny) and organic waste that may subsidize predators. All trash will be covered, kept in self-closing sealable containers with lids that latch to prevent entry by wind, common ravens, and mammals, and removed from the project site at the end of each day or at regular intervals prior to periods when workers are not present at the site. Dead and injured wildlife found in the project footprint will be removed to reduce attraction of opportunistic predators. Dead and injured wildlife will be handled and removed in accordance with any applicable project permits and plans.

A Designated Biologist with knowledge of common raven identification (including nests) and desert tortoise remains (e.g., carcass, shell and bone fragments) will be approved by the USFWS. The Designated Biologist will survey for presence of common ravens and nests within 100 feet of the project facilities in occupied desert tortoise habitat for the purpose of identifying ravens that may prey upon desert tortoise. Nest locations will be recorded using a GPS unit and mapped for future surveys to search for tortoise remains in proximity to the nests.

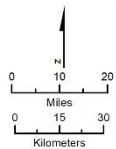
References

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- . 2011. *Revised Recovery Plan for the Mojave Population of the Desert Tortoise (Gopherus agassizii)*. Sacramento, CA. May 2011.
- . 2021. *Critical Habitat Portal*. <http://ecos.fws.gov/ecp/report/table/critical-habitat.html> (Accessed April 2021).



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDB (08/2020), USFWS Critical Habitat (09/2020).

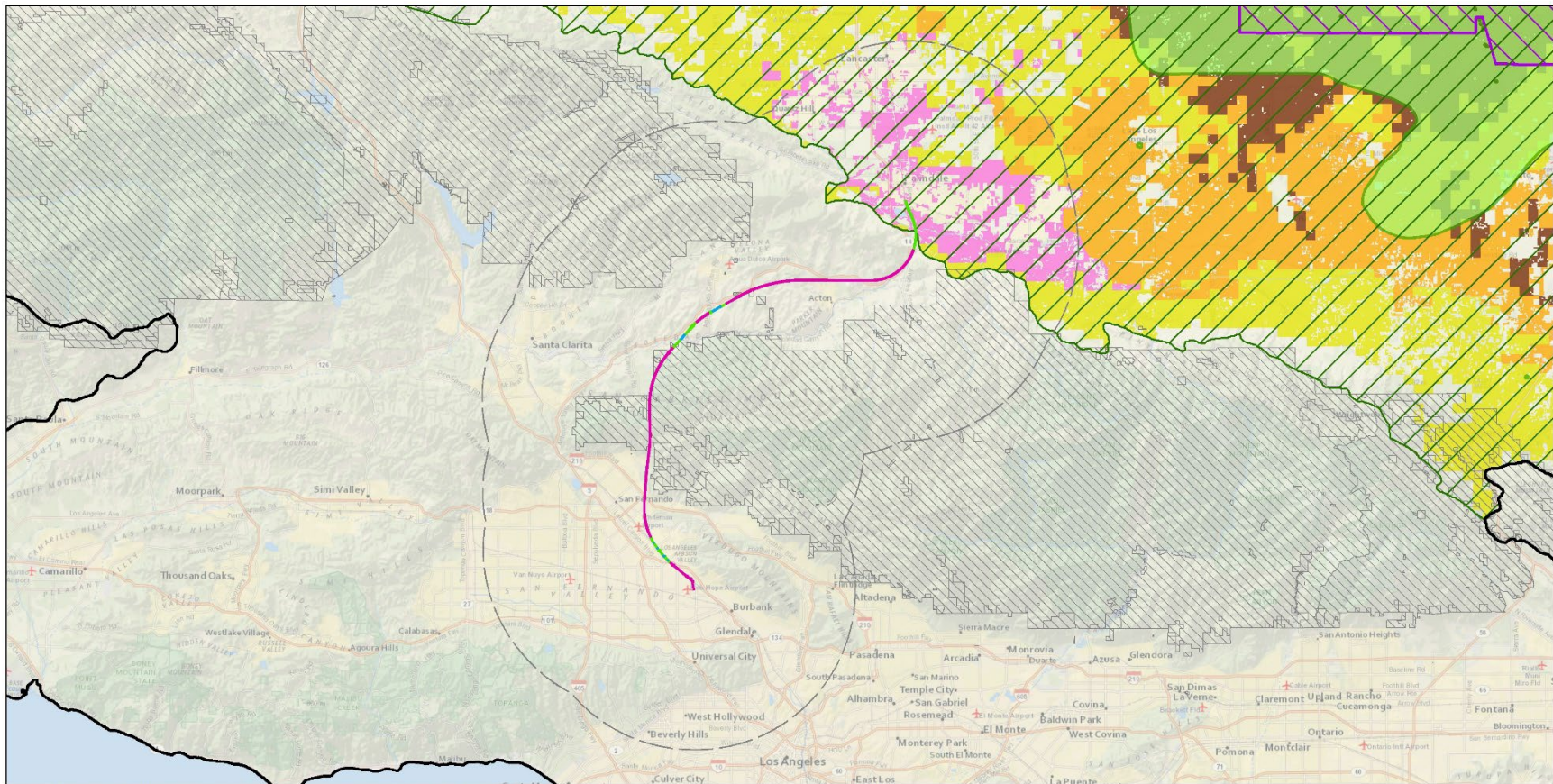
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|----------------------|---------------|---|---------------------------|
| Regional Study | HSR Alignment | Habitat Category | Species Occurrences |
| 10-Mile Buffer | Elevated | High Value Suitable Habitat | Natural Extant Occurrence |
| Forest Service Lands | Surface | Moderate Value Suitable Habitat | |
| Species Range | Underground | Low Value Suitable Habitat | |
| Critical Habitat | | Potentially Suitable Habitat in Urban Setting | |

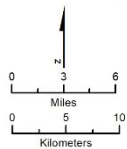
Desert Tortoise

Figure 3.7-33 Desert Tortoise Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDB (08/2020), USFWS Critical Habitat (09/2020).

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|----------------------|---------------|---|---------------------------|
| Regional Study Area | HSR Alignment | Habitat Category | Species Occurrences |
| 10-Mile Buffer | Elevated | High Value Suitable Habitat | Natural Extant Occurrence |
| Forest Service Lands | Surface | Moderate Value Suitable Habitat | |
| Species Range | Underground | Low Value Suitable Habitat | |
| Critical Habitat | | Potentially Suitable Habitat in Urban Setting | |

Desert Tortoise

Figure 3.7-34 Desert Tortoise Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

California Condor

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect the California condor (*Gymnogyps californianus*), a federally-endangered species that is also listed as endangered and designated as fully protected by the State of California.

Rationale

The Authority reviewed species information for California condor including from USFWS federal listing documents, the CNDDDB (CDFW 2021), and other relevant data sources. Data analyzed included known occurrence records, and habitat and range information relative to the proposed action. Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

California condor populations exist in central and southern California, northern Arizona, and southern Utah, as well as northern Baja California. There are three active release sites in California, one in Arizona, and one in Baja California, Mexico (USFWS 2013). The reintroduced population has resumed use of its historic range, which includes coastal and mountainous areas north to southern British Columbia. In California, populations occur near the release sites in the Ventana Wilderness of Los Padres National Forest, Pinnacles National Park, and Bitter Creek National Wildlife Refuge. In 2017, the condor population reached 170 condors in California, with 80 condors in southern California (USFWS 2017a). Current breeding range in California includes mountain ranges from Santa Clara County south to the Transverse Ranges. A separate breeding population was introduced in Arizona at the Grand Canyon.

The California condor historically occurred along the northern extent of the RSA, throughout the Greenhorn Mountains east of Bakersfield and in the San Gabriel Mountains (Figure 3.7-35 and Figure 3.7-36). The nearest release site, the Bitter Creek National Wildlife Refuge, is approximately 70 miles northwest of the action area. In the RSA, critical habitat is designated for California condor west and northwest of the action area in the San Emigdio Mountains, Topatopa Mountains, northern Santa Ynez Mountains, and Tehachapi Mountains. The nearest designated critical habitat is approximately 22 miles west-northwest of the action area in the Sespe Wilderness.

In 2016, condors from the southern California population ranged from the Southern Sierra Nevada range in Fresno County to north of the Santa Monica Mountains, west into the Sierra Madre Mountains of San Luis Obispo County and east into the San Gabriel Mountains north of Ontario in eastern Los Angeles County (USFWS 2017b). The largest concentration of condor activity in 2016 was reported in the Tehachapi Mountains in Kern County.

Six nest attempts occurred in the Topatopa Mountains in 2016, in and around the Hopper Mountain National Wildlife Refuge (USFWS 2017a), approximately 25 miles west of the action area. Nesting activity between 2017 and 2019 was limited to the Tehachapi Mountains; the southern Sierra Nevada mountains east of Bakersfield in Sequoia National Forest; Bitter Creek National Wildlife Refuge in southern Kern County (Kirkland 2019a); and the Kern River Canyon area northeast of Bakersfield (Sloan 2019).

The USFWS reports periodic flights/roosting throughout the ANF (Kirkland 2019b). more activity generally occurs near I-5 and west of SR 14, but flights further south and east have been documented. Condors are known to periodically roost on communication towers at Kagel Mountain (located approximately 1.2 miles southwest of the SR14A Build Alternative adit option) and on neighboring peaks. There is no known breeding activity in the ANF.

The action area is in both the historic and current range of California condor (USFWS 2017b). Designated critical habitat and recent nest sites are located within 22 miles west-northwest of the action area (USFWS 2017b). Since 2000, regular California condor activity has been reported close to the action area, near Contract Point, the Loop Canyon ITT facilities, and nearby areas along FS Road 3N17.8 between the FS Bear Divide Station and County Camp 9 (eBird 2021, Authority and FRA 2019a). In 2016, a biologist monitoring geotechnical boring associated with the

SR14A Build Alternative, observed a California condor at Contract Point, which is approximately 1.6 miles southwest of the adit option.

Conclusion

Because the action area passes through both the historic and current ranges of California condor (USFWS 2017b), and because a condor was observed in the vicinity of the action area as recently as 2016, the species is presumed to be present in the action area. However, no designated or proposed critical habitat for California condor is located in the action area. The action area does not contain condor nesting habitat and no known nesting sites exist within 20 miles of the action area; therefore, impacts to condor nests and nesting habitat would not occur. The project could result in impacts to approximately 811 acres of potential condor foraging habitat within the species historic range, but large contiguous swaths of suitable habitat would remain intact adjacent to the project.

Potential impacts to individuals would be avoided and mitigated through implementation of the project's conservation measures specific to California condor (CM-CACO-01 through CM-CACO-07, provided below). Additionally, CM-GEN-29 requires that project structures including the catenary system, masts, fencing, electric lines, communication towers, and facilities be designed to be bird and raptor-safe (i.e., avoid electrocution and strike) in accordance with applicable Avian Power Line Interaction Committee (APLIC) recommendations in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: State of the Art in 2012* (APLIC 2012). The catenary system would avoid electrocution with a design that ensures a minimum safe distance between the conductors of 83 inches horizontal and 52 inches vertical (Authority 2020). The risk of injury or mortality of condors as a result of collision with trains during operation would be reduced by fencing that prevents most wildlife from entering the railway and becoming a source of carrion.

For these reasons the proposed action may affect, but is not likely to adversely affect California condor. The Authority will reinstate Section 7 consultation if circumstances meeting the reinstatement criteria occur.

Conservation Measures Specific to California Condor

CM-CACO-01: Coordinate with USFWS on California Condor Locations

The Project Biologist will coordinate with USFWS at least seven days prior to initiation of construction activities (including vegetation removal) to review California condor tracking locations so that appropriate monitoring and avoidance measures can be determined. The Designated Biologist or Biological Monitor will continue to review California condor tracking locations daily, using available data or website managed by the USFWS for the purpose of implementing monitoring and avoidance measures.

CM-CACO-02: Monitor for California Condor

A Biological Monitor with California condor experience will be present during construction activities occurring within two miles of where California condor have been observed, based on the most recent tracking and location information obtained from the USFWS prior to construction activities. The Biological Monitor shall have the ability to halt construction activities if a California condor enters the work area and may be affected by project activities (CM-CACO-05). Monitoring of the condor will continue until the condor has left the two-mile buffer area.

CM-CACO-03: Work Timing Restrictions Near California Condor Roosting Locations

If California condor are observed roosting within 0.5 mile of the construction area, no construction activity will occur between one hour before sunset and one hour after sunrise or until the Designated Biologist or Biological Monitor has determined that the bird(s) has left the area. The Designated Biologist will review construction activities seven days prior to initiation of construction activities.

CM-CACO-04: Implement Avoidance Measures for California Condor

During any ground-disturbing activities in the range of California condor, the Project Biologist will implement the following avoidance measures:

- Construction materials located in work areas, including items that could pose a risk of entanglement, such as ropes and cables, will be properly stored and secured when not in use.
- Litter, small artificial items (screws, washers, nuts, bolts, etc.), and all food waste will be stored in self-closing, sealable containers with lids that latch to prevent entry by wind, common ravens, and mammals. All trash receptacles will be regularly inspected and collected regularly; the contents disposed of from work areas on a daily basis to prevent spillage and maintain sanitary conditions. The receptacles will be removed from the project area when construction or O&M activities are complete.
- All fuels, fluids, and components with hazardous materials or wastes will be handled in accordance with applicable regulations. These materials will be kept in segregated, secured, and/or secondary containment facilities, as necessary. Any spills of liquid substances that could harm wildlife will be immediately addressed.
- The project will avoid the use of ethylene glycol-based anti-freeze or other ethylene glycol-based liquid substances. All parked vehicles/equipment will be kept free of leaks, particularly anti-freeze.
- Polychemical lines will not be used or stored on site to preclude wildlife, especially California condor, from obtaining and ingesting pieces of polychemical lines.

CM-CACO-05: Implement Helicopter Avoidance Measures for California Condor

The Project Biologist will coordinate with the USFWS, as appropriate, prior to helicopter use that could affect condor, to establish that no known individuals are in the project region. If condors are present, helicopter use shall be avoided until the birds have left the area. If condors are observed in helicopter construction areas, further helicopter use shall be avoided until the Designated Biologist or Biological Monitor has determined that the condors have left the area. The Designated Biologist and Biological Monitors will have radio contact with the project foreman, who will be in radio contact with the helicopter pilot. The biologist will real-time information updates to avoid conflicts with condors.

CM-CACO-06: Stop Work and Implement Hazing Methods for California Condor

If a California condor(s) lands or is observed in or near a work area, the Designated Biologist or Biological Monitor will assess the construction activities occurring and determine whether there is a potential hazard to the condor. Activities determined to be a potential hazard will be stopped until the condor has abandoned the area. After five minutes, if a condor has not left of its own volition, the Designated Biologist or Biological Monitor, or other USFWS-approved personnel, will implement USFWS-approved hazing methods in accordance with the USFWS Recovery Program’s *Guidance on Hazing California Condors* (USFWS 2014c).

If the California condor does not leave the area within 30 minutes of the initiation of hazing, the Designated Biologist or Biological Monitor will notify the Project Biologist. The Project Biologist will coordinate with the Authority and USFWS to determine the appropriate actions.

CM-CACO-07: Implement Removal of Carrion that may Attract California Condor

Dead and injured wildlife found in the right-of-way and tracks will be removed during construction and O&M when the train is not in operation. During O&M within California condor range, automated security monitoring and track inspections will be used to detect fence failures and/or the presence of carrion in the right-of-way.

References

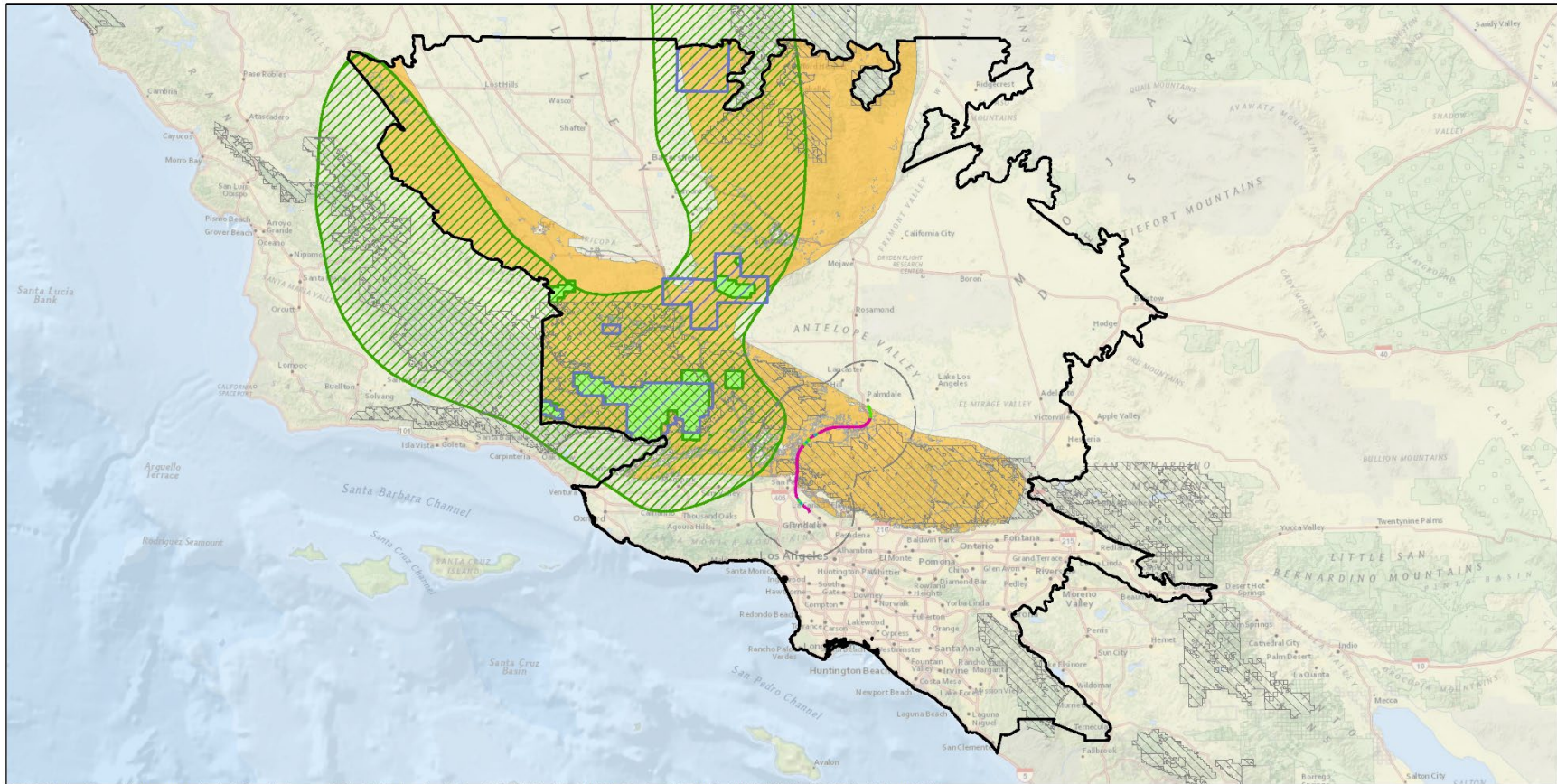
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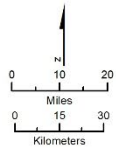
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SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDB (08/2020), USFW Critical Habitat (9/2020).

Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.



- | | | |
|----------------------|---------------|---------------------|
| Regional Study | HSR Alignment | Species Occurrences |
| 10-Mile Buffer | Elevated | Presumed Extant |
| Forest Service Lands | Surface | Historic Range |
| Critical Habitat | Underground | Species Range |
| Species Range | | |

California Condor

Figure 3.7-35 California Condor Occurrences and Habitat in the Regional Study Area

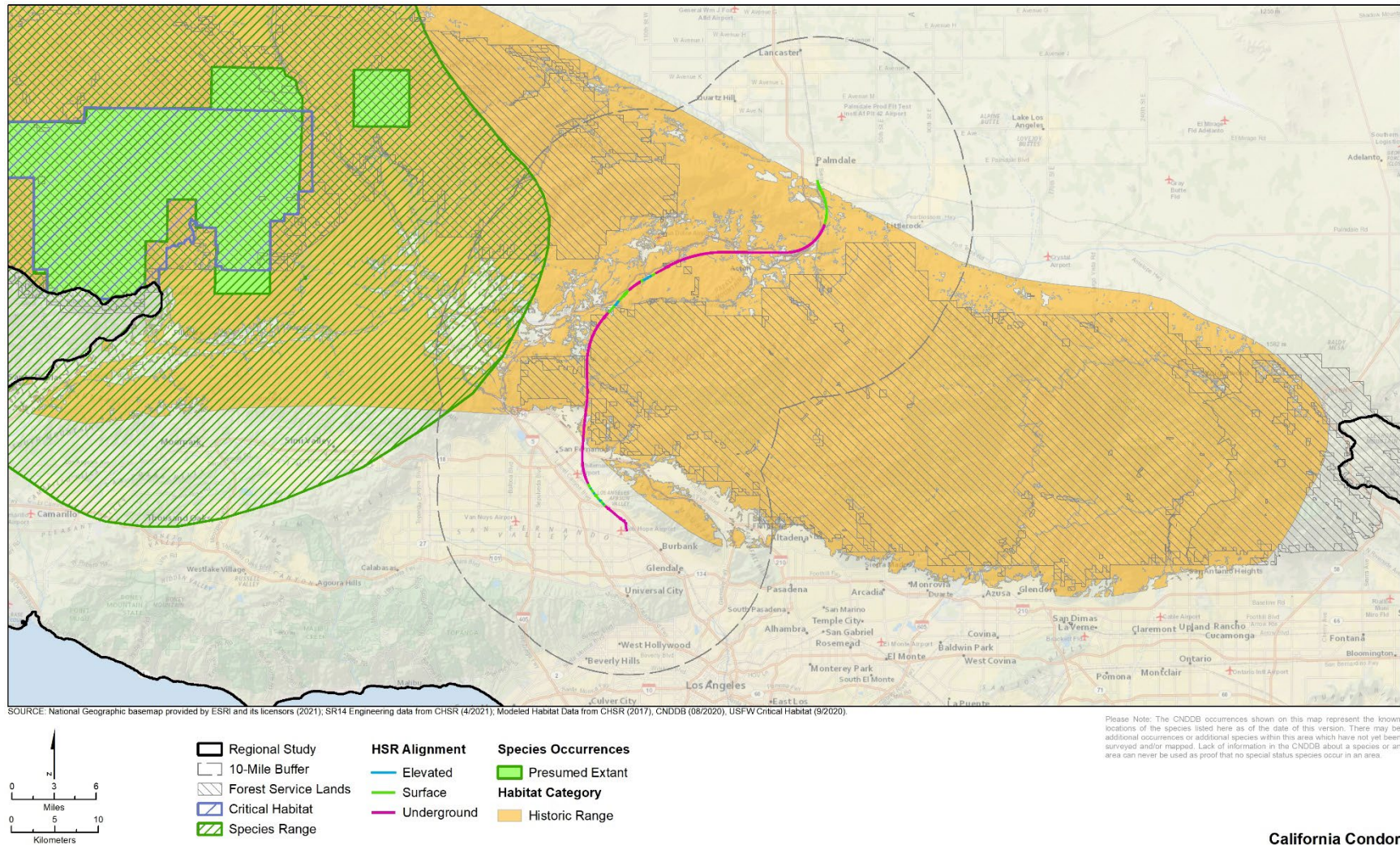


Figure 3.7-36 California Condor Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

California Condor

California Spotted Owl

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect the California spotted owl (*Strix occidentalis occidentalis*) Coastal-Southern California DPS, a candidate for federal listing as endangered, and a California species of special concern.

Rationale

The Authority reviewed species information for California spotted owl, including from USFWS federal listing documents, the Spotted Owl Observations Database (CDFW 2023), and other relevant data sources (see list of references). Data analyzed included known occurrence records (Figure 3.7-37 and Figure 3.7-38), and predicted habitat and range information relative to the proposed action.

The range of the California spotted owl includes the Sierra Nevada DPS, in California and Nevada, and the southern and coastal California DPS, in the Coastal, Transverse, and Peninsular Mountain ranges in California (USFWS 2023a). Currently, California spotted owls are mostly found on lands managed by the USFS and the National Park Service (USFWS 2023b). California spotted owls typically inhabit old growth forests with structural characteristics necessary for nesting, roosting, and foraging. In the Sierra Nevada range, California spotted owls mostly occur within mid-elevation ponderosa pine, mixed conifer, white fir, and mixed-evergreen forest types, with few occurrences in lower elevation oak woodlands of the western foothills. On the central coast of California and in southern California, California spotted owls are found in riparian/hardwood forests and woodlands, live oak/big cone fir forests, and redwood/California laurel forests. Nests are typically found in areas of high canopy cover, with a high number of large trees, and downed trees. Breeding season begins in mid-February and can last through mid-September, starting earlier in southern California and at lower elevations throughout its range, with the peak of egg-laying in mid-April (Verner and Others 1992, USFWS 2023b).

Portions of the action area within the Angeles National Forest fall within the predicted yearlong range of the California spotted owl (CDFW 2023). According to the Spotted Owl Observations Database, there are 13 positive observations of California spotted owls from 1987 through 2015 within 10 miles of the action area (CDFW 2023). The California spotted owl current geographic range does not overlap with the action area (Figure 3.7-37). Within the ANF and outside of the action area, the predicted suitable breeding habitat is limited to small, isolated patches. The predicted suitable habitat patches closest to the action area are found north of Wilson Canyon Saddle, around Iron Mountain. The Wilson Canyon Saddle patch of predicted suitable habitat corresponds with occurrences from the early 1990s through 2015 (CDFW 2023) and is approximately 2.5 miles from the action area (Figure 3.7-37 and Figure 3.7-38). Additional observations and activity centers are clustered around Iron Mountain and Mount Gleason and correspond with small patches of predicted California spotted owl habitat (CDFW 2023). The next closest occurrences are approximately 6.5 miles from the action area.

Conclusion

The action area does not contain California spotted owl breeding habitat and the closest potential breeding habitat occurs approximately 2.5 miles from the action area. Due to the distance to known populations and lack of suitable habitat within the action area, the species likely is not present in the action area. Additionally, the USFWS stated during informal consultation conducted in 2023 that due to rarity of the species in southern California, California spotted owls are not expected to occur in the action area. However, due to the documented spotted owl observations in the ANF within 10 miles of the action area and the presence of modeled habitat (CDFW 2023) near the action area this species cannot be discounted. Therefore, the proposed action may affect but is not likely to adversely affect California spotted owl.

Conservation Measures Specific to California Spotted Owl

The purpose of these conservation measures is to avoid and minimize effects to the federally listed California spotted owl. In addition to the proposed conservation measures below, refer to the general measures.

CM-OWL-01: Conduct Pre-construction Surveys for California Spotted Owl

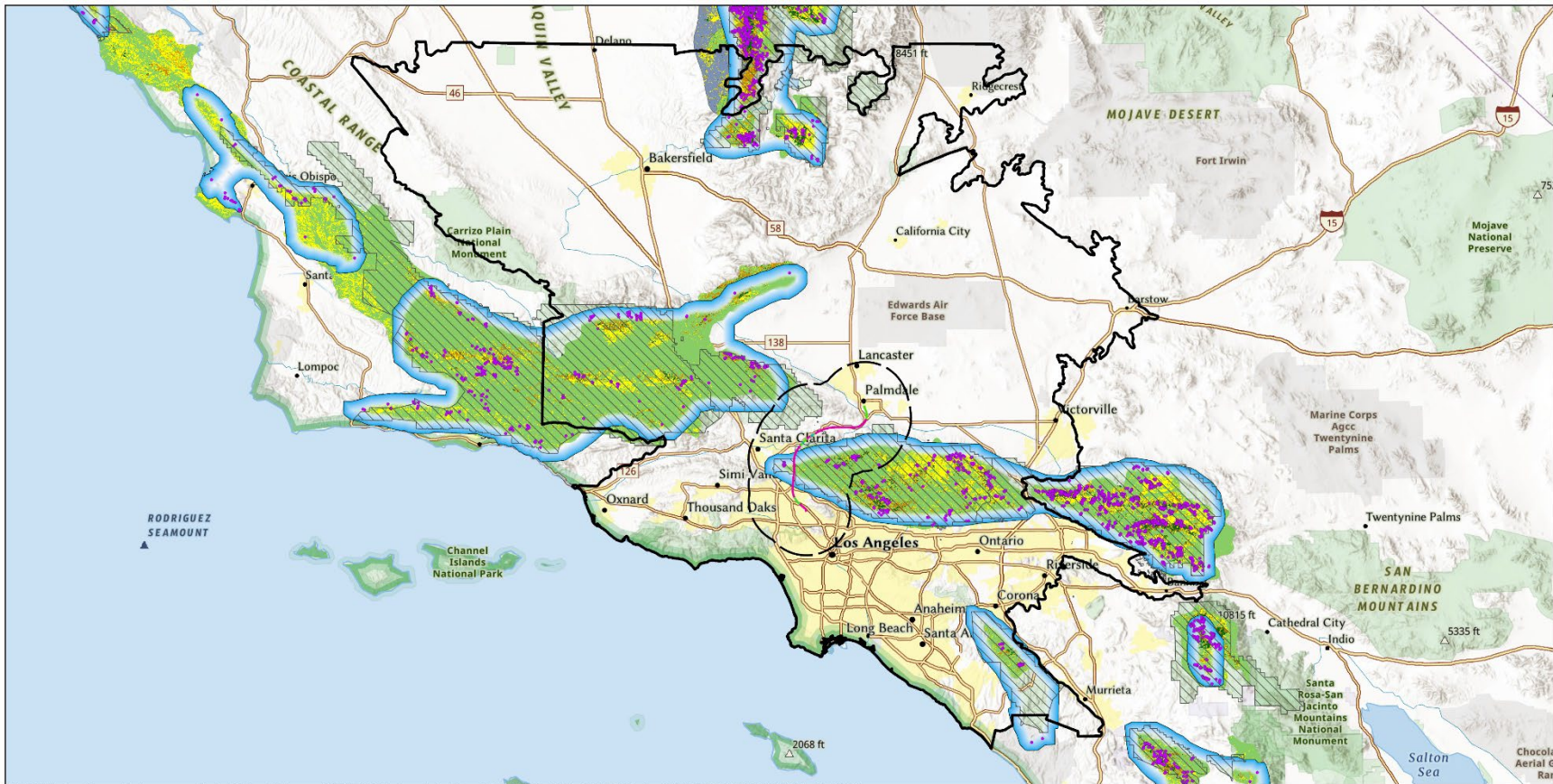
Prior to any ground disturbing activity, the Project Biologist will conduct protocol-level surveys for California spotted owls within suitable habitat located in the work area and any extending 500 feet from the boundary of the work area, where access is available. Surveys will be conducted in accordance with guidelines in the Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls (USFWS 2012), hence adapted for the California spotted owl.

CM-OWL-02: Work Timing Restrictions Near California Spotted Owl Occupied Site

If California spotted owls are within 0.5 mile of the construction area, no construction activity will occur between one hour before sunset and one hour after sunrise. The Designated Biologist will review construction activities seven days prior to initiation of construction activities.

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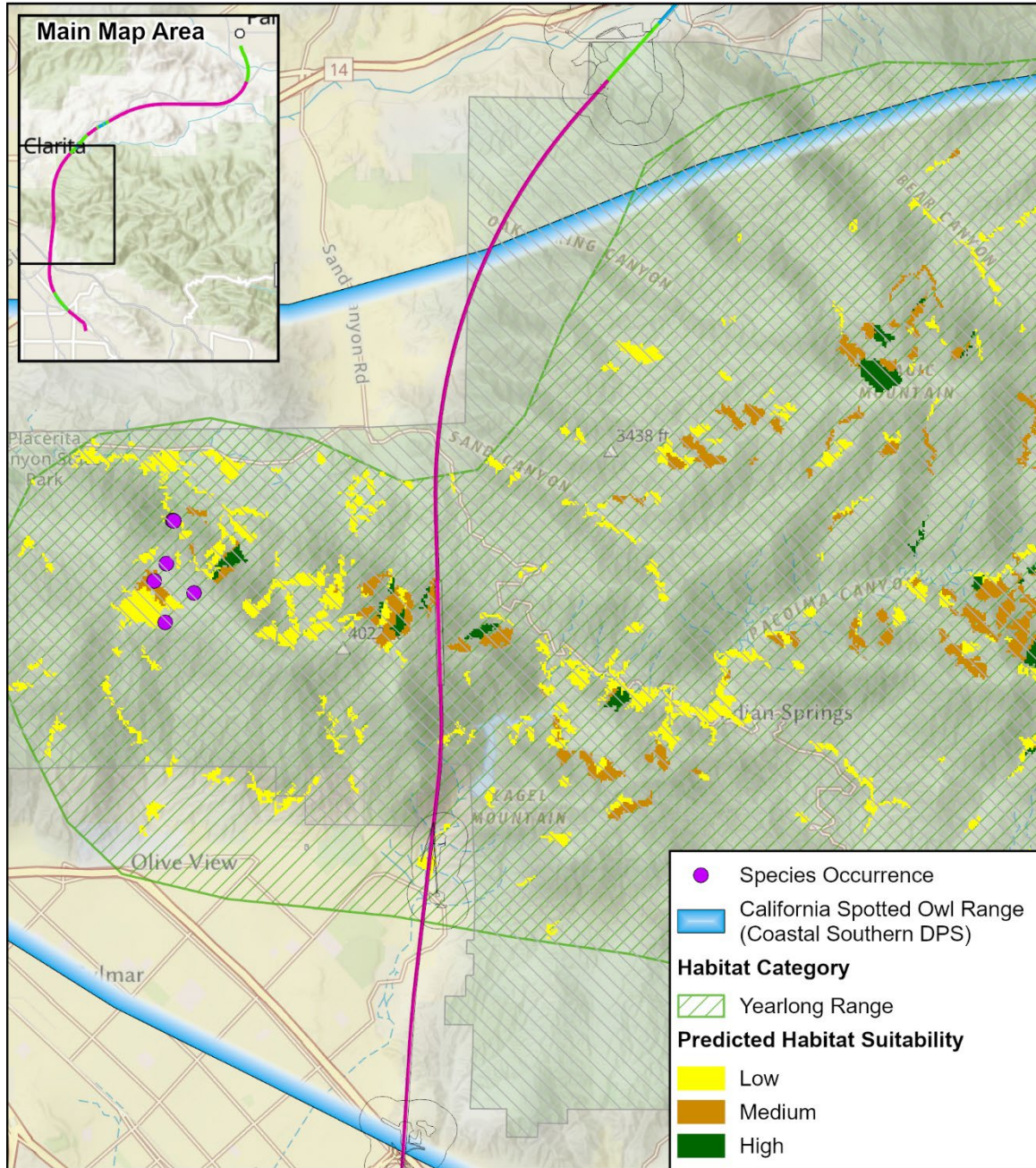
SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); Modeled Habitat Data from CWHR (2023), CNDOB (08/2023), eBird (2023).

Please Note: The CNDOB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDOB about a species or an area can never be used as proof that no special status species occur in an area.



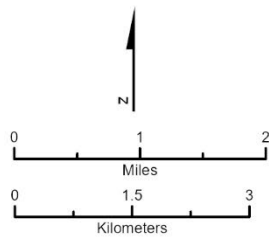
California Spotted Owl

Figure 3.7-37 California Spotted Owl Occurrences and Habitat in the Regional Study Area



SOURCE: Esri National Geographic Basemap, 2023; CHSR, 4/2021; CDFW 8/2023; eBird 9/2023.

November 17, 2023



- 10-Mile Buffer
- Forest Service Lands
- 1,000-foot Wildlife Buffer
- HSR Alignment
- Elevated
- Surface
- Underground

California Spotted Owl

Figure 3.7-38 California Spotted Owl Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section

Yellow-billed Cuckoo

The Authority has determined that the HSR Palmdale to Burbank Project Section may affect but is not likely to adversely affect the western DPS of the yellow-billed cuckoo (*Coccyzus americanus*), a federally threatened and State endangered species, species federally classified as a Bird of Conservation Concern, and a USFS sensitive species.

Rationale

The Authority reviewed species information for yellow-billed cuckoo including from USFWS federal listing documents, the CNDDDB, and other relevant data sources (see list of references). Data analyzed included known occurrence records (Figure 3.7-39 and Figure 3.7-40), and habitat and range information relative to the proposed action. Additionally, the Authority conducted informal consultation with the USFWS for the proposed action, including biweekly meetings initiated in July 2019.

The range of the western DPS of the yellow-billed cuckoo includes western North America (generally west of the Continental Divide) from southern British Columbia through the western U.S. to Baja California and Zacatecas, Mexico (USFWS 2014a). In California, breeding populations occur in the Sacramento Valley along the Sacramento River and some tributaries, the South Fork Kern River, and restoration sites near Blythe on the lower Colorado River (Halterman et al. 2015).

The CNDDDB documents one extirpated occurrence from 1894 within 10 miles of the action area, associated with a heavily developed location in San Fernando (CDFW 2020). A 2018 observation of yellow-billed cuckoo was reported by eBird from the Santa Clara River in Santa Clarita approximately eight miles west of the action area (eBird 2019). The nearest known occupied location is the South Fork Kern River Valley, approximately 30 miles northeast of the action area (CDFW 2020). Proposed critical habitat is present in the Prado Basin, approximately 44 miles southeast of the action area (USFWS 2014b). The yellow-billed cuckoo's current geographic range does not overlap with the action area and suitable breeding habitat is limited to small, isolated patches in Escondido Canyon and Pacoima Wash.

Conclusion

Due to the proposed action being outside of the current geographic range of the species, the lack of extant CNDDDB records within 10 miles of the project, and limited amount of suitable habitat the action area, the species likely is not present in the action area. Additionally, the USFWS stated during informal consultation conducted in 2019 that due to rarity of the species in southern California, yellow-billed cuckoos are not expected to occur in the action area (USFWS 2019a). However, presence cannot be discounted due to the reported eBird observation and the presence of modeled habitat. Therefore, the proposed action may affect but is not likely to adversely affect yellow-billed cuckoo.

To ensure that this species is not present at the time of construction, suitable habitat within the project footprint will be surveyed prior to ground- or vegetation-disturbing activities. The survey(s) will be conducted by a Designated Biologist familiar with the distinguishing characteristics of the species and adhering to guidance in *A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of Yellow-billed Cuckoo* (Halterman et al. 2015). If yellow-billed cuckoos are observed, no project activities that could adversely affect the species will be conducted within 1,000 feet of individuals. The Authority will reinstate Section 7 consultation if circumstances meeting the reinstitution criteria occur.

Conservation Measures Specific to Yellow-billed Cuckoo

The purpose of these conservation measures is to avoid and minimize effects to federally listed bird species.

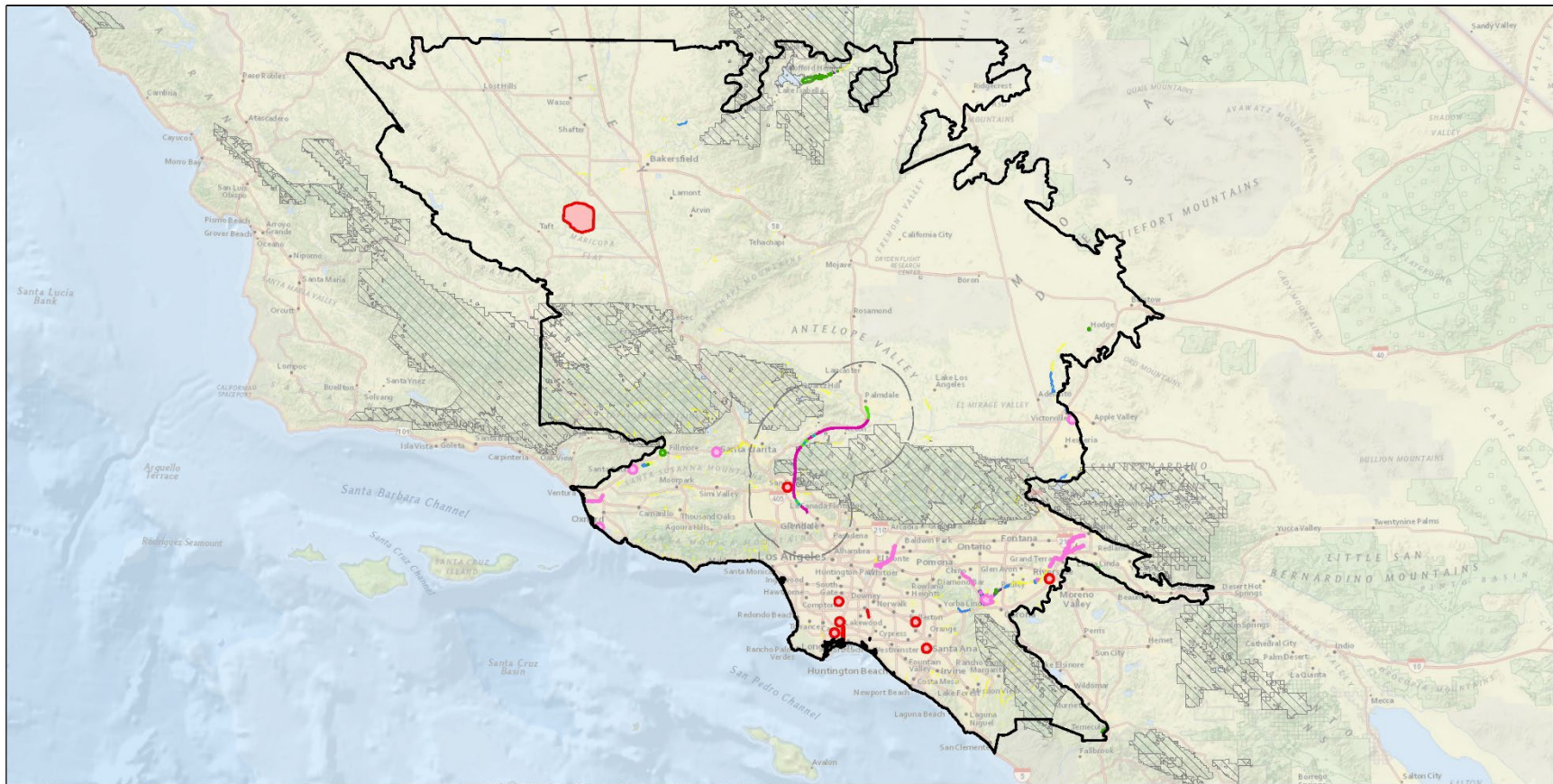
CM-YBCU-01: Conduct Pre-construction Surveys and Implement Impact Avoidance for Yellow-billed Cuckoo

To ensure that yellow-billed cuckoo are not present at the time of construction, all suitable yellow-billed cuckoo modeled habitat within the project footprint will be surveyed prior to ground- or vegetation-disturbing activities. The survey(s) will be conducted by a Designated Biologist familiar with the distinguishing characteristics of the species and adhering to guidance in A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of Yellow-billed Cuckoo (Haltermann et al. 2015).

If yellow-billed cuckoos are observed, the Authority will reinitiate Section 7 consultation to coordinate with USFWS regarding avoidance measures.

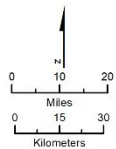
References

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SOURCE: National Geographic basemap provided by ESRI and its licensors (2021), SR14 Engineering data from CHSR (4/2021), Modeled Habitat Data from CHSR (2017), CNDDB (08/2020).

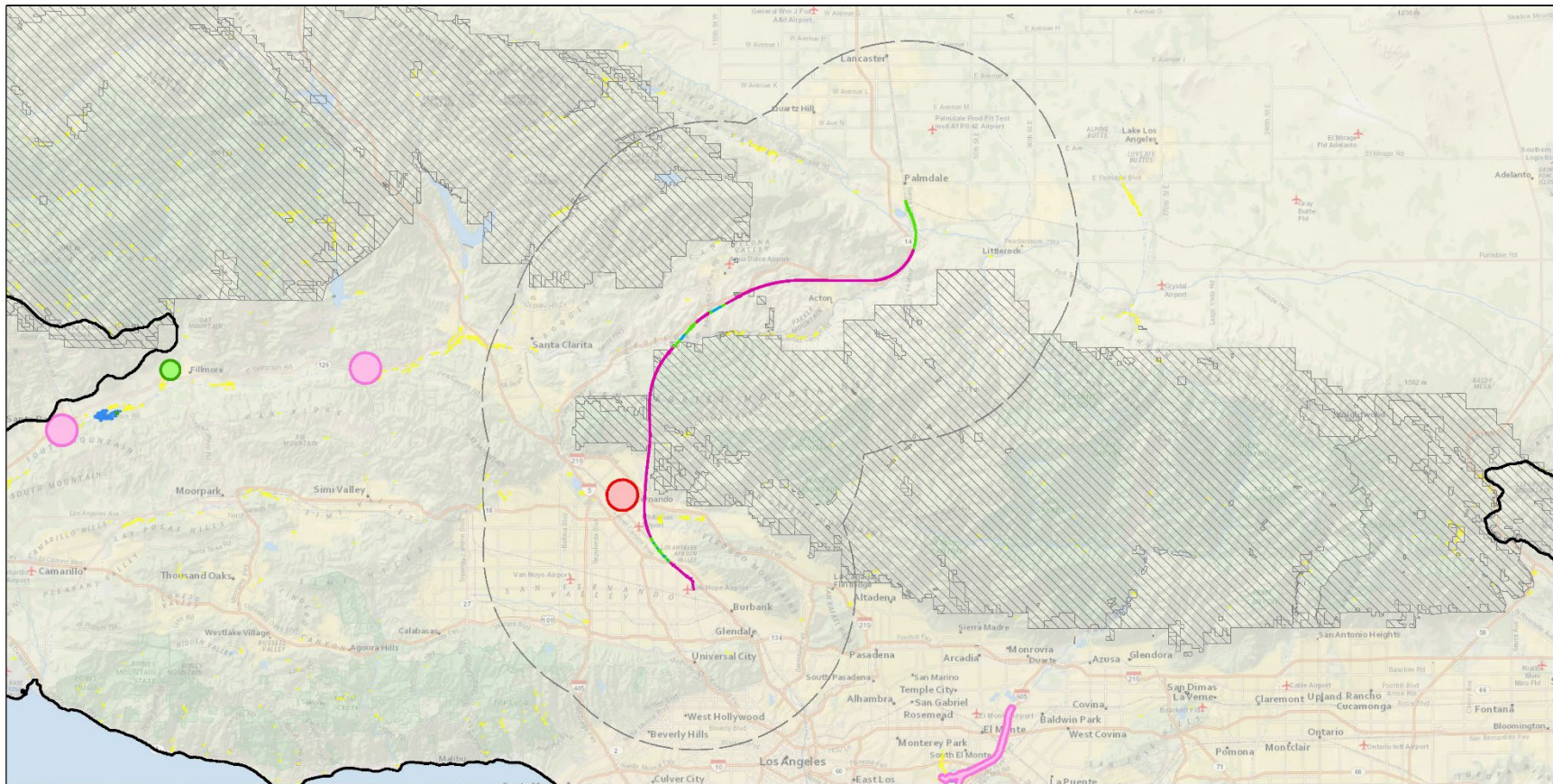
Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.



- | | | | |
|----------------------|----------------------|---|----------------------------|
| Regional Study Area | HSR Alignment | Habitat Category | Species Occurrences |
| 10-Mile Buffer | Elevated | Core Breeding Habitat | Natural Extant Occurrence |
| Forest Service Lands | Surface | High Value Breeding Habitat | Possibly Extirpated |
| | Underground | Other Potentially Suitable Breeding Habitat | Determined Extirpated |
| | | | Documented Extirpated |

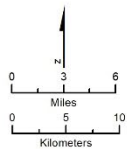
Western Yellow-billed Cuckoo

Figure 3.7-39 Yellow-billed Cuckoo Occurrences and Habitat in the Regional Study Area



SOURCE: National Geographic basemap provided by ESRI and its licensors (2021); SR14 Engineering data from CHSR (4/2021); Modeled Habitat Data from CHSR (2017); CNDDB (08/2020).

Please Note: The CNDDB occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area.



- | | | | |
|----------------------|----------------------|---|----------------------------|
| Regional Study Area | HSR Alignment | Habitat Category | Species Occurrences |
| 10-Mile Buffer | Elevated | Core Breeding Habitat | Natural Extant Occurrence |
| Forest Service Lands | Surface | High Value Breeding Habitat | Possibly Extirpated |
| | Underground | Other Potentially Suitable Breeding Habitat | Determined Extirpated |
| | | | Documented Extirpated |

Western Yellow-billed Cuckoo

Figure 3.7-40 Yellow-billed Cuckoo Occurrences and Habitat in the Vicinity of the Palmdale to Burbank Project Section