APPENDIX B3
FOCUSED RARE PLANT SURVEY

September 26, 2022
(2021-113.01)

Mr. Paul Onufer
JPMB Investments, LLC
556 S. Fair Oaks Ave. #337
Pasadena, California 91105

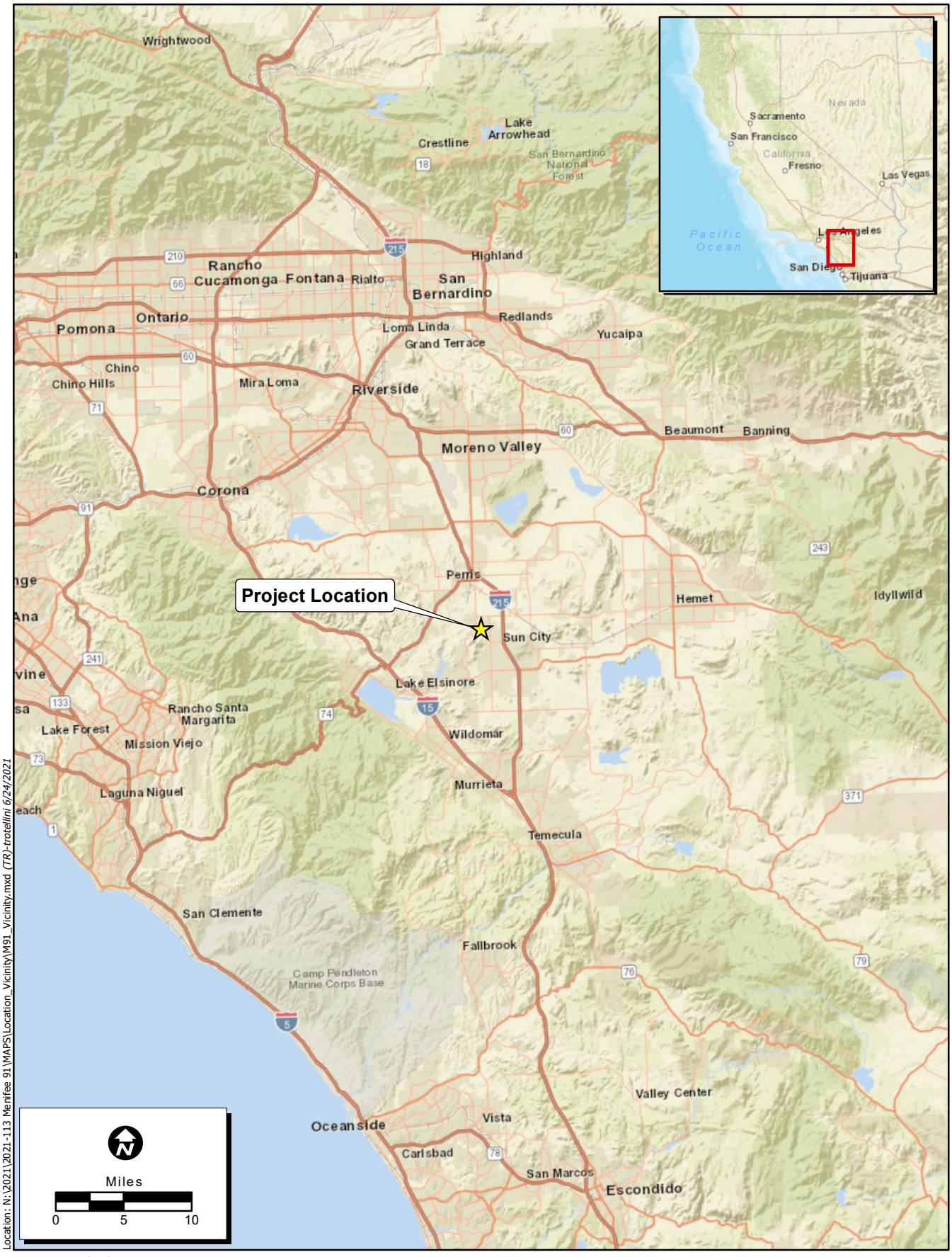
SUBJECT: Results of Focused Narrow Endemic Plant Species Survey for the Menifee 91 Residential Development Project, Riverside County, California

Dear Mr. Onufer,

The purpose of this letter report is to document the results of the focused Narrow Endemic Plant Species survey that was conducted by ECORP Consulting, Inc. for the Menifee 91 Residential Development Project (Project) in Riverside County, California. One protocol-level focused Narrow Endemic Plant Species survey was conducted during the blooming season of target plant species on September 1, 2021, in accordance with the Western Riverside Multiple Species Habitat Conservation Plan (WR MSHCP). The Project site is located with a WR MSHCP designated Narrow Endemic Plant Survey Area and the biological reconnaissance survey identified suitable habitat for one MSHCP Narrow Endemic Plant Species; San Diego ambrosia (*Ambrosia pumila*). As stated in the MSHCP, if the project site contains suitable habitat for Narrow Endemic Plant Species, a Narrow Endemic Plant Species survey is required. Additionally, the survey methods were designed to identify other special-status plant species, which are those listed under the California or Federal Endangered Species Acts or those considered rare by the California Native Plant Society (CNPS). This report presents survey methods, vegetation communities encountered, and a brief discussion.

Project Description and Location

The proposed Project involves the construction of single-family residences on approximately 27.5 acres (APNs 330-230-023 and 330-230-024) in the City of Menifee, Riverside County. The Project site is located west of Interstate 215 and southwest of the intersection of Troy Lane and Byers Road, within the City of Menifee (Figure 1 and Figure 2). The Project site, as depicted on the U.S. Geological Survey (USGS) Romoland 7.5-minute topographic quadrangle, is located within Section 17, Township 5 South, Range 3 West. Elevation at the Project site is approximately 1,500 feet above mean sea level.



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Map Date: 6/24/2021

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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Figure 1-1. Project Vicinity

2021-113 Menifee 91

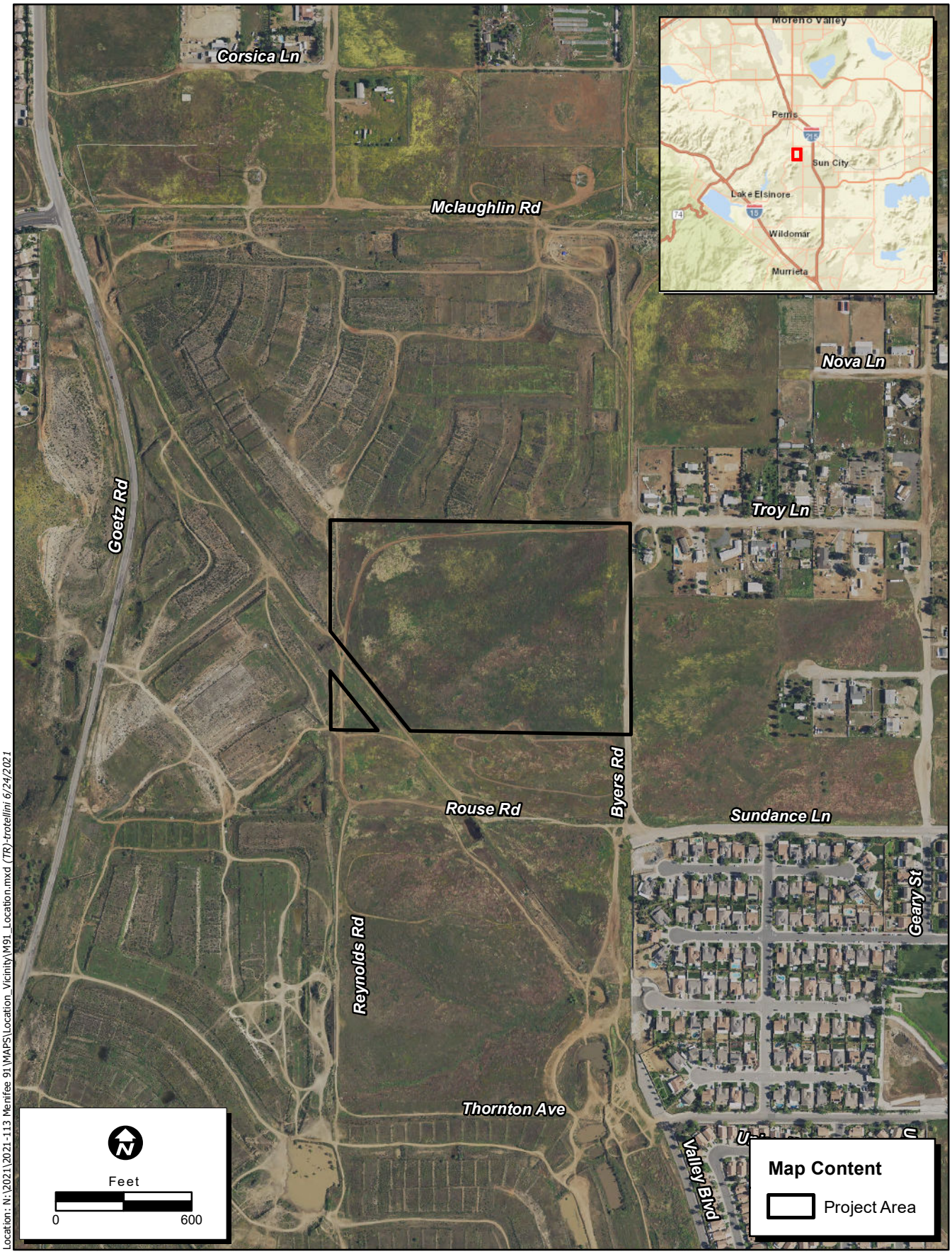

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Figure 2-1. Project Location

2021-113 Menifee 91

Project History

Literature Review and Biological Reconnaissance Survey

Prior to conducting the special-status plant survey, ECORP conducted a review of CDFW's California Natural Diversity Database (CNDDB) (CDFW 2021) and the CNPS Inventory of Rare and Endangered Plants of California (hereafter referred to as CNPS Electronic Inventory) (CNPS 2021) to determine whether special-status plant species have been previously reported within the survey area (Project site and 100-foot buffer) and the surrounding U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles (Romoland, Winchester, Lakeview, Perris, Steele Peak, Lake Elsinore, Wildomar, Murrieta, and Bachelor Mountain) (CDFW 2021).

Upon review of the Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Map, it was determined that the Project site is located within a survey area for the following narrow endemic plants: Munz's onion (*Allium* munzii), San Diego ambrosia (*Ambrosia pumila*), many-stemmed dudleya (*Dudleya* multicaulis), spreading navarretia (*Navarretia* fossalis), California Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*). Therefore, a habitat assessment for narrow endemic plants was conducted concurrently with the biological reconnaissance survey conducted by ECORP Biologists in June 2021. During the habitat assessment, the presence of suitable habitat was identified for one MSHCP Narrow Endemic Plant Species (San Diego ambrosia) on the Project site and therefore a Narrow Endemic Plant Species survey was required during the appropriate blooming period (April-October).

Methods

The survey was scheduled to coincide with the San Diego ambrosia's blooming period (April – October) and during a period when the target species was most likely identifiable. A Protocol-level survey for special-status plants and San Diego ambrosia was conducted by qualified biologists with extensive experience with botanical surveys and knowledge regarding plant taxonomy, plant species in the region, and special-status plant species. Surveys were conducted in accordance with the following resources: 1) Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996), 2) General Rare Plant Survey Guidelines (USFWS 2002), 3) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018, minor revisions 2021), and 4) CNPS Botanical Survey Guidelines (CNPS 2001).

The biologists walked pedestrian transects spaced 10 meters apart throughout the Project site and a 100-foot buffer . Global Positioning System (GPS) devices (tablets running Field Maps software) were used during the survey to record data. Geode™ receivers were used to obtain sub-meter accuracy on the GPS devices. Each GPS device displayed a position using the Universal Transverse Mercator coordinate system, North American Datum 1983. Common plant species were identified and recorded in order to maintain a compendium of plant species that occur in the survey area. Taxonomy of plant species identified within the Survey Area are based on The Jepson Manual, 2nd Ed. (Baldwin et al. 2012). If a special-status plant species was detected, its location was documented using a Global Positioning

System (GPS) unit. If the number of individuals in a population was distributed across an area that exceeded 10 square meters, a polygon was recorded using the GPS device so that the extent of the population would be known.

In addition, vegetation communities existing within the Survey Area were identified during the special-status plant surveys. Habitat descriptions and classifications are based on The Manual of California Vegetation, 2nd Edition (Sawyer et al. 2009); however, in some cases a best-fit definition based on habitat descriptions and land-use has been applied.

Results

Literature Review

The preliminary review returned a total of 55 special-status plant species with the potential to occur within the Project area and the surrounding eight topographic quadrangles. Of those, nine are federally and/or state listed and 40 are covered by the MSHCP. However, the Project site only provides suitable habitat for five of the special-status species identified during the literature review. The Project site provides habitat for the following special-status plant species: San Diego ambrosia, thread-leaved brodiaea (*Brodiaea filifolia*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), and long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*).

Field Survey

The focused Narrow Endemic Plant Species and special-status plant species survey was performed by ECORP biologists Greg Hampton, Alexandra Dorough, and Joshua Harris. The target species of the survey was San Diego ambrosia. Weather conditions are provided in Table 1. A list of all individual plant species observed in the survey area is provided as Attachment A. Photographic documentation of the survey area is included in Attachment B.

Table 1. Weather Conditions During the Survey

Date	Time		Temperature (˚F)		Cloud Cover (%)		Wind Speed (mph)	
	Start	End	Start	End	Start	End	Start	End
08/31/2021	0630	1015	66	72	95	90	3-5	0-3

Vegetation Communities

This section includes information about the habitat types, the vegetation identified in each habitat, the dominant species present, and habitat quality. Photo documentation of the vegetation communities observed during the survey is included in Attachment B. Vegetation communities and notable plant species found within the Project area are described below.

Disturbed Wild Oat and Annual Brome Grassland (*Avena spp. – Bromus spp. Herbaceous Semi-Natural Alliance*)

Areas mapped as disturbed wild oat and annual brome grasslands were largely devoid of native vegetation due to human disturbance and were dominated by open areas of nonnative grasses including nonnative weedy and ruderal vegetation. Disturbed wild oat and annual brome grasslands represent most of the vegetative cover within the Project site boundaries. Vegetation height at the time of survey ranged from approximately one to four feet, with a significant layer of thatch present in each stand. Plants present in this community on site included primarily nonnative grasses and weedy species such as wild oat (*Avena fatua*), short podded mustard (*Hirschfeldia incana*), foxtail chess (*Bromus madritensis*), and bromegrass (*Bromus diandrus*). Native species present in this community at the time of the survey included telegraph weed (*Heterotheca grandiflora*), turkey-mullein (*Croton setiger*), clustered tarweed (*Deinandra fasciculata*), and small seed sandmat (*Euphorbia polycarpa*).

Disturbed - California Buckwheat Scrub (*Eriogonum fasciculatum Shrubland Alliance*)

The western edge of the Project site as well as the northern and western sides survey area consisted of disturbed California buckwheat scrub. California buckwheat scrub is dominated or codominated by California buckwheat and consists primarily of shrubs less than two meters in height with a continuous to intermittent canopy (Sawyer et al 2009). The herbaceous layer is variable and may be grassy. Areas mapped as disturbed California buckwheat scrub contained open to intermittent shrub canopies. Disturbances observed included trash, dirt roads, and abandoned partially developed residential pads. Species present within this community at the time of the survey included deerweed (*Acmispon glaber*) and brittlebush (*Encelia farinosa*), while nonnative species included tree tobacco (*Nicotiana glauca*) and Russian thistle (*Salsola tragus*).

Mule fat Thickets (*Baccharis salicifolia Shrubland Alliance*)

Mule fat (*Baccharis salicifolia*) was located outside of the Project site between the two parcels as depicted on Figure 4-1. Mule fat thickets consist primarily of shrubs less than five meters in height with a continuous canopy at two tiers (less than two meters and at or above five meters) and a sparse herbaceous layer (Sawyer et al 2009). The area mapped as mule fat thickets was isolated in nature with no other sub shrubs or associated species and did not appear to be associated with any waterways. Nearby disturbances included trash, dirt roads, and a dump site.

Disturbed/Developed

Disturbed/developed is not a vegetation classification, but rather a land cover type. Areas mapped as disturbed/developed were heavily disturbed due to human disturbance and were dominated by open areas or nonnative weedy and ruderal vegetation. The disturbed/developed areas of the Project Site were mainly associated with dirt roads, off-highway vehicle use, dumping, and mechanical disturbances present on the site and adjacent to the site within the 500-foot buffer.

Discussion

The biologists did not observe any San Diego ambrosia in the survey area. Since this species was not observed in the survey area, the target species is currently not considered to be present on the Project site. One rare plant species was identified within the survey area, San Diego tarweed (*Deinandra paniculata*), however it is classified as a CNPS Rare Plant Rank 4.2 and is considered a plant of limited distribution or a watch list species. Although San Diego tarweed is considered a rare plant species, it does not have any federal or state protections. Loss of the individuals observed on the Project site would not contribute to a loss of a high-density population of this species and would not be considered significant. A complete list of all plant species observed within the survey area can be found in Attachment B. Recent climate patterns prior to the surveys were not ideal and are considered a limiting factor in the detection of plants on the Project site. Average annual precipitation for Riverside, California is approximately 10.3 inches, which falls as rain (National Oceanic and Atmospheric Administration [NOAA] 2021a). Based on the average rainfall totals for the Riverside Fire Station 3, CA weather station located approximately 18.1 miles from the Project site, 2019 was above average recording 15.6 inches of annual rainfall, 2020 was below average recording 8.8 inches of annual rainfall, and 2021 is below average having recorded 3.1 inches of annual rainfall thus far (NOAA 2021b). If additional special-status plant species are present within the survey area, there is a possibility that these species were either dormant or were unable to germinate, and therefore would not be detectable by the surveyors at the time of the survey.

Thank you for the opportunity to work on your project. If you have any questions regarding the contents of this letter report, please contact me at (909) 307- 0046 or pwasz@ecorpconsulting.com.

CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

SIGNED: _____ DATE: September 26, 2022

Phillip Wasz
Senior Wildlife Biologist
ECORP Consulting, Inc.
215 N. 5th Street
Redlands, CA 92374

Attachments:

Attachment A - Plant Species Compendium
Attachment B - Photo Documentation

Literature Cited

California Department of Fish and Game [CDFG]. 2012. Staff Report on Burrowing Owl Mitigation. State of California, Natural Resources Agency, Department of Fish and Wildlife.

California Department of Fish and Wildlife [CDFW]. 2021. RareFind California Department of Fish and Game Natural Diversity Database (CNDDB). California. Sacramento, CA, California Department of Fish and Wildlife, Biogeographic Data Branch.

ECORP Consulting, Inc. [ECORP, Inc.]. 2021. Biological Technical Report and MSHCP Consistency Analysis for the Menifee 91 Residential Development Project in Menifee, California.

Riverside County Land Management Agency [RCTLMA]. 2021. Western Riverside County Multiple Species Habitat Conservation Plan. Available from: http://rctlma.org/Portals/0/mshcp/volume1/index.html

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_____. 2006. Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan. Available from: https://www.rctlma.org/Portals/3/EPD/consultant/burrowing_owl_survey_instructions.pdf.

Rosenberg, D. K., J. A. Gervais, H. Ober, and D. F. DeSante. 1998. An adaptive management plan for the burrowing owl population at Naval Air Station Lemoore, California, USA. Publication 95, Institute for Bird Populations, P.O. Box 1346, Pt. Reyes Station, CA 94956.

ATTACHMENT A

Plant Species Compendium

SCIENTIFIC NAME	COMMON NAME
ANGIOSPERMS (DICOTYLEDONS)	
APIACEAE	**PARSLEY FAMILY**
Daucus pusillus	Rattlesnake weed
ASTERACEAE	**SUNFLOWER FAMILY**
Baccharis salicifolia	Mule fat
Baccharis sarothroides	Desertbroom baccharis
Bebbia juncea	Sweetbush
*Centaurea melitensis**	Tocalote
Corethrogyne filaginifolia	Common sand aster
Corethrogyne sp.	California aster sp.
Deinandra fasciculata	Clustered tarweed
Deinandra paniculata	San Diego tarweed
Encelia actoni	Acton encelia
Encelia farinosa	Brittlebush
Ericameria sp.	Goldenbush sp.
Gutierrezia sarothrae	Matchweed
Helianthus annuus	Common sunflower
Heterotheca grandiflora	Telegraph weed
Holocarpha virgata	Narrow tarplant
Isocoma menziesii var. vernonioides	Menzies; goldenbush
*Lactuca serriola**	Prickly lettuce
*Oncosiphon pilulifer**	Stinknet
BORAGINACEAE	**BORAGE FAMILY**
Amsinckia sp.	Fiddleneck sp.
BRASSICACEAE	**MUSTARD FAMILY**
*Hirshfeldia incana**	Shortpod mustard
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
*Salsola tragus**	Russian thistle
CONVOLVULACEAE	**MORNINGGLORY FAMILY**
*Convolvulus arvensis**	Orchard morningglory
EUPHORBIACEAE	**SPURGE FAMILY**
Croton setiger	Turkey mullein
Euphorbia albomarginata	Rattlesnake sandmat
*Euphorbia maculata**	Spotted spurge
Euphorbia polycarpa	Smallseed sandmat
FABACEAE	**PEA AND LEGUME FAMILY**
Acmispon glaber	Deerweed
Astragalus cf. pomonensis	Pomona milk vetch
Astragalus sp.	Milk-vetch
GERANIACEAE	**GERANIUM FAMILY**
Erodium botrys	Big heron bill
*Erodium cicutarium**	Coastal heron's bill
LAMIACEAE	**MINT FAMILY**
Trichostema lanceolatum	Vinegarweed

MALVACEAE	**MALLOW FAMILY**
Malacothamnus fasciculatus	Chaparral bush mallow
PLANTAGINACEAE	**PLANTAIN FAMILY**
Plantago erecta	California plantain
POLYGONACEAE	**BUCKWHEAT FAMILY**
Eriogonum fasciculatum	California buckwheat
SOLANACEAE	**NIGHTSHADE FAMILY**
Datura wrightii	Jimsonweed
*Nicotiana glauca**	Tree tobacco
TAMARICACEAE	**TAMARISK FAMILY**
*Tamarix ramosissima**	Tamarisk
ANGIOSPERMS (MONOCOTYLEDONS)	
POACEAE	**GRASS FAMILY**
*Avena fatua**	Wild oat
*Bromus madritensis**	Foxtail chess
*Bromus diandrus**	Bromegrass
Festuca sp.	Fescue
THEMIDACEAE	**ASPARAGUS FAMILY**
Dichelostemma capitatum	Blue dicks

* Not native to California.

ATTACHMENT B

Photo Documentation

Photo 1: Disturbed wild oat and annual brome grassland on Project site, facing west

Photo 2: Project site from northern boundary, facing east

Photo 3: Project site, vehicle tracks, and dirt roads throughout the site, facing south

Photo 4: Project site from northeast corner of Project site, facing southwest

Photo 5: Vehicle tracks through project site, facing west

Photo 6: Dump site along the southern boundary of the Project, facing northeast

Photo 7: Dump site and disturbed California buckwheat scrub in northern Project buffer, facing northwest

Photo 8: Dump site along the western Project boundary, facing northwest

Photo 9: Mule fat thickets in buffer between Project parcels, facing north.

Photo 10: Disturbed California buckwheat scrub, facing west.

Photo 11: San Diego tarweed observed in survey area during survey.

Photo 12: Close up image of San Diego tarweed observed during survey.