

Appendix G

90-Day Letter Report of Wet Season
Vernal Pool Branchiopod Sampling

13 September 2022

Ms. Stacy Love
Recovery Permit Coordinator
U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, CA 93003

Re: 90-Day Letter Report of Wet Season Vernal Pool Branchiopod Sampling for the OLC 3 Perris Project in Riverside County, California; Conducted Under the Endangered Species Act Section 10(A)(1)(A) Permit # TE-038716-5.

Dear Ms. Love:

The following report has been prepared to submit primary survey data and results of the 2022 wet season sampling for vernal pool branchiopods listed under the federal Endangered Species Act of 1973 (ESA) on the OLC 3 Perris Project in Riverside County, California.

SUMMARY

Frank Wegscheider conducted wet season surveys for federally endangered and threatened branchiopods at the OLC 3 Perris Project in Riverside County, California. Survey sampling was authorized under the ESA Section 10(a)(1)(A) and was conducted by Frank Wegscheider (permit #TE-038716-5) in accordance with the U.S. Fish and Wildlife Service (USFWS) Survey Guidelines for the Listed Large Branchiopods (USFWS, 2015). One large detention basin was monitored for ponding within the Study Area (SA). The basin never became inundated during the 2022 wet season. Hence, no sampling for listed branchiopods was possible.

STUDY AREA (SA) DESCRIPTION AND LOCATION

The 40-acre Project Site (Site) is situated within Section 5 Township 4S Range 3W of the City of Perris in Riverside County. More specifically, the Project site is situated north of the Ramona Expressway, east of Perris Boulevard, and south of Perry Street, in the City of Perris, Riverside County, California (Figures 1 and 2; Regional Location Map and Aerial Map, respectively). These surveys are being conducted as part of an Environmental Due Diligence Report. The purpose of this study, conducted in coordination with Michael Baker International (MBI), is to document the existing biological resources and assess the potential biological and regulatory constraints associated with development of the Project Site as outlined by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The project will include office space, 85 truck docks, and truck and passenger car parking. A 7.54-acre future commercial site is located at the southeast corner of the property.

PROJECT SITE CONDITIONS

Michael Baker biologists conducted a preliminary field survey on August 26, 2021 to confirm existing site conditions and identify the presence of any sensitive biological resources that could pose a constraint to future development within the project site. Site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site vegetation communities, and the presence of potentially regulated jurisdictional features (e.g., drainages, streambed) were noted.

Natural habitats within the project site have been eliminated due to routine weed abatement activities (i.e., disking, tilling), resulting in heavily disturbed and compacted surface soils. As such, native vegetation communities do not occur. The project site is primarily comprised of disturbed habitat that is dominated by ruderal/weedy, low-growing plant species. A detention basin was observed within the western portion of the project site; the detention basin appears to undergo routine weed abatement (i.e., disking, tilling) and illegal trash dumping was also observed throughout. Industrial warehouses surround the project site to the north, east, and west and commercial land uses are located to the south of the project site.

HYDROLOGICAL MONITORING

Frank Wegscheider commenced hydrological monitoring of the SA in October 2021. No inundation at the basin was observed throughout the 2022 wet season, although monitoring continued through late June 2022. Table 1 below displays the 2021-2022 monthly rainfall totals.

TABLE 1
2021-2022 MONTHLY RAINFALL TOTALS FOR THE
OLC 3 PERRIS PROJECT

MONTH	RAINFALL (in inches)
October	1.07
November	0
December	3.03
January	0.10
February	1.25
March	0.87
April	0.37
May	0
June	0.06

Source: <https://weathercurrents.com/hemetArchive2021.do>
<https://weathercurrents.com/hemetArchive2022.do>

BRANCHIOPOD SURVEYS

Frank Wegscheider [(FW) permit #TE-038716-5] monitored rainfall events at the Site to conduct protocol wet season fairy shrimp surveys at the SA commencing on 20 October 2021 after USFWS had granted permission to begin dry and wet season surveys. The sampled basin was photographed (Appendix) and mapped using field-collected global positioning system (GPS) coordinates during the wet season study. The fairy shrimp sampling site is located within the U.S. Geological Survey (USGS) 7.5-minute Sunnymead quadrangle topographic map.

Depression Sampled

One detention basin was identified by Michal Baker biologists within the Site. The GPS center point of the approximately 1960 m² detention basin is located at 33.846743° N 117.225577° W and is depicted in the Fairy Shrimp Detention Basin Map (Figure 3).



Legend

-  Project Boundary
-  Detention Basin

Source: County of Riverside, Nearmap



Figure 3

Sampling Timelines

On 8 October 2021, USFWS was initially notified of Intent-to-Perform dry and wet season surveys for ESA listed branchiopods at the Site. On 19 October USFWS Inland Division Supervisor Karin Cleary-Rose authorized commencement of dry and wet season surveys at the Site via email.

The first rains of the 2022 wet season occurred during October 2021. However, no ponding was noted at this time. The next substantial rainfall events (3.03”) occurred during December 2021—again no inundation of the detention basin occurred. Monthly rainfall data, as recorded by the Weather Currents.com, are provided in Table 1.

Site visit dates to verify inundation comprise the following: 12/15, 12/22, 12/28, 1/04, 1/11, 1/18, 1/25, 2/26, 3/05, 3/12, 3/19, 3/31, 4/09, 4/16, 4/23, and 4/30 (2022).

METHODS

Wet Season sampling

Wet season sampling followed the USFWS Survey Guidelines for the Listed Large Branchiopods to Permittees for Recovery Permits Under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods. In short, pools are considered inundated once they have retained 3 cm of standing water for a period exceeding 24 hours. Pools are then sampled within 3 days of inundation and then re-sampled every 7 days thereafter until they are desiccated or until the pool has experienced 120 days of continuous inundation. If pools dry and then refill, sampling is reinitiated within 8 days of refilling.

The detention basin was photographed (see Appendix I) and the location was recorded using a Garmin hand-held GPS receiver. At each subsequent visit the air temperature, wind speed and other weather conditions were recorded.

RESULTS OF 2022 WET SEASON STUDY

One detention basin identified within the SA was monitored for inundation events to commence wet season sampling for the presence of listed fairy shrimp. No inundation of the detention basin occurred during the 2022 wet season. Hence, wet season sampling was not possible, and the absence of listed fairy shrimp could not be substantiated. Selected photographs of the SA and the detention basin are provided in the Appendix I.

DISCUSSION

Seasonal/Vernal Pools

Vernal pools are characterized by shallow, ephemeral wetlands with very specific hydrologic characteristics and possess a unique vegetative community (Zedler, 1987). As such, they are habitat for specific types of wildlife including fairy shrimp. The basin sampled during this suite of surveys did not support typical vernal pool vegetation. Hence, this feature was considered to be seasonal pools/depression and not a true vernal pool. However, branchiopods—including listed fairy shrimp—are often found in seasonal depressions not meeting the criteria of a typical vernal pool.

Fairy Shrimp Species of Concern

Three species of anostracan brachiopods listed for protection under the ESA have the potential to occur at or near the SA: the Riverside fairy shrimp *Streptocephalus woottoni*, the vernal pool fairy shrimp *Branchinecta lynchi*, and the San Diego fairy shrimp *Branchinecta sandiegoensis*, (Eriksen and Belk, 1999).

The Riverside fairy shrimp is federally listed as endangered (Federal Register, 1993a). This species lives in warm-water, long-lived pools with low to moderate total dissolved solids (TDS) generally with a depth greater than 30 cm (Eng, Belk, and Eriksen, 1990; Hathaway and Simovich, 1996; Eriksen and Belk, 1999), although it has been found in stock ponds with relatively high TDS (F. Wegscheider, unpublished data). None of the onsite depressions appear to possess sufficient depth or duration to support Riverside fairy shrimp.

The federally threatened vernal pool fairy shrimp *Branchinecta lynchi* (Federal Register, 1993b) lives in short-lived cool-water pools that may exist for only three weeks in the spring, with low to moderate TDS (Eriksen and Belk, 1999). Generally, they exist in vernal pools (79 percent), although they are sometimes found in a range of natural and artificially created ephemeral habitats such as alkali pools and seasonal drainages (Federal Register, 2003). The vernal pool fairy shrimp generally hatches early in the season when water temperatures are below 10 degrees Celsius (Gallagher, 1996; Helm, 1998) and may cohabit with the versatile fairy shrimp. However, it is found in very low densities, typically comprising perhaps only 1 to 5 percent of the total containment population.

The federally listed San Diego fairy shrimp *Branchinecta sandiegoensis* (USFWS, 1997) typically exists in cool-water, short-lived pools (Eriksen and Belk, 1999), the same conditions that *Branchinecta lindahli* thrives in. Cysts hatch in 3-4 days at 10-15° C; hatching will not occur at warmer temperatures and larvae will then mature in 10-20 days as temperatures fluctuate around 20° C (Hathaway & Simovich, 1996). The fairy shrimps generally die after ca. one month, but subsequent cohorts can hatch after, following rain events (USFWS, 2000). The site lies outside of the current range of

B. sandiegonensis (Fugate, 1993), but conditions are likely suitable for hatching and maturation of the San Diego fairy shrimp.

Widespread and Common Fairy Shrimp Species

The versatile fairy shrimp, which ranges throughout this area, is not a concern since it is a widespread and common brachiopod, and not an ESA listed species.

Additional Studies Recommended

Based on the USFWS protocol for fairy shrimp surveys, one wet season survey and one dry season survey completed in accordance with these guidelines and conducted within a 3- year period are required to complete protocol requirements. A 2021 dry season survey with negative findings for listed fairy shrimp cysts in the sampled detention basin has been completed for the 2021 dry season. Due to the absence of inundation of the detention basin, a protocol wet season survey could not be completed for the 2022 wet season. Therefore, a 2023 protocol wet season survey for listed branchiopods should be conducted to fulfill protocol requirements. If you have any questions regarding this report, please contact me via phone at (714) 402-2899 or email at fwegscheider@fullerton.edu. The primary Project contact is Michael Naggar at (951) 551-7730.

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

<hr/>	13 September 2022	TE-038716-5
Frank J. Wegscheider	<hr/> Date	<hr/> Permit No.


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APPENDIX I

**OLC 3 PERRIS PROJECT 2022 WET SEASON
FAIRY SHRIMP SURVEYS PHOTOGRAPHIC DOCUMENTATION**

PHOTOS		
Photo Number	Direction	Descriptions
1	South/ southeast	 <p>Detention basin 12/12/21</p>

2	South/ southeast	
Detention basin 01/04/22		

Photo Number	Direction	Descriptions
3	Northeast	
Detention basin 01/12/22		

4	North/ northeast	 <p data-bbox="412 842 704 875">Detention basin 02/26/22</p>
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Photo Number	Direction	Descriptions
5	North/ northeast	 <p data-bbox="412 1902 704 1938">Detention basin 03/05/22</p>

6	North/ northeast	
Detention basin 03/26/22		

PHOTOS		
Photo Number	Direction	Descriptions
7	North/ northeast	

Detention basin 03/31/22

8

North/
northeast



Detention basin 04/23/22