

GLENN LUKOS ASSOCIATES

Regulatory Services



July 9, 2024

Stacey Love
U.S. Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

SUBJECT: Report of Findings for 2023-2024 Wet-Season Survey for Listed Branchiopods Conducted for the Mead Valley Commerce Center Project, an Approximately 84-Acre Site Located in Mead Valley, Riverside County, California

Dear Ms. Love:

Glenn Lukos Associates, Inc. (GLA) conducted wet-season surveys for listed branchiopods (fairy shrimp) within 21 seasonally ponded features at the Mead Valley Commerce Center Project Site (Property), located in Mead Valley, Riverside County, California. The Project name was changed to Cajalco Commerce Center and all references in this report naming Mead Valley Commerce Center are synonymous with Cajalco Commerce Center.

GLA biologists Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694) along with GLA biologists David Smith and Velvet Park, as supervised trainees, conducted the 2023-2024 wet season survey with the objective of determining the presence or absence of federally-listed Riverside fairy shrimp (*Streptocephalus woottoni*), San Diego fairy shrimp (*Branchinecta sandiegonensis*), and vernal pool fairy shrimp (*Branchinecta lynchi*).

The versatile fairy shrimp (*Branchinecta lindahli*) was detected in three of the 21 features surveyed. No listed branchiopods were detected on site.

I. SITE LOCATION AND DESCRIPTION

The Project site comprises approximately 83.78 acres in the Community of Mead Valley, Riverside County, California [Exhibit 1 – Regional Map] and is located within Section(s) 11, 12, 13, and 14 of Township 4 South, Range 4 West, of the U.S. Geological Survey (USGS) 7.5-minute quadrangle map Steele Peak, California (dated 2021) [Exhibit 2 – Vicinity Map]. The Project site is bordered by Cajalco Road to the north, Decker Road to the west, Seaton Avenue to

the east, Rider Street in the south, with open space and small residential lands to the west and south. Universal Transverse Mercator (UTM) coordinates approximately corresponding to the Property are 475583 mE and 3743891 mN.

The fairy shrimp survey area [Exhibit 3 – Fairy Shrimp Survey Area Map] is generally flat with elevations ranging from approximately 1,600 feet above mean sea level (AMSL) at the northwestern boundary to 1,550 feet AMSL at the southeastern limits of the Project site. All features within the site were unvegetated and located in areas of road ruts and roadway depressions, which were subject to heavy disturbances from off-road vehicle use and residential vehicle access. Depressional features are present throughout the Property, primarily within areas that are heavily disturbed. Although the majority of these features inundated long enough to support suitable habitat for fairy shrimp, most of the features were small in size/depth and were subject to drying down quickly during periods of dry weather (i.e., no significant precipitation) during the 2023-24 wet season.

II. METHODOLOGY

GLA biologist David Moskovitz provided a written notification to commence wet and dry season surveys to the U.S. Fish and Wildlife Service (USFWS), Carlsbad Field Office on September 15 and revised notification on September 20, 2023. One rain event at the end of November 2023, initiated mapping of features on November 20, 2023. No precipitation was recorded between November 20 and the week of December 18, 2023. Storms in late December 2023 and early January 2024, sustained the majority of features through January 12, 2024. All features were observed to be dry on January 18, 2024. A small storm the week of January 22, 2024 inundated the majority of the features again. After heavy rain (4-5 inches) within the site during February 2024, all features were inundated to their maximum extent and inundation continued until March 15, 2024, with only four features (1, 3, 20 and 21) inundated. On March 20, 2024, only one feature (Feature 21) was inundated. All features dried-down again by March 28 and stayed dry until a majority of the features were inundated again on April 4. All features quickly dried down again by April 12, 2024, and remained dry for the rest of the year.

In accordance with the USFWS *Survey Guidelines for the Listed Large Branchiopods* (Survey Guidelines) dated November 13, 2017¹, site visits were conducted within 24 hours of rain events to determine whether features contained a minimum of three centimeters (cm) of ponding. Under typical conditions, sampling commences within seven days of initial ponding. Sampling continued weekly until the feature was dry or had been inundated continuously for 120 days. If dried features were re-inundated, sampling would begin again as above. Sampling for the presence of fairy shrimp was performed using a dip net within representative portions of the

¹ USFWS. *Survey Guidelines for the Listed Large Branchiopods*, Revised: November 13, 2017.

depression bottom, edges, and vertical water column when there was adequate ponding. Specimens were placed into vials, with unique depression information, containing 95% ethanol solution. Specimens were identified through microscopy and using the “Key to California Fairy Shrimps” found in Eriksen and Belk (1999, Revised 2016).² Datasheets are attached as Appendix A.

IV. RESULTS

A total of 21 features were sampled during the 2023-2024 wet season. Of the 21 features sampled, three features supported fairy shrimp. The common, versatile fairy shrimp (*Branchinecta lindahli*) was detected in the three features. No listed species were detected. Table 1 includes the wet season fairy shrimp survey results. Exhibit 4 depicts the fairy shrimp wet season survey results map. Site photographs are depicted in Exhibit 5.

Table 1 Wet Season Fairy Shrimp Survey Results

Pool ID	FAIRY SHRIMP DETECTED	SURFACE AREA MAX (MxM)	DEPTH MAX (cm)	EASTING	NORTHING
1	Yes	7x4	12.0	475190.69	3744079.46
2	Yes	10x4	8.0	475190.20	3744020.22
3	Yes	5x4	12.0	475188.80	3744009.05
4	No	3x4	9.0	475209.79	3743799.46
5	No	7x3	12.0	475210.02	3743795.35
6	No	10x2.5	10.0	475395.97	3744107.33
7	No	2x1.5	12.0	475439.78	3744000.81
8	No	5x4	9.0	475554.40	3743914.01
9	No	2x1	6.0	475560.92	3743906.13
10	No	1x1	9.0	475567.92	3743926.98
11	No	1x1	8.0	475575.19	3743917.36
12	No	1.5x2	7.0	475577.58	3743913.02
13	No	1x1.5	7.0	475583.69	3743899.98
14	No	1x1.5	8.0	475584.21	3743897.30
15	No	1x1	6.0	475584.90	3743890.18
16	No	5x1	8.0	475585.80	3743884.41

² Eriksen, C. and D. Belk. 1999. *Fairy Shrimps of California's Puddles, Pools, and Playas*. Mad River Press, Inc. Eureka, California.

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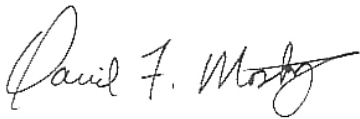
Pool ID	FAIRY SHRIMP DETECTED	SURFACE AREA MAX (MxM)	DEPTH MAX (cm)	EASTING	NORTHING
17	No	4x2	8.0	475584.33	3743882.09
18	No	1x1	7.0	475579.92	3743872.86
19	No	2x2	10.0	475596.39	3743876.14
20	No	2x3	13.0	475583.48	3743873.84
21	No	5x2	15.0	475782.55	3744039.74

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I certify that the information in this survey report and the attached exhibits fully and accurately represent my work. If you have any questions regarding this report, please contact us via email at dmoskovitz@wetlandpermitting.com, at scashin@wetlandpermitting.com, or at cwaterston@wetlandpermitting.com.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "David F. Moskovitz".

Dave Moskovitz
Senior Biologist (PER0010680-0)

A handwritten signature in black ink, appearing to read "Stephanie Cashin".

Stephanie Cashin
Biologist (TE-20280D-0)

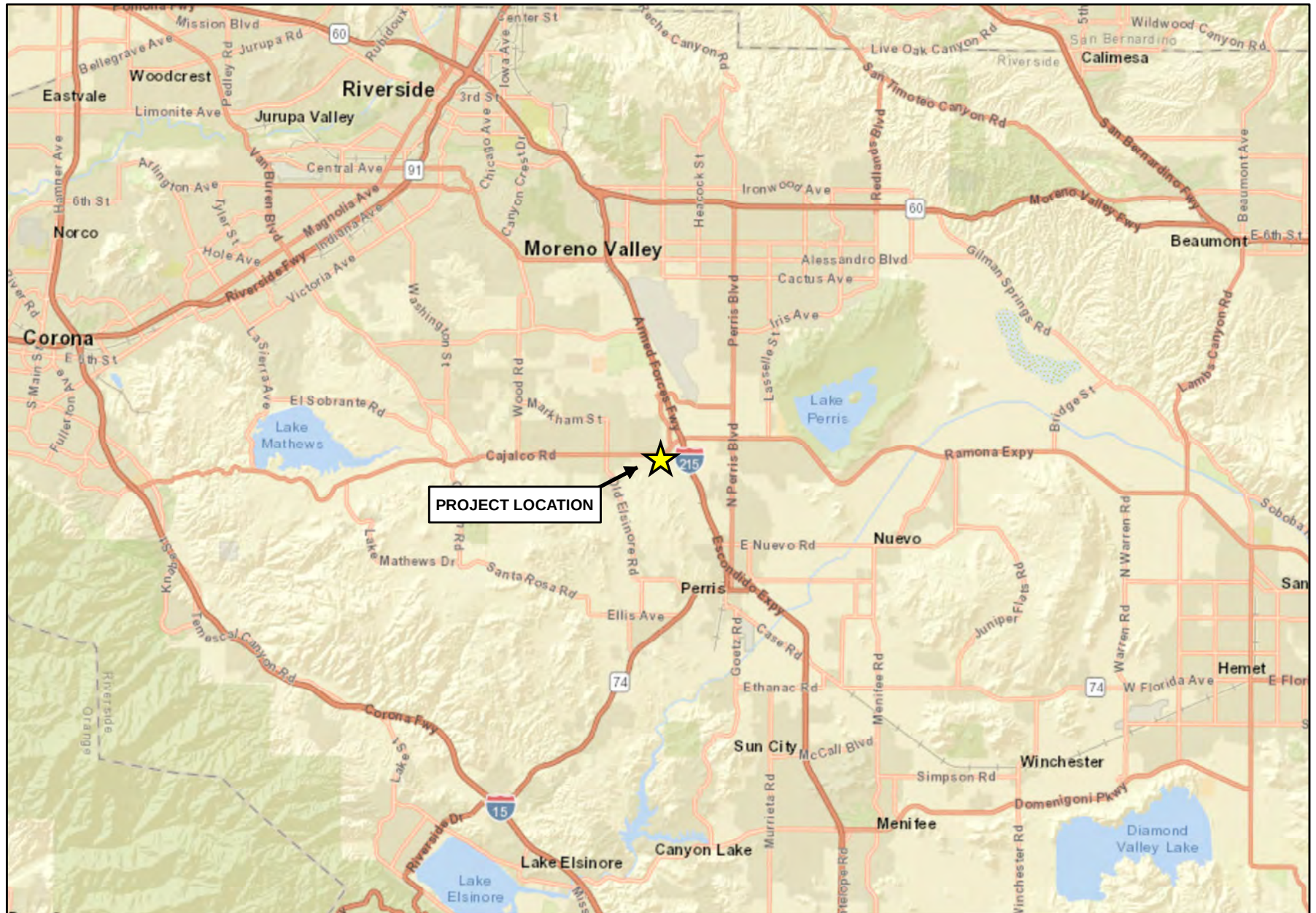
A handwritten signature in black ink, appearing to read "Chris Waterston".

Chris Waterston
Biologist (ESPER-2380694)

Source: ESRI World Street Map



0
2
4
8
Miles



MEAD VALLEY COMMERCE CENTER

Regional Map

GLENN LUKOS ASSOCIATES

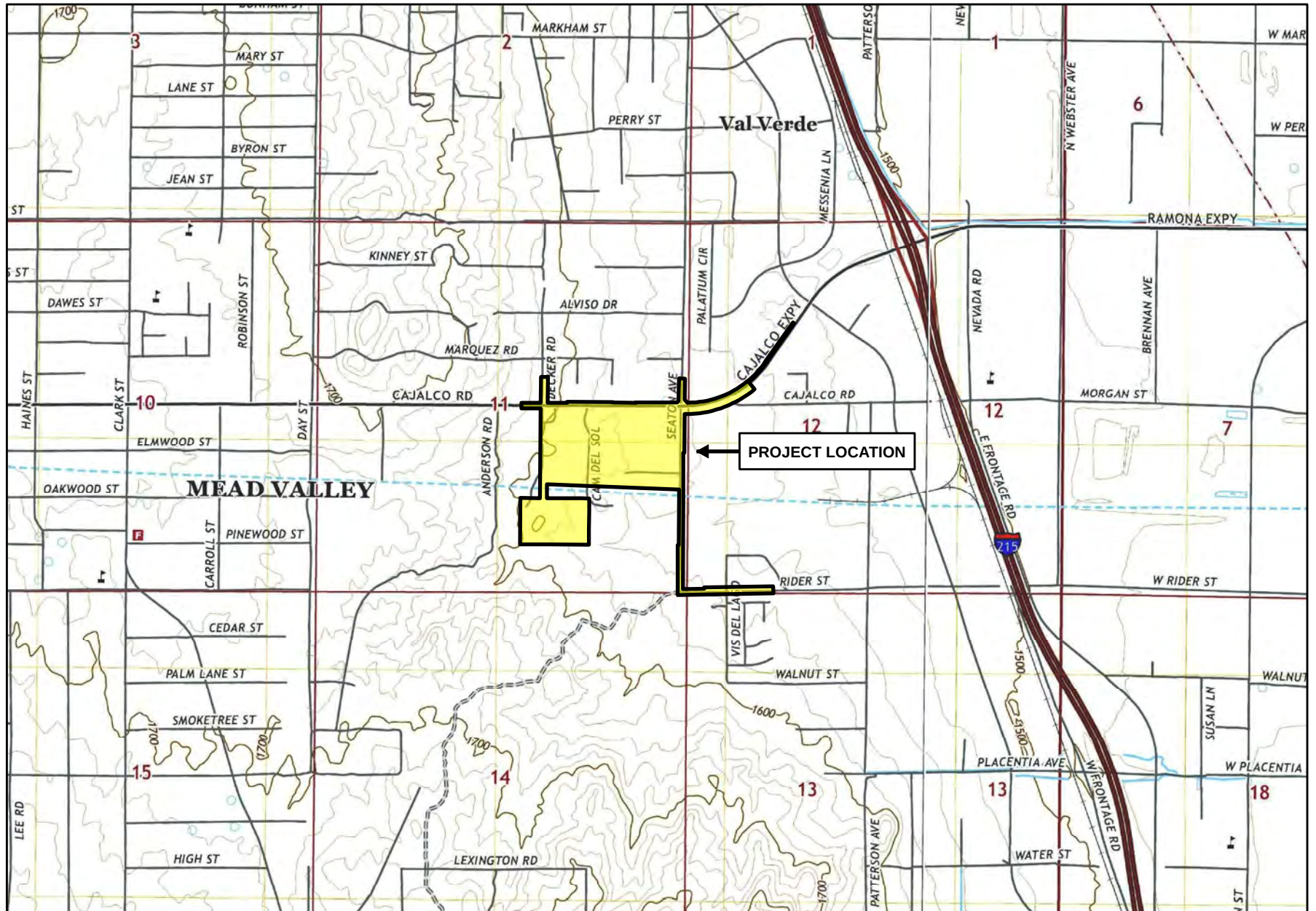
Exhibit 1



Adapted from USGS Steele Peak, CA quadrangle



0 1,000 2,000 4,000
Feet



MEAD VALLEY COMMERCE CENTER

Vicinity Map

GLENN LUKOS ASSOCIATES



Exhibit 2



 Project - Onsite

 Project - Offsite



0 225 450 900
Feet

1 inch = 450 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: May 14, 2024

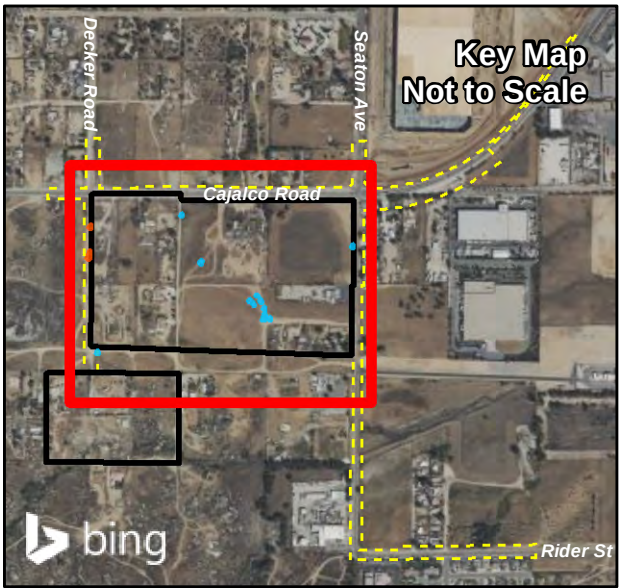
MEAD VALLEY COMMERCE CENTER

2023-2024 Fairy Shrimp Survey Area

GLENN LUKOS ASSOCIATES



Exhibit 3



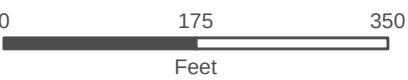
 Project - Onsite

 Project - Offsite

Ponded Features

 Fairy Shrimp Detected

 No Fairy Shrimp Detected



1 inch = 175 feet



Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD 1983 2011
Map Prepared by: B. Gale, GLA
Date Prepared: May 14, 2024

**MEAD VALLEY
COMMERCE CENTER**

2023-2024 Wet Season Fairy Shrimp Survey Results

GLENN LUKOS ASSOCIATES



Exhibit 4



Photograph 1: A view of the project site facing west adjacent to the intersection of Cajalco Road and Seaton Avenue.



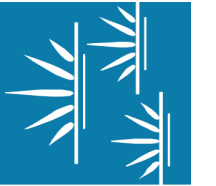
Photograph 2: A view of the vehicle storage and residential lot within the north central portion of the project site.



Photograph 3: A view of the project site facing north within the southern portion of the project site.



Photograph 4: A view of the project site facing west within the southern portion of the project site.





Photograph 1: A view of Feature 2 and 3 facing north during the wet season sampling effort. (3744020.22 N, 475190.20 E, CW, February 15, 2024, *B. lindahli* present).



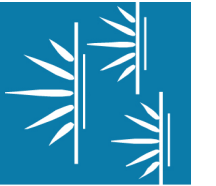
Photograph 2: A view of Features 16-20 facing south during the wet season sampling effort. (3743884.40 N, 475585.79 E, CW, February 15, 2024).



Photograph 3: A view of Features 16-20 facing north during the wet season sampling effort (3743884.40 N, 475585.79 E, SC, March 7, 2024).



Photograph 4: A view of Feature 21 (along Seaton Avenue) during the wet season sampling effort. (3744039.74 N, 475782.55 E CW, March 7, 2024).



Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 11/20/2023	Time:	Weather Conditions: 8mph																		
Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	15.6	14.4		5.0		6 x 4												D, TT	Road rut
2	3744020.22, 475190.20	15.6	14.4		4.0		9 x 2												D, TT	Road rut
3	3744009.05, 475188.80	15.6	14.4		5.0		3 x 1.5												D, TT	Road rut
4	3743799.46, 475209.79				0.0		0													Road rut, Dry
5	3743795.35, 475210.02				0.0		0													Road rut, Dry
6	3744107.33, 475395.97	15.6	14.4		3.0		5 x 1.5												D, TT	
7	3744000.81, 475439.78	15.6	14.4		3.0		1.5 x 1												D, TT	
8	3743914.01, 475554.40	15.6	14.4		2.0		4 x 1												D, TT	
9	3743906.13, 475560.92				0.0		0													Road rut, Dry
10	3743926.98, 475567.92				0.0		0													Road rut, Dry
11	3743917.36, 475575.19				0.0		0													Road rut, Dry
12	3743913.02, 475577.58				0.0		0													Road rut, Dry
13	3743899.98, 475583.69				0.0		0													Road rut, Dry
14	3743897.30, 475584.21				0.0		0													Road rut, Dry
15	3743890.18, 475584.90				0.0		0													Road rut, Dry
16	3743884.41, 475585.80				0.0		0													Road rut, Dry
17	3743882.09, 475584.33	15.6	14.4		4.0		3 x 1												D, TT	
18	3743872.86, 475579.92				0.0		0													Road rut, Dry
19	3743876.14, 475596.39				0.0		0													Road rut, Dry
20	3743873.84, 475583.48	15.6	14.4		8.0		3 x 2												D, TT	
21	3744039.74, 475782.55				0.0		0													Road rut, Dry

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 12/22/2023	Time:	Weather Conditions: 0-1mph, overcast
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Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	13.3	14.4		9.0		4x6													Road rut
2	3744020.22, 475190.20	13.3	14.4		8.0		3x9													Road rut
3	3744009.05, 475188.80	13.3	14.4		9.0		4.5x3.5													Road rut
4	3743799.46, 475209.79	13.3	14.4		8.0		3x4													Road rut
5	3743795.35, 475210.02	13.3	14.4		6.0		7x3													Road rut
6	3744107.33, 475395.97	13.3	14.4		8.0		1.5x2.5													Road rut
7	3744000.81, 475439.78	13.3	14.4		7.0		2x1.5													Road rut
8	3743914.01, 475554.40	13.3	13.3		9.0		5x4													Road rut
9	3743906.13, 475560.92	13.3	13.3		6.0		2x1													Road rut
10	3743926.98, 475567.92	13.3	13.3		7.0		1x1													Road rut
11	3743917.36, 475575.19	13.3	13.3		8.0		.25x.25													Road rut
12	3743913.02, 475577.58	13.3	13.3		7.0		1.5x2													Road rut
13	3743899.98, 475583.69	13.3	13.3		4.0		.5x1													Road rut
14	3743897.30, 475584.21	13.3	13.3		4.0		1x1.5													Road rut
15	3743890.18, 475584.90	13.3	13.3		4.0		1x1													Road rut
16	3743884.41, 475585.80	13.3	13.3		8.0		5x1													Road rut
17	3743882.09, 475584.33	13.3	13.3		8.0		3x1													Road rut
18	3743872.86, 475579.92	13.3	14.4		5.0		1x1													Road rut
19	3743876.14, 475596.39	13.3	14.4		7.0		2x1													Road rut
20	3743873.84, 475583.48	13.3	14.4		13.0		3x2													Road rut
21	3744039.74, 475782.55	13.3	14.4		8.5		10x11													Road rut

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 01/05/2024 Time: Weather Conditions: 0-1mph, overcast

Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	10	10		8.0		3x3.2													Road rut
2	3744020.22, 475190.20	10	10.1		7.0		9x3													Road rut
3	3744009.05, 475188.80	10	10		5.0		.25x.2													Road rut
4	3743799.46, 475209.79	10	10		7.0		3x2								x					Road rut
5	3743795.35, 475210.02	10	10		9.0		4x3								x					Road rut
6	3744107.33, 475395.97	10	10.1		10.0		8x3													Road rut
7	3744000.81, 475439.78	10	10.1		5.0		2x 1.25													Road rut
8	3743914.01, 475554.40	10	10		5.0		2.5x1.5													Road rut
9	3743906.13, 475560.92	10	10		3.5		.5x.25													Road rut
10	3743926.98, 475567.92	10	10.7		3.0		2x1.5													Road rut
11	3743917.36, 475575.19	10	10.1		5.0		.25x.25													Road rut
12	3743913.02, 475577.58				0.0															Road rut, dry
13	3743899.98, 475583.69	8.9	10.1		4.0		.25x.25													Road rut
14	3743897.30, 475584.21	8.9	10.1		3.0		.25x.25													Road rut
15	3743890.18, 475584.90				0.0															Road rut, dry
16	3743884.41, 475585.80				0.0															Road rut, dry
17	3743882.09, 475584.33	8.9	10.1		5.0		1x2.5													Road rut
18	3743872.86, 475579.92	8.9	10.1		7.0		1x1													Road rut
19	3743876.14, 475596.39				0.0															Road rut, dry
20	3743873.84, 475583.48	8.9	10		11.0		1.5x 2.5													Road rut
21	3744039.74, 475782.55	8.9	10		2.0		1.5x.75													Road rut

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 01/12/2024	Time:	Weather Conditions: 0-1mph, clear
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Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	13.3	15.4		7.0		6x3													Road rut
2	3744020.22, 475190.20				0.0															Road rut, dry
3	3744009.05, 475188.80		15.6		3.0		.5x1													Road rut
4	3743799.46, 475209.79				0.0															Road rut, dry
5	3743795.35, 475210.02				0.0															Road rut, dry
6	3744107.33, 475395.97		11.6		4.0		4x1													Road rut
7	3744000.81, 475439.78				0.0															Road rut, dry
8	3743914.01, 475554.40				0.0															Road rut, dry
9	3743906.13, 475560.92				0.0															Road rut, dry
10	3743926.98, 475567.92				0.0															Road rut, dry
11	3743917.36, 475575.19				0.0															Road rut, dry
12	3743913.02, 475577.58				0.0															Road rut, dry
13	3743899.98, 475583.69				0.0															Road rut, dry
14	3743897.30, 475584.21				0.0															Road rut, dry
15	3743890.18, 475584.90				0.0															Road rut, dry
16	3743884.41, 475585.80				0.0															Road rut, dry
17	3743882.09, 475584.33				0.0															Road rut, dry
18	3743872.86, 475579.92				0.0															Road rut, dry
19	3743876.14, 475596.39				0.0															Road rut, dry
20	3743873.84, 475583.48		11.1		6.0		2x1													Road rut
21	3744039.74, 475782.55				0.0															Road rut, dry

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 01/18/2024	Time:	Weather Conditions: 0-1mph, overcast
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Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	10.5																		Road rut, dry
2	3744020.22, 475190.20																			Road rut, dry
3	3744009.05, 475188.80																			Road rut, dry
4	3743799.46, 475209.79																			Road rut, dry
5	3743795.35, 475210.02																			Road rut, dry
6	3744107.33, 475395.97																			Road rut, dry
7	3744000.81, 475439.78																			Road rut, dry
8	3743914.01, 475554.40																			Road rut, dry
9	3743906.13, 475560.92																			Road rut, dry
10	3743926.98, 475567.92																			Road rut, dry
11	3743917.36, 475575.19																			Road rut, dry
12	3743913.02, 475577.58																			Road rut, dry
13	3743899.98, 475583.69																			Road rut, dry
14	3743897.30, 475584.21																			Road rut, dry
15	3743890.18, 475584.90																			Road rut, dry
16	3743884.41, 475585.80																			Road rut, dry
17	3743882.09, 475584.33																			Road rut, dry
18	3743872.86, 475579.92																			Road rut, dry
19	3743876.14, 475596.39																			Road rut, dry
20	3743873.84, 475583.48																			Road rut, dry
21	3744039.74, 475782.55																			Road rut, dry

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLI = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 01/26/2024	Time:	Weather Conditions: 0-4mph, overcast to clear
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Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	14.0	14.0		11.0		4x6													Road rut
2	3744020.22, 475190.20	16.7	14.0		6.5		10x4													Road rut
3	3744009.05, 475188.80	16.7	14.0		5.0		5x3.5													Road rut
4	3743799.46, 475209.79	14.0	14.0		6.0		1x2.5													Road rut
5	3743795.35, 475210.02	17.0	14.0		7.0		4x1.25													Road rut
6	3744107.33, 475395.97	16.7	14.0		7.0		8x1													Road rut
7	3744000.81, 475439.78	16.7	14.0		8.0		1x2.5													Road rut
8	3743914.01, 475554.40	16.7	13.5		5.0		2x.5													Road rut
9	3743906.13, 475560.92	0.0	0.0		0.0															Road rut, dry
10	3743926.98, 475567.92	16.7	13.7		3.0		1 X.25													Road rut
11	3743917.36, 475575.19	16.7	14.0		3.0		.25x.25													Road rut
12	3743913.02, 475577.58	16.7	14.0		5.0		2x.5													Road rut
13	3743899.98, 475583.69	16.7	14.0		3.0		.25x.25													Road rut
14	3743897.30, 475584.21	16.7	14.0		5.0		1x1, 1x.25													Road rut, 2 small pools
15	3743890.18, 475584.90	14.0	14.0		3.0		1x0.25													Road rut
16	3743884.41, 475585.80	14.0	14.0		4.0		1x0.5, 0.25x0.2, 0.2x0.1													Road rut, now 3 small pools
17	3743882.09, 475584.33	14.0	14.0		6.0		4x1													Road rut
18	3743872.86, 475579.92	14.0	14.0		3.5		0.2x0.2													Road rut
19	3743876.14, 475596.39	0.0	0.0		0.0															Road rut, dry
20	3743873.84, 475583.48	14.0	14.0		10.5		2.25x1.25													Road rut
21	3744039.74, 475782.55	14.6	13.0		12.0		5x2													Road rut

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 02/08/2024	Time:	Weather Conditions: 0-2mph, part to clear
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Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects				Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	19.0	16.0		8.0		6.5x4	}										Road rut, single female detected, no sample	
2	3744020.22, 475190.20	19.0	16.0		7.0		3x8											Road rut	
3	3744009.05, 475188.80	19.0	16.0		9.0		4x3											Road rut	
4	3743799.46, 475209.79																	Road rut, dry	
5	3743795.35, 475210.02																	Road rut, dry	
6	3744107.33, 475395.97																	Road rut, dry	
7	3744000.81, 475439.78																	Road rut, dry	
8	3743914.01, 475554.40																	Road rut, dry	
9	3743906.13, 475560.92																	Road rut, dry	
10	3743926.98, 475567.92																	Road rut, dry	
11	3743917.36, 475575.19																	Road rut, dry	
12	3743913.02, 475577.58																	Road rut, dry	
13	3743899.98, 475583.69																	Road rut, dry	
14	3743897.30, 475584.21																	Road rut, dry	
15	3743890.18, 475584.90																	Road rut, dry	
16	3743884.41, 475585.80	16.0	10.0		3.0		1x0.5, 0.25x0.25											Road rut, now 3 small pools	
17	3743882.09, 475584.33	16.0	10.0		4.0		3x0.75											Road rut	
18	3743872.86, 475579.92				0.0													Road rut, dry	
19	3743876.14, 475596.39																	Road rut, dry	
20	3743873.84, 475583.48	16.0	10.0		7.5		2x1											Road rut	
21	3744039.74, 475782.55	16.0	10.0		5.0		4x1											Road rut	

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 02/15/2024 Time: Weather Conditions: 0-2mph, part to clear

Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae		
1	3744079.46, 475190.69	19.0	16.0		8.0		6.5x4	}											Road rut, single female detected, no sample
2	3744020.22, 475190.20	19.0	15.0		4.0		8x1	x											Road rut, 1 male, <i>B. lindahli</i>
3	3744009.05, 475188.80	19.0	14.9		7.0		4x2												Road rut
4	3743799.46, 475209.79		0.0		0.0														Road rut, dry
5	3743795.35, 475210.02		0.0		0.0														Road rut, dry
6	3744107.33, 475395.97	19.0	16.0		6.0		6x1												Road rut
7	3744000.81, 475439.78	18.0	16.0		6.0		.25x1												Road rut
8	3743914.01, 475554.40		0.0		0.0														Road rut, dry
9	3743906.13, 475560.92		0.0		0.0														Road rut, dry
10	3743926.98, 475567.92		0.0		0.0														Road rut, dry
11	3743917.36, 475575.19		0.0		0.0														Road rut, dry
12	3743913.02, 475577.58		0.0		0.0														Road rut, dry
13	3743899.98, 475583.69		0.0		0.0														Road rut, dry
14	3743897.30, 475584.21		0.0		0.0														Road rut, dry
15	3743890.18, 475584.90		0.0		0.0														Road rut, dry
16	3743884.41, 475585.80	16.0	14.3		0.1		0.1x0.1												Road rut, now 1 small pool
17	3743882.09, 475584.33	16.0	14.3		3.0		1x0.5												Road rut
18	3743872.86, 475579.92		0.0		0.0														Road rut, dry
19	3743876.14, 475596.39		0.0		0.0														Road rut, dry
20	3743873.84, 475583.48	16.0	14.3		6.0		1x1												Road rut
21	3744039.74, 475782.55	16.0	10.0		5.0		4x1												Road rut

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 02/22/2024 Time: Weather Conditions: 0-2mph, foggy to overcast, rained last 3 days

Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	14.0	14.3		12.0		7x2.5	}												Road rut, water mites, too small to sample
2	3744020.22, 475190.20	14.0	14.6		8.0		9x2.25													Road rut
3	3744009.05, 475188.80	14.0	14.6		8.0		5x4													Road rut
4	3743799.46, 475209.79	14.0	14.6		9.0		3x3.5													Road rut
5	3743795.35, 475210.02	14.0	14.6		9.0		5x4.5													Road rut
6	3744107.33, 475395.97	13.8	14.0		10.0		10x2.5													Road rut
7	3744000.81, 475439.78	14.0	14.3		12.0		1x1.25													Road rut
8	3743914.01, 475554.40	13.8	14.3		7.0		2x.25													Road rut
9	3743906.13, 475560.92	13.8	14.3		6.0		.5x.25													Road rut
10	3743926.98, 475567.92	13.8	14.3		6.0		1x.3													Road rut
11	3743917.36, 475575.19	13.8	14.3		6.0		1x.25													Road rut
12	3743913.02, 475577.58	13.8	14.3		5.0		1.5x1.5													Road rut
13	3743899.98, 475583.69	13.8	14.3		7.0		1x1.5													Road rut
14	3743897.30, 475584.21	13.8	14.3		8.0		1x0.5													Road rut
15	3743890.18, 475584.90	13.8	14.3		6.0		.75x.25													Road rut
16	3743884.41, 475585.80	13.8	14.6		6.9		3x1, 2x1, 1x0.5													Road rut
17	3743882.09, 475584.33	13.8	14.6		7.0		4x2													Road rut
18	3743872.86, 475579.92	13.8	14.6		7.0		1x0.5													Road rut
19	3743876.14, 475596.39	13.8	14.3		10.0		2x2													Road rut
20	3743873.84, 475583.48	13.8	14.6		12.0		2x3													Road rut
21	3744039.74, 475782.55	14.0	13.2		15.0		3x1.5													Road rut

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 02/28/2024 Time: Weather Conditions: 0-1mph, foggy to clear

Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	13.3	9.2		7.0		4x5.5	6x												Road rut, 1 small male, <i>B. lindahli</i>
2	3744020.22, 475190.20	0.0	10.5		3.0		8x1	1s												Road rut, small males, too small to identify
3	3744009.05, 475188.80	0.0	10.3		9.0		2.25x4	1s												Road rut, small males, too small to identify
4	3743799.46, 475209.79	0.0	0.0		0.0															Road rut, dry
5	3743795.35, 475210.02	12.0	12.3		4.0		.5x.5													Road rut
6	3744107.33, 475395.97	11.7	12.0		6.0		7.5x.5													Road rut
7	3744000.81, 475439.78	11.7	12.0		5.0		.2x.5													Road rut
8	3743914.01, 475554.40	0.0	0.0		0.0															Road rut, dry
9	3743906.13, 475560.92	12.0	10.8		3.0		1x.25													Road rut
10	3743926.98, 475567.92	0.0	0.0		0.0															Road rut, dry
11	3743917.36, 475575.19	0.0	0.0		0.0															Road rut, dry
12	3743913.02, 475577.58	0.0	0.0		0.0															Road rut, dry
13	3743899.98, 475583.69	0.0	0.0		0.0															Road rut, dry
14	3743897.30, 475584.21	0.0	0.0		0.0															Road rut, dry
15	3743890.18, 475584.90	0.0	0.0		0.0															Road rut, dry
16	3743884.41, 475585.80	11.8	11.0		0.0		0.5 x 0.5													Road rut
17	3743882.09, 475584.33	11.8	11.0		3.0		0.5 x 0.5													Road rut
18	3743872.86, 475579.92	0.0	0.0		0.0															Road rut, dry
19	3743876.14, 475596.39	0.0	0.0		0.0															Road rut, dry
20	3743873.84, 475583.48	11.8	10.5		10.0		2 x 1													Road rut
21	3744039.74, 475782.55	11.7	10.5		8.0		2.5x1													Road rut

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 03/07/2024 Time: Weather Conditions: 0-2mph, part cloud, rained yesterday 0.5-0.75in

Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	20.5	19.5		12.0		7x2.5	6x												Road rut, 2 males collected, <i>B. lindahli</i>
2	3744020.22, 475190.20	20.3	19.3		8.0		3x10													Road rut
3	3744009.05, 475188.80	0.0	0.0		12.0		5x4	1s												Road rut, 1 male, <i>B. lindahli</i>
4	3743799.46, 475209.79	19.3	20.3		9.0		4x4													Road rut
5	3743795.35, 475210.02	0.0	19.3		12.0		5x3													Road rut
6	3744107.33, 475395.97	20.5	19.5		10.0		10x2.5													Road rut
7	3744000.81, 475439.78	20.5	19.4		12.0		1x1.25													Road rut
8	3743914.01, 475554.40	20.6	19.5		6.0		2x.25													Road rut
9	3743906.13, 475560.92	20.5	19.5		5.0		.5x.25													Road rut
10	3743926.98, 475567.92	20.6	19.5		9.0		1x.3													Road rut
11	3743917.36, 475575.19	20.6	19.4		8.0		1x.25													Road rut
12	3743913.02, 475577.58	20.6	19.5		7.0		1.5x1.5													Road rut
13	3743899.98, 475583.69	20.6	19.5		6.0		1x1.5													Road rut
14	3743897.30, 475584.21	20.6	19.8		5.0		1x0.5													Road rut
15	3743890.18, 475584.90	20.6	19.6		6.0		.75x.25													Road rut
16	3743884.41, 475585.80	20.6	19.3		6.0		3x1, 2x1, 1x0.5													Road rut
17	3743882.09, 475584.33	20.6	19.5		6.0		4x2													Road rut
18	3743872.86, 475579.92	20.4	19.6		5.0		1x0.5													Road rut
19	3743876.14, 475596.39	20.4	19.6		8.0		2x2													Road rut
20	3743873.84, 475583.48	20.6	19.3		10.0		2x3													Road rut
21	3744039.74, 475782.55	20.4	19.3		14.0		3x1.5													Road rut

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 03/15/2024	Time:	Weather Conditions: 0-5mph, part cloud
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Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	15.0	17.0		7.5		3X3	6x												Road rut, <i>B. lindahli</i>
2	3744020.22, 475190.20	0.0	0.0		0.0															Road rut, dry
3	3744009.05, 475188.80	0.0	17.0		4.0		1X3	1s												Road rut, <i>B. lindahli</i>
4	3743799.46, 475209.79																			Road rut, dry
5	3743795.35, 475210.02																			Road rut, dry
6	3744107.33, 475395.97																			Road rut, dry
7	3744000.81, 475439.78	0.0	0.0		0.0															Road rut, dry
8	3743914.01, 475554.40																			Road rut, dry
9	3743906.13, 475560.92																			Road rut, dry
10	3743926.98, 475567.92																			Road rut, dry
11	3743917.36, 475575.19																			Road rut, dry
12	3743913.02, 475577.58																			Road rut, dry
13	3743899.98, 475583.69																			Road rut, dry
14	3743897.30, 475584.21																			Road rut, dry
15	3743890.18, 475584.90																			Road rut, dry
16	3743884.41, 475585.80																			Road rut, dry
17	3743882.09, 475584.33																			Road rut, dry
18	3743872.86, 475579.92																			Road rut, dry
19	3743876.14, 475596.39																			Road rut, dry
20	3743873.84, 475583.48	15.5	17.0		4.0		.25x.25													Road rut
21	3744039.74, 475782.55	15.5	17.4		8.0		4X2													Road rut

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 03/20/2024	Time:	Weather Conditions: 0-1mph, clear
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Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	0.0	0.0		0.0		0	6x												Road rut,mud,1 male collected, <i>B. lindahli</i>
2	3744020.22, 475190.20																			Road rut, dry
3	3744009.05, 475188.80	0.0	0.0		0.0		0													Road rut, dry
4	3743799.46, 475209.79																			Road rut, dry
5	3743795.35, 475210.02																			Road rut, dry
6	3744107.33, 475395.97																			Road rut, dry
7	3744000.81, 475439.78																			Road rut, dry
8	3743914.01, 475554.40																			Road rut, dry
9	3743906.13, 475560.92																			Road rut, dry
10	3743926.98, 475567.92																			Road rut, dry
11	3743917.36, 475575.19																			Road rut, dry
12	3743913.02, 475577.58																			Road rut, dry
13	3743899.98, 475583.69																			Road rut, dry
14	3743897.30, 475584.21																			Road rut, dry
15	3743890.18, 475584.90																			Road rut, dry
16	3743884.41, 475585.80																			Road rut, dry
17	3743882.09, 475584.33																			Road rut, dry
18	3743872.86, 475579.92																			Road rut, dry
19	3743876.14, 475596.39																			Road rut, dry
20	3743873.84, 475583.48	0.0	0.0		0.0												x			Road rut, dry
21	3744039.74, 475782.55	17.2	22.5		5.0		1x2													Road rut

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLI = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed: with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 03/28/2024	Time:	Weather Conditions: 0-1mph, clear
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Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69																			Road rut, dry
2	3744020.22, 475190.20																			Road rut, dry
3	3744009.05, 475188.80																			Road rut, dry
4	3743799.46, 475209.79																			Road rut, dry
5	3743795.35, 475210.02																			Road rut, dry
6	3744107.33, 475395.97																			Road rut, dry
7	3744000.81, 475439.78																			Road rut, dry
8	3743914.01, 475554.40																			Road rut, dry
9	3743906.13, 475560.92																			Road rut, dry
10	3743926.98, 475567.92																			Road rut, dry
11	3743917.36, 475575.19																			Road rut, dry
12	3743913.02, 475577.58																			Road rut, dry
13	3743899.98, 475583.69																			Road rut, dry
14	3743897.30, 475584.21																			Road rut, dry
15	3743890.18, 475584.90																			Road rut, dry
16	3743884.41, 475585.80																			Road rut, dry
17	3743882.09, 475584.33																			Road rut, dry
18	3743872.86, 475579.92																			Road rut, dry
19	3743876.14, 475596.39																			Road rut, dry
20	3743873.84, 475583.48																			Road rut, dry
21	3744039.74, 475782.55																			Road rut, dry

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLI = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 04/04/2024 Time: Weather Conditions: 0-5mph, part cloud, rained >1in over weekend

Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	16.7	14.4		7.0		5x6.5													Road rut
2	3744020.22, 475190.20				0.0															Road rut, mud only
3	3744009.05, 475188.80	16.7	14.4		6.0		3x1.5													Road rut
4	3743799.46, 475209.79				0.0															Road rut, mud only
5	3743795.35, 475210.02	16.7	14.4		4.0		1x0.25													Road rut
6	3744107.33, 475395.97				0.0															Road rut, mud only
7	3744000.81, 475439.78	16.7	14.4		4.0		2x2													Road rut
8	3743914.01, 475554.40				0.0															Road rut, dry
9	3743906.13, 475560.92				0.0															Road rut, dry
10	3743926.98, 475567.92				0.0															Road rut, dry
11	3743917.36, 475575.19	16.7	14.4		4.0		2.5x2													Road rut
12	3743913.02, 475577.58				0.0															Road rut, dry
13	3743899.98, 475583.69				0.0															Road rut, dry
14	3743897.30, 475584.21	16.7	14.4		3.0		0.25x0.25													Road rut
15	3743890.18, 475584.90				0.0															Road rut, dry
16	3743884.41, 475585.80	16.7	14.4		1.0		0.1x0.1													Road rut
17	3743882.09, 475584.33	16.7	14.4		4.0		1x3													Road rut
18	3743872.86, 475579.92				0.0															Road rut, dry
19	3743876.14, 475596.39				0.0															Road rut, dry
20	3743873.84, 475583.48	16.7	14.4		5.0		2x2													Road rut
21	3744039.74, 475782.55	16.7	14.4		7.0		4x4													Road rut

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

(Estimate grazing regime by height of grasses and forbs and density of hoof prints) LG = light grazing, MG = moderate grazing, HG = heavy grazing.

Appendix 1. U.S. Fish and Wildlife Service - Data Sheet for Wet Season Surveys for Listed Large Branchiopods

Site or Project Name: Mead Valley Commerce Center [Cajalco Commerce Center]	County: Riverside	Quad: Steele Peak	Township: 4S	Range: 4W	Section: 11, 12, 13, 14
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SURVEYOR/Permit Number: Stephanie Cashin (TE-20280D-0) and Chris Waterston (ESPER-2380694)

Date: 04/12/2024	Time:	Weather Conditions: 2-3mph, part cloud to clear
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Feature ID#	UTM (Northing, Easting, Datum)	Temp (°C)		Depth (cm)		Surface Area (m x m)		Crustaceans					Insects					Platyhelminths (flatworms)	Habitat Condition	Notes / Voucher information
		Air	Water	Average	Est. Max.	Present	Est. Max.	Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Diptera	Culicidae	Diptera Chironomidae			
1	3744079.46, 475190.69	16.7																		Road rut, dry
2	3744020.22, 475190.20																			Road rut, dry
3	3744009.05, 475188.80																			Road rut, dry
4	3743799.46, 475209.79																			Road rut, dry
5	3743795.35, 475210.02																			Road rut, dry
6	3744107.33, 475395.97																			Road rut, dry
7	3744000.81, 475439.78																			Road rut, dry
8	3743914.01, 475554.40																			Road rut, dry
9	3743906.13, 475560.92																			Road rut, dry
10	3743926.98, 475567.92																			Road rut, dry
11	3743917.36, 475575.19																			Road rut, dry
12	3743913.02, 475577.58																			Road rut, dry
13	3743899.98, 475583.69																			Road rut, dry
14	3743897.30, 475584.21																			Road rut, dry
15	3743890.18, 475584.90																			Road rut, dry
16	3743884.41, 475585.80																			Road rut, dry
17	3743882.09, 475584.33																			Road rut, dry
18	3743872.86, 475579.92																			Road rut, dry
19	3743876.14, 475596.39																			Road rut, dry
20	3743873.84, 475583.48																			Road rut, dry
21	3744039.74, 475782.55																			Road rut, dry

Notes: Fill in abbreviated names of Anostracans and Notostracans, for all others indicate presence with a check mark. Anostracan and Notostracan Abbreviations: Use first two letters of genus and species name (e.g., LIOC = Linderiella occidentalis, BRLL = Branchinecta lindahli).

For habitat conditions use two letter abbreviation as follows: NP = Natural Pool, CP = Constructed Pool; UD = undisturbed, D = disturbed; with TT = tire tracks, T = trash, P = plowed; G = grazed, UG = ungrazed by: C = cattle, H = horses, S = sheep; AB = Algal blooms present.

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