
**Dudek, "Wet Season Presence/Absence Survey for Vernal Pool Branchiopods
for Newhall Ranch, Los Angeles County, California"
(October 17, 2008; 2008E)**

October 17, 2008

3738-150

Mr. Chris Dellith
United States Fish and Wildlife Service
Ventura Field Office
2493 Portola Road, Suite B
Ventura, CA 93003

Subject: Wet Season Presence/Absence Survey for Vernal Pool Branchiopods for Newhall Ranch, Los Angeles County, California

Mr. Dellith:

This letter transmits the results of survey work coordinated with you and your staff in the fall of 2007. A wet season presence/absence survey for vernal pool branchiopods was conducted for the Newhall Ranch project area, located in the Santa Clara River Valley in northwestern Los Angeles County. The surveys were conducted by Brock A. Ortega (TE-813545-6) of Dudek from December 2007 through March 2008. The survey focused on the determination of the presence/absence of federally-listed endangered vernal pool branchiopod species in accordance with the April 19, 1996, *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods*. The survey consisted of an inspection of five previously identified depressions throughout the site. No fairy shrimp were detected during the focused survey.

PROJECT LOCATION AND EXISTING CONDITIONS

The Newhall Ranch Specific Plan area (SPA) study area is located in an unincorporated portion of the Santa Clara River Valley in northwestern Los Angeles County (Figure 1). It lies roughly one-half mile west of Interstate 5 and largely southwest of the junction of Interstate 5 and State Route 126 (SR-126), with portions of the Specific Plan site located in San Martinez Grande and Chiquito canyons north of SR-126. The City of Santa Clarita is located to the east of the study area, and the Ventura County/Los Angeles County line lies along the western boundary. Site elevations range from 825 feet above mean sea level (AMSL) in the Santa Clara River bottom at the Ventura County/Los Angeles County line to approximately 3,200 feet AMSL on the ridgeline of the Santa Susana Mountains along the southern boundary (Figure 2).

The study area includes areas north of SR-126 between Chiquito Canyon west to the Ventura County line; south of SR-126, it includes areas between the Airport Mesa and Potrero Canyon,

including Middle, Dead-End, Lion, Humble, and Long canyons. However, the active channel in the Santa Clara River, agriculture fields (e.g., Potrero Mesa), and areas currently proposed for conservation (most notably the “High Country” area) were excluded from the study area. This study area is dominated by east-, west-, and northwest-trending primary ridges, with north- and south-trending secondary ridges. Site elevations range from approximately 850 feet AMSL in the Santa Clara River floodplain to approximately 2,000 feet AMSL along the ridgeline, which separates Potrero Canyon from Salt Creek Canyon and Grave Canyon.

Slope gradients range from moderate to very steep in the hillside areas to very gentle within the Santa Clara River floodplain, tributary canyons, and associated mesas. Distinctive elevated geographic features include Sawtooth Ridge, Razorback Ridge, Windy Gap, Ayers Rock, and Potrero, Grapevine, and Airport mesas.

Geologically, the study area is located within the Transverse Ranges geomorphic province of southern California in the eastern portion of the Ventura depositional basin. This basin “was produced by tectonic downwarping in the geologic past to produce a large-scale synclinal structure in which a thick sequence of Cenozoic sediments has accumulated. These sediments have been lithified into a sequence of sedimentary rock that has subsequently been uplifted, tilted, and tectonically deformed.” (Seward 2002, 2004) They are cut by segments of the Del Valle and Salt Creek faults. Bedrock formations found on site include the Modelo, Towsley, Pico, Saugus, and Pacoima formations, as well as Quaternary Terrace deposits. Surficial deposits include Quaternary alluvium, slopewash, soil, and artificial fill (Seward 2002, 2004).

Soils on site include: Castaic and Saugus soils (30% to 65% slopes, severely eroded); Castaic-Balcom silty clay loams (9% to 15% slopes); Castaic-Balcom silty clay loams (15% to 30% slopes); Castaic-Balcom silty clay loams (30% to 50% slopes); Castaic-Balcom silty clay loams (30% to 50% slopes, eroded); Castaic-Balcom silty clay loams (50% to 65% slopes, eroded); Chino loam; Cortina sandy loam (0% to 2% slopes); Gaviota rocky sandy loam (15% to 30% slopes, eroded); Gaviota rocky sandy loam (30% to 50% slopes, eroded) Gazos clay loam (30% to 50% slopes); Hanford sandy loam (0% to 2% slopes); Hanford sandy loam (2% to 9% slopes); Metz loamy sand (0% to 2% slopes); Metz loamy sand (2% to 9% slopes); Mocho loam (0% to 2% slopes); riverwash; sandy alluvial land; Saugus loam (30% to 50% slopes); Saugus loam (30% to 50% slopes, eroded); Sorrento loam (0% to 2% slopes); Sorrento loam (2% to 5% slopes); terrace escarpments; Yolo loam (0% to 2% slopes); Yolo loam (2% to 9% slopes); Zamora loam (2% to 9% slopes); and Zamora loam (9% to 15% slopes) (USDA 1969).

Native and naturalized habitats within the study area are representative of those found in this region and provide examples of those plant communities found in the Santa Susana Mountains and the Santa Clara River ecosystems. Upland habitats dominate the landscape within the study

area both north and south of the Santa Clara River. The majority of the site consists of the following upland plant communities: California sagebrush, California buckwheat, chamise, chamise-mission manzanita-woollyleaf ceanothus, coast live oak, valley oak, and California annual grassland series. The Santa Clara River supports a variety of riparian plant communities. These include southern Fremont cottonwood, arroyo willow, mulefat, and arrow weed series along with freshwater marsh and seeps. Intermittent and ephemeral drainages on site also provide habitat for scalebroom and Great Basin series and alluvial scrubs. However, the fairy shrimp survey areas consisted of oil field pads, field roads, and a water detention basin.

The Newhall Land and Farming Company (Newhall) leases out portions of the study area for oil and natural gas production, as well as for cattle grazing and agricultural operations (e.g., food crop production, dryland farming, honey farming). All such operations are currently ongoing. Grazing activities and oil and natural gas production have had a noticeable effect on much of the natural habitat on site. Scrub habitats have been displaced by non-native grasslands as a result of grazing. Southern California Edison and Southern California Gas Company have transmission lines within easements on site as well.

SURVEY METHODOLOGY

Previously identified depressions (Figure 3) were surveyed for fairy shrimp from the time that rains began and depressions filled, to when they were less than 2 cm filled and no additional rain fell to refill them. During this period, the site was visited approximately every two weeks for a total of eight visits (Table 1).

Table 1
Schedule of Surveys—Winter 2007–2008

Visit Number	Date	Time	Average Air Temperature (°F)	Average Water Temperature (°F)
1	12/19/2007	3:30 p.m.–5:30 p.m.	N/A	53
2	1/2/2008	10:00 a.m.–12:00 p.m.	50	52
3	1/16/2008	4:30 p.m.–6:30 p.m.	55	53
4	2/2/2008	1:00 p.m.–3:00 p.m.	50	51
5	2/16/2008	10:00 a.m.–12:30 p.m.	55	53
6	3/3/2008	10:00 a.m.–12:00 p.m.	65	55
7	3/15/2008	10:00 a.m.–11:30 a.m.	55	55
8	3/29/2008	10:00 a.m.–11:00 a.m.	56	56

During each visit, depressions containing ponded water at least 3 cm deep were staked using pin flags and labeled alphabetically. In order to track the condition of the other previously identified,

Mr. Chris Dellith, Ventura Fish and Wildlife Office

Subject: Wet Season Presence/Absence Survey for Vernal Pool Branchiopods for Newhall Ranch, Los Angeles County, California

non-inundated areas, they were labeled alphabetically as well. The location of these basins was mapped using aerial photography.

During each visit, depressions were inspected for depth of inundation, surface area of water, air and water temperature, level of disturbance and presence of aquatic wildlife. Information was recorded on a data sheet as provided in the Survey Protocol (attached). Data sheets were completed for every depression which met the inundation requirement at the time of surveying.

An aquarium net was passed through all pools which retained water at least 3 cm deep at the time of surveying. The net passed through nearly all portions of the ponded water area and from the bottom to the water surface. The surveyors identified tadpoles where present. There were no specimens collected.

SURVEY RESULTS

No fairy shrimp were detected during the survey effort. Rain events were measured at the CIMIS Santa Clarita weather station 204 during eight events and are provided below for your reference (Table 2).

Table 2
Rain Events Measured at CIMIS Santa Clarita Weather Station 204
during Winter 2007/2008

Date	Event	Precipitation Amount (in)
11/30/2007	1	0.34
12/6/2007	2	0.04
12/7/2007		0.15
12/18/2007	3	0.07
12/19/2007		0.18
12/20/2007		0.11
12/21/2007		0.03
12/22/2007		0.02
12/23/2007		0.01
1/4/2008	4	0.41
1/5/2008		1.56
1/6/2008		0.43
1/7/2008		0.37
1/21/2008	5	0.06
1/22/2008		0.09
1/23/2008		0.74
1/24/2008		1.41
1/25/2008		1.00

Permit Coordinator

Subject: Wet Season Presence/Absence Survey for Vernal Pool Branchiopods for Newhall Ranch, Los Angeles County, California

Table 2 (Continued)

Date	Event	Precipitation Amount (in)
1/26/2008		0.61
1/27/2008		1.45
1/28/2008		0.27
2/3/2008	6	0.06
2/20/2008	7	0.11
2/21/2008		0.04
2/22/2008		0.03
2/23/2008		0.15
2/24/2008		0.08
3/15/2008	8	0.02
Total	8	9.52

Of the five previously identified basins, only two supported water during the wet season. Basins A and C supported water. Basin A was a water detention basin and does not exhibit typical fairy shrimp habitat characteristics.



Basin A

Permit Coordinator

Subject: Wet Season Presence/Absence Survey for Vernal Pool Branchiopods for Newhall Ranch, Los Angeles County, California

Basin C was located on an oil field well pad and storage area. It holds water due to surrounding berms. As this area is highly used, maintained, and in constant flux, it does not support good fairy shrimp habitat either.



Basin C

The other three areas did not show any depression suggesting an area where water could collect, and all occur on dirt access roads. Western spadefoot toad (*Spea hammondi*) eggs were located at Basin C during the survey effort.

In conclusion, only two of the previously identified basins held, or could hold, water, and no fairy shrimp were detected.

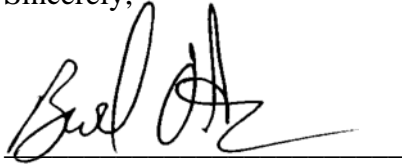
Please refer to the data sheets (Appendix A) for more complete and precise information on each pool and each visit.

Permit Coordinator

Subject: Wet Season Presence/Absence Survey for Vernal Pool Branchiopods for Newhall Ranch, Los Angeles County, California

Please feel free to call me at 760.942.5147 if you have any questions regarding the contents of this letter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Brock A. Ortega', written over a horizontal line.

Brock A. Ortega
Senior Wildlife Biologist
Permit Number TE813545-6

*cc: Sherri Miller, Dudek
Matt Carpenter, Newhall Land*

*att: Figures 1-3
Appendix A—U.S. Fish and Wildlife Service Vernal Pool Data Sheets*

LITERATURE CITED

- Bauder, Ellen T. 1986. *San Diego Vernal Pools: Recent and Projected Losses; Their Condition; and Threats to Their Existence 1979-1990*. Prepared for Endangered Plant Project, California Department of Fish and Game. Funded by United States Fish and Wildlife Service.
- Beauchamp, R.M. 1986. *A flora of San Diego County, California*. Sweetwater Press, National City, California. 241 pp.
- Bowman, R.H. 1973. *Soil Survey, San Diego Area, California, Part 1*. United States Department of the Agriculture. 104 pp. + appendices.
- Dudek & Associates, Inc. 1997. *Biological Resource Report: Fanita Ranch*. Prepared for Westbrook - Fanita Ranch, L.P.
- Eriksen, Clyde and Denton Belk. 1999. *Fairy Shrimps of California's Puddles, Pools and Playas*. Mad River Press. Eureka, California. 196pp.
- Hickman, J.C. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley. 1400 pp.
- Holland, R.F. 1986. *Preliminary descriptions of the terrestrial natural communities of California*. Nongame-Heritage Program, California Department of Fish and Game. 156 pp.
- United States Fish and Wildlife Service (USFWS). 1993. *Endangered and threatened wildlife and plants: Determination of Endangered Status for the Riverside fairy shrimp*. Federal Register. Vol. 58 Number 41391.
- USFWS. 1996. *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods*. April 16, 1996.
- USFWS. 1997a. *Endangered and threatened wildlife and plants: Determination of Endangered Status for the San Diego fairy shrimp*. Federal Register 50 CFR Part 17. Vol. 62, No. 22.
- USFWS. 1997b. *Vernal Pools of Southern California: Draft Recovery Plan*. U.S. Fish and Wildlife Service, Portland, Oregon. 133+ pp.



IMAGE SOURCE: USGS 24K Quad

FIGURE 1

Newhall Ranch Fairy Shrimp Survey Report
Regional Map

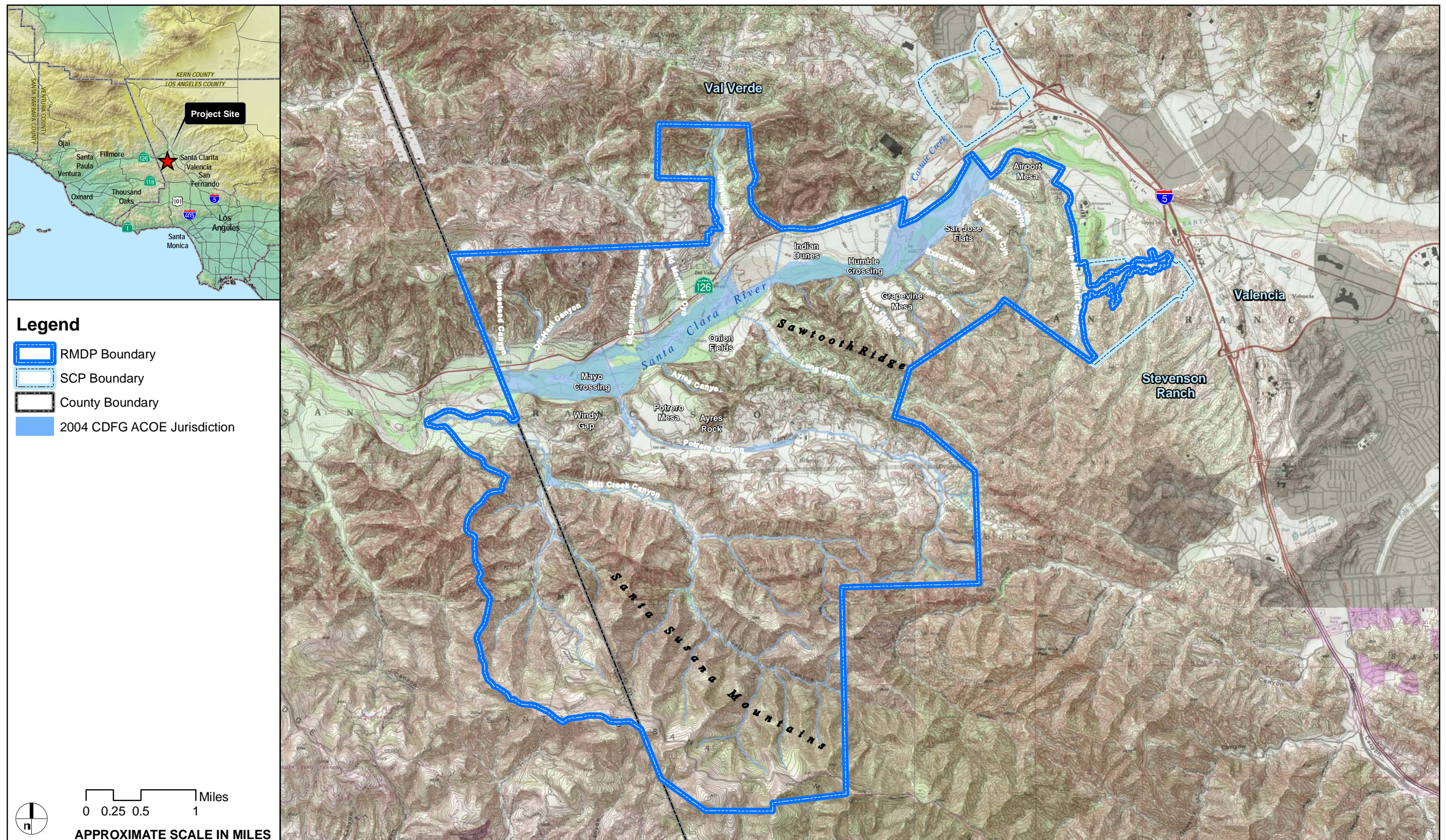


FIGURE 2

Newhall Ranch Fairy Shrimp Survey Report

Vicinity Map

Z:\Projects\373801\Newhall Ranch\arcmapping\EIS-EIR



AERIAL SOURCE: DigitalGlobe, 2007

FIGURE 3

Newhall Ranch Fairy Shrimp Survey Report
Fairy Shrimp Survey Locations

APPENDIX A
U.S. Fish and Wildlife Service
Vernal Pool Data Sheets

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ____ yes

Date: 12/19/07 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Bach Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: B

Township: _____ Range: _____ Section: 34° 25' 00.42" N lat. 118° 37' 16.19" W long.

Temperature: Water: N/A °C Air: 57°F

Pool Depth: Surface Area:

at time of sampling: N/A cm at time of sampling: N/A m x N/A m

estimated maximum: N/A cm estimated maximum: N/A m x N/A m

Habitat Condition: (circle where appropriate)

- undisturbed	disturbed:	tire tracks	garbage	discing/plowing	
- ungrazed	grazed:	cattle	horses	sheep	other _____
			light	moderate	heavy

- land use of habitat:

No pooling present

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: No pool present - just a project site road - reviewed entire season for pooling but none & no basins present.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ☐ no ☒ yes

Required color slides and/or photographs for the project site are included: ☐ no ☒ yes

Date: 12/19/07 Time: 1530 County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brock Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: A

Township: _____ Range: _____ Section: _____ lat. 34° 25' 02.82" N 118° 37' 44.70" W long. _____

Temperature: Water: 53 °F 60 °C Air: 57 °F 60 °C

Pool Depth: _____ Surface Area: _____

at time of sampling: _____ cm at time of sampling: _____ m x _____ m Dry

estimated maximum: 1.5 m estimated maximum: 24 m x 18 m

Habitat Condition: (circle where appropriate)

- undisturbed ☒ disturbed: tire tracks garbage discing/plowing
- ungrazed ☒ grazed: cattle horses sheep
light moderate

- land use of habitat:

Agricultural field / water detention basin

other is a water detention basin
heavy

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: water detention basin - unsuitable for F.S.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ____ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ☒ yes

Date: 12/19/07 Time: 1550 County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brock Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: C

Township: _____ Range: _____ Section: 34023' 52.67" N lat. 118° 38' 44.70" W long.

Temperature: Water: 53 °F Air: 57 °F

Pool Depth: Surface Area:

at time of sampling: _____ cm at time of sampling: _____ m x _____ m Dry

estimated maximum: 16 cm estimated maximum: 23 m x 5 m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other oil field pad
light moderate heavy
- land use of habitat:
oil field pad - production facility

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: area is highly active

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ___ yes

Date: 12/19/07 Time: _____ County: Los Angeles Quad: Newhall, Kal Verde

Collector(s): Brock Ortega Permit #: TE 813 545-6

Site/Project Name: Newhall Ranch Pool #: D

Township: _____ Range: _____ Section: 34° 23' 55.90" N 118° 37' 59.39" W lat. _____ long.

Temperature: Water: _____ °C Air: 57° F 06

Pool Depth: Surface Area:

at time of sampling: N/A cm at time of sampling: N/A m x N/A m

estimated maximum: N/A cm estimated maximum: N/A m x N/A m

Habitat Condition: (circle where appropriate)

- undisturbed

disturbed

tire tracks

garbage

discing/plowing

- ungrazed

grazed:

cattle

horses

sheep

other _____

light

moderate

heavy

- land use of habitat:

area is part of rd network, oil field

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes:

no pool present - searched after every rain event. no rats or low spots present.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ☐ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ☐ yes

Date: 12/19/07 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brach Ortega Permit #: TE 813 545-6

Site/Project Name: Newhall Ranch Pool #: E

Township: _____ Range: _____ Section: 34°23'52.41"N 118°57'51.79"W lat. _____ long. _____

Temperature: Water: _____ °C Air: 57 °F °C

Pool Depth: Surface Area:

at time of sampling: N/A cm at time of sampling: N/A m x N/A m

estimated maximum: N/A cm estimated maximum: N/A m x N/A m

Habitat Condition: (circle where appropriate)

- undisturbed ☒ disturbed: ☐ tire tracks ☐ garbage ☒ discing/plowing
- ungrazed ☐ grazed: ☐ cattle ☐ horses ☐ sheep ☐ other _____
light moderate ☒ heavy
- land use of habitat:
oil field road

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: oil field road - no notes on pools. checked entire season.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ☒ yes

Date: 1/2/08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brent Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: C

Township: _____ Range: _____ Section: 34°23' 52.67"N lat. 118°38'44.70"W long.

Temperature: Water: 52 F Air: 50 F

Pool Depth: Surface Area:

at time of sampling: 16 cm at time of sampling: 5 m x 5 m

estimated maximum: 16 cm estimated maximum: 23 m x 5 m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed tire tracks garbage discing/plowing
- ungazed grazed cattle horses sheep other oil field pad
light moderate heavy

- land use of habitat:
oil field pad - production facility

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Dissolved NH₄: _____ ppt or ppm

pH: _____

Salinity: _____ ppt or ppm

Conductivity: _____ uMHO

Dissolved Oxygen: _____ ppm or mg/l

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Total Dissolved Solids (TDS): _____ ppm

Notes: area is highly active

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ___ no ☒ yes

Date: 1 / 2 / 08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Breck Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: A
34° 25' 02.82" N 118° 37' 41.70" W
Township: _____ Range: _____ Section: _____ lat. _____ long. _____

Temperature: Water: 52 °F Air: 50 °F

Pool Depth: Surface Area:

at time of sampling: 60 cm at time of sampling: 24 m x 18 m

estimated maximum: 1.5 m estimated maximum: 24 m x 18 m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep
light moderate other is a water detention basin
- land use of habitat: heavy
Agricultural field / water detention basin

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: water detention basin - unsuitable for F.S.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ___ no ☒ yes

Date: 1/16/08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brock Ortega Permit #: TE 813 545-6

Site/Project Name: Newhall Ranch Pool #: A
Township: _____ Range: _____ Section: 34° 25' 02.82" N 118° 37' 44.70" W lat. _____ long.

Temperature: Water: 53°F Air: 55°F

Pool Depth: Surface Area:

at time of sampling: 321 m at time of sampling: 24 m x 18 m

estimated maximum: 1.5 m estimated maximum: 24 m x 18 m

Habitat Condition: (circle where appropriate)

- undisturbed ☒ disturbed: tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep
light moderate other is a water detention basin
- land use of habitat: heavy
Agro cultural field / water detention basin

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l Conductivity: _____ uMHO
Dissolved NH₄: _____ ppt or ppm Dissolved Oxygen: _____ ppm or mg/l
pH: _____ Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____
Salinity: _____ ppt or ppm Total Dissolved Solids (TDS): _____ ppm

Notes: water detention basin - not suitable for F.S.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ☒ yes

Date: 11/16/08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brock Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: C

Township: _____ Range: _____ Section: 340231 52.67'N lat. 118°38'44.70"W long.

Temperature: Water: 53°F / °C Air: 55°F °C

Pool Depth: Surface Area:

at time of sampling: 16 cm at time of sampling: 23 m x 5 m

estimated maximum: 16 cm estimated maximum: 23 m x 5 m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep
light moderate other oil field pad
heavy
- land use of habitat:
oil field pad - production facility

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: area is highly active

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ___ no ☒ yes

Date: 2/2/06 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brock Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: A

Township: _____ Range: _____ Section: 34° 25' 02.82" N 118° 37' 44.70" W lat. _____ long.

Temperature: Water: 51 F °C Air: 50 F °C

Pool Depth: Surface Area:

at time of sampling: 1 ^m at time of sampling: 24 m x 18 m

estimated maximum: 1.5 ^m estimated maximum: 24 m x 18 m

Habitat Condition: (circle where appropriate)

- undisturbed ☒ disturbed: tire tracks garbage discing/plowing
- ungrazed ☒ grazed: cattle horses sheep
light moderate ☒ other is a water detention basin
- land use of habitat: heavy
Agricultural field / water detention basin

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: water detention basin - unsuitable for F.S.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ☐ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ☒ yes

Date: 2/2/08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brock Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: C

Township: _____ Range: _____ Section: 34° 23' 52.67" N lat. 118° 38' 44.70" W long.

Temperature: Water: _____ °C Air: _____ °C

Pool Depth: Surface Area:

at time of sampling: 16 cm at time of sampling: 23 m x 5 m

estimated maximum: 16 cm estimated maximum: 23 m x 5 m

Habitat Condition: (circle where appropriate)

- undisturbed

disturbed

tire tracks

garbage

discing/plowing

- ungrazed

grazed:

cattle

horses

sheep

light

moderate

other oil field pad

heavy

- land use of habitat:

oil field pad - production facility

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH4: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes:

area is highly active

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ___ no ☒ yes

Date: 2/16/08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brock Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: A
34° 25' 02.82" N 118° 37' 41.70" W
Township: _____ Range: _____ Section: _____ lat. _____ long.

Temperature: Water: 53 F °C Air: 55 F °C

Pool Depth: Surface Area:

at time of sampling: 0.25 m at time of sampling: 20 m x 18 m

estimated maximum: 1.5 m estimated maximum: 24 m x 18 m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other is a water detention basin
light moderate heavy
- land use of habitat:
Agricultural field / water detention basin

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l Conductivity: _____ uMHO
Dissolved NH₄: _____ ppt or ppm Dissolved Oxygen: _____ ppm or mg/l
pH: _____ Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____
Salinity: _____ ppt or ppm Total Dissolved Solids (TDS): _____ ppm

Notes: water detention basin - on suitable for F.S.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ☐ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ☒ yes

Date: 2/16/08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brock Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: C

Township: _____ Range: _____ Section: 340231 52.67'N lat. 118°38'44.70"W long.

Temperature: Water: 53 F °C Air: 55 F °C

Pool Depth: Surface Area:

at time of sampling: 10 cm at time of sampling: 23 m x 4 m

estimated maximum: 16 cm estimated maximum: 23 m x 5 m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed tire tracks garbage discing/plowing
- ungazed grazed cattle horses sheep other oil field pad
light moderate heavy
- land use of habitat:
oil field pad - production facility

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: area is highly active

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ☐ no ☒ yes

Required color slides and/or photographs for the project site are included: ☐ no ☒ yes

Date: 3 / 3 / 08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brack Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: A

Township: _____ Range: _____ Section: 34° 25' 02.82" N 118° 37' 44.76" W lat. _____ long. _____

Temperature: Water: 55°F 0°C Air: 65°F 0°C

Pool Depth: Surface Area:

at time of sampling: 0.25 ^m at time of sampling: 8.24 m x 5 m

estimated maximum: 1.5 ^m estimated maximum: 24 m x 18 m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep
light moderate

other is a water detention basin

heavy

- land use of habitat:

Agricultural field / water detention basin

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: water detention basin - not suitable for F.S.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ☒ yes

Date: 3/3/08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Breck Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: C

Township: _____ Range: _____ Section: 34° 23' 52.67" N lat. 118° 38' 44.70" W long.

Temperature: Water: 55 F Air: 65 F

Pool Depth: Surface Area:

at time of sampling: 16 cm at time of sampling: 23 m x 4 m

estimated maximum: 16 cm estimated maximum: 23 m x 5 m

Habitat Condition: (circle where appropriate)

- undisturbed

disturbed

tire tracks

garbage

discing/plowing

- ungrazed

grazed:

cattle

horses

sheep

light

moderate

other oil field pad

heavy

- land use of habitat:

oil field pad - production facility

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes:

area is highly active

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

3/3/05 Pond C

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: (note reproductive status)

Notostracans: (note reproductive status)

(Optional) Species Observations:

Cladocerans: yes no

Conchostracans: yes no

Copepods: yes no

Ostracods yes no

Fish yes no

Frogs yes no

Salamanders yes no

Waterfowl yes no

Other (specify) spade foot toad eggs

Insects: (adult or larvae)

Anisoptera: yes no

Zygoptera: yes no

Hydrophilidae: yes no

Dytiscidae: yes no

Corixidae: yes no

Notonectidae: yes no

Belostomatidae: yes no

Other (specify) _____

Voucher Specimens Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species

Individuals

Accession/Catalog #

Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ___ no ☒ yes

Date: 3 / 15 / 08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brauk Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: A
Township: _____ Range: _____ Section: 34° 25' 02.82" N 118° 37' 41.70" W lat. _____ long.

Temperature: Water: 55 F 9C Air: 55 F 9C

Pool Depth: _____ Surface Area: _____

at time of sampling: 10 cm at time of sampling: 10 m x 5 m

estimated maximum: 1.5 m estimated maximum: 24 m x 18 m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other is a water detention basin
light moderate heavy
- land use of habitat:
Agricultural field / water detention basin

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: water detention basin - not suitable for F.S.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ☐ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ☒ yes

Date: 3 / 15 / 08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brock Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: C

Township: _____ Range: _____ Section: 34° 23' 52.67" N lat. 118° 38' 44.70" W long.

Temperature: Water: 55 F °C Air: 55 F °C

Pool Depth: _____ Surface Area: _____

at time of sampling: 6 cm at time of sampling: 5 m x 3 m

estimated maximum: 16 cm estimated maximum: 23 m x 5 m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed? tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other oil field pad
light moderate heavy

- land use of habitat:
oil field pad - production facility

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: area is highly active

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

3/15/08 Pond C

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: (note reproductive status)

Notostracans: (note reproductive status)

(Optional) Species Observations:

Cladocerans: yes no

Conchostracans: yes no

Copepods: yes no

Ostracods yes no

Fish yes no

Frogs yes no

Salamanders yes no

Waterfowl yes no

Other (specify) spade-footed tailpoles

Insects: (adult or larvae)

Anisoptera: yes no

Zygoptera: yes no

Hydrophilidae: yes no

Dytiscidae: yes no

Corixidae: yes no

Notonectidae: yes no

Belostomatidae: yes no

Other (specify) _____

Voucher Specimens Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species

Individuals

Accession/Catalog #

Pool #

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ___ no ☒ yes

Date: 3/29/08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brack Ortega Permit #: TE 813 545-6

Site/Project Name: Newhall Ranch Pool #: A
Township: _____ Range: _____ Section: 34° 25' 02.82" N 118° 37' 44.70" W lat. _____ long.

Temperature: Water: _____ °C Air: _____ °C

Pool Depth: _____ Surface Area: _____

at time of sampling: 2 cm at time of sampling: 1 m x 0.5 m

estimated maximum: 1.5 cm estimated maximum: 24 m x 18 m

Habitat Condition: (circle where appropriate)

- undisturbed disturbed tire tracks garbage discing/plowing
- ungrazed grazed: cattle horses sheep other is a water detention basin
light moderate heavy
- land use of habitat:
Agricultural field / water detention basin

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: water detention basin - not suitable for F.S.

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

U.S. Fish and Wildlife Service Vernal Pool Data Sheet
Wet Season Survey

Note: Please fill out the required information completely for each site visit.

This form is being submitted to serve as part of the 90-day report: ___ no ☒ yes

Required color slides and/or photographs for the project site are included: ☒ no ☒ yes

Date: 3/29/08 Time: _____ County: Los Angeles Quad: Newhall, Val Verde

Collector(s): Brock Ortega Permit #: TE 813545-6

Site/Project Name: Newhall Ranch Pool #: C

Township: _____ Range: _____ Section: 34° 23' 52.67" N lat. 118° 38' 44.70" W long.

Temperature: Water: _____ °C Air: _____ °C

Pool Depth: Surface Area:

at time of sampling: 2 cm at time of sampling: 1 m x 1 m

estimated maximum: 16 cm estimated maximum: 23 m x 5 m

Habitat Condition: (circle where appropriate)

- undisturbed ☒ disturbed ☒ tire tracks ☒ garbage ☐ discing/plowing
- ungrazed ☐ grazed ☐ cattle ☐ horses ☐ sheep ☐ other oil field pad
light moderate ☒ heavy

- land use of habitat:
oil field pad - production facility

(Optional) Water Chemistry Data

Alkalinity (total): _____ ppm or mg/l

Conductivity: _____ uMHO

Dissolved NH₄: _____ ppt or ppm

Dissolved Oxygen: _____ ppm or mg/l

pH: _____

Turbidity: (secchi disc depth) _____ cm or: clear to bottom _____

Salinity: _____ ppt or ppm

Total Dissolved Solids (TDS): _____ ppm

Notes: area is highly active

U.S. Fish and Wildlife Service Vernal Pool Data Sheet Wet Season Survey

Note: Please fill out the required information completely for each site visit.

negative

3/29/08 Pond C

Species Observed: state none or estimate # of individuals present in terms of an order of magnitude (e.g., 10's, 100's, 1000's)

Anostracans: (note reproductive status)

Notostracans: (note reproductive status)

(Optional) Species Observations:

Cladocerans: yes no

Conchostracans: yes no

Copepods: yes no

Ostracods yes no

Fish yes no

Frogs yes no

Salamanders yes no

Waterfowl yes no

Other (specify) spade foot tadpoles

Insects: (adult or larvae)

Anisoptera: yes no

Zygoptera: yes no

Hydrophilidae: yes no

Dytiscidae: yes no

Corixidae: yes no

Notonectidae: yes no

Belostomatidae: yes no

Other (specify) _____

Voucher Specimens Specimens shall be preserved according to the standards of the institution in which they will be accessioned.

Species

Individuals

Accession/Catalog #

Pool #