

#### REPORT

## ADDENDUM TO THE BIOLOGICAL RESOURCES TECHNICAL REPORT FOR THE RIO MESA SOLAR ELECTRIC GENERATING FACILITY RIVERSIDE COUNTY, CALIFORNIA

#### Prepared for

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URS Project No. 27651006

February 2012

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#### INTRODUCTION

The following letter report has been prepared in response to a California Energy Commission (CEC) data adequacy request that requests the completion of additional biological resources surveys of parcels for which URS Corporation (URS) did not have access during the original surveys completed in 2011. As stated in the published CEC data adequacy request, additional surveys are necessary so that the biological surveys are inclusive of the entire project site and project linear facilities. This report serves as an addendum to the original biological resources technical report, *Biological Resources Technical Report for the Rio Mesa Electric Generating Facility, Riverside County, California (Draft Final)* (URS 2011).

Six parcels totaling approximately 476.4 acres were not accrued in 2011 as, at that time, right of entry (ROE) had not been granted (Figure 1, 2 and 3). This report includes the results of the additional biological surveys including vegetation mapping, western burrowing owl (BUOW, *Athene cunicularia*) presence/absence surveys, and Waters of the United States (WUS) and Waters of the State of California (WSC) delineations, completed for these six parcels by URS in January 2012.

The proposed site for the Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF or Project) is situated on the east side of the Mule Mountains approximately 13 miles southwest of Blythe, California (Figure 1). The site is located in the Colorado Desert region of the Sonoran Desert on the Palo Verde Mesa in Riverside County, California.

The original 11,277 acre Biological Study Area (BSA) for the proposed Project consists of the main project site where the three solar plants and common area are proposed (plus a 500-foot buffer), the generator tie-line (gen-tie line) along existing transmission lines that extend to the proposed Colorado River Substation (plus a 650-foot buffer), and access areas from State Route 78 via Bradshaw Trail and 34th Avenue (plus a 100-foot buffer).

As per recommendations by the California Department of Fish and Game (CDFG), winter burrowing owl Phase II and Phase III level surveys were completed for survey areas 1 and 4, totaling approximately 218.4 acres. BUOW surveys were conducted only on survey areas 1 and 4, as survey areas 2, 3, 5, and 6 were previously completed in 2011. Previous efforts of vegetation mapping and desktop delineations of WUS and WSC were verified for the six parcels totaling 476.4 acres to which URS previously did not have access. The acreage not surveyed were portions of the parcels that were outside the BSA.

#### METHODS

#### VEGETATION MAPPING

Initial desktop mapping was conducted using a Geographic Information System (GIS) and highresolution aerial photography (VTN 2011). Biologists verified the vegetation mapping of the ROE parcels through on-site foot surveys using field maps and Global Positioning Service (GPS) units. These on-site foot surveys were conducted January 9, 10, and 11, 2012.

Vegetation communities were mapped according to the second edition of *A Manual California Vegetation* (Sawyer et. al 2009). Vegetation communities were identified according to the percent cover of dominant plant species observed. Vegetation communities are groupings of ecologically distinctive plant assemblages based on dominant species observed, where individual dominant species are present at approximately 20 percent or higher cover. Community classifications were based on dominant species for a given vegetation community (i.e., grasslands must have at least approximately 50 percent cover with dominant grass species to be mapped as grassland). In cases where dominant species did not comprise more than 50 percent of the total cover, subdominant or co-dominant species having between approximately 10 percent and 20 percent cover were used to characterize the mapped unit. Percent cover was visually estimated. Maps used for field surveys were generally at a scale of one inch = 300 feet or larger.

#### BURROWING OWL FIELD SURVEY METHODS

Suitable BUOW habitat occurs within three of the six previously inaccessible parcels. Phase II surveys for the BUOW [CDFG Species of Special Concern (SSC)] were conducted according to the *California Burrowing Owl Consortium Survey Protocol*, developed in 1993. Phase II surveys were conducted on January 9, 2012 and consisted of belt-transect surveys, with biologists spaced at 30 meters, to allow for 100 percent visual coverage to locate BUOWs, burrows and other BUOW signs (e.g., pellets, white wash, feathers). All potentially active tortoise, kit fox, badger, and BUOW burrows were identified on datasheets and marked with a GPS unit. A single burrow found in one of the surveyed parcels was assessed as a BUOW burrow as evidenced by pellets and whitewash. This burrow was then monitored (Phase III survey) to determine occupation by owls.

Phase III surveys were conducted on four separate days from January 9 through January 12, 2012, according to survey protocol from the *California Burrowing Owl Consortium Survey Protocol*. Phase III surveys were conducted for the aforementioned potentially active BUOW burrow. During the four-day survey, the burrow was observed for BUOW activity. These surveys were conducted either in the afternoon/evening, from two hours before sunset to one hour after sunset, or in the morning, from one hour before sunrise to two hours after sunrise. Surveys were conducted during weather that was conducive to observing BUOW outside their burrows. The burrow was observed

using binoculars from the best vantage point possible to provide visual coverage of the burrow. Surveyors maintained a minimum distance of 50 meters (approximately 160 feet) from the burrow to avoid disturbance to BUOW and checked the burrow after the survey for any new sign.

#### PRELIMINARY WATERS OF THE UNITED STATES

Areas considered and assessed as potential jurisdictional WUS were based on wetland delineation practices that are in compliance with Section 404 of the Clean Water Act (CWA), Sections 9 and 10 of the Rivers and Harbors Act of 1899 (RHA), and United States Army Corps of Engineers (USACE) Regulatory Guidance Letter No. 08-02 dated 26 June 2008. The methodology to determine what is proposed jurisdictional waters involved the following criterion:

**Ordinary High Water Mark (OWHM)**: Areas with higher density vegetation, but lacking any of the OHWM characteristics, were eliminated as proposed jurisdictional waters, whereas proposed jurisdictional waters exhibited conditions indicative of OHWMs being present.

Features were considered proposed jurisdictional regardless of connectivity to the Colorado River, the nearest traditionally navigable water (TNW).

#### PRELIMINARY WATERS OF THE STATE OF CALIFORNIA

Areas considered and assessed as potential WSC were evaluated by URS based on delineation practices that are in compliance with requirements of Section 1600 *of the California Fish and Game Code, Streambed Alteration Agreement.* URS followed CDFG usual practice to interpret the jurisdictional limits of state jurisdictional waters to include any one of the criteria identified below.

- (1) At minimum, intermittent and seasonal flow through a well-defined bed or channel with banks and also supports fish or other aquatic life.
- (2) A watercourse having a surface or subsurface flow regime that supports or has previously supported riparian vegetation.
- (3) Hydrogeomorphically distinct top-of-embankment to top-of-embankment limits (i.e., well-defined bed and bank).
- (4) Outer ground cover and canopy extent of typical riparian associated vegetation beyond the top-of bank that would be sustained by surface and/or subsurface waters from the WSC watercourse.

#### RESULTS

#### **VEGETATION MAPPING RESULTS**

Nine native vegetation alliances, as defined in the document titled *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009), were observed in the BSA. The primary vegetation types are creosote bush scrub, creosote bush/white burr sage scrub, and blue palo verde/ironwood woodland. Disturbed areas are associated with unpaved roads and trails, maintenance areas for existing transmission line poles, and ROWs along underground pipeline routes.

Included in these nine native vegetation alliances are six sensitive alliances: blue palo verde ironwood woodland, mesquite/bush seepweed scrub, creosote bush/white burr sage scrub with big galleta grass association, brittle bush/ferocactus scrub, desert dunes, and bush seepweed. Sensitive vegetation communities are natural vegetation communities that are of limited distribution within a county, region or state (CDFG 2010). These vegetation communities are often vulnerable to environmental impacts associated with the construction and maintenance of projects.

Vegetation communities were mapped during the January 2012 on-site foot surveys on parcels to which ROE was granted (Figures 2 and 3). Current and previous acreages for each vegetation community are shown in Table 1. Changes in boundaries since the biotechnical report account for a decrease in total acreage as displayed in Table 1. Direct and indirect impacts associated with the changes in acreage for each vegetation type are displayed in Table 2.

## Table 1ROE Vegetation Mapping Survey:Before and After Acreage by Vegetation Communities within the BSA

Rio Mesa SEGF Vegetation Community Acreages Comparison				
Vegetation Community/Alliance	ROE Parcel Acreage	Total Acreage prior to ROE surveys	Total Acreage after ROE surveys *	
1 – Creosote/White Burr Sage Scrub	200.3	3905.1	3322.8	
2 - Blue Palo Verde/Ironwood Woodland	117.3	2237.8	2130.7	
3 – Creosote Bush Scrub	62.3	2814.3	2723.6	
4 - Bush Seepweed Scrub/Mesquite Bosque	0.0	110.3	98.6	
5 – Creosote Bush/White Burr Sage Scrub with Ocotillo Association	0.0	68.6	68.6	

Rio Mesa SEGF Vegetation Community Acreages Comparison					
Vegetation Community/Alliance	ROE Parcel Acreage	Total Acreage prior to ROE surveys	Total Acreage after ROE surveys *		
6 – Creosote Bush/White Burr Sage Scrub with Big Galleta Grass Association	50.3	923.1	485.7		
7 – Brittle Bush/Ferocactus Scrub	7.3	220.4	199.5		
8 – Desert Dunes	28.3	789.2	80.6		
9 – Bush Seepweed Scrub	0.0	7.5	7.5		
10 - Agriculture	0.0	85.7	85.7		
11 - Developed/Open channel	0.0	0.8	0.8		
12 - Ruderal	10.9	44.2	55.1		
99 - Not Surveyed-no right of entry at time of survey	0.0	70.0	29.4		
TOTAL*	476.4	11277.0*	9288.6*		

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\*Changes in boundaries since the biological technical report account for a decrease in total acreage within the BSA. BSA – Biological Survey Area ROE – Right of Entry

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Direct and Indirect Impacts (Acres)						
Vegetation Type	Inside Fence Line	Gen-tie Line	Access Roads	Total Direct Impacts	Total Indirect Impacts `(500 ft Buffer from Fence Line)	Total Project Impacts (Direct plus Indirect)
Creosote Bush Scrub	1,764.13	2.81	2.95	1,769.89	555.51	2,325.40
Creosote / White Burr Sage Scrub	2,416.21	5.90	1.64	2,423.75	331.86	2,755.61
Creosote Bush / White Burr Sage Scrub with Big Galleta Grass Association #	135.91	0.63	0.19	136.73	105.78	242.51
Creosote Bush / White Burr Sage Scrub with Ocotillo Association #	60.73	0.00	0.00	60.73	7.90	68.63
Blue Palo Verde / Ironwood Woodland #	1,135.74	2.30	1.42	1,139.46	313.97	1,453.43
Brittle Bush / Ferocactus Scrub #	2.43	0.00	0.00	2.43	44.08	46.51
Desert Dunes #	0.00	5.60	2.31	7.91	0.00	7.91
Mesquite Bosque / Bush Seepweed#	. 0.00	0.00	0.47	0.47	0.31	0.78
Open Channel	0.00	0.00	0.02	0.02	0.02	0.04
Ruderal	10.87	0.00	0.97	11.84	0.65	12.49
Agriculture	0.00	0.00	10.10	10.10	5.83	15.93
Totals	5,526.02	17.24	20.07	5,563.33	1,365.91	6,929.24

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## Table 2 Direct and Indirect Impacts to Vegetation Communities within the BSA

BSA – Biological Survey Area

Gen-tie - Generator tie-line

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#### WESTERN BURROWING OWL RESULTS

#### BUOW Phase II

A single potential BUOW burrow was observed during the Phase II belt-transect surveys (Figure 4) as evidenced by last season's BUOW sign (pellets and faded whitewash). The burrow was part of an old kit fox den that had several openings and an abundance of old kit fox sign covering the aprons. Five kit fox den burrows detected during Phase II surveys are also shown in Figure 4.

#### **BUOW Phase III**

During the Phase III surveys in which the burrow was visited on four consecutive days, no BUOW were observed using the burrow. In addition, no new activity was observed during the four day Phase III survey period at or around the potentially active burrow.

#### PRELIMINARY WATERS OF THE UNITED STATES RESULTS

During the January 2012 field verification surveys, no additional WUS were observed on the six additional parcels. The desktop delineated WUS completed in October 2011, covered these six additional parcels. A total of approximately 1,178.78 acres of potentially jurisdictional WUS were identified and mapped in the project area, with an additional 254.82 acres in the biological survey buffer. This number includes 621.30 acres of direct impacts and 158.13 acres of indirect impacts.

#### PRELIMINARY WATERS OF THE STATE OF CALIFORNIA RESULTS

During the January 2012 field verification surveys, no additional WSC were observed on the six additional parcels. The desktop WSC delineation was completed in October 2011 and covered these six additional parcels. A total of approximately 2,608.46 acres of potentially jurisdictional WSC were identified and mapped in the biological survey area, which includes 1,264.94 acres of direct impacts and 347.61 acres of indirect impacts.

#### CONCLUSIONS

#### **VEGETATION MAPPING CONCLUSIONS**

Six sensitive vegetation communities exist in the revised Project area: blue palo verde ironwood woodland decreased in acreage from 2237.8 to 2130.7 acres, mesquite/bush seepweed scrub decreased in acreage from 110.3 to 98.6, creosote bush/white burr sage scrub with big galleta grass association decreased from 923.1 to 485.7 acres, brittle bush/ferocactus scrub decreased from 220.4 to 199.5 acres, and bush seepweed did not change in acreage (Figures 2 and 3). The acreage for the desert dunes community had the largest decrease from 789.2 to 80.6 acres (Table 1). As a result of these changes, the total potential impacts to the six sensitive vegetation communities for the Project area, has decreased by a total of 105.5 acres.

#### BURROWING OWL CONCLUSIONS

During both winter season Phase II and Phase III surveys on the three parcels, BUOW activity was not observed. This is consistent with the findings of the spring BUOW Phase II surveys for the rest of the Project site. During the spring Phase II spring surveys, 17 potential burrows were identified and subsequently monitored during spring Phase III surveys. No BUOW activity was observed at the 17 burrows during the spring Phase III surveys. A total of 18 BUOW burrows are present within the current BSA.

#### PRELIMINARY WATERS OF THE UNITED STATES CONCLUSIONS

The 2012 field survey verified the results and conclusions of the desktop delineation in these ROE parcels. Therefore, there are no changes to the WUS acreage mapped in the project area.

#### PRELIMINARY WATERS OF THE STATE OF CALIFORNIA CONCLUSIONS

The 2012 field survey verified the results and conclusions of the desktop delineation for these six ROE parcels. There are no changes to the WSC acreage mapped in the project area.

#### REFERENCES

California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. http://www.dfg.ca.gov/wildlife/nongame/docs/boconsortium.pdf.

CDFG. 2011. California Natural Diversity Data Base. Sacramento, CA.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation. 2nd ed.

California Native Plant Society Press. Sacramento, CA. 1300 pp.

- URS Corporation. 2011. Biological Resources Technical Report for the Rio Mesa Electric Generating Facility, Riverside County, California (Draft Final).
- USACE. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- USACE. 2001. Final Summary Report: Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest. U.S. Army Corps Engineers, South Pacific Division.
- USACE. 2004. Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States. Edited by Robert W. Lichvar and James S. Wakeley. ERDC TR-04-1. January 2004.
- USACE. 2008a. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. Robert W. Lichvar and Shawn M. McColley. ERDC/CRREL TR-08-12. August 2008.
- USACE. 2008b. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). ERDC/EL TR-08-28. September 2008.
- USACE. 2001. Final Summary Report: Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest. U.S. Army Corps Engineers, South Pacific Division.
- USACE. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. Robert W. Lichvar and Shawn M. McColley. ERDC/CRREL TR-08-12. August 2008.

VTN. 20110121\_PVM\_map\_VTN\_HI\_preliminary.jpeg. [map]. Jan 21, 2011.



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#### BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA 1516 NINTH STREET, SACRAMENTO, CA 95814 1-800-822-6228 – WWW.ENERGY.CA.GOV

#### APPLICATION FOR CERTIFICATION FOR THE RIO MESA SOLAR ELECTRIC GENERATING FACILITY

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#### **DECLARATION OF SERVICE**

I, <u>Michelle L. Farley</u>, declare that on <u>February 28, 2012</u>, I served and filed copies of the attached <u>Addendum to the</u> <u>Biological Technical Report for the Rio Mesa Solar Electric Generating Facility, Riverside County, California</u>, dated\_ <u>February 2012</u>. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: [http://www.energy.ca.gov/sitingcases/riomesa/index.html].

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as <u>appropriate</u>, in the following manner:

#### (Check all that Apply)

#### For service to all other parties:

- X Served electronically to all e-mail addresses on the Proof of Service list;
  - Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with firstclass postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "e-mail preferred."

#### AND

#### For filing with the Docket Unit at the Energy Commission:

- by sending electronic copies to the e-mail address below (preferred method); OR
- X by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION - DOCKET UNIT

Attn: Docket No. 11-AFC-4 1516 Ninth Street, MS-4 Sacramento, CA 95814-5512 docket@energy.state.ca.us

#### OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

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I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Michelle L. Farling

