FOCUSED BURROWING OWL SURVEY REPORT

AGINCOURT SOLAR PROJECT

Cougar Buttes USGS 7.5' quadrangle
Section 34, Township 4 North, Range 1 East
APNs 0449-641-27 and 0449-641-04

SAN BERNARDINO COUNTY, CALIFORNIA

Submitted by the Project Applicant:

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URS Project Number 28907132

June 2012

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CERTIFICATION

"I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a nondisclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project."

DATE: 6/20/2012 SIGNED: Christopher Julian

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EXECUTIVE SUMMARY

Agincourt Solar, LLC (the Applicant) has retained URS Corporation (URS) to prepare this Focused Burrowing Owl Survey Report for the Agincourt Solar Project (Project), a proposed 10 megawatt solar photovoltaic electrical power generating facility on approximately 59 acres of a 79-acre site located in unincorporated San Bernardino County, California. The proposed Project will connect with an existing Southern California Edison 33-kilovolt transmission line. No new off-site transmission line is proposed.

During protocol surveys, a single burrowing owl was detected within the Agincourt site. This owl was observed and monitored in accordance with the California Burrowing Owl Consortium's survey protocol for this species (CBOC 1993), and the locations of burrows and extent of utilized habitat were mapped. Because implementation of the project would eliminate the existing burrows and associated foraging habitat, measures that would minimize and compensate for impacts to this species are proposed.

SECTION 1.0
INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

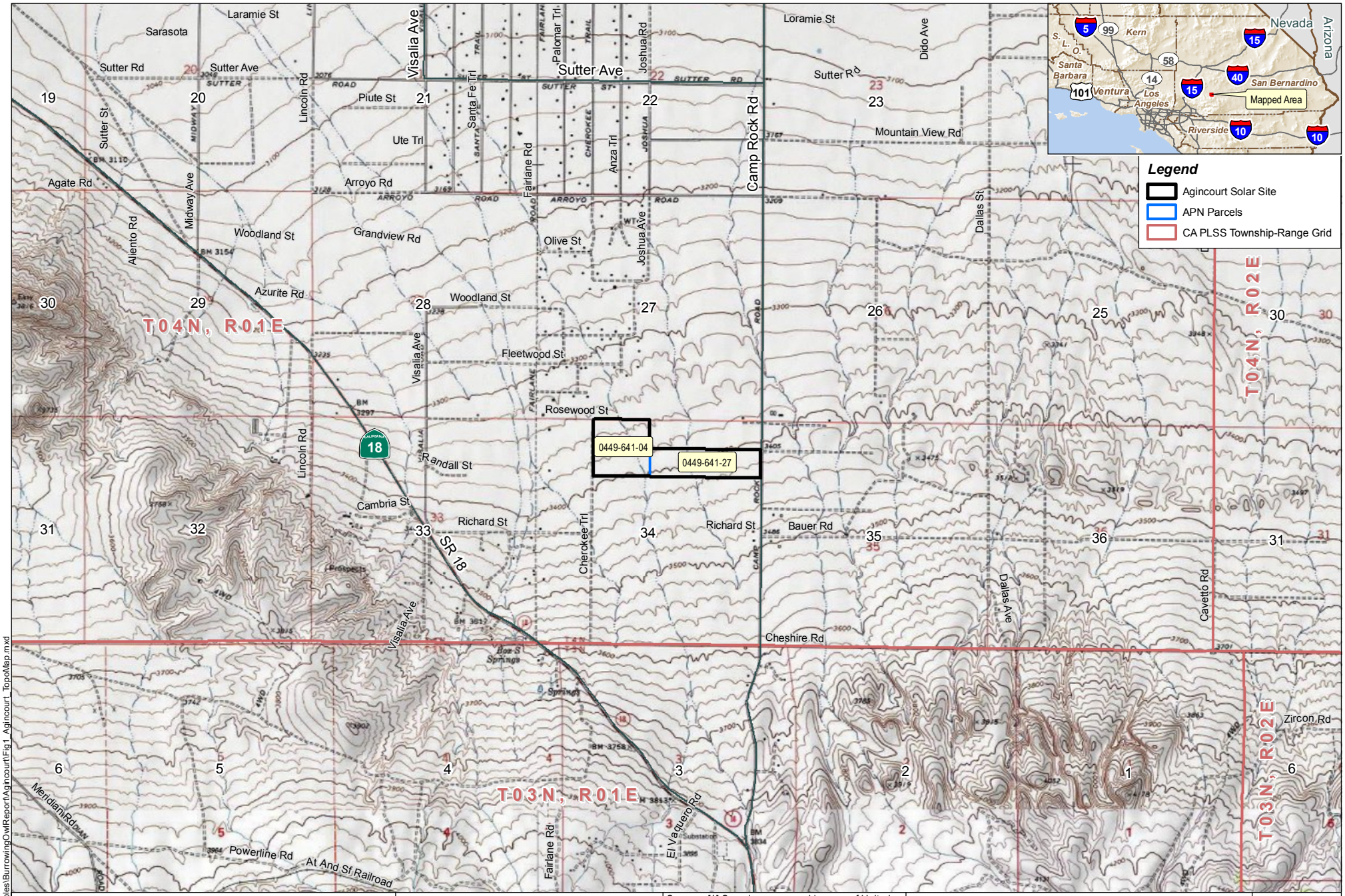
The Applicant proposes to construct and operate a 10 megawatt (MW) solar photovoltaic (PV) electrical power generating facility in unincorporated San Bernardino County, California. The proposed Agincourt Solar Project (Project) will connect with an existing Southern California Edison (SCE) 33-kilovolt (kV) transmission line. No new off-site transmission line is proposed.

This Focused Burrowing Owl Survey Report presents the results of focused surveys for the burrowing owl (*Athene cunicularia*), a small owl that is designated by the California Department of Fish and Game (CDFG) as a California Species of Special Concern (CSC), that have been undertaken within the Agincourt Solar Project site. The project's impacts on this species are described, and feasible mitigation measures that would reduce impacts to less than significant levels are recommended. The unauthorized take of migratory non-game birds, including the burrowing owl, is prohibited by the Migratory Bird Treaty Act (16 USC 703) and by Section 3513 of the California Fish and Game Code. **This Focused Burrowing Owl Survey Report and mitigation measures recommended herein do not constitute authorization for incidental take of migratory birds.**

Because the proposed project is a photovoltaic solar generating facility that would be located in unincorporated San Bernardino County (County), the responsibility for issuing or denying land use approvals for the project rests with the County. The Applicant will submit a Conditional Use Permit (CUP) application to the County, and the Planning Division of the County Land Use Services Department (Planning) will initiate environmental review of the proposed Project as required under the California Environmental Quality Act (CEQA).

1.2 PROJECT SITE

The Project site evaluated in this Focused Burrowing Owl Survey Report comprises approximately 79 acres in the Lucerne Valley, in the western Mojave Desert in unincorporated San Bernardino County. The site is located approximately six miles southeast of the intersection of State Routes 18 and 247, which occurs in the unincorporated town of Lucerne Valley. Access to the site can be achieved via Camp Rock Road, which forms the site's eastern border. Rosewood Street, an unpaved County road, forms the northern border in the western portion of the site; however, the majority of the northern boundary and the entire western and southern boundaries are not marked by physical features. The site is located within Township 4 North, Range 1 East (San Bernardino Base and Meridian), within the Cougar Buttes USGS 7.5-minute series quadrangle. The site exhibits a key-like shape, with a wider portion at the western end and a narrow neck extending to the east (see Figure 1).



0 0.25 0.5 0.75 1 Mile

0 1,000 2,000 3,000 4,000 5,000 6,000 Feet

Agincourt Solar Project
Focused Burrowing Owl Report
San Bernardino County, CA

URS Corporation

Source: [1] Seamless, scanned images of United States Geological Survey (USGS) paper topographic 1:24,000-scale maps by National Geographic TOPO!, [2] California Geospatial Information Library PLS, [3] San Bernardino County Assessor. [4] ESRI StreetMap USA (2007).

Figure 1. Topographic Map of Project Area

2012

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The project site is comprised of two adjacent parcels, both of which are currently unimproved and vacant. The western portion of the site (parcel 0449-641-04) is zoned LV/RL-5 (Rural Living – five-acre parcel minimum). The RL land use zoning district provides sites for rural residential uses, incidental agricultural uses, and similar and compatible uses. The easterly portion of the site (parcel 0449-641-27) is zoned LV/AG, which has a minimum 10-acre lot size and is intended for commercial agricultural operations, agriculture support services, rural residential uses and similar and compatible uses. The site is privately owned, and is not within or adjacent to any designated sensitive resource areas, ecological reserves, or other formally protected lands.

Much of the land surrounding the Project site has been subdivided into large residential lots for rural living, but only a few of these lots have been developed with residences. The closest residence to the Agincourt site is located approximately 0.15 mile north of the site boundary on Rosewood Street near the intersection with Camp Rock Road. Aside from scattered rural residences, the landscape surrounding the Project site is characterized by relatively intact desert vegetation.

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SECTION 2.0
PROJECT AND PROPERTY DESCRIPTION

Agincourt Solar, LLC (Applicant) of Santa Barbara, California, proposes a photovoltaic solar facility to be constructed on a site measuring approximately 79 acres. The site is located in the south one half of the north one half of the northeast one quarter of Section 34, Township 4 North, Range 1 East, San Bernardino Base and Meridian, in the Cougar Buttes USGS quadrangle, County of San Bernardino, California.

The site is bounded by Rosewood Street directly to the north, Camp Rock Road directly to the east, Richard Street to the south, and Cherokee Trail to the west. Figure 1 shows the local site vicinity, and the inset on this figure shows a regional map for context.

Elevations within the Project site range from approximately 3,350 to 3,440 feet above mean sea level, with the overall grade sloping gradually to the northwest. The northern foothills of the San Bernardino Mountains, a major regional mountain range with elevations exceeding 11,000 feet, are located approximately three miles south of the site. The site exhibits microtopography associated with several ephemeral drainage channels that traverse the site, but major landforms and topographic features are absent.

Vegetation on-site is comprised of creosote bush-white burr sage scrub and Joshua tree woodland.

2.1 PROJECT LOCATION AND LEGAL DESCRIPTION

The proposed Project site is situated in the western Mojave Desert, in the southern Lucerne Valley region of San Bernardino County. The site is about 5.5 miles southeast of the Lucerne Valley community. The primary access point to the Project site is from Camp Rock Road, which runs along the eastern project boundary. Camp Rock Road intersects SR 18 approximately 1.7 miles south of the proposed Project site.

The proposed Project site includes the following Assessor Parcel Numbers (APNs):

- 0449-641-04 (40 acres, NE/4 of NW/4, Section 34, Township 4N, Range 1E)
- 0449-641-27 (39.2 acres, S/2 of N/2 of NE/4, Section 34, Township 4N, Range 1E, excepting 50-foot County road easement)

2.2 EVIRONMENTAL SETTING AND SURROUNDING USES

The Mojave Desert is a subsection of the Basin and Range Physiographic Province, which is characterized by long, north-south-trending mountain ranges separated by broad valleys. The site is located on a broad gently sloping bajada of alluvial material originating from the San Bernardino Mountains to the south. Elevation of the project site ranges from approximately

3,340 feet above sea level (asl) at its northwest corner up to 3,446 asl at its southeast corner. The topography is generally flat, with a slope of about four percent towards the north-northwest. Numerous small braided channels cross the site.

The Project site is bordered to the north by vacant land and Rosewood Street. Land to the north of Rosewood Street is subdivided into five acre lots, but only a few of these have been developed with residences. To the west, the land is also subdivided with lot sizes ranging from 2.5 to 10 acres. Most of these lots are vacant, and about one dozen homes are located within one-half mile of the northern and western project boundaries. Immediately south of the project site are two large vacant lots. In general terms, land to the south and east is in larger lots with a lower density of development. About one dozen homes are located within one mile of the project to the south and east.

2.3 EXISTING LAND USES

The project site is currently vacant. The western portion of the site (parcel 04) is zoned LV/RL-5 (Rural Living – 5 acre parcel minimum). The RL land use zoning district provides sites for rural residential uses, incidental agricultural uses, and similar and compatible uses. The easterly portion of the site is zoned LV/AG, which has a minimum 10-acre lot size and is intended for commercial agricultural operations, agriculture support services, rural residential uses and similar and compatible uses. Under County Code Chapters 82.03 and 82.04, electrical power generation is defined as a transportation, communications and infrastructure use, and is allowed in the AG and RL-5 zones upon approval of a Conditional Use Permit (CUP).

2.4 PROJECT LAYOUT AND CONSTRUCTION

The proposed solar power generation facility would be comprised of the following major components: non-reflective PV solar module arrays mounted on fixed-tilt or single-axis trackers and a racking system supported by embedded piers. The site would also include approximately 10 inverters on small concrete pads, a switching station in an enclosure measuring approximately 200 by 200 feet in plan view, an unmanned communications enclosure measuring approximately 20 by 30 feet in plan view, a Conex box for equipment storage, and buried collector lines. Concrete pads would be sized and installed to accommodate associated equipment (inverters and switchgear). The top-of-concrete elevation would be approximately 6 inches above-grade-level locally to maintain flow away from the foundation.

The site plan is illustrated in Figure 2 (note: locations of solar panels and other elements within the site may be refined during final design). The layout of the solar panels would be aligned in rows in the north-south direction throughout the site. Each solar panel would be attached to embedded piers using a support structure. The rows of

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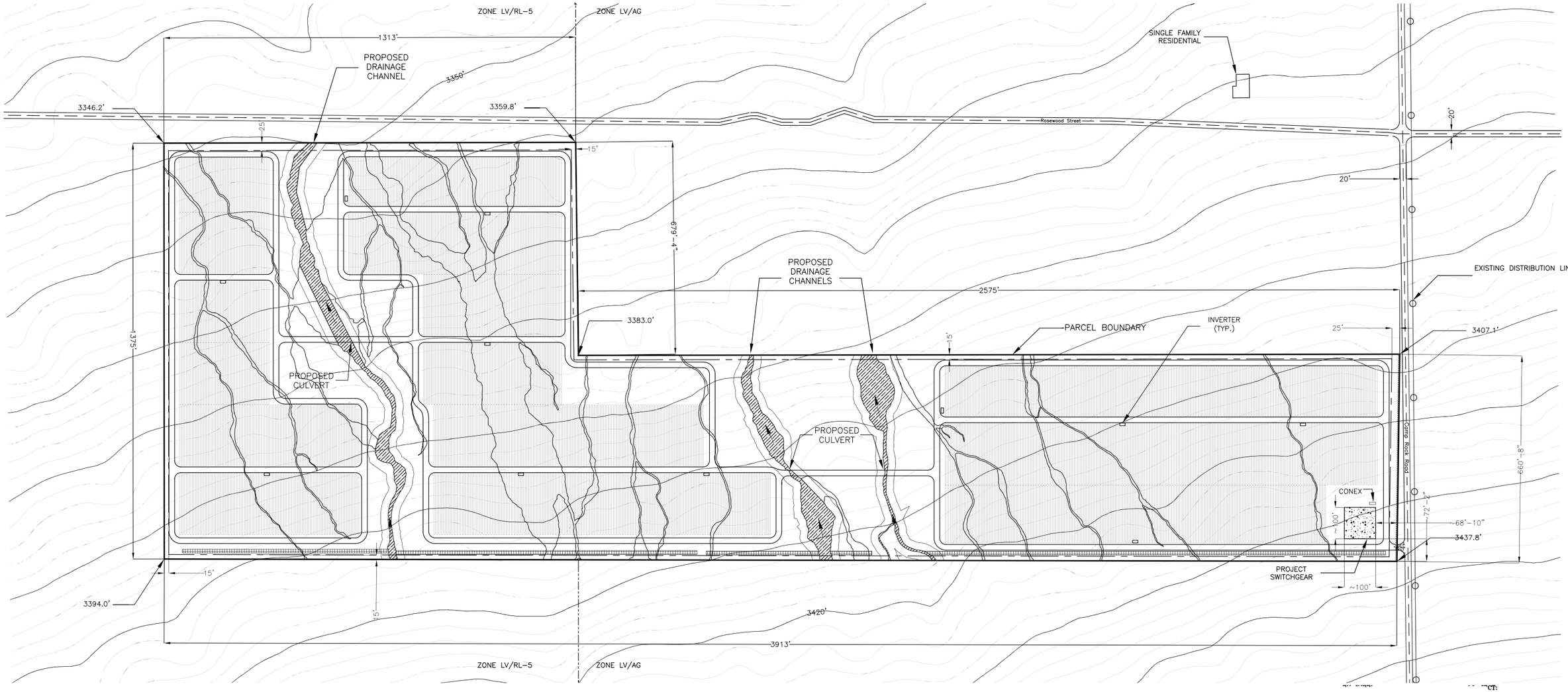

LEGEND

- SETBACK
- ROAD CENTERLINE
- CONSTRUCTED CHANNEL
- PARCEL BOUNDARY
- PROPOSED DRAINAGE CHANNELS
- ZONING BOUNDARY
- ASPHALT APRON

Site Location

0 160 320 640

APPROXIMATE SCALE: 1" = 320'

Agincourt Solar Project Focused Borrowing Owl Report San Bernardino County, CA URS Corporation	**Source:** Lincoln Renewable Energy, LLC June 2012. Document Number: D1-0502-002 Rev. E	**Figure 2.** Proposed Site Plan	2012

solar panels would be separated by access ways. Internal site circulation would include a 25-foot-wide perimeter gravel road. Maintenance roads with access to the solar panels would be improved (minimally graded, dirt or gravel) to provide truck access. Upon completion of the proposed Project, vegetation or dust palliatives may be used if needed to control wind and water erosion during operations.

No off-site improvements are anticipated with the exception of the development of site access points. Typical site access will be 25 feet wide, accommodating 75-foot turning radii in both directions. The proposed site access will include a 75-foot-long drive apron and a roadway section paved with asphalt. The actual depth of roadway sections would be determined during final design based on anticipated loading and traffic indices. However, it is anticipated that the road base course would be a minimum of six inches thick. The top course thickness would be a minimum of two inches thick.

A six foot high chain link security fence topped with one foot of barbed wire will be installed at the property setback. Signs will be installed to achieve the appropriate safety and security as expected in a solar power plant. Proposed signage includes high voltage danger signs, site under surveillance, caution electric shock, etc. Any signs as required by the National Electrical Code will be installed.

The Project's lighting system will provide operation and maintenance personnel with illumination for both normal and emergency conditions. Lighting will be designed to provide the minimum illumination needed to achieve safety and security objectives. Lighting will be directed downward and shielded to focus illumination on the desired areas only to avoid light spillage on adjacent properties. Project lighting will be located at each inverter station and switchyard. Lighting will be no brighter than required to meet safety and security requirements, and the lamp fixtures and lumens will be selected accordingly. All project lighting will be switched and without timers.

Several part-time employees would visit the site periodically (e.g., monthly or bi-monthly) and several times a year the employees or a contractor would visit the site to wash the PV panels. Panel washing would require approximately 2 acre-feet of water per year and, based on an assumed use of medium-sized water tankers, would require approximately 130 truckloads (260 truck trips) for delivery of this water. Water would be purchased from a local purveyor. No on-site wells would be used.

2.5 SUPPORT PEDESTAL DRAINAGE AND EROSION DESIGN

The solar panels would drain freely to the ground. They would be almost parallel to the ground with a slight sloping orientation. In general, rain would run off the lower edge of the PV panel. The edge of the panel would be approximately 24 inches above the ground, and the runoff would be approximately 25 gallons in a 10-year storm (5-minute – 10-year rain event per 200 square feet of panels). This volume of water is expected to run off the panels over a

5-minute period. Based on the volume of water falling from each panel, the height of the fall, and the soil conditions, it is not expected that erosion beyond a micro level will occur. It is expected that water will fall from the PV panels and pond at a drip point before infiltrating or gradually migrating into the existing drainage patterns. If, over time, minor erosion were noted at the drip points, small gravel pads could be added to help dissipate the energy of the falling water. If minor erosion were noted near the foundations, minor grading could restore support for the individual foundations, and keep surface flows from undermining the foundations in future storm events.

2.6 INCREASE IN IMPERVIOUSNESS DUE TO CONSTRUCTION

Increase in impervious area of the site due to the construction of the project embedded piers, is estimated to be minimal, approximately 11 percent.

2.7 SITE DRAINAGE

A flood map search (FEMA 2011) for Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel ID numbers 06071C6575H and 06071C6600H confirms the proposed Project site area has not been mapped by FEMA for flood zone hazards, and is therefore classified as an "Undetermined Risk Area." The County of San Bernardino also has no flood zone hazard mapping for this area.

Typical of arid regions, the area experiences short-duration, high-intensity rainfall storm events producing potentially high rates of runoff when the initial infiltration rates are exceeded. During these periods the small, incised washes become conduits for water flow.

The soil in the watershed is predominantly Soil Group D. This soil type is characterized as having high runoff potential due to very slow infiltration rates when thoroughly wetted. It is expected that drainage conditions present at the site, which have been formed by past storm events, would not be disturbed and would continue to convey storm flows following project construction. Because construction essentially leaves flow patterns unaltered, mitigation is considered unnecessary for this site.

Based on visual observations during a site visit and the type of facility proposed, it is expected that the proposed solar panel construction would not significantly change offsite runoff characteristics during a major storm event. Because the imperviousness of the site would not be greatly changed as a result of the construction, the impact of increased rainfall runoff due to construction would be negligible. As noted above, the site design indicates that project construction would result in a minor (11 percent) increase in impervious surfaces at the site.

The site topography can be characterized as uniform in surface profile, with a slight slope in a northwesterly direction. Based on field observations, the site is characterized by naturally

developed riverine channels that direct rainfall runoff through the site. Some of the existing drainage flow paths would be filled during the development of the site based on the final layout of the solar panels and the project's Conceptual Drainage Plan would redirect their existing flows to other existing drainages. With incorporation of the Conceptual Drainage Plan, the proposed Project is not expected to significantly affect offsite flow patterns.

2.8 PROJECT CONSTRUCTION AND SCHEDULE

Construction of the proposed Project is estimated to require approximately 80-100 workers at its peak. Construction is estimated to start in 2013 and would take approximately nine months to complete. Approximately 40 acre-feet of water would be used during construction for dust suppression and ancillary construction activities. Dust suppression during construction may also involve application of palliatives.

The development of the Project would require site grading, with limited impact to existing offsite drainage patterns and overall topography of the site. Minor cuts may be required at the locations of inverters and other equipment to provide level foundations. It is expected that the fill from these cuts will be placed around the pre-cast foundation in order to divert small, localized flows away from the foundation and prevent undermining of the same.

Where grading is required, cut-and-fills are expected be balanced onsite, resulting in little or no import or export of earthen material. A total of approximately 150,000 cubic yards of cut-and-fill may be balanced onsite. Final drainage design will be completed following a detailed topographic site survey overlaid with proposed site development grading.

Areas along major drainage channels outside of the developed footprint will be preserved. Vegetation would be cleared to allow for the construction of the solar panels and access roads. Grubbing would occur on all gravel access roads, and in any areas where the roots would impede the pier structure. The installation of the solar panels also requires trenching along and below access roads for the installation of multiple cable systems. Under and along almost every internal roadway, trenches as deep as 48 inches would house the cables in a sand bed that would be backfilled with excavated material from the site.

Best management practices (BMPs) for erosion control would be used to avoid and minimize impacts on the environment during construction, operations and maintenance. For example, gravel pads or other track-out reduction measures at project construction site access points may be used to minimize dirt and mud deposits on public roads, as required to meet stormwater quality regulations and vegetation or dust palliatives may be used if needed to control wind and water erosion during operations. A Water Quality Management Plan that includes a Stormwater Pollution Prevention Plan and an Erosion and Sediment Control Plan would be prepared and implemented to avoid and minimize impacts on water quality during construction and operations.

SECTION 3.0
METHODOLOGY

To document the extent to which burrowing owls utilize habitat within the Agincourt site, URS relied upon a review of available literature, seasonally-timed biological field investigations of the site, and extended observations of the single owl detected on-site. The methods employed are described below.

3.1 LITERATURE REVIEW

Prior to conducting biological field surveys within the Agincourt site, URS biologists performed a literature review to identify known burrowing owl occurrences and habitat that occur within or in the vicinity of the Project site. The materials reviewed included topographic maps, aerial photographs, species-specific technical literature, and publicly-available environmental documentation for other recent projects in the region. In addition, a five-mile radius query of the California Natural Diversity Database (CNDDB; CDFG 2012) was performed. These resources were used to identify documented occurrences within or in the vicinity of the Project site. The CNDDB five-mile query also provided locations of designated critical habitat for federally listed species, sensitive natural communities, ecologically sensitive areas, and state-managed lands. The results of the CNDDB query are presented on Figure 3.

3.2 PROTOCOL BURROWING OWL SURVEYS

The California Burrowing Owl Consortium's *Burrowing Owl Survey Protocol and Mitigation Guidelines* (CBOC 1993) recommend a four-step approach to surveying for this species. The first phase (Phase I) involves a simple habitat assessment, which was completed during URS' preliminary biological investigations for the project in February 2010 (~1000–1700; Temperature ranged from 15.6°C to 20°C; Wind ranged from calm to 10 mph (NNE)). The site's geographic location, elevation, vegetation, topography, and soil characteristics were evaluated relative to the burrowing owl's habitat requirements. Because the assessment indicated that the site does contain suitable burrowing owl habitat, the remaining three phases of the survey were performed.

Phase II of the survey protocol is comprised of a full-coverage, pedestrian transect survey of the project site. The required survey was performed by URS biologists on April 9 and 10, 2012. The survey dates and times, weather conditions, and names of investigators are presented in Table 1 below. The survey protocol recommends that the interval between survey transects should range between 10 and 30 meters, depending on site conditions such as vegetative cover and visibility. The survey transects were spaced at 10 meter intervals, the most conservative and rigorous interval recommended by the protocol. A team of three

WHITE HORSE MTN. QUAD*
GRAND VIEW MINE QUAD
LUCERNE VALLEY QUAD
COUGAR BUTTES QUAD*
BIG BEAR CITY QUAD*
FAWNSKIN QUAD

desert tortoise (1986)
prairie falcon (1978)
Le Conte's thrasher (1978)
western mastiff bat (1954)
Parish's phacelia (1941)
Shockley's rockcress (XXXX)
Salt Spring checkerbloom (1993)
hillside wheat grass (1978)
Mohave ground squirrel (1886)
Parish's popcorn-flower (2005)
Le Conte's thrasher (1964)
silver-haired bat (1983)
burrowing owl (2009)
burrowing owl (2010)
white pygmy-poppy (1987)
Le Conte's thrasher (1988)
burrowing owl (2006)
Le Conte's thrasher (1991)
alkali mariposa-lily (2010)
pallid San Diego pocket mouse (1954)
prairie falcon (1980)
desert tortoise (1986)
Parish's daisy (1995)
Cushenbury buckwheat (1966)
Cushenbury milk-vetch (1995)
Cushenbury milk-vetch (XXXX)
Parish's daisy (1992)
summer tanager (1987)
San Bernardino milk-vetch (1985)
desert monkey grasshopper (1919)
Cushenbury milk-vetch (1988)
Cushenbury buckwheat (XXXX)
Cushenbury buckwheat (2009)
Parish's daisy (1998)
Big Bear Valley woollypod (1998)
Parish's daisy (XXXX)
Parish's daisy (1996)
Shockley's rockcress (1988)
purple-nerve cymopterus (1995)
Cushenbury oxytheca (1995)
Shockley's rockcress (2010)
Cooper's hawk (1988)
Cushenbury milk-vetch (1992)
Shockley's rockcress (1998)
Parish's daisy (1988)
San Bernardino Mountains dudleya (1994)
San Bernardino milk-vetch (2009)
Cushenbury buckwheat (2001)
Cushenbury buckwheat (1988)
Cushenbury milk-vetch (1994)
San Bernardino milk-vetch (1997)
Shockley's rockcress (2001)
Cushenbury buckwheat (1996)
Baldwin Lake linanthus (2005)
Cushenbury buckwheat (1998)
Parish's daisy (1992)
Cushenbury milk-vetch (2004)
Parish's rockcress (1978)
San Bernardino Mountains dudleya (1996)
Cushenbury buckwheat (XXXX)
Shockley's rockcress (1998)
Big Bear Valley phlox (1932)
Parish's rockcress (1978)
Parish's alumroot (1998)
Cushenbury oxytheca (2007)
large-blotched salamander (2005)
alkali mariposa-lily (1981)
Cushenbury milk-vetch (1992)
Latimer's woodland-gilia (1955)
California mountain kingsnake (San Bernardino population) (1996)
Big Bear Valley milk-vetch (2009)
southern mountain buckwheat (2001)
Big Bear Valley woollypod (2005)
Big Bear Valley woollypod (1998)
San Bernardino ragwort (2008)
Cushenbury oxytheca (2007)
Big Bear Valley phlox (2006)
Pebble Plains (1980)
Baldwin Lake linanthus (1979)
Cushenbury milk-vetch (2004)
Cushenbury buckwheat (1992)
southern mountain buckwheat (2001)
coast horned lizard (1937)
Big Bear Valley milk-vetch (1998)
Shockley's rockcress (1998)
Parish's daisy (2006)
Parish's daisy (1992)
Cushenbury oxytheca (2007)
Cushenbury buckwheat (1998)
San Bernardino ragwort (200X)
San Bernardino ragwort (1989)
southern rubber boa (1993)
Cushenbury buckwheat (1979)
Johnston's buckwheat (1998)
Cushenbury buckwheat (2000)
southern mountain buckwheat (1997)
Latimer's woodland-gilia (1926)
Parish's daisy (1998)
San Bernardino milk-vetch (2010)
Cushenbury oxytheca (2007)
wedgeleaf woodbeauty (1886)
Shockley's rockcress (1998)
Big Bear Valley sandwort (200X)
Big Bear Valley sandwort (2008)
California dandelion (1924)
ash-gray paintbrush (1997)
Cushenbury milk-vetch (2010)
Parish's daisy (1988)
Cushenbury oxytheca (1998)
San Bernardino ragwort (2000)
Big Bear Valley milk-vetch (2008)
Pebble Plains (1980)
Parish's daisy (1988)
Big Bear Valley woollypod (2001)
Parish's rockcress (2010)
pinyon rockcress (2005)
Cushenbury buckwheat (1998)
San Bernardino ragwort (2011)
Pebble Plains (1980)
Cushenbury oxytheca (1998)
little purple monkeyflower (2008)
silver-haired ivesia (2008)
Baldwin Lake linanthus (2009)
San Bernardino milk-vetch (2010)
Big Bear Valley woollypod (2001)
Parish's rockcress (2001)
southern mountain buckwheat (1988)
San Bernardino Mountains owl's-clover (2010)
Parish's daisy (1998)
two-striped garter snake (2001)
Baja navarretia (1982)
Big Bear Valley woollypod (1984)
Pebble Plains (1980)
silver-haired ivesia (2008)
little purple monkeyflower (2008)
southern mountain buckwheat (2003)
Shockley's rockcress (1998)
San Bernardino ragwort (2001)
Parish's alumroot (XXXX)
simple hydroporus diving beetle (1983)
pygmy pussypaws (2007)
San Bernardino Mountains monkeyflower (2008)
Parish's rockcress (2001)
male fern (1882)
ash-gray paintbrush (2001)
Parish's rockcress (2010)
silver-haired ivesia (2008)
Big Bear Valley sandwort (2008)
Cushenbury milk-vetch (2010)
Bear Valley pyrrocoma (1988)
Parish's rockcress (2001)
Baja navarretia (1978)
Baja navarretia (1995)
Pebble Plains (1987)
Parish's rockcress (2009)
Parish's daisy (1992)
San Bernardino Mountains monkeyflower (1982)
silver-haired ivesia (2006)
San Bernardino Mountains dudleya (198X)
pinyon rockcress (2009)
Parish's rockcress (2009)
California dandelion (1988)
Big Bear Valley sandwort (200X)
Pebble Plains (1980)
Big Bear Valley phlox (1979)
Big Bear Valley woollypod (2005)
Pebble Plains (1986)
Big Bear Valley sandwort (2009)
Big Bear Valley sandwort (2008)
southern mountain buckwheat (2003)
Shockley's rockcress (1998)
Big Bear Valley sandwort (200X)
San Bernardino Mountains monkeyflower (1982)
Pebble Plains (1980)
Pebble Plains (1980)
Big Bear Valley phlox (2004)
Pebble Plains (1980)
Parish's yampah (1930)
Baldwin Lake linanthus (2009)
Baldwin Lake linanthus (2009)
silver-haired ivesia (2006)
Pebble Plains (1980)
Palmer's mariposa-lily (1978)
Baldwin Lake linanthus (2009)
Cushenbury buckwheat (2006)
Laguna Mountains jewel-flower (XXXX)
Parish's rockcress (2001)
ash-gray paintbrush (2000)
ash-gray paintbrush (2000)
Parish's rockcress (197X)
San Bernardino milk-vetch (1924)
pinyon rockcress (2008)
Parish's daisy (1998)
California dandelion (1975)
Big Bear Valley phlox (2009)
Parish's rockcress (2001)
Sierra Madre yellow-legged frog (2000)
southern mountain buckwheat (2003)
Big Bear Valley milk-vetch (1978)
Big Bear Valley woollypod (2008)
Parish's yampah (1996)
Big Bear Valley phlox (2009)
Big Bear Valley phlox (1979)
Big Bear Valley woollypod (1979)
Parish's rockcress (2010)
Big Bear Valley sandwort (2008)
Parish's rockcress (2009)
Cushenbury buckwheat (2006)
short-sepaled lewisia (2001)
Big Bear Valley sandwort (1979)
San Bernardino Mountains bladderpod (2009)
Parish's rockcress (2010)
Cushenbury buckwheat (2006)
Parish's daisy (2005)
San Bernardino Mountains dudleya (2009)
Pebble Plains (1980)
bald eagle (1979)
Parish's rockcress (2001)
Cushenbury buckwheat (2008)
Pebble Plains (1980)
bird-foot checkerbloom (1983)
Cushenbury buckwheat (2006)
Big Bear Valley woollypod (1993)
San Bernardino Mountains dudleya (2000)
Cushenbury buckwheat (2008)
lodgepole chipmunk (1949)
lodgepole chipmunk (1991)
bird-foot checkerbloom (1983)
Bear Valley pyrrocoma (1946)
Shockley's rockcress (1980)
Cushenbury buckwheat (2008)
Baja navarretia (1978)
pinyon rockcress (2008)
pinyon rockcress (2008)
Cushenbury buckwheat (2006)
lodgepole chipmunk (1991)
ash-gray paintbrush (2007)
Cushenbury buckwheat (2008)
short-sepaled lewisia (1981)
Parish's rockcress (2010)
Baldwin Lake linanthus (2008)
Baldwin Lake linanthus (2008)
San Bernardino Mountains bladderpod (1988)
San Bernardino Mountains bladderpod (2009)
Parish's yampah (1984)
lodgepole chipmunk (1991)
Baldwin Lake linanthus (2008)
wedgeleaf woodbeauty (2011)
bird-foot checkerbloom (1979)
Big Bear Valley phlox (2001)
Bear Valley pyrrocoma (1982)
San Bernardino aster (2004)
Bear Valley pyrrocoma (1999)
Baldwin Lake linanthus (2008)
wedgeleaf woodbeauty (1886)
Cushenbury buckwheat (2008)

Harrod Rd
Rabbit Springs Rd
Foothill Rd
Tradepost Rd
Sutter Ave
Camp Rock Rd
SR 247
SR 18
247
Atf And Sf Railroad
Channel and Basin - Cushenbury Sand & Gravel Quarry HCP
Channel and Basin - Cushenbury Sand & Gravel Quarry HCP

Legend

Project Region (5-mile Radius)

Agincourt Project Site

Proposed Project Site

County Line

CNDDB August 2011

Plant
Animal
Terrestrial Community
Aquatic Community

City Limits
CA Dept. of Parks and Recreation
CA State Managed Lands
7.5 Quad Index
7.5 Quads with Sensitive EOs
**Sensitive EOs are not mapped, but occur somewhere within the quad boundary*

0 0.5 1 1.5 2 Miles

0 5,000 10,000 Feet

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Agincourt Solar Project
Focused Burrowing Owl Report
San Bernardino County, CA

URS Corporation

Source: [1] CNDDB August 2011, [2] LADeptOfRegionalPlanning, 11-26-2007, [3] Tele Atlas North America, Inc./Geographic Data Technology, Inc., ESRI (2005-06-01), [4] I-cubed Nationwide Prime - Aerials Express (2009-04-15 image date, 0.3m resolution).

Figure 3. Special-status species in the Project Vicinity

2012

TABLE 1
PHASE II TRANSECT SURVEYS

Date	Time	Weather Conditions	Location (UTM, Zone 11S) and Elevation (m)	Investigators
April 9, 2012	Start: 1400	Start: Temperature 27.2°C, Wind 2.5 mph (NW), 1 percent cloud cover	Start: 0512220E, 3806425N, 1,029 m	Christopher Julian Julie Love
	End: 1730	End: Temperature 25.7°C, Wind 7.3 mph (W), 1 percent cloud cover	End: 0512490E, 3806253N, 1,038 m	
April 10, 2012	Start: 0830	Start: Temperature 17.5°C, Wind 1 mph (W), 2 percent cloud cover	Start:0512500E, 3806307N, 1,035 m	Christopher Julian Julie Love William Fletcher
	End: 1156	End: Temperature 28.0°C, Wind 5–6 mph (W), 0 percent cloud cover	End: 0513010E, 3806119N, 1,049 m	
April 10, 2012	Start: 1315	Start: Temperature 29.7°C, Wind 4–5 mph (W), 0 percent cloud cover	Start: 0512210E, 3806462N, 1,027 m	Christopher Julian Julie Love William Fletcher
	End: 1635	End: Temperature 27.7°C, Wind 8–10 mph (SW), 0% cloud cover	End: 0511980E, 3806448N, 1,026 m	
April 11, 2012	Start: 0830	Start: Temperature 12.5°C, Wind 1–2 mph (W), 85 percent cloud cover	Start:0511970E, 3806534N, 1,022 m	Christopher Julian Julie Love William Fletcher
	End: 1030	End: Temperature 14.5°C, Wind 5–6 mph (SW), 15 percent cloud cover	End: 0511820E, 3806534N, 1,022 m	

survey biologists, each possessing substantial experience and knowledge of burrowing owl biology, physical indicators of burrowing owl presence, and survey techniques, walked parallel transects across the Agincourt site. The surveys were initiated at the northeastern corner of the site, and transects were walked in a north-south orientation to reduce the effects of glare and shadows. Each biologist carried a handheld GPS unit to ensure that the transects were parallel and to maintain the desired transect orientation. All burrows of sufficient size to harbor burrowing owls (3 inches in diameter or greater) were investigated for signs of use by

the species, including presence of pellets, feathers, whitewash, or nearby individuals. Where burrows exhibited signs of use, the burrow locations were recorded using GPS technology.

Photographs were taken, and the nature of the burrow was described by the biologists in written notes. Wildlife and plant species incidentally observed during the surveys were also recorded. Air temperature, wind speed, and wind direction were recorded at the start and end of each survey day using a WindMate 200 thermometer/anemometer. Air temperature was measured approximately five centimeters above the ground in the shade of the observer. Wind speed and direction were measured at approximately five feet above the ground. Following completion of the transect survey, the locations of any burrows detected were plotted on a map for use during the remaining phases of the protocol survey.

Phase III of the survey protocol includes determining burrowing owl use and collecting burrowing owl behavior during three observation periods at the burrow location. These observations were conducted on three consecutive days during the dawn survey period, consisting of 1 hour before sunrise to 2 hours after sunrise. Fixed points for burrow observation were identified in the field and marked using GPS. Observation points were selected when it was determined that a point was at a reasonable distance from the burrow and that thorough visual coverage of the burrow could be achieved based on the topography

TABLE 2
PHASE III OWL CENSUS AND OBSERVATION

Date	Time	Weather Conditions	Sunrise	Investigators
April 17, 2012	Start: 0515	Start: Temperature 16.6°C, Winds calm.	0615	Julie Love William Fletcher
	End: 0815	End: Temperature 21.7°C, Winds 2–6 mph (SW).		
April 18, 2012	Start: 0513	Start: Temperature 16.2°C, Winds 1–2 mph (SW).	0613	Julie Love William Fletcher
	End: 0813	End: Temperature 18.6°C, Winds 3–7 mph (SW).		
April 19, 2012	Start: 0512	Start: Temperature 13.5°C, Winds calm.	0612	Julie Love William Fletcher
	End: 0812	End: Temperature 20.1°C, Winds 2–6 mph (SW).		

of the area surrounding the burrow location. The observation point used by each observer was noted daily. Observers used binoculars and spotting scopes to aid in determining the number of owls using the burrow and surrounding area. Behavior of the burrowing owl was also documented during each survey. Mapping of the territory used by the burrowing owl was conducted when observational data were sufficient. Dates and times for each observation period are shown in Table 2 below.Phase IV of the burrowing owl survey protocol involves preparing a survey report that presents the results of the protocol surveys. This Focused Burrowing Owl Survey Report constitutes the Phase IV report for the Agincourt project.

SECTION 4.0
GENERAL BIOLOGICAL SURVEY RESULTS

This section presents the results of general biological surveys that were conducted within the Agincourt site between February 2010 and October 2011. Details for these surveys are reported under separate cover in the General Biological Resources Assessment Report (URS 2012a), but are summarized below to provide the environmental context for the discussion of the burrowing owl surveys described in Section 5.0, below.

4.1 REGIONAL SETTING

The Project site is located in the Lucerne Valley, at the western edge of the Mojave Desert. Because this area is in proximity to montane, foothill, and desert habitats, the Project region contains plants, plant communities, and animals adapted to each of these general habitat classes.

4.1.1 Topography

The Lucerne Valley is located in the western Mojave Desert, and is bounded by the Granite, Ord, and Rodman Mountains to the north and the San Bernardino Mountains to the south. The San Bernardino Mountains are the larger of these two ranges, reaching elevations in excess of 11,000 feet at the top of Mt. San Gorgonio, and receive considerable winter snowfall. Because the Agincourt is located within three miles of the northern edge of the San Bernardino Foothills, slope and drainage within the site is influenced by these mountains. The topography of the Agincourt site slopes gradually from the southeast to the northwest, away from the San Bernardino Mountains and towards the floor of the Lucerne Valley. Topography of the site itself is relatively flat, and elevations on-site range from 3,350 to 3,440 feet above mean sea level.

4.1.2 Hydrology

According to the Watershed Boundary Dataset prepared by the California Interagency Watershed Mapping Committee (CalWater), which is responsible for watershed mapping and dataset creation in the state of California, the Project site is within the Lucerne Lake hydrologic unit of the Colorado River hydrologic region. More specifically, the site is within the Lucerne Lake planning watershed in the Lucerne Lake super planning watershed (CalWater 2004)[1]. This watershed is not tributary to the ocean or any other water body;

[1] The California Interagency Watershed Map is the State of California's working definition of watershed boundaries. The California Interagency Watershed Map describes California watersheds, beginning with the division of the State's 101 million acres into ten Hydrologic Regions (HR). Each HR is progressively subdivided into six smaller, nested levels: the Hydrologic Unit (HU, major rivers), Hydrologic Area (HA, major tributaries), Hydrologic Sub-Area (HSA), Super Planning Watershed (SPWS), and Planning Watershed

rather, all water either infiltrates into the groundwater basin, evaporates, or flows toward the dry lakebed of Lucerne Lake located to the northwest of the Project site. All flow channels on-site are intermittent or ephemeral, and likely to only receive stream flow during and following significant rain events. Drainage patterns within the site are well-defined in most cases, with many tributaries and interconnected/braided systems occurring on-site (URS 2012b).

4.1.3 Soils

The Project site is located in the Lucerne Valley, which is characterized by relatively flat-lying topography, punctuated by alluvial systems associated with the southern face of the San Bernardino Mountains. The Soil Survey for the San Bernardino County, California, Mojave River Area (USDA-NRCS SSURGO 2008) indicates that three soil types occur within the Project site, including the Arizo, Cajon, and Trigger series, which are described below. None of the soil series within the Project site are identified as hydric soils by the Soil Survey. The descriptions of these soils below are abridged from the USDA-NRCS Official Soil Series Description database (USDA-NRCS 2011).

4.1.3.1 Arizo Series

The Arizo series (100) consists of very deep, excessively drained soils that formed in mixed alluvium. Arizo soils occur on recent alluvial fans, inset fans, fan apron, fan skirts, stream terraces, and floodplains of intermittent streams and channels. Slopes range from 0 to 15 percent. The mean annual precipitation is approximately 18 centimeters (cm) (7 inches [in]), and the mean annual temperature is about 17°C (62°F). Arizo soils tend to be used for rangeland and wildlife habitat. The associated vegetation is mainly creosote bush and white burr sage. These soils are classified as Sandy-skeletal, mixed, thermic Typic Torriorthents. Arizo soils occur in a majority of the Agincourt Project site.

4.1.3.2 Cajon Series

The Cajon series (115) consists of very deep, somewhat excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. Cajon soils occur on alluvial fans, fan aprons, fan skirts, inset fans, and river terraces. Slopes range from 0 to 15 percent. The average annual precipitation is approximately 15.24 cm (6 in) and the mean annual temperature is approximately 18°C (65°F). Cajon soils are used mostly for range, watershed, and recreation. A few areas are irrigated and are used for growing alfalfa and other crops. The associated vegetation is mostly desert shrubs including creosote bush, saltbush (*Atriplex* spp.), Mormon tea (*Ephedra* spp.), Joshua trees, some Indian ricegrass (*Stipa* [*Achnatherum*]

(PWS). At the Planning Watershed level (the most detailed level), where implemented, polygons range in size from approximately 3,000 to 10,000 acres. At all levels, a total of 7,035 polygons represent the State's watersheds (CalWater 2004).

hymenoides), annual grasses, and forbs. Cajon soils are classified as mixed, thermic Typic Torripsamments. Cajon soils occur in a small portion of the eastern side of the Agincourt site.

4.1.3.3 Trigger Series

The Trigger series (164) consists of shallow, well drained soils that formed in material weathered from hard sedimentary rocks. Trigger soils occur on uplands. Slopes range from 5 to 50 percent. The average annual precipitation is approximately 10.2 cm (4 in) and the average annual temperature is approximately 17°C (63°F). Trigger soils are used for wildlife habitat, limited grazing, and recreation. The associated vegetation is creosote bush, cactus, annual grasses, and forbs. Trigger soils are classified as loamy, mixed, superactive, calcareous, thermic Lithic Torriorthents. Trigger soils occur in a small portion of the eastern side of the Agincourt site.

4.1.4 Vegetation Communities in the Project Region

The climate of the western Mojave Desert is characterized by cool winter temperatures, warm summer temperatures that are moderated somewhat by the marine influence, with its rainfall occurring almost entirely in the winter (UCSB 2011). Due to its climate, the western Mojave Desert supports a unique desert plant community. Juniper and pinyon pines are found at higher elevations, while creosote bush scrub, yuccas, Joshua trees, grasslands, and cholla are found at lower elevations. In addition, some of the larger washes within the desert support desert riparian woodlands. However, the Joshua tree (*Yucca brevifolia*) is the signature plant of the Mojave Desert and often defines its boundaries.

In the Lucerne Valley, vegetation is mainly comprised of creosote bush scrub, a vegetation type that is common and widespread throughout the Mojave Desert. Creosote bush scrub maintains no federal or state sensitivity designation. Joshua trees are a common component of the desert vegetation, and some areas contain sufficient density of these trees to be mapped as Joshua tree woodlands. (The most recent vegetation classification system [Sawyer et al. 2009] requires Joshua tree cover to exceed one percent for an area to qualify as a Joshua tree woodland). Although the Lucerne Valley generally contains habitats that are common and widespread in the region, some types, such as Joshua tree woodlands, are designated by the CDFG as sensitive natural communities (CDFG 2010).

4.2 VEGETATION COMMUNITIES

The Project site is located within the Mojave Desert geographical region, a distinct vegetation region (Sawyer et al. 2009). The Project site is relatively undisturbed, and native trees and shrubs are abundant with a low lying understory of native and non-native herbaceous species. Vegetation within the site is relatively homogeneous, and is characterized by the presence of two distinct plant communities. Within the site's drainages,

the vegetation is dominated by shrubs and herbaceous understory and most closely corresponds with Sawyer et al.'s (2009) creosote bush-white burr sage scrub (*Larrea tridentata-Ambrosia dumosa* shrubland alliance). In the upland portions of the site, vegetation is dominated by shrubs and trees and most closely corresponds with Sawyer et al.'s (2009) Joshua Tree Woodland (*Yucca brevifolia* woodland alliance). More detailed descriptions of the site's vegetation communities are provided below. Figure 4 illustrates the extent and location of vegetation communities within the Project site, and acreages are presented in Table 3. Photographs showing the on-site vegetation communities are included in Appendix A.

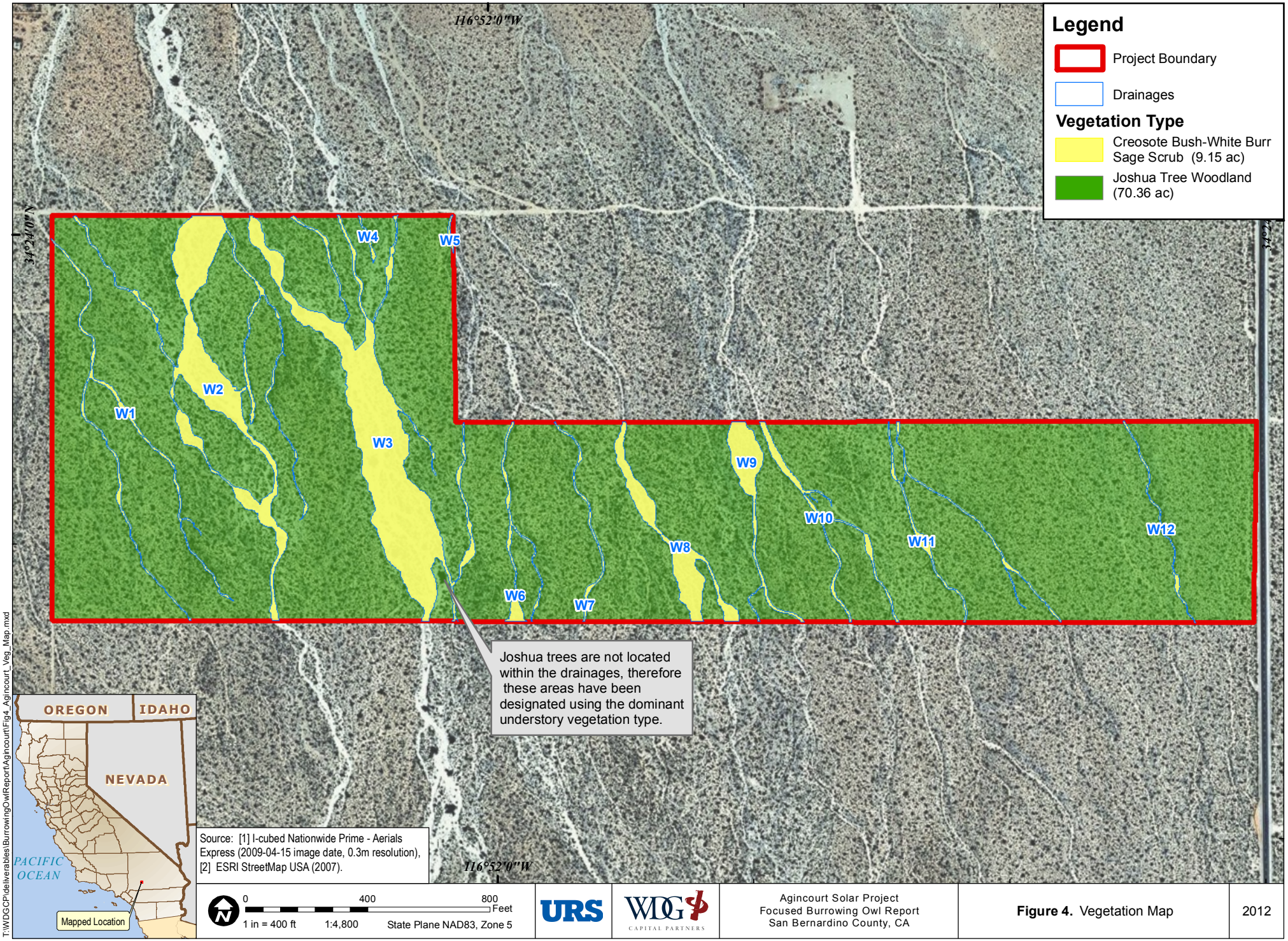
TABLE 3
VEGETATION COMMUNITIES WITHIN THE AGINCOURT SITE

Vegetation Community	Aerial Extent (Acres)	Percent of Site Cover
Joshua Tree Woodland	70.36	88.5
Creosote Bush – White Burr Sage Scrub	9.15	11.5
Total	79.51	100.0

4.2.1 Joshua Tree Woodland

Joshua tree woodland vegetation is characterized by the dominance of Joshua trees (*Yucca brevifolia*) in the tree stratum, over an understory of shrubs or herbaceous vegetation. To be classified as a woodland, Joshua tree cover must exceed one percent, and pines and junipers, if present, must not exceed one percent of the vegetative cover. The shrub layer is open to intermittent, and the herbaceous layer is open to intermittent with annual and perennial grasses and forbs (Sawyer et al. 2009). This vegetative alliance occurs at elevations between 750 and 1800 meters (2,475 and 5,940 feet). In California, Joshua tree woodlands are distributed within the Mojave Desert and surrounding transitional areas, but are absent from San Diego, Imperial, and the easternmost portions of Riverside and San Bernardino counties. The CDFG's most recent List of California Terrestrial Natural Communities (CDFG 2010) identifies Joshua tree woodlands as a sensitive natural community.

In the Joshua tree woodlands within the Agincourt site, dominant species include native trees such as Joshua trees (*Yucca brevifolia*), native shrubs such as creosote bush (*Larrea tridentata*), white burr sage (*Ambrosia dumosa*), cheesebush (*Ambrosia* [*Hymenoclea*] *salsola* var. *salsola)*, and Mojave yucca (*Yucca schedigera*), and non-native herbs such as red brome (*Bromus madritensis* ssp. *rubens*), red-stem fillaree (*Erodium cicutarium*), and Arab grass (*Schismus arabicus*). The site contains 792 Joshua trees, distributed approximately evenly throughout the site (excepting the desert washes), and this species exceeds one percent of the site's total vegetative cover.


116°52'0"W
34°2'0"N
Legend
Project Boundary
Drainages
Vegetation Type
Creosote Bush-White Burr Sage Scrub (9.15 ac)
Joshua Tree Woodland (70.36 ac)
W1
W2
W3
W4
W5
W6
W7
W8
W9
W10
W11
W12
Joshua trees are not located within the drainages, therefore these areas have been designated using the dominant understory vegetation type.
OREGON
IDAHO
NEVADA
PACIFIC OCEAN
Mapped Location
Source: [1] I-cubed Nationwide Prime - Aerials Express (2009-04-15 image date, 0.3m resolution), [2] ESRI StreetMap USA (2007).
0
400
800
Feet
1 in = 400 ft
1:4,800
State Plane NAD83, Zone 5
URS
WDG
CAPITAL PARTNERS
Agincourt Solar Project
Focused Burrowing Owl Report
San Bernardino County, CA
Figure 4. Vegetation Map
2012
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4.2.2 Creosote Bush-White Burr Sage Scrub

This vegetation community is dominated by shrubs, primarily creosote bush (*Larrea tridentata*) and white burr sage (*Ambrosia dumosa*), which are usually co-dominant in the canopy (Sawyer et al. 2009). In California creosote bush-white burr sage scrub is limited to the Mojave Desert, and occurs in Inyo, eastern Kern, northeastern Los Angeles, San Bernardino, Riverside, San Diego, and Imperial counties. This vegetation community usually occurs at elevations between 75 and 1,200 meters (247 and 3,960 feet), and is commonly observed in minor desert washes, alluvial fans, and on upland slopes (Sawyer et al. 2009). Creosote bush-white burr sage scrub is a common and widely distributed vegetation type throughout much of the Mojave desert, and this vegetation maintains no federal, state, or local sensitivity designation.

Within the Agincourt site, creosote bush-white burr sage scrub occurs along the several desert washes that traverse the site in a north-south direction. Joshua trees are not abundant in these areas, and dominant species include native shrubs such as creosote bush, white burr sage, cheesebush (*Ambrosia* [*Hymenoclea*] *salsola* var. *salsola*), and Mojave yucca (*Yucca schedigera*). The understory is comprised mainly of non-native herbs such as red brome (*Bromus madritensis* ssp. *rubens*), red-stem fillaree (*Erodium cicutarium*), and Arab grass (*Schismus arabicus*). Desert willows (*Chilopsis linearis*) are also uncommon but present in one of the washes.

4.3 HYDROLOGY

As stated previously, the Agincourt site is located within the Lucerne Lake watershed. This watershed is not tributary to the ocean or any other water body; rather, all surface flows in the watershed either infiltrate into the groundwater basin, evaporate, or flow toward the dry lakebed of Lucerne Lake to the northwest of the Project site. During a field delineation of jurisdictional features within the site a total of 12 ephemeral drainages were mapped, traversing the site in a south-north direction. All 12 drainages originate off-site (south) and convey flows northwest (downstream) and off-site. Drainage banks vary from defined cut banks to gradual sloped banks, and widths and heights vary greatly. Sinuosity is mild for each drainage, as the channels are relatively straight. The channel bottoms are mostly un-vegetated with upland plant species on the banks and the drainages does not support any riparian vegetation (with the exception of a few desert willows in one of the drainages). The substrate within the channel bottoms is composed mostly of sand with some cobble and boulders. Locations of these drainages are illustrated on Figure 4.

The Lucerne Valley is an arid region, receiving only about 7.5 inches of precipitation annually (Spatial Climate Analysis Service 1998). As a result, the majority of the stream channels that traverse this area exhibit ephemeral hydrology, containing surface flows for only a short duration following storm events. The region's low gradient topography and

porous, sandy soils contribute to this phenomenon, as these factors increase the rate at which surface flows infiltrate into the substrate. The absence of relatively permanent surface flows limits the suitability of the on-site drainages for use by wildlife. Use of these features as a source of drinking water is limited to the periods when surface flows are present, and the flow duration is not sufficient to support aquatic and semi-aquatic species such as fishes and amphibians. However, the site's drainages provide topographic structure in an otherwise uniform environment, and these features may be used as travel routes by wildlife crossing the site.

4.4 PLANT SPECIES

In general, the plant species found on the Project site were native shrubs and trees, with an understory of native and non-native grasses and forbs. No special-status plant species were detected on-site, with the exception of the silver cholla (*Cylindropuntia echinocarpa*), pencil cholla (*Cylindropuntia ramosissima*), cottontop cactus (*Echinocactus polycephalus*), Engelmann's hedgehog cactus (*Echinocereus engelmannii*), Joshua tree, and Mojave yucca, which maintain no formal sensitivity designation but are granted protection under the California Desert Native Plants Act and the San Bernardino County Development Code. A complete list of the plant species observed within the Agincourt site is presented in Appendix B.

4.5 WILDLIFE SPECIES

Based on results of the full-coverage pedestrian transect surveys performed within the Agincourt site, wildlife use of this site appears to be limited. The species detected were primarily common insects, birds, mammals, and reptiles. Due to the absence of perennial watercourses, the Agincourt site does not contain suitable habitat for aquatic or semi-aquatic animals such as fishes and amphibians. A complete list of the wildlife species observed within the Agincourt site is presented in Appendix C. Results of the protocol burrowing owl surveys are presented in Section 5.

SECTION 5.0
PROTOCOL BURROWING OWL SURVEY RESULTS

Results of the protocol burrowing owl surveys are presented below.

5.1 PHASE I HABITAT ASSESSMENT RESULTS

During the Phase I habitat assessment, physical and biological characteristics of the Agincourt site were compared to burrowing owl habitat requirements in an effort to determine whether the site is suitable for this species. The Agincourt site is within the geographic range of the burrowing owl, as depicted on current range maps, and on-site elevations are within the range occupied by the species (Haug et al. 1993). Vegetation on-site is composed of creosote-white burr sage scrub and Joshua tree woodland, two communities that are well represented throughout the Mojave desert and that are known to support burrowing owls. Based on this information, the Agincourt site contains suitable habitat for the burrowing owl.

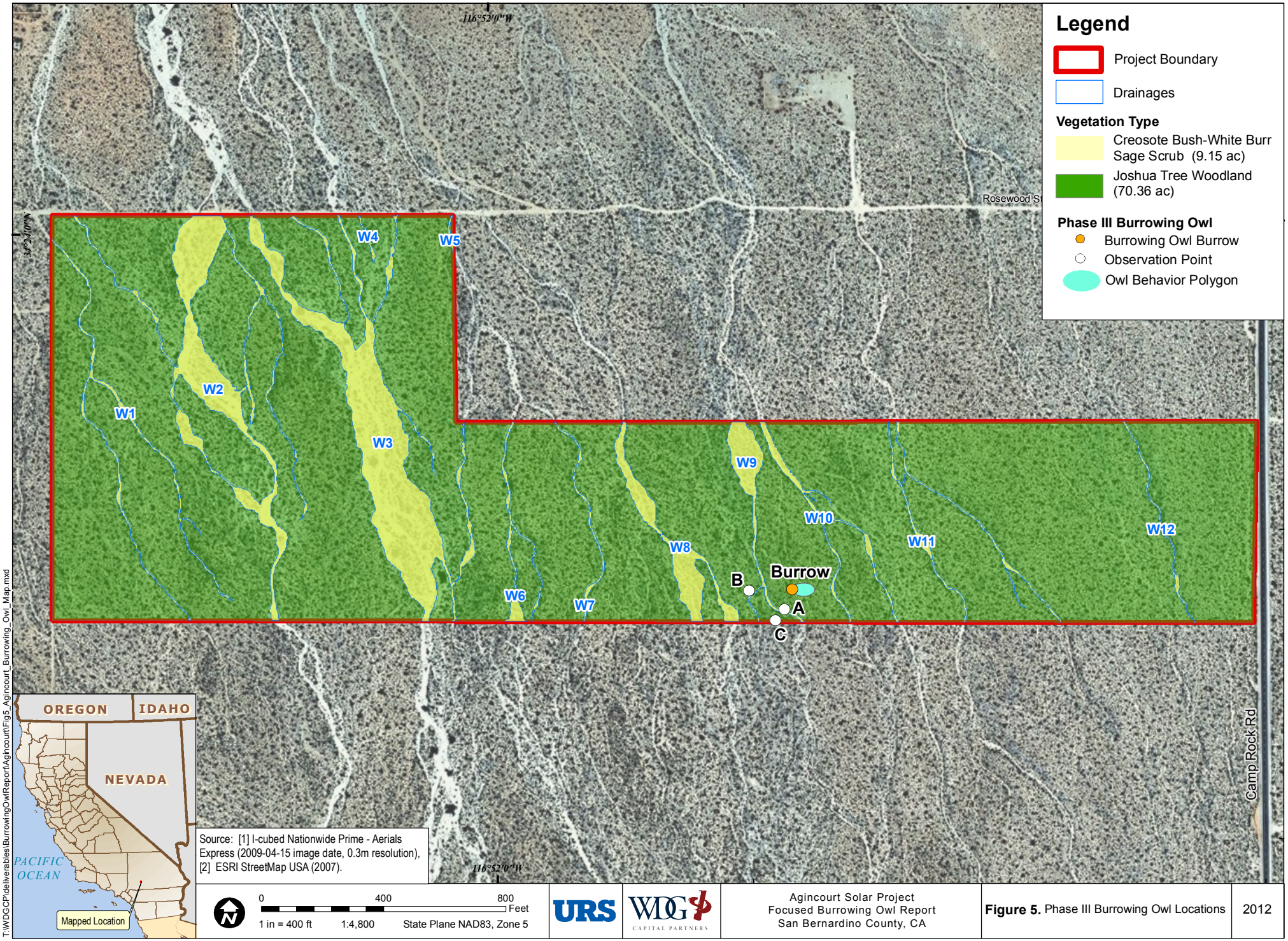
5.2 PHASE II TRANSECT SURVEY RESULTS

During Phase II transect surveys, the overall density of animal burrows within the Agincourt site was observed to be low. Occasionally small mammal burrows, likely those of kangaroo rats (*Dipodomys* spp.) and/or antelope squirrels (*Ammospermophilus* spp.), were observed, but were not of sufficient size to accommodate a burrowing owl. A total of two larger burrows were detected, however; one appeared to be a very old and abandoned kit fox (*Vulpes macrotis arsipus*) den, and the other had been excavated by a coyote (*Canis latrans*). Neither burrow showed signs of current occupation by mammal species. A single burrowing owl was flushed from the vicinity of the coyote burrow during the Phase II transect surveys. Although no burrowing owl sign (white wash, pellets, feathers) was observed, the location was documented as a potentially active burrowing owl burrow. Two owl pellets were observed near the burrow, but were determined not to have been burrowing owl pellets due to their very large size and high proportion of mammal remains among the contents. The pellets were likely generated by a larger owl, such as a great horned (*Bubo virginianus*), long-eared (*Asio otus*), or short-eared (*Asio flammeus*) owl. The abandoned kit fox burrow did not exhibit any signs of use by burrowing owls. From the results of the transect survey, it was determined that the coyote burrow should be monitored during Phase III census and observation.

5.3 PHASE III OWL CENSUS AND OBSERVATION RESULTS

The single potentially active burrowing owl burrow within the Agincourt site was monitored for three hours at dawn on three separate days, as described in Section 3.2 above. Owl movements and behaviors observed near the burrow are described below. A CNDDB field survey form for the occurrence is included in Appendix D.

- April 17, 2012:
  - 0515 hours: start of survey, observers at Observation Point A (see Figure 5).
  - 0515 to 0557 hours: no burrowing owl activity was evident at the burrow.
  - 0557 hours: a single burrowing owl flew into the area from the east and landed approximately 20 meters east of the burrow, but was concealed.
  - 0557 to 0605 hours: no burrowing owl activity was evident at the burrow, and the owl previously observed had not resurfaced.
  - 0605 hours: one observer moved to Observation Point B (see Figure 5) in an attempt to locate the owl.
  - 0605 to 0635 hours: no burrowing owl activity was evident at the burrow, and the owl previously observed did not resurface. Sunrise occurred at 0615.
  - 0635 hours: the owl was observed flying low near a Joshua tree and settling in brush. Likely foraging behavior.
  - 0635 to 0815 hours: no burrowing owl activity was evident at the burrow, and the foraging owl was not visible.
  - 0815 hours: observers left posts and attempted to locate the owl; the owl was not observed and No activity at the burrow was noted. End of survey.
- April 18, 2012:
  - 0513 hours: start of survey, observers at Observation Points A and C (see Figure 5).
  - 0513 to 0800 hours: no burrowing owl activity was evident at the burrow, no burrowing owls were observed. Sunrise at 0613.
  - 0800 hours: one observer moved from Observation Point A to Observation Point B (see Figure 5).
  - 0800 to 0813 hours: no burrowing owl activity was evident at the burrow, no burrowing owls were observed.
  - 0813 hours: end of survey.
- April 19, 2012:
  - 0512 hours: start of survey, observers at Observation Point C (see Figure 5).
  - 0512 to 0812 hours: no burrowing owl activity was evident at the burrow, no burrowing owls were observed. Sunrise at 0612.
  - 0812 hours: end of survey. Observers inspected the burrow at close range and detected two fresh owl pellets among the old pellets present.


116°52'0"W
34°52'0"N
Rosewood St
Legend
Project Boundary
Drainages
Vegetation Type
Creosote Bush-White Burr Sage Scrub (9.15 ac)
Joshua Tree Woodland (70.36 ac)
Phase III Burrowing Owl
Burrowing Owl Burrow
Observation Point
Owl Behavior Polygon
W1
W2
W3
W4
W5
W6
W7
W8
W9
W10
W11
W12
Burrow
A
B
C
Camp Rock Rd
OREGON
IDAHO
NEVADA
PACIFIC OCEAN
Mapped Location
Source: [1] I-cubed Nationwide Prime - Aerials Express (2009-04-15 image date, 0.3m resolution), [2] ESRI StreetMap USA (2007).
0
400
800
Feet
1 in = 400 ft
1:4,800
State Plane NAD83, Zone 5
URS
WDG
CAPITAL PARTNERS
Agincourt Solar Project
Focused Burrowing Owl Report
San Bernardino County, CA
Figure 5. Phase III Burrowing Owl Locations
2012
T:\WDGCP\deliverables\BurrowingOwlReport\Agincourt\Fig5_Agincourt_Burrowing_Owl_Map.mxd

The information gained through the Phase III burrowing owl census and observation is limited by the short period during which a burrowing owl was visible. The fact that the owl was present near the burrow for a only a short period on the first day of observation, and not at all during the observation periods on the second and third days, suggests that the burrow may be used for short-duration cover during foraging periods but it is probably not the primary burrow used by this owl. However, the presence of fresh pellets indicates that the burrow is in active use, at least on a periodic basis. The burrow is physically suitable for occupation by burrowing owls, and could potentially be used for longer periods or for more substantial purposes (overnight shelter, nesting) in the future.

SECTION 6.0
PROJECT IMPACTS TO THE BURROWING OWL

Impacts of the proposed Agincourt Solar Project on the burrowing owl are addressed below. Impacts to individual burrowing owls are described separately from losses of suitable habitat because of the differences in the nature (i.e., short-term construction related vs. long-term changes in land use) of these impacts.

6.1 IMPACTS TO INDIVIDUAL BURROWING OWLS

Within the Agincourt site, approximately 63.9 acres of existing natural habitat would be permanently removed during construction. Impacts would result from grading and site preparation activities, including the filling of some of the site's ephemeral drainages. The single burrowing owl burrow that was detected, and at which a burrowing owl was observed during protocol surveys, would be removed during site preparation. Since burrowing owls nest and roost underground, it is possible that construction activities could kill or injure any adult and juvenile/nestling owls that may be present and could destroy any eggs present. If construction occurs when nestlings are present, adult owls might have the ability to escape but nestlings likely would not. In addition, disturbances from construction could potentially cause burrowing owls to abandon their nest burrows, leaving nestlings unattended and exposed to injury and mortality. The impacts of the Agincourt project on burrowing owl individuals would be significant, absent mitigation. These impacts would be reduced to a less than significant level through the incorporation of Mitigation Measures BIO-1, BIO-2, and BIO-3, which would require pre-construction surveys and avoidance/relocation, biological monitoring, and worker environmental training during the construction phase of the project. These measures are described below in Section 7.0

6.2 IMPACTS RELATED TO LOSS OF SUITABLE HABITAT

The Project would permanently remove approximately 63.9 acres of existing Joshua tree woodland and creosote bush-white burr sage scrub vegetation identified as suitable burrowing owl habitat during the Phase I habitat assessment. Areas where vegetation is permanently eliminated would be made permanently unsuitable for burrowing owl foraging, roosting, and nesting. Based on the proposed site layout, the Agincourt project would leave approximately 15.3 acres of the site in an undeveloped state. Because the CDFG's (1995) Staff Report on Burrowing Owl Mitigation recommends that a minimum of 6.5 acres of on-site mitigation land should be provided for each individual burrowing owl or pair on-site, the project's preservation of 15.3 acres of suitable burrowing owl habitat would be consistent with the mitigation guidelines. Impacts associated with losses of burrowing habitat would therefore be less than significant.

SECTION 7.0
MITIGATION MEASURES

Mitigation measures to offset potentially significant impacts on the burrowing owl are presented below. The measures are provided to inform the County's environmental analysis of the Project under CEQA.

BIO-1: Pre-construction Burrowing Owl Surveys. If construction or site preparation activities are scheduled during the non-nesting season of the burrowing owl (typically September through January), the Applicant shall retain a qualified biologist to conduct wintering burrowing owl surveys for all areas in the footprint of disturbance, as well as other areas controlled by the Applicant, including all drainages that would be preserved within the fenced facility. The survey shall be conducted no more than 21 days prior to commencement of construction activities in the area. During the construction period, the results of the surveys, including graphics showing the locations of any active burrows detected and any avoidance measures required, shall be submitted to the County on a monthly basis. If active burrows are detected, the required avoidance measures shall conform to the following:

- If burrowing owls are observed using burrows during the non-breeding season, occupied burrows shall be left undisturbed, and no construction activity shall take place within 300 feet of the burrow where feasible (see below).
- If disturbance of owls and owl burrows is unavoidable, owls shall be excluded from all active burrows through the use of exclusion devices placed in occupied burrows in accordance with CDFG protocols (CDFG 1995). Specifically, exclusion devices, utilizing one-way doors, shall be installed in the entrance of all active burrows. The devices shall be left in the burrows for at least 48 hours to ensure that all owls have been excluded from the burrows. Each of the burrows shall then be excavated by hand and refilled to prevent reoccupation. Exclusion shall continue until the owls have been successfully excluded from the disturbance area, as determined by a qualified biologist.

If construction activities must be initiated in any area of the site during the burrowing owl breeding season (typically February through August), pre-construction surveys for burrowing owls shall be conducted. Any active burrowing owl burrows found at this season shall not be disturbed. Construction activities shall not be conducted within 300 feet of an active burrow during this season.

BIO-2 **Worker Environmental Awareness Program.** The biological monitor shall conduct an initial training for all construction workers on the biological resources that require protection during construction activities as well as the measures that must be implemented to protect those resources. The biological

monitor shall maintain a list of personnel that have received the training and any new personnel shall receive the training prior to commencing construction activities.

BIO-3 **Biological Monitoring.** A biological monitor shall be present during all ground disturbing construction activities to ensure that burrowing owls are not impacted by the project and to administer passive relocation of owls, if required. If burrowing owls are observed, the biological monitor shall have the authority to halt construction activities to avoid damaging sensitive resources or violating applicable laws.

SECTION 8.0
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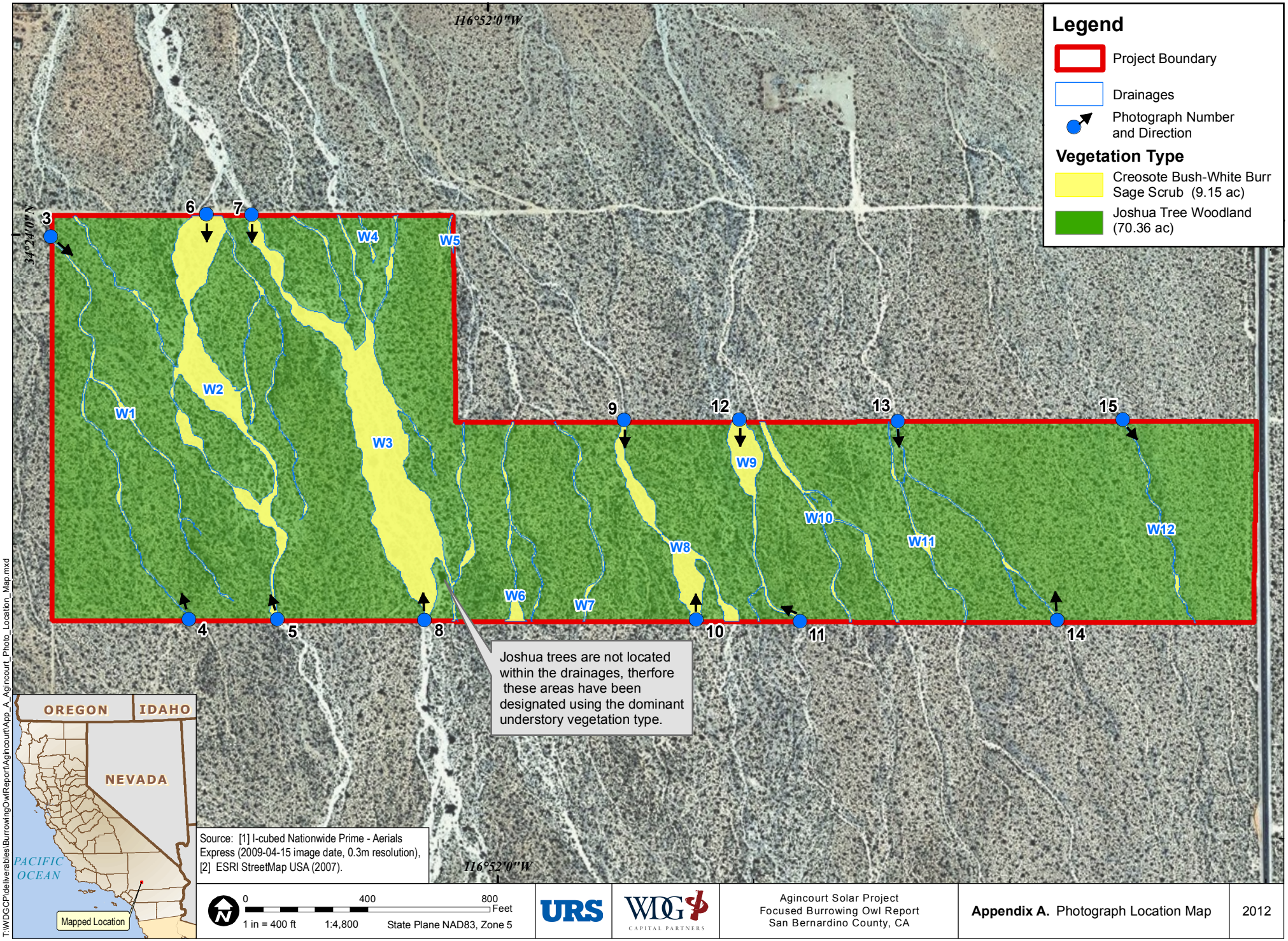
APPENDIX A
SITE PHOTOGRAPHS


116°52'0"W
34°4'34"N
Legend
Project Boundary
Drainages
Photograph Number and Direction
Vegetation Type
Creosote Bush-White Burr Sage Scrub (9.15 ac)
Joshua Tree Woodland (70.36 ac)
3
6
7
W4
W5
W1
W2
W3
9
12
13
15
W9
W10
W11
W12
W8
W6
W7
4
5
8
10
11
14
Joshua trees are not located within the drainages, therfore these areas have been designated using the dominant understory vegetation type.
OREGON
IDAHO
NEVADA
PACIFIC OCEAN
Mapped Location
Source: [1] I-cubed Nationwide Prime - Aerials Express (2009-04-15 image date, 0.3m resolution), [2] ESRI StreetMap USA (2007).
0
400
800
Feet
1 in = 400 ft
1:4,800
State Plane NAD83, Zone 5
URS
WDG
CAPITAL PARTNERS
Agincourt Solar Project
Focused Burrowing Owl Report
San Bernardino County, CA
Appendix A. Photograph Location Map
2012
T:\WDGCP\deliverables\BurrowingOwlReport\Agincourt\App_A_Agincourt_Photo_Location_Map.mxd

Photograph 1. February 2010.
Overview of the project site.

Photograph 2. February 2010.
Overview of the project site.

Photograph 3. September 12, 2011.
View to the south, taken from northern project boundary.
Drainage W1, facing upstream. APN 0449-641-04.

Photograph 4. September 12, 2011.
View to the north, taken from southern project boundary.
Drainage W1, facing downstream. APN 0449-641-04.

Photograph 5. September 12, 2011.
View to the north, taken from southern project boundary.
Drainage W2, facing downstream. APN 0449-641-04.

Photograph 6. September 12, 2011.
View to the south, taken from northern project boundary.
Drainage W2, facing upstream. APN 0449-641-04.

Photograph 7. September 12, 2011.
View to the south, taken from northern project boundary.
Drainage W3, facing upstream. APN 0449-641-04.

Photograph 8. September 12, 2011.
View to the north, taken from southern project boundary.
Drainage W3, facing downstream. APN 0449-641-04.

Photograph 9. September 12, 2011.
View to the south, taken from northern project boundary.
Drainage W8, facing upstream. APN 0449-641-27.

Photograph 10. September 12, 2011.
View to the north, taken from southern project boundary.
Drainage W8, facing downstream. APN 0449-641-27.

Photograph 11. September 13, 2011.
View to the north, taken from southern project boundary.
Drainage W9, facing downstream. APN 0449-641-27.

Photograph 12. September 13, 2011.
View to the south, taken from northern project boundary.
Drainage W9, facing upstream. APN 0449-641-27.

Photograph 13. September 13, 2011.
View to the south, taken from northern project boundary.
Drainage W11, facing upstream. APN 0449-641-27.

Photograph 14. September 13, 2011.
View to the north, taken from southern project boundary.
Drainage W11, facing downstream. APN 0449-641-27.

Photograph 15. September 13, 2011.
View to the south, taken from northern project boundary.
Drainage W12, facing upstream. APN 0449-641-27.

APPENDIX B
PLANT SPECIES OBSERVED WITHIN THE AGINCOURT SITE

TABLE B-1
PLANT SPECIES OBSERVED WITHIN THE AGINCOURT SITE

Scientific Name	Common Name	Family	Growth Habit	Dominant Species?
Ambrosia acanthicarpa	Annual Burr Sage	Asteraceae	AH	N
Ambrosia dumosa	White Burr Sage	Asteraceae	S	Y
Ambrosia (*Hymenoclea*) *salsola* var. *salsola*	Cheesebush	Asteraceae	S	Y
Amsinckia tessellata ssp. *tessellata*	Desert Fiddleneck	Boraginaceae	AH	N
Atriplex canescens	Four-wing Saltbush	Chenopodiaceae	S	N
Brassica tournifortia[1]	Sahara Mustard	Brassicaceae	AH	N
Bromus madritensis ssp. *rubens*[1]	Red Brome	Poaceae	AG	Y
Bromus tectorum[1]	Soft Chess	Poaceae	AG	N
Calycoseris parryi	Yellow Tack-stem	Asteraceae	AH	N
Camissonia boothii ssp. *desertorum*	Booth's Shredding Primrose	Onagraceae	AH	N
Castilleja angustifolia	Desert Indian Paintbrush	Orobanchaceae	PH	N
Chaenactis macrantha	Mojave Pincushion	Asteraceae	AH	N
Chaenactis stevioides	Desert Pincushion	Asteraceae	AH	N
Chilopsis linearis	Desert Willow	Bignoniaceae	S	N
Chorizanthe brevicornu var. *brevicornu*	Brittle Spineflower	Polygonaceae	AH	N
Cryptantha echinella	Hedgehog Forget-Me-Not	Boraginaceae	AH	N
Cryptantha micrantha	Eremocarya Forget-Me-Not	Boraginaceae	AH	N
Cylindropuntia (*Opuntia*) *echinocarpa*	Wigin's Cholla	Cactaceae	S	N
Cylindropuntia ramosisima	Pencil Cholla	Cactaceae	S	N
Datura wrightii	Jimsonweed	Solanaceae	PH	N
Delphinium parishii ssp. *parishii*	Parish's Larkspur	Ranunculaceae	PH	N
Descurainia californica	California Tansy Mustard	Brassicaceae	AH	N
Echinocereus engelmannii	Hedgehog Cactus	Cactaceae	S	N
Echincocactus polycephalus	Cotton Top Cactus	Cactaceae	S	N
Elymus elymoides ssp. *elymoides*	Squirreltail	Poaceae	PG	N
Encelia farinosa	Brittlebush	Asteraceae	S	N
Encelia frutescens	Desert Brittlebush	Asteraceae	S	N
Ephedra californica	California Ephedra	Ephedraceae	S	N
Ephedra nevadensis	Nevada Ephedra	Ephedraceae	S	N
Ericameria cooperi var. *cooperi*	Cooper's Goldenbush	Asteraceae	S	N
Eriogonum fasciculatum var.	Desert Wild Buckwheat	Polygonaceae	S	N

TABLE B-1 (CONTINUED)
PLANT SPECIES OBSERVED WITHIN THE AGINCOURT SITE

Scientific Name	Common Name	Family	Growth Habit	Dominant Species?
polifolium				
Eriogonum inflatum var. *inflatum*	Desert Trumpet	Polygonaceae	AH	N
Eriogonum pusillum	Yellow Turbans	Polygonaceae	AH	N
Eriophyllum pringlei	Pringle's Woolly Daisy	Asteraceae	AH	N
Eriophyllum wallacei	Wallace's Woolly Daisy	Asteraceae	AH	N
Erodium cicutarium[1]	Redstem Filaree	Geraniaceae	AH	Y
Gilia sp.	Gilia	Polemoniaceae	AH	N
Ferocactus cylindraceus	Barrel Cactus	Cactaceae	S	N
Glyptopleura marginata	Prickly Leaf Sculpted Fruit	Asteraceae	AH	N
Grayia spinosa	Hop Sage	Chenopodiaceae	S	N
Krameria sp.	Ratany	Krameriaceae	S	N
Kraschennikovia lanata	Winter Fat	Chenopodiaceae	S	N
Larrea tridentate	Creosote Bush	Zygophyllaceae	S	Y
Lepidium fremontii var. *fremontii*	Fremont Peppergrass	Brassicaceae	S	N
Lepidospartum squamatum	Scale Broom	*Asteraceae*	S	N
Linanthus aureus ssp. *aureus*	Desert Gold	Polemoniaceae	AH	N
Loeseliastrum schottii	Schott's Calico	Polemoniaceae	AH	N
Lycium andersonii	Anderson's Desert Thorn	Solanaceae	S	N
Malacothrix californica	California Desert Dandelion	Asteraceae	AH	N
Mentzelia jonesii	Jones' Stickleaf	Loasaceae	AH	N
Mirabilis sp.	Wishbone Bush	Nyctaginaceae	PH	N
Opuntia basilaris ssp. *basilaris*	Beavertail Cactus	Cactaceae	S	N
Pectocarya heterocarpa	Chuckwalla Pectocarya	Boraginaceae	AH	N
Peritoma (*Isomeris*) *arborea*	Bladderpod	Cleomaceae	S	N
Petalonyx thurberi	Sandpaper Plant	Loasaceae	PH	N
Phacelia crenulata var. *ambigua*	Purplestem Scorpionweed	Boraginaceae	AH	N
Phacelia tanacetifolia	Tansy Phacelia	Boraginaceae	AH	N
Pleuraphis (*Hilaria*) *rigida*	Galleta grass	Poaceae	PG	N
Rafinesquia neomexicana	Desert Chicory	Asteraceae	AH	N
Salsola tragus (*S. kali*)	Russian Thistle	Chenopodiaceae	AH	N
Schismus arabicus[1]	Arab Grass	Poaceae	AG	Y
Scutellaria (*Salazaria*) *mexicana*	Paper Bag Bush	Lamiaceae	S	N
Sphaeralcea ambigua var. *rugosa*	Desert Mallow	Malvaceae	PH	N
Stephanomeria pauciflora	Wire Lettuce	Asteraceae	PH	N

TABLE B-1 (CONTINUED)
PLANT SPECIES OBSERVED WITHIN THE AGINCOURT SITE

Scientific Name	Common Name	Family	Growth Habit	Dominant Species?
Stipa (*Achnatherum*) *hymenoides*	Indian Rice Grass	Poaceae	PG	N
Xylorhiza tortefolia var. *tortefolia*	Desert Aster	Asteraceae	PH	N
Yucca brevifolia	Joshua Tree	Agavaceae	T	Y
Yucca schidigera	Mojave Yucca	Agavaceae	S	Y

[1] Non-native species.

Notes:

Scientific nomenclature, native status, and habit follow Hickman 1993.

Habit definitions:

AG = annual grass or graminoid	PG = perennial grass or graminoid	S = shrub
AH = annual herb	PH = perennial herb	T = tree

APPENDIX C
WILDLIFE SPECIES OBSERVED WITHIN THE AGINCOURT SITE

TABLE C-1
WILDLIFE SPECIES OBSERVED WITHIN THE AGINCOURT SITE

Common Name	Scientific Name	Applicable Regulatory Status (Federal/State)
Insects		
Pollen wasp	*Pseudomasaris maculifrons*	None/None
Say's stink bug	*Chlorocroa sayi*	None/None
Flower fly	Family syrphidae	None/None
Weevil	Family curculionidae	None/None
Aphid	Family aphididae	None/None
Tenebrionid beetle	Family tenebrionidae	None/None
Flower beetle	Suborder Polyphaga	None/None
Reptiles		
Southern desert horned lizard	*Phrynosoma platyrhinos calidiarum*	None/None
Western side-blotched lizard	*Uta stansburiana elegans*	None/None
Western zebra-tailed lizard	*Callisaurus draconoides rhodostictus*	None/None
Birds		
Burrowing owl	*Athene cunicularia*	None/CSC
Barn swallow	*Hirundo rustica*	None/None
Cactus wren	*Campylorhynchus brunneicapillus*	None/None
Common raven	*Corvus corax*	None/None
Sage sparrow	*Amphispiza belli*	None/None
Swallow sp.	Family Hirundinidae	–
Western gull	*Larus occidentalis*	None/None
Mammals		
Kangaroo rat	*Dipodomys* sp.	None/None
Black-tailed jackrabbit	*Lepus californicus*	None/None
Ground squirrel	Family Sciuridae	None/None

Regulatory Status:
FT = Federally listed threatened ST = State-listed threatened CSC = California Species of Special Concern

APPENDIX D
CALIFORNIA NATURAL DIVERSITY DATABASE FORM

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 04/17/2012

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Athene cunicularia*

Common Name: Burrowing owl

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Christopher Julian, URS Corporation
Address: 130 Robin Hill Road, Suite 100
Santa Barbara, CA 93117
E-mail Address: Christopher.Julian@urs.com
Phone: (805) 692-6000

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

1 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☑ burrow site ☐ other

***Location Description* (please attach map AND/OR fill out your choice of coordinates, below)**

The site is located at APNs 0449-641-27 and 0449-641-04. The site is bounded by Rosewood Street directly to the North, Camp Rock Road directly to the East, Richard Street to the South, and Cherokee Trail to the West.

County: San Bernardino Landowner / Mgr.: WDG Capital Partners

Quad Name: Cougar Buttes Elevation: 1041m

T 4N R 1E Sec 34, ____ ¼ of _____ ¼, Meridian: H☐ M☐ S☑ Source of Coordinates (GPS, topo. map & type): GPS

T____ R____ Sec ____, ____ ¼ of _____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin 60CSX

DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☑ Horizontal Accuracy 3 meters meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐

Coordinates: 0512552E, 3806155N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

A burrowing owl was observed at a burrow during Phase III protocol surveys. Use of the burrow was limited, and the owl was observed only once during three burrow observation sessions. The on-site habitat/vegetation communities included: 1) Joshua tree woodland in the uplands, dominant species include Joshua trees (Yucca brevifolia), creosote bush (Larrea tridentata), white burr sage (Ambrosia dumosa), cheesebush (Ambrosia salsola), Mojave yucca (Yucca schedigera), red brome (Bromus madritensis ssp. rubens), red-stem fillaree (Erodium cicutarium), and Mediterranean grass (Schismus barbatus); and 2) creosote bush-white burr sage scrub in the understory of the Joshua tree woodland and along the drainages. Same dominants, but Joshua trees absent.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: The site is vacant, the western portion of the site is zoned rural living, the eastern portion is zoned agriculture

Visible disturbances: None on-site; limited residential development in adjacent areas.

Threats: the parcels are proposed for solar energy development

Comments:

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: Identification in the field by qualified biologists

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☑ no ☐